

# **Continuity of care in UK general practice**

**Bruce Guthrie**

**Thesis submitted for the degree of PhD**

**University of Edinburgh**

**2003**



This thesis has been composed by me, based on supervised research conducted by me alone. The work has not been submitted for any other degree or professional qualification.

Word count 83 934 (excluding tables, references and appendices)

# Table of contents

LIST OF FIGURES.....	V
LIST OF TABLES.....	VI
LIST OF ABBREVIATIONS.....	VII
ACKNOWLEDGEMENTS.....	VIII
<b>ABSTRACT.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>3</b>
WHY RESEARCH ‘CONTINUITY’?.....	3
CHOOSING RESEARCH QUESTIONS.....	6
AIMS.....	8
ORGANISATION OF THE THESIS.....	9
<b>CHAPTER 1 – CONTINUITY AND GENERAL PRACTICE IN THE LITERATURE.....</b>	<b>10</b>
INTRODUCTION.....	10
DEFINING CONTINUITY.....	10
Five definitions of continuity.....	11
What does the literature defining continuity tell us?.....	17
CONTINUITY IN POST WAR UK GENERAL PRACTICE.....	18
THE SOCIOLOGY OF PROFESSIONS.....	29
The system of professions.....	31
DOES ‘CONTINUITY’ LEAD TO BETTER OUTCOMES?.....	35
OFFICIAL RHETORIC OR THE BELIEF OF INDIVIDUAL GPs AND PATIENTS?.....	39
IMPLICATIONS FOR THIS RESEARCH.....	42
<b>CHAPTER 2 - METHODOLOGY.....</b>	<b>45</b>
INTRODUCTION.....	45
MIXING METHODS AND THE RELATIONSHIP BETWEEN STANCE AND METHOD.....	46
MY EPISTEMOLOGICAL STANCE.....	50
THE RELATIONSHIP BETWEEN THE TWO STUDIES.....	56
SUMMARY AND DISCUSSION.....	58
<b>CHAPTER 3 – AN EXPLORATION OF THE DISTRIBUTION OF PERSONAL/LONGITUDINAL CONTINUITY.....</b>	<b>60</b>
INTRODUCTION.....	60
CONTINUOUS MORBIDITY RECORDING AND PROVIDER CONTINUITY.....	61
THE PATIENT ENABLEMENT INSTRUMENT DATASET.....	62
DATA MANAGEMENT AND SELECTION OF VARIABLES TO EXPLORE.....	63
Outcome variable.....	63
Explanatory variables.....	65
STATISTICAL METHODS FOR THE ANALYSIS OF HIERARCHICAL DATASETS.....	81

Using multilevel modelling with this dataset .....	82
Modelling strategy .....	86
RESULTS OF THE MULTILEVEL REGRESSION MODEL .....	87
Fitting a random intercepts, 'empty' model .....	87
Fitting a model with explanatory variables .....	88
CHECKING MODEL ASSUMPTIONS .....	90
Missing data .....	90
Distributional assumptions .....	93
Model fit and detection of outliers .....	94
Explained variance in the preferred model.....	97
MODEL INTERPRETATION.....	97
SUMMARY AND DISCUSSION .....	100
<b>CHAPTER 4 - INTERVIEW STUDY DESIGN AND METHODS.....</b>	<b>103</b>
INTRODUCTION .....	103
EARLY DATA .....	104
SETTLING ON A METHOD .....	106
CHOOSING A SAMPLE .....	108
RECRUITMENT.....	111
INTERVIEWING AND DATA HANDLING .....	113
ANALYTICAL STRATEGY .....	118
SUMMARY AND DISCUSSION .....	122
<b>CHAPTER 5 – ‘PERSONAL CONTINUITY’ .....</b>	<b>124</b>
INTRODUCTION .....	124
PERSONAL CONTINUITY IN THE INTERVIEWS .....	125
WHEN DOES PERSONAL CONTINUITY MATTER MOST? .....	127
WHAT ADVANTAGES DID GPs ASCRIBE TO PERSONAL CONTINUITY? .....	134
WHAT ADVANTAGES DID PATIENTS ASCRIBE TO PERSONAL CONTINUITY?.....	138
The relationship between trust and legitimacy .....	147
WHAT DISADVANTAGES DID PERSONAL CONTINUITY HAVE?.....	151
SUMMARY AND DISCUSSION .....	155
<b>CHAPTER 6 – PERSONAL CONTINUITY, THE APPOINTMENT AND THE MEDICAL RECORD.....</b>	<b>159</b>
INTRODUCTION .....	159
PERSONAL CONTINUITY, LONGITUDINAL CONTINUITY AND THE APPOINTMENT.....	160
Negotiating the appointment .....	162
The relationship between personal and longitudinal continuity .....	170
PERSONAL CONTINUITY AND THE MEDICAL RECORD .....	173
The relationship between personal continuity and the medical record .....	178
SUMMARY AND DISCUSSION .....	181

<b>CHAPTER 7 – CROSS BOUNDARY AND TEAM CONTINUITY, AND THE CONSTRUCTION OF GPs’ PROFESSIONAL IDENTITY .....</b>	<b>185</b>
INTRODUCTION .....	185
CROSS BOUNDARY CONTINUITY .....	186
TEAM CONTINUITY .....	189
THE CONSTRUCTION OF A GENERAL PRACTICE IDENTITY .....	197
General practice and the hospital .....	197
General practitioners and primary care nurses .....	208
Medical knowledge and general practice identity .....	213
SUMMARY AND DISCUSSION .....	219
<b>CHAPTER 8 – DISCUSSION .....</b>	<b>223</b>
INTRODUCTION .....	223
SUMMARISING THE FINDINGS.....	223
The definition and value of ‘continuity’ in UK general practice .....	224
The distribution of personal/longitudinal continuity .....	230
‘Continuity’ and the construction of a general practice identity .....	232
STRENGTHS AND LIMITATIONS OF THE STUDIES .....	245
The patient survey .....	245
The interview study .....	246
Mixing methods and integrating data .....	248
IMPLICATIONS OF THIS RESEARCH .....	250
CONCLUSION.....	259
<b>REFERENCES.....</b>	<b>261</b>
<b>APPENDICES.....</b>	<b>280</b>
APPENDIX A: ADULT PATIENT QUESTIONNAIRE FOR THE PEI STUDY .....	281
APPENDIX B: GP QUESTIONNAIRE FOR THE PEI STUDY .....	291
APPENDIX C: COCKBURN QUESTIONNAIRE FOR THE PEI STUDY .....	294
Scoring the Cockburn questionnaire .....	298
APPENDIX D: PRACTICE QUESTIONNAIRE FOR THE PEI STUDY .....	299
APPENDIX E: VARIABLES EXCLUDED FROM THE QUANTITATIVE ANALYSIS .....	307
APPENDIX F: AN EXTENDED DESCRIPTION OF MULTILEVEL MODELLING .....	309
Multilevel modeling .....	309
A single level regression model .....	310
A random intercepts multilevel model .....	313
The full (random intercepts and slopes) multilevel model .....	315
Estimation procedures .....	317
Alternatives to multilevel modelling .....	318
Summary and discussion .....	321
APPENDIX G: RECRUITMENT MATERIAL FOR THE QUALITATIVE STUDY.....	324

APPENDIX H: TOPIC GUIDES FOR INTERVIEWS .....	331
GP interview topic guide.....	331
Patient interview topic guide.....	335
APPENDIX I: CHARACTERISTICS OF QUALITATIVE STUDY PARTICIPANTS.....	339
APPENDIX J: PUBLISHED PAPERS BASED ON RESEARCH DONE FOR THIS THESIS .....	343

## List of figures

FIGURE 1: A HIERARCHICAL CONCEPTUALISATION OF THE PEI DATASET .....	82
FIGURE 2: A NON-HIERARCHICAL CONCEPTUALISATION OF THE UNDERLYING CONSULTATION PROCESS .....	83
FIGURE 3: NORMAL PLOTS OF GP AND PRACTICE LEVEL RESIDUALS .....	94
FIGURE 4: PRACTICE LEVEL DIAGNOSTICS .....	95
FIGURE 5: GP LEVEL DIAGNOSTICS.....	96
FIGURE 6: SINGLE LEVEL REGRESSION MODEL IGNORING SCHOOLS .....	311
FIGURE 7: RANDOM INTERCEPTS FOR EACH SCHOOL.....	314
FIGURE 8: RANDOM INTERCEPTS AND RANDOM SLOPES FOR EACH SCHOOL.....	315

## List of tables

TABLE 1: DISTRIBUTION OF OUTCOME VARIABLE .....	65
TABLE 2: DISTRIBUTION OF INCLUDED PATIENT LEVEL EXPLANATORY VARIABLES....	70
TABLE 3: DISTRIBUTION OF GP LEVEL EXPLANATORY VARIABLES.....	76
TABLE 4: DISTRIBUTION OF PRACTICE LEVEL EXPLANATORY VARIABLES.....	80
TABLE 5: VARIANCE COMPONENTS IN THE 'EMPTY' MODEL .....	87
TABLE 6: FIXED EFFECTS OF PREFERRED MODEL .....	89
TABLE 7: RANDOM EFFECTS OF PREFERRED MODEL.....	90
TABLE 8: FIXED EFFECTS OF MODEL OMITTING GP LEVEL EXPLANATORY VARIABLES	92
TABLE 9: RANDOM EFFECTS OF MODEL OMITTING GP LEVEL VARIABLES .....	93
TABLE 10: SAMPLING FRAME FOR FIRST EIGHT PRACTICES RECRUITED .....	109
TABLE 11: NUMBERS AGREEING AND DECLINING TO PARTICIPATE .....	112
TABLE 12: PATIENT LEVEL EXPLANATORY VARIABLES CONSIDERED BUT EXCLUDED	307
TABLE 13: GP LEVEL EXPLANATORY VARIABLES EXCLUDED .....	307
TABLE 14: PRACTICE LEVEL EXPLANATORY VARIABLES EXCLUDED.....	308
TABLE 15: EFFECTIVE ALPHA VALUES FOR DIFFERENT ICCs AND GROUP SIZES.....	313
TABLE 16: PRACTICE CHARACTERISTICS .....	339
TABLE 17: DOCTOR CHARACTERISTICS.....	340
TABLE 18: PATIENT CHARACTERISTICS.....	341

## List of abbreviations

ANOVA	Analysis of variance
ANCOVA	Analysis of co-variance
CI	Confidence interval
CMR	Continuous Morbidity Recording
GHQ12	12 item General Health Questionnaire
GMS	General Medical Services (the standard form of GP contract)
GP	General practitioner
GPASS	General Practice Administration System for Scotland
ICC	Intra-cluster correlation coefficient
ISD	Information and Statistics Division [of the NHS in Scotland]
MRC	Medical Research Council
MQL	Maximum quasi likelihood
NHS	National Health Service
NHS R&D SDO	National Health Service Research and Development Service Delivery and Organisation [Programme]
PEI	Patient Enablement Instrument
PQL	Penalised quasi likelihood
RCGP	Royal College of General Practitioners
RCT	Randomised controlled trial
UK	United Kingdom

## **Acknowledgements**

This thesis and the research done for it relied on the support and expertise of my three supervisors. John Forbes provided comment on and input into the quantitative work. Sarah Cunningham-Burley's expertise and interest in the qualitative data was a source of much insight and learning for me. Sally Wyke was instrumental in the success of the original funding application and development of the training programme, and made substantial perceptive contributions to both studies, their integration and in keeping a focus on general practice and the delivery of health services. Despite their help, all errors, omissions and overgeneralisations are my sole responsibility.

I would also like to thank the Department of General Practice, and more widely the Department of Community Health Sciences for providing a friendly and supportive environment to be a PhD student in, and acknowledge the Medical Research Council Health Services Research Training Programme for funding my research fellowship. Additionally, throughout the fellowship and since, I have enjoyed the stability and pleasure of working clinically in the Ferguson Medical Practice, where the integration of my theoretical and professional understandings of 'continuity' were repeatedly tested.

Finally, I would like to thank Janet who has patiently waited for the promised day, and Duncan and Isobel for me being sometimes distracted from playing while 'writing all those words'.

## **Abstract**

‘Continuity’ is frequently cited as a core value for UK general practice, and in this context usually appears conceptualised in terms of personal continuity or ongoing relationships between patients and general practitioners (GPs). Formal definitions include other dimensions such as continuity of information, and the co-ordination of care, and these are more promoted in recent UK policy documents and by organisational change.

Two studies were conducted for this thesis. The first used multilevel regression analysis of survey data from over 25,000 patients in 53 general practices to explore the distribution of ‘continuity’ in the sense of whether or not patients were seeing their ‘usual or regular’ GP. The key findings were that measured ‘continuity’ was lower in larger practices and those with shared lists where patients can see any GP. Younger patients and those without chronic disease were less likely to be seeing their usual or regular GP, although whether the age association represents a cohort or lifecycle effect cannot be addressed with cross sectional data. In the second study, thirty-two patients and sixteen GPs were interviewed about what they valued about general practice. Interviews were semi-structured, and the data were analysed qualitatively. A thematic analysis of which dimensions of ‘continuity’ were valued by patients and GPs, and how these related to other valued processes and outcomes of general practice care was developed. Further analysis focused on the ways that GPs used ‘continuity’ to construct a particular kind of professional identity, and whether patients accepted or rejected the claims to a particular identity made by GPs.

Both GPs and the majority of patients emphasised the importance of personal continuity. A key difference was that patients talked about routinely balancing personal continuity against access, with their preference varying with the nature of the problem to be discussed. The majority of patients said that they usually preferred to wait to see ‘their’ GP, but a few solely prioritised speed or convenience of access. GPs and patients ascribed a similar range of advantages to personal continuity, but GPs focused on benefits in terms of better diagnosis and management of problems, whereas patients emphasised feeling more at ease, being able to be more active in

consultations, and increased trust and legitimacy. In formal definitions, the different dimensions of 'continuity' are made conceptually distinct. But for these GPs and patients, different dimensions of continuity were interwoven. Personal continuity (an ongoing relationship) and longitudinal continuity (seeing the same GP) were routinely conflated, and GPs described complex interactions between the different ways of knowing the patient associated with personal continuity and with continuity of information embodied in the medical record. Personal continuity was frequently deployed by GPs to distinguish themselves from hospital doctors. This boundary was repeatedly constructed without prompting throughout the GP interviews, suggesting that it was a problematic area. This appeared to be because of hospital doctors' greater expertise in diagnosis and management of particular diseases or problems, something acknowledged by GPs and taken for granted by patients. In contrast, GPs appeared to assume that their control of medical knowledge made their identity with regard to nurses unproblematic. Supporting this, patients talked about nurses' work largely in terms of the tasks done, and said they did not greatly value ongoing, personal relationships with nurses. Underpinning both of these boundaries was a shared assumption of medical work as primarily being the diagnosis and management of problems, with a stronger biomedical emphasis than was immediately apparent in talk about 'personal continuity'.

The data are used to discuss the ways in which personal continuity appeared central to patients' and GPs' experience of general practice, and to the construction of a stable professional identity for GPs. The usefulness of 'continuity' as a research or policy concept is then explored. Although formal definitions of 'continuity' are conceptually helpful, different dimensions of 'continuity' are likely to be interdependent within an individual health care system. Understanding 'continuity' therefore requires a sensitivity to this wider context. Finally, possible implications of current organisational change for the experience of 'continuity' by patients and the professional identity of GPs and general practice are examined.

# Introduction

## **Why research 'continuity'?**

As a medical student, I wanted to either be a general practitioner or work in public health. However, on qualifying, my first experience of the actual practice of medicine was in the hospital. Whereas there was much about the hospital that I had not liked as a medical student, I enjoyed being a doctor there and decided to stay. My chosen speciality was renal medicine, which is a regional or tertiary service and is usually characterised as an esoteric speciality routinely using complex medical technologies. The technical side of renal medicine was initially interesting, but quite rapidly became repetitive. What I liked most about it was that the patients kept coming back. Once someone has end stage renal failure, they usually stay with the same renal unit for life, although that life may be much shortened. For me, the patients became as important as the problems they presented, although clearly, my relationships with them were framed by their disease and need for medical care.

What drove me from renal medicine was the desire to preserve the rest of my life from the demands of a speciality with a necessity and a culture of working very long hours. What drew me back to general practice was my recognition that what I liked most about renal medicine, and medical practice more generally, was seeing patients with whom I had an ongoing relationship. General practice seemed likely to provide that, and when I started working as a GP trainee, my trainer and half-day release course repeatedly stressed the importance of the doctor-patient relationship. However, patients that I saw often commented on how difficult it could be to see 'their' doctor. Several also said that this had become harder as the practice had grown from a single handed GP, to three GPs and a trainee. This was 1993, and government policy at the time was also widely perceived by GPs to take them away from clinical work, and to reduce their availability to patients. My initial interest in 'continuity' as a research topic came from this disjunction between what I liked as a clinician, and the way that general practice appeared to be increasingly organised to reduce the likelihood of ongoing relationships.

A recent UK definition of general practice was produced by the Royal College of General Practitioners (RCGP) and the General Practitioners' Committee of the British Medical Association in response to the NHS Plan in 2001 (Department of Health 2001). It is partly reproduced below.

“General practitioners are the patients’ advocates; front-line diagnosticians; the keeper of the lifelong record, the deliverer of continuity of care and are highly cost efficient. ... When patients are ill, or think they are ill, they want to see a doctor who they can trust. Trust is based on the patient’s knowledge of their doctor and their clinical and interpersonal skills, and their attitudes. ... The registered patient list, GP referral to secondary care and GP involvement in designing services are all systems that encourage a cost-effective health system. ... Continuity of care is highly prized by patients. Seeing a doctor who knows the patient and remembers key events in the life of that patient and the family, who will be there subsequently when required and who takes a longer term view of care and its outcomes is an important feature of primary care. Continuity has been shown to reduce use of secondary care services and to improve patient satisfaction.”

(RCGP 2001)

Such statements of ‘core values’ are a feature of post war general practice, and usually claim that ‘continuity’ is central to GPs’ work and benefits patients. The usual emphasis is on ongoing personal relationships between GPs and their patients, which is now usually called ‘personal continuity’ (Rose 1951, RCGP 1972, RCGP 2001, Freeman 1997, Freeman 2001).

Despite its place at the heart of ‘core values’, almost all major changes to NHS general practice seem likely to have reduced personal continuity by making it less likely that patients see the same doctor. Practices have grown in size, both in terms of the numbers of GPs and of the number of other clinicians and administrative staff that form the primary health care team. Fewer practices operate personal lists where patients normally only see their registered GP. Out of hours care is now largely done by large, area based co-operatives.

There is some evidence that these changes are likely to have reduced patient satisfaction with their care. Two studies have shown that patients in practices with

personal lists are more likely to get longitudinal continuity with a GP than those registered with a shared list practice (Freeman 1990, Roland 1986). This is proposed as the reason why patient satisfaction is higher in personal list practices (Baker 1996, Baker 1995). Although there is no research data about the effect of list size or being a training practice on longitudinal continuity, lower levels of longitudinal and personal continuity are also suggested as reasons why patient satisfaction is lower in larger and training practices (Baker 1995, Baker 1996).

Associated with the structural changes outlined above, there have been changes to the work done in general practice. The balance of care between hospital and community has changed, and there is increasing emphasis on prevention and structured care for chronic disease in general practice. This has resulted in a rapid growth in the number of practice nurses, who increasingly do work previously done by GPs. More recently, government policy emphasising rapid access has driven the creation of telephone advice services like NHS Direct, and walk in primary care centres (Department of Health 1997). This parallels policy documents that emphasise 'continuity' in terms of the co-ordination and consistency of care. Seeing the same doctor is one way to achieve these, but policy promotes other ways such as electronic patient records and guidelines (Department of Health 1997, Department of Health 2001, Scottish Executive 2001).

What is curious about these changes in general practice structure is that most have been actively supported by GPs or have been official policy of general practice organisations, with the exception of NHS Direct and walk in centres. If personal continuity matters so much, then why does reorganisation appear to largely ignore it? It may be that these changes do not actually change personal continuity although this appears contradicted by the apparently widespread belief that personal continuity is in decline (McCormick 1996, Taylor 1997, Weatherall 1994). Reading documents like 'Valuing General Practice' makes it clear that 'continuity' is claimed to have numerous beneficial effects, and it is used to claim a particular (important) role for general practice in the NHS. But this sits uneasily with GPs' acquiescence in previous organisational change that appears to have threatened it. If this is true, then why do GPs only defend personal continuity vigorously in the face of some but not

other organisational change? It begs the question as to whether 'continuity' is primarily a rhetorical device used by GPs to maintain their professional position.

There is certainly evidence of rhetorical use in writing about continuity in UK general practice that mourns the passing of the 'personal doctor' (Batten 1956, Scott 1965, McCormick 1996, Taylor 1997, Baker 1997, Haslam 1999). On the face of it, here is evidence that health service changes have reduced personal continuity, but such laments are part of a longer tradition. The first expressions of regret over the weakening of the personal bonds between GP and patient were recorded about 20 years after the appearance of the general practitioner in the early 19<sup>th</sup> century (Loudon 1984). They also presuppose a past in which strong, long lasting personal relationships between GPs and patients were the norm. However, in pre war general practice, this was probably only commonly true for inhabitants of remote rural areas and the more affluent (Collings 1950, Titmuss 1958). Arguably, the NHS widened the possibility of such relationships to most of the population, and given increasing consultation rates and longer appointment times it is plausible that GPs and patients could actually have closer relationships now than in the past.

My interest in 'continuity' originally came from my own liking for the kind of relationship with patients emphasised by official definitions of general practice. But what made 'continuity' my chosen field of research was the recognition of its ambiguous and highly contestable nature, and of the variety of uses that the concept serves beyond any simple claim that it benefits patients.

## **Choosing research questions**

For me, researching continuity had to be sensitive to this ambiguity and contestability in three ways. First, it had to take account of the possibility of multiple, potentially competing definitions or conceptualisations. This introduction has briefly described the way that general practice organisations define the concept of continuity, with an indication that one use of these definitions is to construct a particular corporate identity for general practice. There are interesting questions about whether individual GPs share the official line, and which dimensions of

continuity (if any) they think relevant to or important in their work. Certainly, there is some evidence that there is divergence between the RCGP line on prevention and the perceptions of individual GPs (Williams 1988, Williams 2002). Equally importantly, the perceptions of patients need consideration. Formal documents and the above discussion largely ignore patients, except as the objects of health care and the claimed beneficiaries of various dimensions of continuity.

Second, any research has to be sensitive to rhetorical uses of the ‘continuity’, and therefore competing definitions have to be understood as more than simple descriptions of the ‘facts’. Equally though, just because there are rhetorical uses does not mean that some of the claims made for ‘continuity’ are not justifiable. Even if ‘continuity’ serves self-interested purposes for GPs, it may still be something that is valuable to users of healthcare or policymakers. Given that I value ‘personal continuity’ and have my own need to construct my clinical work as worthwhile, my own self-interest is also a relevant consideration for the conduct and interpretation of the research.

Thirdly, continuity has to be understood in its wider social context. ‘Personal continuity’ is a set of claims about particular individual’s relationships and care. This care is embedded in a particular health service structure and the particular circumstances of each individual patient. This context also includes shared expectations and current conventions of doctor-patient or clinician-patient relationships. Any research done therefore has to try to take account of the relationships between individuals and the contexts within which they act.

As well as these substantive considerations, deciding what to ask depended partly on my commitment to a particular kind of research. One influence on this was my source of funding for this PhD. I was employed by the Medical Research Council (MRC) as a Special Training Fellow in Health Services’ Research. This was a training grant which emphasised multidisciplinary and interdisciplinary working, and a commitment to training in and the use of multiple or mixed methods. My original application stated that:

“Research in general practice requires a concern for a range of values and outcomes beyond medically defined ones, and an appreciation of the effect of organisation and social context on individual clinical care. Experience of different disciplinary perspectives and their associated research methods is a central feature of such concern.”

The fellowship application proposed two studies, one ‘quantitative’ (a survey), and one ‘qualitative’ (an interview study), entailing the ‘required’ training in different research methods. The research questions asked therefore flow not just from what interested or puzzled me about ‘continuity’, but also from the funding and disciplinary contexts within which I was embedded.

## **Aims**

Reflecting my interest in how organisational change might have altered patient experience of continuity, the first aim was to examine the distribution of some measure of ‘continuity’. Given the main constructions of ‘continuity’ in definitions of UK general practice, it seemed appropriate to use a measure of personal continuity (an ongoing relationship) or longitudinal continuity (patterns of consultation). As well as being interested in patient characteristics associated with this, a particular concern was to examine how the context of patients’ registered practice influenced the experience of ‘continuity’. The aim was therefore to explore associations of measures of personal and longitudinal continuity with a range of patient and practice characteristics. Multilevel regression analysis of survey data was used to address this aim.

The second aim was to explore the ways in which patients and GPs valued (or did not value) different dimensions of continuity, and therefore to try to understand which aspects of continuity were important to individual users and practitioners in the context of UK general practice. Within this, two important concerns were how continuity related to other valued processes and outcomes of care, and how ‘continuity’ was used to construct particular images of the GP and general practice within the interview. The latter reflected my recognition of the rhetorical uses of continuity, and the potential for using this to better understand the social context in

which care was embedded in terms of relationships between GPs and patients, and between different professionals. Given the lack of a coherent or agreed definition of ‘continuity’, this aim was addressed using qualitative analysis of data collected using semi-structured interviews.

## **Organisation of the thesis**

Chapter one critically reviews the literature defining continuity, examining it in the context of the history of UK general practice and the sociology of the professions. The methodology or overall research stance that bridges the two studies is discussed in chapter two. Chapter three presents an exploration of the distribution of longitudinal and personal continuity in UK general practice, using multilevel regression analysis of a large patient survey.

Chapter four then discusses the qualitative methods and study design in detail, and chapters five to seven present the analysis of this data. All three qualitative data chapters lay out a more realist, thematic analysis of ‘continuity’, although the core of this is in chapters five and six. In contrast, chapter seven is predominately concerned with the ways in which GPs used ‘continuity’ to construct a particular professional identity, and their construction of boundaries between themselves, hospital doctors and practice nurses.

Data from both studies are drawn together in chapter eight, and the strengths and limitations of the research done discussed. Finally, the way in which participating GPs and patients constructed ‘continuity’ is compared with a recent formal definition, and areas for further research identified.

# **Chapter 1 – Continuity and general practice in the literature**

## **Introduction**

There is no clear agreement on the definition of ‘continuity’ in the health care literature, with different authors emphasising different dimensions. This chapter therefore starts by describing five definitions of continuity relevant for UK general practice, and examines how the dimensions chosen for inclusion at least partly reflect the health service organisational contexts and professional interests of the authors. The implication is that understanding ‘continuity’ in UK general practice has to be sensitive to these contexts.

Subsequently, the history of UK general practice is discussed, focusing on its development under the NHS. This is then placed in the wider theoretical context of the sociology of the professions, and particularly the work of Abbott (Abbott 1988). From this perspective, two interesting questions are whether the claims made for ‘continuity’ in terms of benefit to patients are supported by evidence, and whether individual GPs and patients share the corporate vision of general practice promoted by the RCGP. Both are considered in turn, and the implications of these literatures for the research done for this thesis outlined.

Even from this brief outline, it should be clear that several large and complex literatures are reviewed here. A comprehensive discussion of ‘the history of UK general practice’ or ‘the sociology of the professions’ could easily fill the same space as this entire chapter. What follows are therefore necessarily short treatments that draw on the various literatures where this is helpful to understand ‘continuity’ in UK general practice now, rather than definitive discussions.

## **Defining continuity**

The phrases ‘continuing care’ and ‘continuity’ have been used in the UK for most of this century to describe a central feature of general practice, although explicit

definition has usually been avoided (The Editor of the Lancet 1927, Anonymous 1955, Anonymous 1973). In this context, continuity often appears to be taken for granted as an ongoing relationship between a patient and their GP. The first attempts to define ‘continuity’ more formally came from North America (Hansen 1975, Hennen 1975, Rogers 1980, Wall 1981, Banahan 1981, Starfield 1980, McWhinney 1997). More recently, an increasing number of UK and European definitions have been proposed (Freeman 1984, Freeman 1997, Freeman 2001, Fleming 2001, Freeman 2001, Olesen 2002). It is notable that although research into ‘continuity’ and its effects is common to many disciplines, it is often general and family practitioners who have tried to conceptualise it and produce a universal definition. This section discussed four formal definitions of ‘continuity’, as well as a recent definition of UK general practice in which ‘continuity’ is deeply embedded (Rogers 1980, Freeman 1997, Starfield 1980, Freeman 2001, RCGP 2001).

### **Five definitions of continuity**

Writing for a North American audience, Rogers and Curtis define seven dimensions of continuity, modifying Hennen’s simpler schema (Rogers 1980, Hennen 1975). This is an early example of an attempt to produce a comprehensive definition of ‘continuity’ applicable to any context. Their seven dimensions are:

- The chronological dimension (also called longitudinality): health care is provided over long periods, which allows the accumulation of knowledge about individuals.
- The geographical dimension: one physician provides all care irrespective of site, including home, office and hospital.
- The interdisciplinary dimension: one physician provides care for all problems presented, patients seek “holistic care from a single source”.
- The relationship dimension: continuity of the doctor-patient relationship, and of other staff-patient relationships. Within this, providers may feel a sense of continued responsibility to patients.

- The informational dimension: reliant on adequate medical records, effective communication between providers, and good referral systems.
- The accessibility dimension: ensures that other forms of continuity are possible with convenient office hours, provision of out of hours care and so on.
- The stability dimension: stability of community, and patient or provider mobility facilitates or discourages other dimensions.

There are two particularly interesting features. Firstly, it includes aspects of healthcare that many would not call ‘continuity’. Accessibility is usually thought of as a separate concept, albeit one that may allow or hinder some kinds of ‘continuity’. This elasticity of the concept of continuity that allows it to enfold large areas of the process of health care is a feature of most suggested universal definitions. Secondly, good primary care is explicitly defined in terms of these seven dimensions. They then use the idea that only family practitioners are able to provide full continuity as a way of showing that only they can provide excellent primary care. So for example, when describing the chronological dimension they say:

“This implies care for people of all ages and exposes the limitations of continuity for paediatricians and internists.”  
(p124)

For Rogers and Curtis, ‘continuity’ is therefore both an obviously good way of organising health care, and a way of defining the value of family practice compared to other medical disciplines. Such dual use is common.

Freeman and Hjortdahl take a narrower focus on the two dimensions that they say are most relevant to UK and European general practice – longitudinal continuity and personal continuity (Freeman 1997). They define longitudinal continuity as “care given by one practitioner over a defined time” (p1870). This captures the idea of patients exclusively or mostly seeing one clinician over time. In the US and most of the Scandinavian literature this is usually called provider continuity, and is defined as a process of care. Personal continuity is defined as “an ongoing therapeutic

relationship between patient and practitioner” (p1870). This implies both empathy and personal responsibility on the part of the practitioner, and some kind of commitment from the patient. Personal continuity is therefore both a process that may have beneficial outcomes, and a beneficial outcome in its own right. Confusingly, this concept is what some US writers call ‘longitudinality’ (Starfield 1980, although not Rogers and Curtis above).

The relationship between longitudinal and personal continuity is complex. Clearly, some longitudinal continuity is necessary for personal continuity, but how much is not obvious and the authors cite evidence that this varies from patient to patient (Freeman 1994, Hjortdahl 1992). Longitudinal continuity is said to be the traditional way of delivering general practice, but they suggest that the focus should now be more on promoting personal continuity. However, most of their suggested methods for doing this appear to aim to increase longitudinal continuity. Although the longitudinal and personal continuity can be conceptually distinguished, they therefore appear interwoven in Freeman and Hjortdahls’ account.

This definition is interesting because it embodies the same assumptions as most of the formal definitions of UK and European general practice (RCGP 1972, Leeuwenhorst Working Party 1977, RCGP 2001). That is, an ongoing personal relationship between patient and doctor is placed at the centre of GPs’ work. By implication this is less relevant in hospital or specialist practice, and there are therefore taken for granted assumptions about the nature of different kinds of medical work. As with Rogers and Curtis, an apparently ‘academic’ definition of ‘continuity’ is related to professional definitions of general or family practice.

Starfield suggests a third construction of the idea of ‘continuity’ in an editorial accompanying Rogers and Curtis’ paper. She identifies two main dimensions - ‘longitudinality’ and ‘continuity’ (Starfield 1980). She describes longitudinality as the availability of a regular source of care, and a decision by a patient to seek care from that source. It requires action by both provider and patient, and requires a particular attitude on the part of both. It allows the accumulation of mutual knowledge, and facilitates communication. Others have described this “attitudinal

contract” as a defining feature of primary care (Banahan 1981). In contrast, she defines ‘continuity’ as a set of mechanisms for bridging different parts of an event or episode. It is therefore a “structural element (place, professional, medical record or computer)” (p117) for linking together events that need joining in some way. It is much less under patient control.

Unlike both Rogers and Curtis, and Freeman and Hjortdahl, Starfield seeks to construct a definition that includes all of health care. Rather than implicitly defining hospital and specialist care as discontinuous, she attempts to delineate different kinds of ‘continuity’ relevant for different circumstances. She suggests that ‘longitudinality’ or the creation of a relationship that has value in its own right and transcends any particular problem is the distinguishing feature of primary care. ‘Continuity’ matters for all care, but it is the focus of secondary and tertiary care where the key issue is follow up and management of the problem at hand. However, despite this conceptual separation, ‘longitudinality’ still seems to be a major potential source of ‘continuity’.

The fourth definition is the most clearly research focused. ‘Continuity’ was an important theme emerging from the listening exercise that informed priorities for the NHS R&D Service Delivery and Organisation programme (Fulop 2000), and the first programme of research commissioned was on continuity of care. Commissioning was preceded by a scoping exercise which presented a definition of continuity, and examined the relationship between different dimensions of continuity and various outcomes (Freeman 2001). This proposed a six part definition:

“The experience of a co-ordinated and smooth progression of care from the patients’ point of view (*experienced continuity*). To achieve this central element the service needs:

- Excellent information transfer following the patient (*continuity of information*)
- Effective communication between professionals and services (*cross boundary and team continuity*)
- To be flexible and adjust to the needs of the individual over time (*flexible continuity*)

- Care from as few professionals as possible consistent with other needs (*longitudinal continuity*)
- To provide one or more named individual professionals with whom the patient can establish and maintain a therapeutic relationship (*relational or personal continuity*)” (Freeman 2001).

Unusually among continuity definitions, it places the individual patient’s experience at its heart. This is implicit in other definitions in the sense that they assume that ‘continuity’ leads to better patient outcomes, but most discussion centres around professionals and service organisation. However, like Rogers and Curtis’ definition, some of the dimensions seem somewhat overarching. Although adjusting to an individual’s needs as they change over time may be a good thing, arguably this is not actually ‘continuity’ but one possible outcome of it.

Like Starfield, this definition is notable because the focus is on all of health care, not just general practice or primary care. Its main purpose is to lay out a research agenda. This is helpful because it reduces the extent to which particular dimensions are emphasised to prioritise particular specialities or ways of working (although the definition does take the broad structure of UK healthcare largely for granted). The language used throughout the thesis therefore follows their description of the broad dimensions of ‘continuity’.

The final ‘definition’ is not explicitly of continuity. However, as already indicated, the most recent statement of ‘core values’ for general practice has ‘continuity’ at its heart (RCGP 2001, RCGP Scotland 2000). It was written in response to the NHS reforms proposed after the 1997 general election (Department of Health 1997). Both the main UK and the Scottish responses follow similar patterns, although here only the former is explicitly considered. The following extended extract shows that a particular kind of ‘continuity’ is central to this definition of UK general practice.

“Continuity of care is highly prized by patients. Seeing a doctor who knows the patient and remembers key events in the life of that patient and the family, who will be there subsequently when required and who takes a longer term view of care and its outcomes is an important feature of primary care. Continuity has been shown to reduce use of

secondary care services and to improve patient satisfaction. Of course, GPs take holidays, retire and move on; not all patients see “their” GP. But continuity is supported by four crucial features:

[Firstly] the life-time clinical record is retained in general practice. The general practitioner is its guardian although we support the concept of a patient held and patient involved record. This record is the key to efficient and safe health care delivery. [Secondly] a population perspective is a key aspect of modern general practice, with health needs assessment, health inequalities and commissioning being addressed. [Thirdly] advocacy on behalf of individual patients, groups of patients and whole communities requires a variety of skills, an overview of the health and social system, the ability to detect and address inequalities and an involvement in commissioning. Good advocacy is based on a shared understanding, which in turn is greatly facilitated by continuity. [Fourthly] team working is now a key feature of general practice with professional isolation being less common. However the general practitioner fulfils a key role within the team and is a central player in the team success of primary care.” (RCGP 2001)

The explicit focus is on longitudinal and personal continuity – on patients seeing the same GP over time, and developing close personal relationships with them. Other dimensions of continuity are cast in a supporting role: ‘continuity of information’ in the guise of the general practice medical record; ‘cross boundary continuity’ as advocacy for individual patients and commissioning of secondary care; ‘team continuity’ as responsibility and leadership of the primary care team. This brings us full circle from Roger and Curtis’ definition of continuity that also defines a particular role for family practice in the USA, to a definition of general practice where continuity is explicitly marshalled to give GPs a central place in UK healthcare. The two documents are intended for different audiences. One is an academic paper for a largely US audience, the other a response to a UK policy document, but both share at least one purpose, the construction of family or general practice as a distinct medical discipline.

## What does the literature defining continuity tell us?

Twenty years ago, Starfield characterised this literature as a “continuous confusion” (Starfield 1980). Relatively little has changed since then, with various authors defining ‘continuity’ for different purposes in a range of settings. The particular conceptualisation presented appears to depend in part on who is doing the defining and for what purpose. Definitions from UK general practice and US family practice use continuity to construct particular images of general and family practice. By contrast, Starfield and the NHS R&D Scoping Exercise are more concerned with mapping out a wide range of possible dimensions as a means to construct a research and policy agenda.

When UK and US definitions are compared, it is also apparent that the way that continuity is conceptualised is dependent on context. This is clear when *cross boundary continuity* is juxtaposed with *geographical continuity*. Both relate to the relationship between primary and hospital care. In the UK, there is a division institutionalised by the National Health Service (NHS) which is near absolute. The potential discontinuity it creates is largely taken for granted, and the focus is on cross boundary continuity in the sense of mechanisms for managing the interface. In the USA, keeping the care of patients wherever they are treated is a particular concern of doctors, at least partly related to competition for paying patients. The idea of geographical continuity, or one doctor being responsible irrespective of where the patient is, has been used to resist pressure from the state and insurance companies to promote the creation of ‘hospitalists’. These are hospital based specialists broadly equivalent to UK hospital consultants, and represent a creation of a primary-secondary care interface similar to the one taken for granted in the UK (Manian 1999). The conceptualisation of ‘continuity’ and ‘discontinuity’ at the boundary between hospital and primary care is therefore partly dependent on the wider context of health service structure and culture.

This joint dependence on context and purpose suggests one reason why ‘continuity’ has no agreed definition in the literature. Rather than ‘continuity’ being a universal concept, it may be better to examine how particular health care systems work, and

how particular ways of organising care create ‘discontinuity’ and ‘continuity’. It seems unlikely that any health care system can avoid discontinuity, if only because a ‘solution’ to one discontinuity may have unintended consequences on other dimensions of continuity (Freeman 2001).

For example, the NHS has a formal boundary between primary and hospital care, but some of the mechanisms for managing this interface promote other forms of continuity. There is a formal referral system, which is associated with particular forms of communication. Because hospital doctors write to GPs when they see patients, it is possible to create a single medical record that is more complete than in most other countries. Informational continuity in UK primary care flows in part from the discontinuity of the interface (although other structures are also important such as list based registration with GPs, and the mechanisms for records to follow the patient when they change GP). To understand ‘continuity’ in UK general practice therefore requires an understanding of the history and current organisation of UK general practice.

## **Continuity in post war UK general practice**

This section focuses on UK general practice in the post war or NHS era, although clearly the structure of UK health care and the UK medical profession is partly determined by its pre-war history (Parry 1976, Loudon 1986, Digby 1999, Loudon 1998). As indicated in the introduction, this account is necessarily brief, and aims to highlight how the current organisation and status of general practice are an evolution from past structures. It relies largely on secondary historical and sociological sources.

The ‘general practitioner’ was first named early in the 19<sup>th</sup> century, and represented a further breach in the slowly decaying tripartite structure of English ‘medicine’ (Oxbridge educated physicians, barber-surgeons and shopkeeper apothecaries) (Loudon 1984, Loudon 1986). The new GP was usually a surgeon-apothecary, or held a degree from a Scottish university. However, whereas the surgeons successfully severed their link with barbers and created their own Royal College,

GPs remained tainted with the shopkeeper image since much of their income was derived from the compounding and dispensing of medicines (Loudon 1986, Digby 1999, Parry 1976).

The 1858 Medical Act unified the profession, but left the social, financial and internal status divisions between GPs, physicians and surgeons largely intact, with GPs generally having lower status and income. By the end of the 19<sup>th</sup> century, there was an oversupply of GPs, and in many areas the market for their services was dominated by buyers, often in the form of friendly societies and clubs appointing doctors on the basis of lowest cost. Consequently, many GPs were insecurely employed and financially troubled (Digby 1999).

Because of fears over who would control their work, and disputes over the appropriate capitation fee, most GPs fiercely resisted The National Insurance Act of 1911. In the event, GPs dominated local National Insurance Committees, and National Insurance fees became a key source of the majority of GPs' income (Digby 1999, Honigsbaum 1979). Nevertheless, this did little to change the declining status of general practice within medicine, a trend also seen in the USA and in much of Europe (Loudon 1984).

However, unlike in other countries, general practice survived in the UK. In historical accounts, this is usually credited to the creation of National Insurance, and even more so the NHS. These gave UK general practice a secure institutional position (Honigsbaum 1979, Honigsbaum 1985, RCGP 1992). Despite this though, there was an air of crisis and lack of purpose about general practice in the 1950s and early 1960s that this structurally focused account cannot easily explain (even allowing for early disputes over GPs' pay (Honigsbaum 1989)).

In a more sociological analysis, Armstrong argues that the crisis of identity was because general practice defined itself, and was defined by others, in terms of hospital medicine (Armstrong 1979, Armstrong 1983, Armstrong 1985). In his analysis, the essential issue is the construction of knowledge. The hospital was more than just a building or a place of practice. It was also where medical knowledge and

power were created (Armstrong 1979, Armstrong 1983, Armstrong 1985, Reiser 1978, Sturdy 1992).

He follows Foucault and others in identifying a change in medical epistemology from the early 19<sup>th</sup> century onwards that created 'hospital medicine' (Foucault 1973, Jewson 1976). 'Hospital medicine' was more than just a new place of work. Rather, it was a new concept of disease as a localised lesion within the body. The work of the doctor became the application of a new 'clinical gaze' to locate such lesions within the body of the patient. Patients themselves were therefore reconceptualised largely as the canvas on which disease was painted, a change facilitated by the creation of the hospital where many bodies (alive and dead) were available for study.

Foucault contrasts 'hospital medicine' with an older 'bedside medicine', in which disease and illness were seen as disturbances within individuals, and diagnosis relied on the description of illness by the patient (Foucault 1973). The medical encounter took place in the patient's home, at the patient's request, and the doctor was directly reliant on the patient's patronage for income. Armstrong argues that 'bedside medicine' did not disappear, but persisted in GP-patient relationships where patients (or organised groups of patients such as friendly societies) retained considerable powers of patronage through direct payment for services (Armstrong 1979).

For Armstrong, 'hospital medicine' created new power relationships, with both patients and GPs becoming clients of hospital knowledge. The GP-hospital relationship was managed in part by the growth of a relatively strict but largely informal system of referral. The GP conceded control of medical knowledge, but retained considerable economic power over consultants via this referral system (Loudon 1978). The ascendancy of hospital medicine was further reinforced by developments in medical knowledge in the early 20th century (Armstrong 1979). First, hospitals were the site of the laboratory, which offered new techniques of clinical gaze into bodies (Reiser 1978, Jacyna 1988, Sturdy 1992). Second, the hospital sector grew, both in terms of inpatient and outpatient facilities (Loudon 1978). Both these developments promoted specialisation, with more areas of work previously done by GPs taken over by specialists, including obstetrics, infant welfare

and public health (Honigsbaum 1979). Consequently, the role of the GP became increasingly unclear.

In the 1950s and 1960s, GPs' work was commonly conceptualised as sorting the wheat of disease from the chaff of 'trivia', and referring the former for hospital care (Armstrong 1979). 'Trivia' and the difficulty of applying their medical training in general practice was identified as the main source of low morale among GPs. A common proposed solution to this was to call for access to NHS beds and hospital work as a way of reconnecting general practice to hospital (and implicitly 'proper') medicine (Anonymous 1955, Grant 1957, Honigsbaum 1979). However, this never seemed likely to happen at any point, and the lack of a clear and valued role for GPs seemed an insoluble problem.

The NHS removed GPs economic dependency on patients, extending the financial security provided by earlier state mediation in the doctor-patient relationship in the form of the 1911 National Insurance Act (Digby 1999). However, by institutionalising the general practice/hospital divide, it also removed the 'ladder' of progression to specialist that GPs could theoretically have ascended previously (Stevens 1966, Honigsbaum 1979). However, as well as making explicit the problem of GPs having no clear or acceptable role, these can also be seen as creating a space within which a new conceptualisation of general practice was possible. Armstrong suggests that this occurred via a change in the way that disease was conceptualised within a new general practice epistemology, which he called 'Biographical Medicine'.

He describes this as a "redesignation of the ontological status of symptoms from being indicators of pathology to being a part of the pathology itself" (Armstrong 1979 p5). This constructed a wider field of work for GPs that goes beyond the technical search for physical pathology that the hospital performed. In 'biographical medicine', the patient and their life is at the centre (others have called this whole person or biopsychosocial medicine). Patients are opened up to a broader scrutiny that includes their personality, and their everyday lives. Patients present 'unorganised' symptoms to GPs, who have to decide if these represent a problem

amenable to technical intervention, or one that they can manage using themselves as the therapeutic agent. The relationship between GP and patient is now a central diagnostic and therapeutic tool. GPs themselves are also opened up to scrutiny, since they are now exhorted to examine, discuss and use their feelings and emotions in the consultation.

Armstrong also describes a second shift in the conception of disease. In the 19<sup>th</sup> century, disease was seen as spatialised, and located within the space of the patient's body as a distinct lesion. The shift was then to a temporal location where disease ceases to be episodic, and is instead seen as chronic (Armstrong 1983, Armstrong 1985). It includes the idea that even the apparently healthy may have hidden risk of disease within them. This temporal location of disease again places an ongoing relationship between patient and GP centre stage. He places this in a Foucauldian analysis of linked new forms of surveillance such as the social survey and medical screening. From the point of view of general practice, he identifies increasing discourses of 'prevention' as reflecting this shift. These include the claim by the RCGP that because GPs 'know' their patients, they are uniquely placed to implement individual preventive strategies (RCGP Working Party 1983).

For Armstrong, the 'new' general practice therefore had a number of important features. It involved a change in the conceptualisation of disease, patients and doctors, albeit one that Armstrong says is partly shared with other new medical disciplines of the same era such as paediatrics and geriatrics (Armstrong 1983). This created new forms of medical knowledge which general practice could claim as its own. The new conception was not of a doctor unnecessarily burdened with 'trivia', but of an expert in 'early diagnosis' who was able to manage patients who were either failed or damaged by hospital medicine (Balint 1957, Hodgkin 1963, Balint 1965). General practice was no longer 'minor medicine', but claimed unique knowledge and skills defining a specific area of practice. The ongoing relationship between patient and GP built and maintained in the 'consultation' was at the heart of this new conception.

Conceptual changes also allowed new constructions of the relationships between general and hospital practice. Rather than being passive filters sorting disease to be referred from trivia to be retained, the new GP was a gatekeeper, and thus an essential determinant of hospital and health service efficiency and cost containment. Because of political concern to contain health care costs, an important effect was to increase the status of general practice in the eyes of the state (Starfield 1994). Linked to this has been the creation of clinical teams in the community, now called the primary health care team (van Weel 1994, Fleming 2001). This initially involved the attachment to specific general practices of district nurses, health visitors and other staff employed by local authorities or community health services. It reproduced the hospital division of labour in the community, since GPs were usually conceived of as leading these teams (Calnan 1991).

These new conceptualisations of general practice built around the centrality of the doctor-patient relationship were accompanied by changes to the administration of the health service and GPs' remuneration in the mid-1960s (the Family Doctor Charter). The effect of a new sense of purpose, and increased status in the eyes of the state was to create what is now often described as the "happy years" of general practice, a golden age ended by increasing state intervention in the late 1980s (Morrell 1998 p12).

This indicates a weakness in Armstrong's analysis where the focus is solely on the reorganisation of medical knowledge. For him, the structure of medical care and health services is seen as a consequence of changes in medical knowledge. Additionally, the state and NHS management appear as largely passive players. Although more plausible in the early 1980s, the assumption is harder to maintain now. My own preference is to conceive of there being an interaction between structure and knowledge. Changes in structure or technology can create new spaces for the construction of medical and other knowledge, but equally the construction of new knowledge can promote changes in structure.

The next section therefore explicitly returns to 'continuity', and its conceptualisation in UK general practice. Subsequently, structural changes to general practice in the

1990s are described, and the ways in which the state and the profession have marshalled various conceptualisations of ‘continuity’ is then examined.

### ***Changing conceptions of ‘continuity’***

Armstrong argues that the construction of Biographical Medicine created both the ‘doctor-patient relationship’ and ‘continuity’ (Armstrong 1982, Armstrong 1985). Like Foucault writing about the change from Bedside to Hospital Medicine in revolutionary France (Foucault 1973), he creates a sharp break from the past with a discontinuity or revolution in conception and language. His evidence for this includes the increase of research into continuity in the 1970s, and published concerns that personal care and continuity were being lost (Pinsent 1969, Anonymous 1973, Gray 1979).

By contrast, Loudon has argued that laments for a lost golden era of close personal bonds between GP and patient first appeared in the early 19<sup>th</sup> century soon after the ‘general practitioner’ was named (Loudon 1984). They have continued to be regularly expressed ever since (Batten 1956, Scott 1965, Weatherall 1994, McCormick 1996, Taylor 1997, Baker 1997, Haslam 1999). It is also apparent that there is a rhetoric of ‘continuity’ as central to general practice present in documents prior to the 1960s (The Editor of the Lancet 1927, Rose 1951, Loudon 1984).

What seems to be different pre-war though, is that the old continuity was focused on the “continuing care” of the problems of the individual patient, with those problems largely conceived of as localised physical disease (The Editor of the Lancet 1927). Although close personal bonds between doctor and patient were also emphasised, these were secondary to the medical tasks of dealing with disease. An important but rarely explicit reason for emphasising ‘continuing care’ before the NHS, was that it meant keeping the care of fee paying patients (Loudon 1984, Digby 1999).

The formation of the NHS greatly weakened the economic rationale for ‘continuing care’, but the rhetoric remained available for use in the construction of a new identity for general practice within the NHS and the wider medical profession. The new knowledge and identity created have been increasingly used to control entry to

general practice via the introduction of compulsory postgraduate training in 1980 and the requirement to pass a qualifying examination in 1997 (RCGP 1972, JCPTGP 2002, NOSA 2002).

The new 'continuity' maintained the focus on the individual patient, and was associated with other claims around prevention and particular forms of holism. Additionally, it allowed a new set of claims around the co-ordination and cohesiveness of care, reflected in the ideas of gatekeeping and teamwork. These changes in conceptualisation and knowledge have then been available for use by different groups in debates and disputes about the appropriate structure and reorganisation of health care.

The last twelve years have seen important changes to the structure of general practice and primary health care, within the context of major change to the NHS as a whole. In the 1980s, state sponsored reform was mainly directed at the hospital and district/regional administrative structures (Klein 1989). However, by 1990, political and managerial attention was also turning to general practice and primary care. Reflecting government belief in the power of economic incentives through markets, two major changes imposed were the new GP contract, and GP fundholding (Morrell 1998).

The 1990 GP contract aimed to introduce more competition between general practices, and to use financial incentives to encourage particular forms of care like health promotion. Fundholding was seen as helping drive the internal market for secondary care, and preventing providers forming cartel like relationships with the monopoly health authority purchasers who had previously directly managed them. Although fiercely resisted by some GPs, it was taken up by many others with enthusiasm because of the financial benefits, and because it potentially changed the balance of power between GPs and hospitals (Llewellyn 1997).

The more recent reforms have largely dismantled the internal market, and the GP contract is currently being re-negotiated (Department of Health 2001, Department of Health 1997, Scottish Office 1998, BMA General Practitioners Committee 2002). The changes are complex, and the effects of their implementation will not be fully

clear for some time. There is also increasing divergence between the different countries of the UK (Parston 1998).

A central concern of recent reforms is with access. For hospitals, the focus has been on various kinds of waiting list especially those for outpatient appointments, surgery and other rationed non-emergency treatment. These have long been politically important, were the subject of pledges in the 1997 general election, and have seen repeated media and political interest since. An important purpose of the NHS reforms has been to address the political 'problem' of access, with some arguing that one aim may be to devolve responsibility for waiting lists away from politicians (Ham 1998, Chisholm 1998).

Access in primary care has been less politically sensitive, but the proposed standards for waiting times for GP and primary care appointments, and the creation of NHS Direct/NHS 24 and primary care walk in centres represent major changes (Department of Health 1997, Department of Health 2001). Many of these reforms strongly encourage a reconfiguration of professional roles, particularly for community pharmacists and primary care nurses who are envisaged as both doing new work, and taking over significant proportions of the work currently done by GPs. These recent developments follow a major increase in the employment of practice nurses by GPs since the early 1980s, themselves significantly driven by the requirements of the 1990 GP contract for health promotion and chronic disease management (Walby 1994, Williams 2000a).

Ideas of continuity are more implicit in recent reforms (Scottish Office 1998, Department of Health 1997, Department of Health 2001). Local commissioning and other strategies emphasise the co-ordination of different parts of the health and social care system. Bodies like the National Institute of Clinical Effectiveness and Quality Improvement Scotland support and guide local planning, and so effectively emphasise consistency because clinical governance works within a nationally set framework. Other national initiatives like NHSNet and the electronic health record prioritise the flow of information about an individual patient and therefore potentially promote co-ordination and consistency across several sites of care. Guidelines,

shared records and defined roles allow teams to function in a co-ordinated manner. The vision appears to be of a system that allows a smooth, co-ordinated patient journey through it. What is largely absent in these policies are strategies that promote longitudinal and personal continuity.

‘Valuing General Practice’ is a response to these proposals (RCGP Scotland 2000, RCGP 2001). It endorses many of the government’s plans such as primary care commissioning of secondary care services and better co-ordination of care. However, although much of the rhetoric is shared, the emphases and implications differ. In Valuing General Practice longitudinal and personal continuity are effectively marshalled to place general practice both at the centre of primary care, and at the heart of the whole NHS with responsibility for managing much of what happens in secondary care (see quotes on p4 and p15-16). The personal link between patient and GP is held to be central to the effectiveness of general practice in particular, and of UK primary care in general across a range of outcomes (cost, efficiency, patient preference and so on). By contrast, access is much reduced in prominence, and is tied to ideas of equity and need. The latter is elsewhere contrasted with what some patients might ‘want’. Implicitly, access is cast as a problem of inappropriate wants of patients and lack of resources from government.

An interesting change is that whereas Armstrong identified the problem of general practice before 1980 being its relationship with hospital medicine (Armstrong 1985, Armstrong 1979), this is largely absent from these more recent general practice documents. In Valuing General Practice, the relationship with the hospital is encompassed by general approval for the idea of GP commissioning and management of the primary-secondary care interface as gatekeepers (RCGP Scotland 2000, RCGP 2001). It is only significantly discussed as problematic in that the new arrangements may not be adequately resourced. NHS Direct and walk in centres are not directly addressed, but what is prominent is discussion of the nature of teamwork and relationships with nurses in particular. An entire section is devoted to “the extent to which a GP’s work can be done by others”. In particular, GPs are claimed to have “complex clinical skills” which nurses lack, and personal continuity with a GP is marshalled to support the proper application of this unique set of skills.

There is therefore an increasingly explicit claim to co-ordination and overall responsibility for care, which is similar to the more implicit definitions of 'continuity' in the government's modernisation plans. However, in the RCGP/BMA account, the longitudinal and personal continuity the GP is said to have with the patient is used to justify the role of the GP in these terms. This is not a prominent feature of older definitions of UK general practice (Rose 1951, RCGP 1972), although it has parallels with important strands of general practice thought like Balint (Balint 1957, Balint 1965). Arguably, it is a claim that is now easier to make because the state is actively driving new relationships between general practice and the hospital, and between GPs and other professionals.

Armstrong is persuasive in his analysis of changing conceptualisations of disease and general practice work, but there is also more continuity in rhetoric than he allows. 'Continuity' is a changing concept, flexible enough to allow different uses appropriate to changing circumstances. Rather than seeing continuity as solely fabricated by new discourses of prevention or the temporal localisation of disease, it may be better to think of these and other changes in context creating additional possible meanings for existing ideas and rhetorics. These are available to GPs and others such as the state or managers to use for their own purposes. Additionally, although his analysis is strong on changes in the conceptualisation of disease, it is weaker on why these have happened, or how individuals and groups of individuals exert any effect. It does not easily account for the complex interplay between professionals, state and public. This is better done using theories that form part of the sociology of professions' literature.

## The sociology of professions

What follows is a short treatment of a large and complex literature. My interest in the sociology of the professions came from the rhetorical uses of ‘continuity’ in definitions of general practice and policy documents, and recognition early in the qualitative study of similar use by GPs to construct a particular professional identity. Therefore what I was particularly looking for in this literature was a middle level theory to help organise and contextualise the analysis of the qualitative data.

Before the mid 1960s most research on the professions took a functionalist perspective, treating professions as a necessary, essentially benign and disinterested part of the established order of society. Subsequently, sociologists have largely rejected this conceptualisation, and begun to address professional self-interest, and to ask how professions and professionals maintained their position within society. Freidson’s concept of professional dominance has played a central role in this work (Freidson 1970a, Freidson 1970b). Writing primarily about US medicine, he defines a profession as an occupation that dominates its field of work, both in terms of controlling other subsidiary occupations and in terms of having widespread cultural legitimacy. Associated with dominance is autonomy, in which professions have a near complete control over day to day work and lack of external accountability.

Two competing concepts starting from the same assumption of the professional dominance of US medicine in the 1960s are deprofessionalisation (Haug 1973) and proletarianisation (McKinlay 1985, McKinlay 1988). Both assume that medicine increased its autonomy and dominance as part of a process of ‘professionalisation’. This reached its peak in the US in the late 1960s, and there is evidence for a slow decline in professional power since then. These include changes in the way that doctors are paid (increasingly as salaried employees in large corporate organisations), increasing specialisation making it easier to routinise professional work, and increasing consumerism and reduced trust in medicine. The proletarianisation thesis puts these changes in the context of a Marxist analysis of class structures and historical processes. However, in 1988, Haug herself commented that there was as yet insufficient evidence to accept or reject her original 1973

deprofessionalisation hypothesis (Haug 1988). Other Marxist analysts have also rejected the concept of proletarianisation applied to doctors (Navarro 1988).

This highlights the difficulty that theories that start with professional dominance as their initial assumption face in trying to account for change. A dominant occupation like medicine is a profession; non-dominant occupations like nursing are not. Any threat or change to dominance therefore implies professional decline. This is the source of the criticism of the concepts of 'dominance' and 'autonomy' as too ambiguous to be useful (Elston 1991, Coburn 1992). Some see UK health service changes since 1980 as resulting in a clear decline in professional autonomy and power (Harrison 2000). Others take a more nuanced view and suggest that declines in some kinds of autonomy or power are accompanied by increases in others (Elston 1991, Calnan 1995).

For Elston, autonomy has three main elements – economic (the ability to determine remuneration); political (the ability to control the policy agenda); and clinical or technical (the ability to control day to day work) (Elston 1991). In the UK, the 1990 general practice contract and the internal market were imposed, and in that sense overrode any political, and to some extent economic autonomy that GPs and hospital doctors had. However, general practice fundholding represented a potential significant increase in the power and autonomy of GPs, since it restored some of the financial influence over specialists and hospitals that GPs had lost in 1948 (Llewellyn 1997). More recent changes include the threat of increasing control of GPs' work via clinical governance and the proposed 2003 GP contract, and the possibility of increased influence over secondary care via commissioning (in some UK countries at least). The relationship between the state and medicine, or groups within medicine like GPs, cannot therefore be seen in all or nothing terms. The state can simultaneously limit and enhance professional autonomy and powers (Larkin 1995, Light 1993, Calnan 1995).

The issues addressed by the theories of professional dominance, proletarianisation and deprofessionalisation are clearly relevant, but I do not find the concepts as currently developed easy to apply to an analysis of UK general practice. In part, this

is because they are too all or none. Either medicine is dominant or it is not, proletarianised or not and so on (Annandale 1998). An alternative view at a macro level is the concept of 'countervailing powers' (Light 1993). The focus is on:

“the interactions of a few powerful actors in a field in which they are inherently interdependent yet distinct. If one party is dominant ... its dominance is contextual and likely to elicit countermoves eventually by other powerful actors in an effort, not to destroy it, but to redress an imbalance of power.” (Light 1993 p71)

Therefore, understanding any single profession or occupational group requires it to be considered in the wider context of other occupational groups, the state, the public and patients. An attractive and potentially useful alternative conceptualisation of the relationship between professions, the public and the state is offered by the work of Abbott (Abbott 1988).

### **The system of professions**

Comparative analysis of different professions in different countries at different times is the basis for Abbott's System of Professions (Abbott 1988). Abbott's focus is on the work that professionals do, rather than organisational structures that surround them such as licensing or ethics codes. He maintains that different professions compete for control of work, and this brings them into conflict. He argues that each profession is defined by its relationship with other professions and occupational groups, and that any analysis has to account for an individual profession within the overall 'system of professions'. Abbott suggests that the same ideas can be used to analyse intra-professional relationships.

“The central phenomenon of professional life is thus the link between a profession and its work, a link I shall call jurisdiction. To analyse professional development is to analyse how this link is created in work, how it is anchored by formal and informal social structure, and how the interplay of jurisdictional links between professions determines the history of the individual professions themselves.” (Abbott 1988 p20)

A claim to control particular work is a claim to *jurisdiction*. Such claims are used to contest boundaries with other professions doing similar work, and are fought and

won in three *arenas*: the legal or administrative world of legislatures and courts; the public world of media representation and public understanding; and the actual work site of professional practice. In terms of clarity, there is a gradient with the legal arena being the best-defined, but often bearing little relation to the murkier world of actual practice. Such claims are only likely to be successful in the long term if they are based in the actual work done. Abbott suggests that changes in what is done in the workplace lead to changes in public perceptions over some years, and to changes in legal or administrative status over decades.

From this perspective, documents like Valuing General Practice (RCGP 2001) can be seen primarily as claims for jurisdiction in the legal/administrative arena, although they also serve functions in the public arena since they are made available to the media and are linked to other documents intended to promote at least limited public discussion (Mihill 2000). These claims are partly justified by assertions of particular benefits from the personal and longitudinal continuity that is said only GPs can provide.

In Abbott's analysis, a range of factors, both external and internal to the profession can trigger jurisdictional disputes. External factors include the creation of new areas of work, for example by technological or social change. New or existing professional groups can claim these. In the case of existing groups, claiming such areas may weaken or destroy jurisdictions already held, creating potential vacancies for other professional groups to contest. The proposed re-organisation of the NHS is an example of an external trigger. New forms of primary care delivery are proposed (telephone advice centres, walk in centres), new forms of technology are supported (NHSNet, the electronic patient record), and new forms of organisation are created (primary care trusts, primary care commissioning). The state, rather than the profession have driven these. They offer GPs both opportunities (increased control over hospitals via financial control) and threats (new roles for nurses and increased control over their own clinical work through clinical governance). These simultaneously threaten some aspects of GPs' autonomy and power, while enhancing others. Both create opportunities for new jurisdictional disputes with other professional groups.

Resolution of jurisdictional disputes can be by a number of *settlements*. Full jurisdiction broadly equates to Freidson's professional dominance. At the other extreme is no jurisdiction despite the claims of particular occupations. Between are a number of other settlements including subordination (of which nursing and the paramedical professions are the classic example), formal division of labour, intellectual control, advisory control and client differentiation. Settlements are of varying stability. For example, intellectual control is where formal control of knowledge remains with one profession, but others may freely practice it. This is likely to be difficult to maintain since these others are likely to either be absorbed, or develop their own abstract knowledge systems to define their work.

Arguably, intellectual control was the form of jurisdiction that hospital medicine had over general practice. The changes in conceptualisation of disease and the task of general practice medicine that Armstrong identifies can then be seen as a manifestation of a jurisdictional dispute between GPs and hospital doctors, with an at least partially successful attempt by GPs to redefine their work (Armstrong 1985, Armstrong 1979). More recent developments that can be analysed in terms of intra-professional competition include the idea of a primary care led NHS, with state promotion of increased financial and planning influence of primary care (and general practice in particular) over hospitals (Allsop 1995, Meads 1996, Llewellyn 1997).

There is a growing body of research about how other health professions have attempted to change their roles, and the response of GPs and other doctors to such attempts (Broadbent 1998, Williams 2000a, Edmunds 2001). These new roles produce a potential problem for GPs, since they risk losing control over some of the work they currently do. This is especially true in the case of nurses, and practice nurses in particular whose claimed expertise and actual work overlap significantly with GPs. Both nursing and general practice share a rhetoric of holism or whole person medicine, and practice nursing is increasingly important in delivering chronic disease care (Williams 2000a). Importantly though, practice nurses are usually employed by GPs who therefore have considerable control over the work they do. This is not the case when nurses are working in the new primary care organisations like NHS Direct. How this will evolve is uncertain, but it seems likely that whereas

the relationship with hospital medicine dominated past debates about the nature and role of general practice, relationships with other professions are likely to become increasingly important in the future (Annandale 1998).

From this perspective, professional dominance can be seen as a special case of a more general thesis, and it is easier to conceive of change within a single conceptual framework. Unlike other theories, it makes explicit the difference between how professional claims operate at individual or workplace level, and at higher levels of social structure (Annandale 1998). However, like Freidson, Abbott is also criticised as paying too much attention to inter-occupational competition at the micro- or meso- level. Consequently, the 'system of professions' is more effective at describing how certain professional groups win or lose jurisdictional disputes, than why they do in terms of wider social theory (Coburn 2000, MacDonald 1995). Nevertheless, as a middle level theory, it has considerable explanatory power for UK general practice and the place of 'continuity' within it.

More generally, Abbott can be located in a broadly neo-Weberian research tradition (Saks 1983, Calnan 1991, Haug 1973, Larson 1977, Freidson 1994, Freidson 1970a, Freidson 1993, Witz 1992, MacDonald 1995). Abbott shares a focus with this tradition on how occupational groups achieve control over the market place for their services. An important way of doing this is to seek control over who can become a member of the group, and to limit their numbers to increase the market value and status of members. Larson emphasises the importance of the 'professional project', where professionals (and especially elite professionals) work as a group to achieve a shared set of objectives (Larson 1977). These objectives include monopoly over the market for particular professional services, and enhancing the economic and social position of the profession. However, they also may give "existential meaning and moral value" to the individual professional (MacDonald 1995 p188). Although Abbott does not explicitly site himself within this research tradition, his analysis of competition between professions, and of control of jurisdictions requiring claims about control of knowledge to be accepted by a variety of audiences is consistent with it.

The discussion above contextualises the way in which ‘continuity’ is used by corporate bodies of GPs like the RCGP and the BMA to claim a particular role and status within UK health care. ‘Continuity’ and particularly ‘personal continuity’ can therefore be seen as part of a professional project for general practice. ‘Continuity’ is the basis for a claim to jurisdiction over particular kinds of work. The main audience for these claims in the documents examined here is the state. However, for them to be accepted they must have some basis in the work actually done by GPs, and be at least partially accepted by the public (Abbott 1988). One obvious question is whether the claims made are valid. Does ‘personal continuity’ or ‘longitudinal continuity’ lead to better outcomes for patients? The next section addresses this. A second question is whether the claims made are accepted. Based on the documents presented above, the state appears at least partly sceptical. However, there has been relatively little place so far for either the individual patient or the individual GP (who may not necessarily share the values espoused by their corporate representatives). This is subsequently discussed.

## **Does ‘continuity’ lead to better outcomes?**

The existence of multiple competing definitions makes it difficult to answer a question like ‘does continuity work?’ There are a large number of studies addressing this issue, but they examine implementations of many different kinds of ‘continuity’ in many different contexts. Freeman et al (2001) have recently reviewed this body of literature, but since UK general practice definitions emphasise longitudinal and personal continuity, this is the focus here. However, there is relatively little research on the association of personal or longitudinal continuity and outcomes in UK general practice. Given the likely importance of the context of the health care system, generalisation from other countries and settings may be problematic.

In biomedical research, the design usually accepted as ‘best’ for deciding if a well defined intervention works is the randomised controlled trial (Sackett 2000). In organisational research where the intervention is usually complex, this is more debatable (Fulop 2001, Campbell 2000, EPOC 2003). This section therefore addresses evidence from randomised controlled trials, and then from observational

studies. Randomised controlled trials (RCTs) usually use changes in longitudinal (provider) continuity as their intervention, because it is easier to construct a well-defined intervention. This discussion excludes RCTs where there are also other major changes in service organisation such as increasing the range of other services in the intervention site (for example Katz 1968, Gordis 1971, Alpert 1976), or where increased longitudinal continuity is associated with changes in the professional actually providing care (for example, studies of team midwifery Vs routine obstetric care Flint 1989, Rowley 1995).

There are two reasonably strong studies in methodological terms. Wasson et al randomised 776 elderly men attending a Veteran's Administration medical outpatients department in the USA to high and low longitudinal (or provider) continuity groups. Patients in the high longitudinal continuity group were more satisfied with their care, and had lower overall rates of hospitalisation with shorter lengths of stay. Interestingly, they had more (short) elective admissions and fewer (long) emergency admissions despite no significant differences in a range of other markers of the process of outpatient care. The authors suggested that doctors seeing patients they knew well responded more appropriately to subtle changes in their condition (Wasson 1984).

Becker et al randomised families with children to attend two otherwise identical paediatric clinics in a US hospital (Becker 1974a). In one, patients saw the first available member of staff. In the other, they only saw staff (receptionists, nurses, doctors, and social workers) from the team to which they were assigned. Patients and staff in the high longitudinal continuity group were more satisfied and many measures of the process of care were better (for example, lower rates of broken appointments and higher rates of disclosure of behavioural problems). However, mothers in the high continuity group sought advice more often, which was interpreted as them being less self reliant. In part, this may be because patients perceived the continuity clinic as more friendly and accessible.

There are many more observational studies. These used a mixture of measures of longitudinal continuity and measures of personal continuity like patient or doctor

assessments of the quality or nature of the relationship. They explore the association of these measures with a range of outcomes.

The largest UK study of over 25,000 patients in 53 general practices found that patients seeing a doctor who knew them well was the single most powerful predictor of the patient feeling 'enabled' after the consultation, although there was no multivariate analysis to adjust for confounding factors (Howie 1999). Two smaller studies have shown that patients who say they know the doctor well were more likely to complete courses of antibiotics (Ettlinger 1981), and that where GPs said they had good 'general' knowledge of a patient, they were better at diagnosing urinary tract infection (Nazareth 1993). However, a UK study of people with epilepsy in general practice found little evidence that longitudinal (and possibly personal) continuity was associated with better processes of care, although the methods used in the study were not well described (Freeman 1994).

In a large observational study in Norwegian general practice, Hjortdahl found that patient satisfaction with care was most strongly associated with patients' and GPs' assessment of the depth of their relationship (a measure of personal continuity). There were weaker associations with the duration and number of contacts (measures of longitudinal continuity) (Hjortdahl 1992, Hjortdahl 1992). Doctors described their management of patients they knew well as different from those they did not in terms of it saving time in the consultation, using fewer tests, using a 'wait and see' policy more often, but also prescribing and referring more (Hjortdahl 1992, Hjortdahl 1991).

The US observational literature is larger, although again most of it refers to secondary care (see for example (Raddish 1999, Christakis 1999, Ettner 1999, Mainous 1998, Gill 1998, Starfield 1976, Breslau 1982, Breslau 1981, Breslau 1976, Becker 1974b, Roos 1980, Charney 1967, Alpert 1964)). Consistent with the European observational literature and the RCTs, studies that examined the association of longitudinal continuity with satisfaction generally found a positive correlation. However, the only longitudinal study found that dissatisfaction in one year was associated with provider change in the next, thus questioning the validity of

the assumption that continuity leads to satisfaction rather than vice versa (Marquis 1983). However, this is not fully consistent with the evidence of the RCTs, and the relevance of this to the UK is unclear, since changing practice is unusual unless patients move house.

Most of these studies report small to moderate beneficial associations of a range of outcomes with increases in longitudinal continuity measured in a variety of ways. These include better recognition and response to problems previously personally dealt with by doctors (Starfield 1976), better recall of the doctor's advice and higher compliance (Becker 1974b, Charney 1967), fewer missed appointments (Alpert 1964), reduced admission to hospital (Raddish 1999, Mainous 1998, Gill 1998), reduced use of emergency departments (Gill 2000, Christakis 1999) and lower rates of prescribing (Raddish 1999). A few studies show no difference between groups with different levels of longitudinal continuity (for example, Roos 1980, Ettner 1999). None show negative associations between longitudinal continuity and outcome. Establishing causality in observational studies is problematic and it is plausible that sicker patients are less likely to receive longitudinal continuity because of their different health needs (although most studies attempt to control for this).

Although only presented briefly here, my overall interpretation of this literature is that there is consistent evidence that patients are more satisfied with their care if they see fewer professionals, and if they have a personal relationship with those professionals they do see. There is some evidence that professionals are more satisfied with their work under the same circumstances. The evidence of association with other outcomes is weaker. This conclusion parallels the assumptions of the NHS Service Delivery and Organisation research programme into continuity of care. The commissioning briefs emphasised a focus on outcomes other than patient satisfaction, presumably because they accepted that there is a demonstrated association with the latter (NHS R&D 2001).

There is therefore some support for the claims made by UK general practice for the benefits of longitudinal continuity, although little of this research addresses personal continuity directly. However, the relative lack of UK based research into the benefits

of ‘continuity’ is striking, and it is ironic that much of the support for this ‘core value’ is derived from research done in specialist or hospital settings in the US. The strength of the claim is arguably out of proportion to the evidence for it, although the problem is as much one of absence of evidence as evidence to contradict the claims being made. The next section addresses whether individual GPs and patients share the core values espoused by GP organisations like the RCGP, and make the same claims for them.

## **Official rhetoric or the belief of individual GPs and patients?**

Recently, some GPs have argued that personal continuity is increasingly irrelevant and should be replaced with continuity with the team (Fleming 2001, Olesen 2000). The degree to which individual GPs agree with the vision promoted by the RCGP, BMA or the state is therefore open to question. Equally, since the public and patients leave fewer written traces to examine, analyses based solely on documents are likely to underplay their perceptions. However, there is research evidence that at least some GPs share the ‘core values’ espoused, and that at least some patients value related aspects of their care.

Cartwright’s two surveys of general practice in 1964 and 1977 described what GPs enjoyed most about their work in both surveys in terms of “contact with people and humanity, knowing people over time, establishing relationships with patients, trust, giving continuous, ongoing care” (Cartwright 1979 p11, Cartwright 1967). This broadly equates to longitudinal and personal continuity. However, only 46% and 45% of GPs in 1964 and 1977 respectively identified this as a major source of enjoyment. Those who did not were more likely to identify ‘trivia’ as frustrating, and there was little change in the proportion that described their work in these terms.

More recently, Calnan has also used survey methods to explore how GPs conceived their role, and found that GPs could be characterised in terms of having a predominately medical or social orientation. The former focuses on disease, the latter on a more holistic view of the patient as a person, with greater value put on the relationship. There was much more variation than might be assumed from readings

of official documents such as those produced by the RCGP (Calnan 1988a). Other survey work exploring GPs' attitudes also suggests greater variation than in official accounts (Bucks 1990). In Calnan's study, younger GPs, female GPs, those qualified in the UK, the vocationally trained and trainers were more likely to have a social orientation. He concludes that this probably reflects their greater exposure to official ideology via the compulsory postgraduate training for general practice introduced in 1980 (Calnan 1988a).

Qualitative research has found similar discontinuity between official accounts and individual GPs' beliefs. General practice organisations such as the RCGP, and textbooks of general practice often describe GPs' work as following a biopsychosocial model, which parallels Armstrong's concepts of Biographical Medicine (RCGP 1972, McWhinney 1997). However, there is evidence that individual GPs perceive physical problems as more appropriate for patients to present to them than psychological, and especially social problems (May 1996, Dowrick 1996).

Similarly, there appears to be a discontinuity between RCGP and other 'official' statements enthusiastically promoting prevention and individual GPs' perceptions (Williams 1988, Williams 2002). Although most GPs acknowledged the relevance of prevention as part of their work, many viewed it as problematic and were not particularly active in implementing the rhetoric. One indication of the lack of personal enthusiasm was the routine delegation of preventive work to practice nurses (Williams 2002). So it is plausible that individual GP's perspectives on 'continuity' will be more heterogeneous than a reading of official documents would suggest.

Individual patients are notable by their absence in the discussion so far, appearing largely as the object of professional work. My own perspective is that patients are active participants in health services, although (like GPs) they are partly constrained by health service structures and the expectations and actions of other participants. They therefore actively evaluate their care. This evaluation is in the context of the health care system they use, but is contingent on an individual's own past experience

of illness and care, and the particular problem they are seeking help for at any one time (Calnan 1988b).

There is evidence that patients highly value the way the GP acts, and the quality and continuity of the personal relationship with the GP (Cartwright 1979, Freeman 1993, Calnan 1988b, Smith 1989, Wensing 1998, Kearley 2001, Schers 2002). This is largely derived from surveys, although the aspects of general practice care asked about in individual surveys varies widely (Wensing 1998). Patients routinely appear to judge GPs in terms of the quality of interpersonal care they provide. They usually prioritise the quality of the relationship or interaction (broadly equating to personal continuity) more than simply being able to see the same GP at each visit (longitudinal continuity) (Wensing 1998). The quality of technical care is also rated as important by patients (Wensing 1998, Jung 1997). However, in some studies they appear less able or willing to judge this (Williams 1996) and commonly it is rated as less important than interpersonal aspects of care (Carroll 1998, Smith 1989).

A feature of many of these studies is that they ignore the context of the problem to be dealt with. They effectively treat patients' preferences as fixed. This seems unlikely to be true given research showing that healthy and ill patients have different preferences for style of GP care (al-Bashir 1991). The two surveys that explicitly asked about when personal continuity with a GP most mattered showed that patients in the UK (Kearley 2001) and the Netherlands (Schers 2002) identified it as important when the problem was serious and chronic, and where there were significant psychological or social dimensions. Similarly, the importance given to seeing a trusted doctor depends on the nature of the problem the patient is seeking help for (Lupton 1996).

A small number of studies have compared patients' and GPs' responses to the same questionnaire. These show considerable agreement, but also significant divergence. In Kearley's (2001) study in UK general practice, 75% of patients said that they had a 'personal' GP in the sense of "a GP who is familiar with them, who they feel understands them and their health needs, who knows about their past medical history and with whom they have an ongoing relationship" (p713). GPs put more value on

patients having and seeing a personal GP for psychological and chronic physical problems than patients did, but less for conditions that were acute or routine such as earache or contraception. They also appeared to give less importance to patients having appointments at a convenient time (Kearley 2001). In a large Dutch study, areas of disagreement included easy access and availability, and being able to see the same GP at each visit which patients valued more than GPs. Areas that GPs emphasised more included co-operation between primary care professionals and co-ordination of care (Jung 1997).

Overall, the literature indicates that many individual GPs and patients broadly value longitudinal and personal continuity, although it seems likely that there is more heterogeneity than formal descriptions of general practice suggest. In part, this may be because some of this research has been insensitive to the context of the problem that patients want to discuss at any particular consultation. Although there is considerable congruence between GPs' and patients' perceptions, it also seems likely that these will diverge in important ways.

## **Implications for this research**

This chapter has drawn on three complex literatures relating to 'continuity', the history of UK health care, and the sociology of the professions. 'Continuity' has no agreed definition or terminology in the literature. Although there are clear overlaps between different definitions, the dimensions of continuity constructed or emphasised vary. This seems at least partly dependent on authors' context, in the sense of the structure and organisation of healthcare within which they are located. A common function of many definitions seems to be the construction of a particular professional identity for general practice, or for other similar kinds of doctor such as the US family practitioner.

Within the context of UK general practice, ideas associated with 'continuity' and especially personal continuity were at the heart of a new conceptualisation of general practice under the NHS (Armstrong 1979, Armstrong 1983, Armstrong 1985). The strict separation of general and hospital practice, which made explicit the

problematic role of the GP as a client of specialist medical knowledge, both made this necessary, and made it possible. Abbott's focus on competition for control of work via claims to control abstract knowledge offers a useful framework for understanding how this new conceptualisation of the work of general practice was used as part of a reasonably successful professional project to increase the status of general practice (Abbott 1988, MacDonald 1995). This has involved making a series of claims about the effects of 'continuity' that serve to place general practice at the heart of the NHS. There is some evidence to support at least some of the claims made, although much of it comes from outside the UK or from secondary care, and its relevance to UK general practice is debatable. The idea of professional projects also emphasises general practice as a group, or a corporate body. It is less clear if individual GPs fully share the values espoused, or if patients accept the claims the made.

'Continuity' is therefore both a means of understanding the process and experience of health care, but also has important uses in defining professional identity, and in pursuing professional and managerial purposes. The attempt to create a universal definition of continuity for all places at all times therefore seems unlikely to succeed. It is probably better to try to understand how different patients in different systems, and the same patients at different times of their lives or illnesses perceive the care they receive, and which aspects of continuity or discontinuity are important under what circumstances.

What this makes clear is that the experience of 'continuity' in UK general practice by individual patients is likely to be partly structured by both the overall context of NHS organisation, and the local organisation of the general practice they are registered with. It was therefore of interest to explore how individual patients' experience of personal and longitudinal continuity vary depending on their own circumstances and the structure of the general practice they use. Although there is unlikely to be a simple mapping to local perceptions of what matters, formal definitions of 'continuity' may be useful to help make taken for granted assumptions about health care and its organisation more explicit (Porter 1984).

However, as well as patient perspectives, understanding what ‘continuity’ means to general practice also requires an understanding of what it means to individual GPs, and the benefits they ascribe to it for patients, for health service efficiency, and for themselves. If individual use paralleled the rhetorical use by corporate general practice, then a particular potential use for GPs was the construction of their individual professional identity.

In this thesis, one way of understanding patient experience and factors affecting it was the examination of the distribution of ‘continuity’ using quantitative analysis of patient survey data. This is described in chapter three. The meaning, advantages and disadvantages of ‘continuity’ to both patients and GPs were explored using qualitative analysis of semi-structured interview data, which included an examination of GPs’ construction of a professional identity. This is the focus of chapters four to seven. Before discussing the conduct and results of the individual studies though, the next chapter lays out my broad stance on the conduct of research, and the construction and interpretation of data.

## **Chapter 2 - Methodology**

### **Introduction**

As the introduction to the thesis indicated, the context of the original application for funding partly determined the overall framework for this thesis. The training fellowship was constructed as providing training in both quantitative and qualitative methods. This PhD is therefore based on analysis of two very different kinds of data, which made writing a single text somewhat problematic.

The relationship between qualitative and quantitative social research has been the subject of much heated debate within the social sciences, albeit one that has cooled in recent years. A key factor driving this debate has been differences in the methodological stance of researchers from different disciplines, and disputes between them as to what kind of data are valid or credible. Paralleling this, the language used by researchers to describe and define their work and the nature of research varies widely. Bryman suggests that this creates a range of “rhetorics of persuasion” that researchers use to demonstrate the credibility or plausibility of their work to their peers, with conventions that vary between disciplines (Bryman 1998).

For a PhD, there appear to be varying expectations of the form and content of the methods or methodology chapter (Silverman 2000). When writing about qualitative research from a social scientific perspective, there is a general expectation that I will discuss my broad stance in terms of its underlying ontology and epistemology, laying out how I think researchers can know the world. For quantitative research, particularly from a biostatistical perspective, such a discussion of epistemology is not usually considered necessary and is unlikely to be welcome.

There is no simple way of squaring this circle, and its consequence is a disjunction between the language and styles of writing in the sections describing the methods and results of each study. I have chosen to organise the thesis so that this short chapter lays out my broad stance, and indicates the implications for, and relationships between the two studies. Detailed description of the methods within

each study is written separately, although with an attempt to make all such description as comprehensible as possible for readers from different disciplines. In particular, an appendix is included, which gives a more detailed description of the quantitative methods using both a graphical explanation of multilevel modelling to clarify the algebraic one (appendix F, p309).

This chapter begins by outlining two major perspectives on the use of ‘mixed methods’: one holding that differences in method are markers for differences in underlying ontology and epistemology; the other that methods can be chosen on more pragmatic grounds relating to the question to be answered. I then outline my own epistemological stance and the implications of this for my research practice, and the construction and interpretation of research data, and the relationship between the two studies examined in more detail.

## **Mixing methods and the relationship between stance and method**

The relationship between qualitative and quantitative social research has been much debated. Argument has often revolved around the nature of the link between the methods used and the beliefs of the researcher about the nature of the social world (ontology) and how they can know it (epistemology). In the past, many qualitative researchers have held that method *should* be determined by the ontological and epistemological positions of the researcher, even if this was not always the case in practice (Guba 1994, Denzin 2000). From this perspective, debate about methods per se was misleading. The true distinction was between paradigms, and method questions were simply a symptom of underlying, and probably irreconcilable, philosophical differences. For example, Guba and Lincoln writing within a chapter in the 1994 edition of the Handbook of Qualitative Research argued:

“Questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways.” (Guba 1994 p35)

From this perspective, use of structured or quantitative methods was often seen as indicating a commitment to a 'positivist', naïvely realist and reductionist paradigm based on the natural or physical science tradition. Use of unstructured or qualitative methods conversely indicated a commitment to broadly idealist or relativist paradigms such as 'social constructionism' or 'critical theory'. An important implication of this stance is that the results produced by researchers working within different paradigms are incommensurable (Guba 1994). There is no possibility of combining the knowledges produced, and therefore no possibility of combining the methods used to create those knowledges.

Paradigm differences were often described as a set of dichotomies. As a result of being based in the natural science tradition, quantitative research was said to be deductive in its reasoning, using theory to predict the observations that would be made by objective researchers who generalise their results using claims based on statistical sampling. By contrast, qualitative research was generally claimed to be inductive, deriving theory from observations made by a researcher who used themselves as a research instrument, and placed their subjectivity in the foreground of an attempt to understand the perspectives of those being researched. The results might not be directly generalisable, although the understanding or theory they generate could potentially be applied in other contexts (Mays 1996, Steckler 1992, Guba 1994, Strauss 1990, Denzin 2000). Although this brief account conflates a number of positions, the central claim was that researchers using different methods necessarily have different underlying ontologies and epistemologies.

An alternative perspective came from those who emphasised that choosing a method was more a technical decision than a philosophical one (Bryman 1988, Morgan 1998, Silverman 2000). For these researchers, epistemological stances were seen more as mental constructs or ideal types rather than as directly determining research practice. These could help researchers challenge their own taken for granted assumptions by stimulating new ways of thinking about particular fields of research or analytical problems. Rather than being bound by one 'paradigm', researchers could use alternative ways of viewing the social world to gain fresh perspectives on research problems (Seale 1999). From this perspective, an interest in and engagement with

epistemology are seen as *useful* for research practice. In this view, the problems of practice cannot be resolved by appeal to a more abstract and at least as insoluble set of philosophical problems (Bryman 1988, Hammersley 1992, Seale 1999, Silverman 2000).

Interestingly, some of the strongest proponents of the position of the primacy of a researcher's philosophical position have recently substantially modified it (Oakley 1998, Lincoln 2000). These authors no longer claim that a researcher's stance should *determine* the methods they use, and knowledges derived from different methods are no longer seen as necessarily incommensurable (Lincoln 2000). Indeed, multi-method research is increasingly actively encouraged as allowing multifaceted understanding of the social world (Denzin 2000). Researchers' stances are still given primacy, but the emphasis is increasingly on what they intend to achieve with their research and the general way in which they pursue those aims.

Differences in purpose include whether researchers perceive knowledge created as valuable in itself, or more as a means to social emancipation, and differences in research conduct the degree of control of the researcher compared to the research participants. So rather than use of a method indicating an underlying paradigmatic stance (Guba 1994), the focus is on the claimed purpose of the research done (Lincoln 2000). However, 'qualitative' methods are identified as more suitable for researchers emphasising in social emancipation and participant control. The paradigms they identify as taking this kind of stance include 'critical theory', 'social constructivist' and 'participatory'.

My reading of the shift in these authors' position, is that the strict determination of methods by stance has not been sustainable. To some extent, Guba and Lincoln have moved towards the position where the choice of methods are determined largely by the question being asked (Bryman 1988, Hammersley 1992, Silverman 1993). It has to be recognised though, that the question asked may significantly be influenced by the stance the researcher takes. So the 'social constructionist' is unlikely to ask questions which lend themselves to being researched by large quantitative surveys. Equally though, researchers' requirement for external funding often means that they

do not have complete control over what questions are asked. As with me, one reason why mixed methods are increasingly seen as desirable is likely to be because funding bodies believe them to be valuable irrespective of the positions of individual researchers. This emphasises that the relationship between stance and method is neither simple, nor one to which there is a widely accepted resolution.

In preparing this thesis, I have found the position taken by authors like Bryman, Hammersley and Silverman most persuasive (Bryman 1998, Bryman 1988, Hammersley 1992, Silverman 1993, Silverman 2000). The first reason for this is because I think it is problematic to describe researchers' stances as 'paradigms'. For Kuhn, a paradigm was a largely unconscious worldview that is shared by a community of researchers (Kuhn 1970). This sits uneasily with the idea that a researcher should 'choose' their paradigm, or the very rapid shifting of stances implicit in some of this writing (Denzin 2000, Lincoln 2000). Kuhn specifically excluded the social sciences from his theory because he considered them to be in a pre-paradigmatic phase, which he described as competing schools with no one perspective dominant and therefore no shared worldview (Kuhn 1970). This seems consistent with the nature of the debate described above.

The second reason is because the strong links made between ontology, epistemology and the purpose of research do not fit my own perceptions of the world. It is not at all clear to me that 'critical theorist', 'constructivist' or 'participatory' researchers have a monopoly of moral purpose, whereas other researchers necessarily lack any commitment to social justice or action. Seale makes a similar criticism when he points out that the claim that 'participation' is the hallmark of a moral research endeavour leans heavily on a liberal conception of a just society with an emphasis on individualism and Western style democracy (Seale 1999). At the least, this sits uneasily with the relativist stance claimed by many of the same researchers as a fundamental philosophical position. I personally see more utility in research that is realist enough to be able to assume that there is the possibility of change. The next section lays out my overall stance in more detail.

## My epistemological stance

In this section I will outline my overall stance, address some of the implications of it for my research practice, and address some of the criticisms that can be made of it. I start from an assumption that what researchers do is partly, but not simply, determined by their beliefs about the nature of the world, and the ways in which that world can be known (their ontology and epistemology). This is as true for the natural sciences as for the social sciences (Kuhn 1970). I say only 'partly determined' because research operates in a social context and so other factors are also relevant. In my own case, the perceived advantages of constructing a 'mixed methods' training to get funding from the Medical Research Council is a clear example of this.

Broadly, I take the position that Hammersley calls 'subtle realism' (Hammersley 1992). Its three key elements are that:

- 'Knowledge' is beliefs about whose validity we are reasonably confident. There are no 'hard facts' that we can be completely certain about. Accepting a belief as 'knowledge' therefore requires judgements about plausibility and credibility. These are partly rooted in what else we 'know' about the social world. Both knowledge and the methods used to create it are therefore fallible, and subject to refutation.
- There are phenomena independent of our claims about them. Independent in the sense that the making of the claim does not alter the reality in such a way as to make that claim true or false. 'Knowledge' is more valid or true if it more closely corresponds to this underlying reality, although there is no certain way of knowing if this is the case. Although a broadly realist stance, this rejects naïve realism in the sense of believing that there are facts waiting to be unproblematically discovered by the application of a research technique.
- The aim of social research is to represent reality, but not to reproduce it. Representation is always from some point of view that emphasises some aspects of reality over others. To choose a method is to choose a point of view. There can therefore be "multiple, non-contradictory and valid descriptions and explanations

of the same phenomenon” (Hammersley 1992 p51). Crucially though, where there are *contradictory* descriptions, then a judgement has to be made as to which is most valid (or true) in the sense of corresponding more to ‘reality’. A key issue is how judgements about ‘validity’ or ‘truth’ can be made.

There are a number of important consequences of taking such a position. Firstly, it conceives research above all else as an interpretive project. All data are constructed jointly by the researcher and the researched within the social context within which the research is embedded, although the degree of control exerted by each varies greatly. All data requires interpretation by the researcher, and the researcher’s role in that interpretation needs to be as explicit as possible. This perspective therefore represents a weak form of social constructionism, since although data is jointly created, there is still assumed to be some correspondence to an underlying, albeit not completely knowable reality.

The interpretative role applies to all social research methods. In semi-structured interviews, the researcher takes a ‘topic guide’ embodying a particular set of interests and concerns to each interview, and is actively involved in constructing a text that requires interpretation for analysis. Data collection is not simply a gathering of facts, and the many kinds of data analysis used are not simply applications of mechanical techniques (Silverman 1993, Silverman 2000). Although qualitative research is often said to be inductive (particularly by those who claim to be using a ‘grounded theory’ approach (Strauss 1990), the involvement of the researcher necessarily involves an element of deduction, or a cycling between data and theory or knowledge of the field (Bryman 1988, Schuttermaier 2001).

Similar processes occur in quantitative research. In quantitative surveys, the researcher constructs questions in particular ways. Analysis requires an interpretation of what participant’s answers or behaviours actually mean, as well as the use of statistical techniques for summarising the data. Although some qualitative texts imply that the use of statistics can be equated to the blind application of algorithms, this is too simplistic a claim. Analysis is often (although not always) ambiguous and artful because it is simultaneously guided by two potentially contradictory maps: the



researcher's substantive knowledge and beliefs about the field of study; and the results of statistical techniques applied to the data collected (Snijders 1999). There is again a cycling between theory and data, and between inductive and deductive reasoning.

From this perspective, there will often be no single 'correct' answer or statistical model. Rather, there are many different possible interpretations of the data, whose plausibility depends on a range of statistical and substantive justifications. In randomised controlled trials and other experiments, the researcher decides the intervention, the context (usually conceived of as something to be controlled for), the outcomes to be measured, and pre-specifies the analysis. Even here though, the results do not speak for themselves (although they are often taken as if they do). They have to be interpreted in the light of the design decisions made, and judgements are made about how to present the results to reflect those interpretations (McCormack 2000).

What is shared between researchers from different disciplines is the use of a cycle between inductive and deductive reasoning. All researchers move between data and theory, and interpret both in the light of the other. What is different is how researchers from different disciplines actually do this in practice. Quantitative research generally keeps data collection and analysis separate. While collecting data, researchers therefore have less opportunity to alter their underlying theory or hypothesis because the study is often seen as testing that theory. However, by altering theory, the results will influence how future studies are conducted. In qualitative research, data collection and analysis are often simultaneous (although the emphasis varies on the stage of the research). There is therefore greater opportunity to modify theory within a single study and use this to change data collection.

A mixture of inductive and deductive modes of reasoning are therefore used by both kinds of researcher, although there are important differences in how they are used. The distinction is therefore in the emphasis within the methodology and the method, rather than in a deeper philosophical position. This reflects that, philosophically,

neither induction nor deduction are agreed to be a secure method of reasoning (Phillips 1995).

The second consequence of my chosen position is that the need for interpretation by the researcher and their audience creates another shared problem for all research methods. Although there are no secure grounds for *absolutely* preferring one method to another, there is a need to make judgements about the credibility or validity of research accounts. A key issue is the basis on which judgements about the validity (or plausibility, credibility and relevance) of research are made (Hammersley 1992, Seale 1999). Bryman's concept of 'rhetorics of persuasion' is that claims to validity or 'truth' are made in different ways depending on the audience being addressed (Bryman 1998). Such audiences include other researchers, policy makers, the public and practitioners (Seale 1999). Writing largely about the audience of other researchers, Miller suggests that:

“One way of conceptualising how qualitative researchers and their audiences are interrelated is by analysing them as members of interpretive communities. Such communities consist of the shared orientations to social reality and interpretive practices that like-minded readers and writers bring to their reading and writing of texts. ... Interpretive communities may involve diverse conflicts of interest and interpretation, but these conflicts are negotiated within contexts made up of community members shared assumptions, concerns and interpretive practices. ... Qualitative researchers enter interpretive communities in deciding what to study, how to study it, and in analysing their data. These decisions also signal qualitative researchers' willingness to be held accountable to the standard of their chosen interpretive communities.” (Miller 1997 p8)

The idea of interpretive communities has been criticised for being inherently conservative, with 'validity' being addressed in terms of what everyone 'knows' to be true (although this fits with Kuhn's (1970) idea of paradigms being shared worldviews that are taken as given and which define the questions that researchers ask). However, it also suggests one reason why the quantitative-qualitative debate has been so heated. In Bryman's terms, a 'rhetoric of persuasion' that is effective in one context may be ineffective or even offensive in another because it is being

assessed by a different set of criteria (Bryman 1998). One reason that the ‘creation myth’ of qualitative research so strongly emphasised differences with ‘positivists’ is likely to have been the need to construct a new interpretive community that would judge qualitative research in terms relevant to it (Schwandt 2000, Hammersley 1992).

The implication of this argument is that judging the credibility or validity of research to some extent requires the research to be taken on its own terms. It makes no sense to *only* use statistical criteria to judge a study of accounts created in interviews, but it also makes no sense to *only* judge a social survey in discourse analytic terms. First and foremost, each has to stand by itself, and be justifiable in terms of standards of validity or credibility that make sense to it. That does not mean that the kinds of criticism that can be made from other research perspectives are irrelevant. So the sampling strategy of an interview study may be critiqued from a variety of perspectives including statistical ones, and the language of the social survey may be profitably explored with a discourse analysis. Such critiques do not necessarily invalidate other perspectives or methods, but they do challenge them and therefore potentially stimulate researchers to reflect on their own assumptions and the limitations of the methods they routinely use (Seale 1999).

Despite the differences in the criteria used to make judgements of credibility, there can be similarities across methodologies and methods. The justifications I make for my two studies are different in many respects, but there is a common concern with fallibility, by which I mean a concern to openly examine the assumptions underlying the research.

In the quantitative study, there are assumptions made about the way that participants respond to written questions, and the meanings they impart to the responses allowed. These assumptions rely on my own, and other researchers’ beliefs about the way that patients perceive general practice care and which aspects of it they value. They also rely on ‘commonsense’ assumptions about how patients will interpret particular words or questions. Even accepting these, analysis then relies on a range of statistical assumptions. These can all be critically examined. The interpretation of patient

responses to questionnaires does not have to be taken for granted, and statistical assumptions are open to explicit examination.

In the qualitative study, the interview is embedded in the same social context that is the topic of interest. So patients and GPs bring taken for granted assumptions about health care and professional-client relations to the interview. So do I as the interviewer. An example is the idea of a 'referral to hospital'. In the UK, it is usually taken for granted that seeing a hospital doctor usually requires a 'referral' from a GP except in emergencies. There is nothing 'natural' about this assumption. It is a feature of NHS organisation that has its roots in an informal set of practices that evolved at the end of the nineteenth century to regulate competition for patients' fees among doctors (Loudon 1978). I am likely to share many of these kinds of assumptions. When interviewing and in analysing transcribed interview data, such commonsense assumptions by me can limit the scope of the analysis. Similarly, unreflective reading of transcripts risks simply confirming what I expected to find.

It is also likely that I bring assumptions about the way that interviews should be conducted from my experience of consultations as a GP. I have a set of expectations of how 'interviewers' ask questions which are partly based on this (although also on my knowledge of 'interviewing' from television and other non-research sources) (Silverman 2000, Silverman 1993). The literature review indicated the central place of 'personal continuity' in the professional identity of GPs, and the introduction made clear my own belief in its value (if only for my personal satisfaction). These are relevant in the construction and interpretation of the interview data, but like the assumptions in the quantitative study, they are also open to challenge. A prerequisite for this challenge is awareness of the existence of assumptions and being open to alternative interpretations. Working with other researchers from different backgrounds is one way of promoting this. In this study, my supervisors being social scientists rather than medical doctors facilitated this. Others include procedures within the analysis such as the search for cases or examples that do not fit emerging categories or concepts.

The techniques and procedures used to examine assumptions are more fully discussed in the chapters that describe the individual studies (chapters three and four). As illustrated above, the kinds of assumption made, and the ways in which they are examined differ for the two studies, but the intent is the same. Assumptions are usually necessary to allow research questions to be asked and answers to be constructed, but they should also be open to critique, and their careful examination can enhance the research process.

## **The relationship between the two studies**

This chapter started by highlighting the problematic nature of the relationship between the two studies in the writing of the thesis. An intellectual acceptance of the possibility of “non-contradictory and valid descriptions and explanation of the same phenomenon” (Hammersley 1992 p51) is one thing. Actually combining data from two very different studies is another. The literature describes a number of kinds of combination, usually in the context of integrating ‘qualitative’ and ‘quantitative’ research.

Triangulation uses a surveying metaphor to imply that it is possible to get a better ‘fix’ on a topic by viewing it from more than one perspective. This might be using the same method on different occasions, or in different settings, but more commonly the term is used when different methods are applied to the ‘same’ topic (Brannen 1992). As the underlying metaphor implies, this requires a relatively realist understanding of the world in that there is a set of facts to be observed from these different perspectives. I would agree with those who see this as too simplistic, particularly ‘crude’ triangulation, which effectively assumes that different datasets can be used as a test of each other’s validity (Seale 1999). Since datasets collected using different methods will often be asking different questions (and may also be addressing subtly different ‘topics’), this is likely to be a complex judgement if it is possible at all (Mason 1994). This applies as equally to mixing qualitative methods, as to mixing qualitative and quantitative (Barbour 1998).

Alternative, less realist conceptions include ‘crystallisation’ (Denzin 2000). Here the metaphor is of different methods or perspectives illuminating various facets of the social world, but without the idea that there is a single point being observed (Denzin 2000). This parallels less metaphorical descriptions of methods as complementary in some way. From this perspective, different methods do not necessarily address the same set of ‘facts’, but they may address the same broader topic or facilitate each other in a number of ways (Bryman 1998). Morgan suggests a fourfold classification that can be used to pre-specify which of the two methods is to be dominant, and the sequence in which they are to be applied (Morgan 1998).

- Preliminary qualitative study facilitates main quantitative study eg qualitative informs development of quantitative instruments, creates hypotheses for ‘testing’ in quantitative study
- Preliminary quantitative study facilitates main qualitative study eg informs qualitative sampling, or helps contextualise sampled settings
- Main quantitative study is followed up by qualitative study to help understand results eg aids interpretation of ‘outliers’ or unexpected results
- Main qualitative study is followed up by quantitative study eg to aid generalisation

An essential issue is that the researcher or research team has to be able to move between the different logics and assumptions of varied methods with sufficient expertise in each to make adequate technical judgements (Steckler 1992). At a minimum, this means that it is problematic to “subcontract” those parts of a mixed methods project that the main researchers are unfamiliar with (Mason 1994 p108).

In my case, when I started the research I had only a limited understanding of how the individual projects were to be conducted, and only the haziest notions of the difficulties of combining them (although this is of course an appropriate status for a PhD student). The studies themselves were also essentially simultaneous. So rather than there being a carefully specified relationship built into the design of the project

as a whole, it was something that evolved over the course of the PhD. There were three kinds of combination that happened.

Firstly, the sampling in the qualitative study was partly based on routinely available quantitative data (although not the survey data analysed here). The rationale for this is described in chapter four (p109). Secondly, the emerging results of the interview study influenced the interpretation of the quantitative survey data, and vice versa (discussed in the results chapters and chapter eight). Thirdly, the ways in which the two datasets were congruent and incongruent was examined (discussed in chapter eight p248). This form of triangulation was not particularly helpful in deciding the validity of either study, but was used as a way of stimulating reflection on the results of both and attempting to draw them together.

## **Summary and discussion**

This discussion of methodology has particularly focused on the nature of the relationship between qualitative and quantitative method, but this risks concealing major differences between methodology and methods within each of these broad categorisations (Bryman 1988, Barbour 1998, Seale 1999). Arguably, comparing laboratory experiments, social surveys, ethnographies and conversation analyses of audiotapes solely in terms of their use of numbers is to gloss over multiple dimensions of difference and similarity (Seale 1999). Similarly, conversation analysis is both social constructionist in seeing language as jointly created by the speakers, and firmly realist in insisting that there is a single correct interpretation of the structure of that text (Seale 1999, Silverman 1993).

Rather than broadly categorise methods in relation to fixed ‘paradigms’, it therefore seems better to explicitly consider how different epistemological assumptions and methods can best address the research topic at hand. My position therefore, is that there is no certain method of research practice. This is both in the sense of there not being a secure philosophical position that neatly determines the correct method, and in the sense of there not being clear techniques that can be straightforwardly applied to a set of ‘facts’ to find the truth.

However, this does not mean that different methods do not offer particular advantages. Nor does it mean that methods can be used willy-nilly without careful consideration of their strengths and weaknesses. Different techniques or methods construct data that can be interpreted or analysed in a variety of ways. The ‘correct’ technique is the one that most appropriately answers a particular question, and that is applied by a researcher who understands and can use its strengths and limitations, and has some understanding of alternative approaches.

This chapter cannot address these issues directly, since they are embedded in the study design and choice of methods to answer particular questions. The inclusion of two very different studies means that this discussion happens in two places. Chapter three describes the quantitative study, including an examination of its underlying substantive and statistical assumptions. Chapter four discusses the qualitative study design and methods. The strengths and limitations of both studies, and the relationships between them in practice are then further explored in chapter eight.

# **Chapter 3 – An exploration of the distribution of personal/longitudinal continuity**

## **Introduction**

Reflecting the difficulties of definition outlined in chapter one, a study measuring ‘continuity’ provoked a degree of discomfort in me from the beginning. My preference would have been to design and use a quantitative instrument based on an understanding from the interview study of the perception and value of ‘continuity’ for individual patients and GPs. Time constraints did not allow this. Because of its organisational and policy relevance, I had a particular interest in exploring the effects of practice structure on the distribution of personal and longitudinal continuity. This required data collection in many practices. Again because of the limited time and resources available, an early decision was that I would therefore use an existing dataset to examine the distribution of ‘continuity’ in UK general practice.

The two main implications were having to accept a conceptualisation of ‘continuity’ that was uninformed by the qualitative study I was simultaneously carrying out, and not being able to control the explanatory variables collected. There both lead to particular issues of interpretation, because the assumptions built into the questionnaire are not those I might have chosen at the time (and even more now, having completed the qualitative study. However, all data requires interpretation, although the disjunction between the design and purpose of the dataset, and my own ends makes this more explicit here. Given this, the analysis can only be seen as exploratory.

This chapter discusses the two datasets considered for analysis, describes data management and exploration in the dataset used, outlines the analytical approach, and presents a multilevel regression analysis of the data. Appendix F (p309) gives a more detailed explanation of multilevel modelling and discusses alternatives analytical approaches.

## **Continuous morbidity recording and provider continuity.**

The original intention was to use the Continuous Morbidity Recording (CMR) dataset. CMR is a routine, Scottish general practice dataset held by the Information and Statistics Division of the NHS in Scotland (ISD 2002). CMR collects data on all face to face contacts with GPs in over 60 Scottish general practices representative for age, sex and area of residence, although participating practices serve more affluent populations than the Scottish average. For each contact, one or more Read codes<sup>1</sup> and the identity of the GP being seen are recorded. Because consultation data are record linked with a unique patient identifier, an individual patient's consultation history can be extracted.

Such data can be used to calculate measures of longitudinal continuity. These are quantitative measures of consultation pattern in terms of which doctors (or other professionals) have been seen (Shortell 1976, Steinwachs 1979, Eriksson 1983, Shear 1983, Smedby 1984, Ejlertsson 1984, Ejlertsson 1985, Smedby 1986, Freeman 1987, Mattsson 1987). In most of the measurement literature, these measures are referred to in terms of 'provider continuity', but for consistency here they are referred to as measures of longitudinal continuity (Freeman 1984, Freeman 2001). Whilst there are over 15 measures, there is little published research that uses measures to examine the distribution of longitudinal continuity in a range of practices or other settings of care. The intention was to do such a study.

Calculating a value for provider continuity measures requires a minimum of two or three consultations, although the distributions of most measures are distinctly non-normal with such low numbers. Since the majority of patients do not consult more than 3 times per year, applying provider continuity measures to the CMR data required a minimum of one year's data, and preferably two. By the beginning of the

---

<sup>1</sup> Read codes are a hierarchical coding system for general practice embedded in the clinical computing system used by all practices participating in CMR. They allow coding of diseases, symptoms, procedures, and socio-economic data. CMR is designed to predominately collect morbidity data and discourages the inclusion of other codes in the dataset (although practices can still record this without it being collected by ISD).

second year of my MRC training fellowship, it was clear that the CMR dataset was not going to be available in time. The general practice clinical computing system on which CMR data collection relies was being upgraded, and there were data incompatibilities between the different versions. Even on optimistic assumptions about the speed of changeover, the data would only be available sometime in the third year of my training period. An alternative strategy was therefore necessary. In the event the CMR data only became available after the MRC funding had run out.

## **The Patient Enablement Instrument dataset**

An available alternative was a large, cross sectional survey of patients consulting their GPs that was being carried out by another research team, including members of my department. The outcome measure for this study was a score from a patient completed measure of consultation outcome in terms of perceived ability to cope with and manage illness (the Patient Enablement Instrument or PEI). The aim of the study was to use this measure to evaluate the quality of care provided by individual GPs and practices. A random sample of practices in four UK regions was invited to participate, of which 53 (38%) did so. In these practices, all patients consulting in a two-week period in 1998 were asked to complete a questionnaire, and 25,994 patients aged 12 years and over consulting 220 GPs did so (78% of eligible patients).

A series of linked questionnaires were completed. Before the consultation, patients completed a questionnaire about themselves and the problem for which they were consulting. Adults accompanying children under 12 years of age completed a somewhat different questionnaire. Because there were significant differences between adult and child questionnaires, subsequent description and analysis only refers to the adult data. After the consultation, GPs recorded information about the consultation including whether or not the patient was in a booked appointment or an 'extra' and the length of the consultation, and the patient then completed a PEI questionnaire. Information about individual GPs and practices was collected by separate questionnaires (Howie 1999). Copies of all the questionnaires used are attached in appendixes A to D (p281).

The research team had hypothesised that ‘continuity’ would be associated with greater ‘enablement’ (personal communication Jeremy Walker and David Heaney). Three questions intended to measure ‘continuity’ were therefore included in the questionnaire completed by patients before the consultation (questions 7-9 in appendix A p286). There was also considerable ‘explanatory’ data collected for the PEI study including information about patient demography and socio-economic status, the problems they had and those they wished to discuss at the consultation, GPs’ characteristics and practice structure. The PEI dataset therefore offered a convenient way of exploring the distribution of ‘continuity’ in over 50 practices, and in size and complexity far exceeded what would have been possible for me to collect working alone. However, the convenience of using data collected by someone else has to be balanced against the problems of using data for a purpose that it was not explicitly designed for. This is discussed in detail in the section addressing data management, and further discussed at the end of the chapter.

## **Data management and selection of variables to explore**

### **Outcome variable**

The chosen outcome variable was based on the question (question 7, appendix A p286):

Is the doctor you are seeing today your usual or regular doctor?

Yes

No

I do not have a regular doctor

I do not know which doctor I shall be seeing today

This question was designed to be a measure of personal continuity (personal communication David Heaney). This conceptualisation assumed that most patients did have an ongoing relationship with a GP and acted to maintain such relationships. However, the question can equally plausibly be considered a measure of ‘provider/longitudinal continuity’, in the sense that it assesses an aspect of consultation pattern without any assumption that there was a personal or ongoing relationship between patient and GP. Either interpretation is reasonable, although there is no data available on how patients read it. The question therefore conflated

personal and longitudinal continuity. This parallels much of the professional writing about 'continuity' (RCGP 2001), and some academic writing which clearly distinguishes personal and longitudinal continuity but also makes the same conflation when discussing how to organise to maximise personal continuity (Freeman 1997).

Ideally, the questionnaire would have asked questions that distinguished personal and longitudinal continuity. However, to some extent, that is a conclusion reached after analysis of the qualitative data. Had I designed this questionnaire early in the PhD I suspect the same conflation would have been present, because I shared the underlying assumptions of the researchers. What follows therefore describes the outcome as a measure of personal/longitudinal continuity.

In principle, the outcome could have been analysed in its original four categories. However, multinomial regression in a multilevel framework is not simple, because estimation is relatively unstable, the validity of the estimates not well understood, and because the results are not easy to interpret (Yang 2001). For the purposes of this analysis, the four part response was therefore collapsed into a dichotomous variable with responses 1 = 'Yes', 0 = 'No/I do not have a regular doctor/I do not know which doctor I shall be seeing today'.

Table 1 shows the distribution of this outcome variable. Of the 25 994 patient questionnaires returned, 69 (0.3%) were identified as temporary residents and were excluded, and a further 1979 (7.6%) did not have a valid response to the outcome variable. A total of 23 946 (92.1%) cases were therefore available for analysis. However, 514 (2.0%) of those with a valid response did not have a valid GP or practice identifier, which excludes them from the multilevel analysis.

**Table 1: Distribution of outcome variable**

Outcome variable		No (%) of all patients (n=25994)	% of valid responses	
Are you seeing your usual or regular doctor today?	Yes	14632 (56.3)	61.1	
	No	4752 (18.3)	19.8	
	I do not have a regular doctor	2666 (10.3)	11.1	
	I do not know which doctor I will be seeing today	1896 (7.3)	7.9	
	Missing or temporary resident	2048 (7.9)		
	Yes	14632 (56.3)	61.1	
	No	9314 (35.8)	38.9	
	Missing	2048 (7.9)		

### Explanatory variables

Analysis required choices about which variables to include in the analysis, and how to handle them. These choices were guided by both theoretical considerations based on knowledge of the topic and previous research, and practical problems with the data, especially in terms of inconsistency and the proportion missing (Snijders 1999). The dataset was large in the sense that there were over 25,000 patient questionnaires returned, but there were relatively few observations at GP and particularly practice level (220 and 53 respectively). There was therefore relatively low power to explore GP and practice effects. This implied limits on the number of practice level and GP level variables that could be examined in a regression model.

An important problem of exploring the distribution of continuity with this dataset was that some explanatory factors that I was theoretically interested in were not included, because they were not seen as relevant to the PEI study aims. An example is that the patient questionnaire was not designed to find out about speed of access. In the literature, this is identified as something that patients may balance against seeing particular doctors (Freeman 1997, Mihill 2000). In this dataset, it was possible to make some assumptions about desired speed of access in terms of the problem that patients wanted to discuss, or whether they were seen as an ‘extra’. However, these do not directly tap into patients’ choices or preferences, and the questionnaire effectively assumed that ‘urgent’ problems were physical (as in the available response that the patient wishes to discuss “a new or urgent physical problem”

questions 1 and 2, appendix A p284). This had implications for the interpretation of results, and is further discussed at the end of the chapter.

Available variables were considered for inclusion primarily based on whether there were theoretical grounds for an association with personal/longitudinal continuity. Some of those so identified, were then excluded after examination of the data structure because of excessive missing data or doubts about data validity. In what follows, for variables at each level, the rationale for including and excluding particular variables, and how included variables were handled is described, and the distribution of included variables and their univariate relationship with outcome are then presented. This exploration was conducted using the Statistical Package for the Social Sciences (SPSS Inc 1999). Chi-squared tests were applied to contingency tables of patient level data, and one way analysis of variance used to compare means within groups of GPs and practices. For reasons of space, other data exploration examining the single level relationship of the various included variables is not shown, although it too contributed to the construction and interpretation of the regression model.

### ***Explanatory variables at patient level***

Table 12 in appendix E (p307) lists all excluded variables, and the justification for their exclusion.

### **Included variables**

Patient age and sex were considered relevant on the basis of known differences in consultation pattern between men and women of different ages (McCormick 1995, Ejlertsson 1984, Smedby 1986, Sloane 1983). Previous studies have shown age, but not sex differences in longitudinal continuity with higher rates among older people, but have not explored whether there are interactions between age and sex. (Ejlertsson 1984, Smedby 1986, Ejlertsson 1985).

Studies of provider continuity have shown differences in consultation pattern over one or more years depending on the kinds of problem that patients have presented for

care (Ejlertsson 1985, Fleming 1985). Three variables provided information about the context of the appointment. The first was completed by the patient and indicated if the patient had been asked to attend by the doctor (question 4, appendix A p284). The other two indicated whether or not the patient was an 'extra' in a fully booked surgery, and whether they were attending an 'open' surgery (completed by the GP on the questionnaire frontsheet, appendix A, p282). All three are plausibly related to personal/longitudinal continuity because of the likely trade off between speed of access and choice of GP to see (Ejlertsson 1984, Freeman 1990). However, whether or not the patient was attending an 'open' appeared inconsistently answered and it was excluded from analysis (table 12, appendix E, p307).

Patients with high levels of psychological distress might be expected to prefer to see a known GP, although plausibly some might prioritise speed of access. Psychological distress in the last two weeks was measured using the 12 item version of the General Health Questionnaire (GHQ12) (question 5, appendix A, p285).

Consultation pattern is known to be associated with ethnicity (McCormick 1995, Hemingway 1997). In the PEI study, language spoken at home was used as a proxy for ethnicity (although it is also confounded with nationality). Although 95 different languages spoken at home were identified, 91.3% of patients spoke English at home, with South Asian languages the other main group (4.4%). It seemed plausible that identification of a GP as the usual or regular doctor would be associated with that GP being able to consult in the same language that the patient spoke at home (un-numbered question, appendix A, p283).

### **Data handling and univariate association with outcome**

Because only data from the adult (aged >12) questionnaire was included, patient age was truncated in the early teens, as well as being skewed to the left with a long tail of more elderly patients. Patient age was therefore handled as a set of 10 year categories rather than a continuous variable.

The pre-consultation patient questionnaire asked about both problems that the patient had, and about which of these they wished to discuss in the consultation (questions 1

and 2, appendix A, p284). The problem to be discussed seemed most directly relevant to patient choices made while organising the appointment. Patients could indicate any number of problems they wished to discuss and were not asked to indicate the main reason for consultation (question 2, appendix A, p284). This complicates the interpretation. In the regression model, patients who *only* wanted to discuss a ‘new or urgent physical health problem’ were used as the reference category. To maintain this reference category, variables referring to the ‘problem the patient wanted to discuss’ were entered as a block, and stayed in the model irrespective of statistical significance of individual variables. Where no problem to be discussed was identified, this was treated as a separate category rather than ‘missing’. The number of problems that a patient wanted to discuss was also examined, since ‘complexity’ might be expected to alter choices about which GP to see.

It also seemed plausible that existing problems might influence choice of GP even when the focus of a consultation was another problem. This seemed most likely when patients had existing ‘longstanding physical health problems’, ‘emotional or psychological’ problems or ‘social’ problems in addition to the problems they wished to discuss. Three new variables were constructed, where patients indicated that they had one of these problems, but did not wish to discuss it at that consultation.

Binary variables included were patient sex, and whether or not the patient was an extra or had been asked to attend by a doctor. The GHQ12 questionnaire was scored in the standard way, and scores of 5 or more were taken to indicate that the patient was a case on GHQ12 (Bowling 1997). There were two included questions about the language spoken at home, and the language the patient expected to consult in. These were combined to create a single ‘language’ variable with three categories.

Patient spoke English at home, and expected to consult in English  
Patient did not speak English at home, but expected to consult in English  
Patient did not speak English at home, and expected to consult in their own language

Table 2 shows the distribution of all included variables, and their association with the outcome. It should be noted that the size of the dataset means that even small differences were likely to be found statistically significant, especially since no

allowance was made for multiple testing. This re-emphasises that the main purpose of this univariate analysis was data exploration and developing an understanding of data structure prior to regression modelling.

The strongest associations with personal/longitudinal continuity were for patient age (with older patients being progressively more likely to be seeing their usual or regular doctor), the patient being an 'extra' in a fully booked surgery (less likely), if the patient had been asked to attend by a doctor (more likely). Patients wanting to discuss new or urgent physical problems were considerably less likely to be seeing their usual or regular doctor, whereas those with longstanding physical problems, emotional or psychological problems, and to a lesser extent social problems or more than one problem were more likely. Patients who spoke a language other than English at home and expected to consult in a language other than English were more likely to be seeing their usual or regular doctor, but the small numbers in this category meant that this was only of marginal statistical significance.

**Table 2: Distribution of included patient level explanatory variables**

Explanatory variables	Categories	No (%) of patients with valid outcome (n=23432)	% of patients seeing their 'usual or regular doctor'*
Patient age	<25	3640 (15.5)	42.1
	25-34	4661 (19.9)	54.9
	35-44	3766 (16.1)	59.5
	45-54	3473 (14.8)	64.8
	55-64	2739 (11.7)	73.9
	65-74	2364 (10.1)	77.3
	>74	1364 (5.8)	82.7 $\chi^2=1376.9$ (6df), p<0.000
	Missing	1425 (6.1)	p<0.000
Patient sex	Female	14168 (60.5)	62.5
	Male	7945 (33.9)	61.2 $\chi^2=3.6$ (1df), p=0.056
	Missing	1319 (5.6)	
Patient was an extra in a fully booked surgery	No	22161 (94.6)	62.6
	Yes	1271 (5.4)	44.1 $\chi^2=174.6$ (1df), p<0.000
Patient had been asked to attend by a doctor	No	17470 (74.6)	56.7
	Yes	5962 (25.4)	75.8 $\chi^2=682.2$ (1df), p<0.000
Language spoken by patient	Speak English at home, expect to consult in English	19319 (82.4)	60.7
	Speak other language at home, expect to consult in English	1388 (5.9)	64.8
	Speak other language at home, expect to consult in other language	494 (2.1)	81.8 $\chi^2=97.2$ (2df), p<0.000
	Missing	2231 (9.5)	
Patient was a case on GHQ12 (scores 5 or more)	No	17469	61.4
	Yes	5963 (25.4)	62.2 $\chi^2=1.3$ (1df), p=0.263

For each variable, Pearson chi-squared tests were based on contingency tables for non-missing data.

**Table 2 (continued)**

Explanatory variables	Categories	No (% of patients with valid outcome (n=23432))	% of patients seeing their 'usual or regular doctor'
Problem patient wished to discuss (reference for all was did not wish to discuss):	New or urgent physical		
	No	13151 (56.1)	69.3
	Yes	10281 (43.9)	51.8 $\chi^2=746.1$ (1df), $p<0.000$
	Longstanding physical		
	No	14961 (63.8)	55.9
	Yes	8471 (36.2)	71.7 $\chi^2=574.9$ (1df), $p<0.000$
	Emotional and/or psychological		
	No	21133 (90.2)	60.3
	Yes	2299 (9.8)	73.0 $\chi^2=141.0$ (1df), $p<0.000$
	Social problem		
	No	22787 (97.2)	61.4
	Yes	645 (2.8)	68.8 $\chi^2=14.7$ (1df) $p<0.000$
	Administrative problem		
	No	22339 (95.3)	61.7
	Yes	1093 (4.7)	58.9 $\chi^2=3.5$ (1df), $p=0.063$
	Action or advice to keep healthy		
No	20966 (89.5)	61.3	
Yes	2466 (10.5)	63.8 $\chi^2=5.8$ (1df), $p=0.008$	
Patient did not indicate any problem			
No	21225 (90.6)	61.5	
Yes	2207 (9.4)	62.8 $\chi^2=1.4$ , (1df) $p=0.238$	
Patient wished to discuss >1 problem	No	19968 (85.2)	60.9
	Yes	3464 (14.8)	65.8 $\chi^2=31.2$ (1df), $p<0.000$

**Table 2 (continued)**

Explanatory variables	Categories	No (%) of patients with valid outcome (n=23432)	% of patients seeing their 'usual or regular doctor'
Problem patient had, but did not want to discuss	Longstanding physical		
	No	21467 (8.4)	61.4
	Yes	1965 (91.6)	63.9 $\chi^2=4.9$ (1df), p=0.027
	Emotional and/or psychological		
	No	808 (3.4)	61.5
	Yes	22624 (96.6)	65.2 $\chi^2=4.7$ (1df), p=0.030
	Social		
	No	1005 (4.3)	61.4
	Yes	22427 (95.7)	66.6 $\chi^2=11.0$ (1df), p=0.001

### ***Explanatory variables at GP level***

GPs were asked to complete two questionnaires. The first was completed during the main data collection period, and measured their orientation to ideas of ‘good’ practice (the ‘Cockburn questionnaire’ appendix C, p295) (Cockburn 1987). Twelve (5.4%) GPs did not return this questionnaire. The second was completed some time after main data collection, and collected demographic data and information about their work in the practice (appendix B, p292). Twenty four (10.9%) GPs did not return this questionnaire, of whom eight had also not returned the Cockburn questionnaire.

GPs who did not return questionnaires saw fewer patients than those who did (mean 58.8 vs 122.5 patients seen,  $t=5.374$ ,  $p<0.0001$ ), and were less likely to be identified as the usual or regular doctor by patients seeing them (26.7% vs 60.2% patients consulting,  $t=6.815$ ,  $p<0.0001$ ). GP identifiers were allocated in sequence to each practice according to the doctors the practices said worked there regularly. 11 other GPs contributing data were given out of sequence identifiers, reflecting that they were not named by the practice before the study started. Eight of those with an out of sequence identifier did not return a questionnaire, and all saw less than 50 patients in the two-week period. It therefore seems likely that many GPs not returning questionnaires were locums or only worked part time. At a minimum, it is likely that non-response was not a random process, and this has implications for the regression analysis, which are further discussed on p90.

Table 13 in appendix E (p307) lists all excluded variables, and the justification for their exclusion.

### **Included variables**

How long GPs had worked in the practice, their status there, their age and their sex were considered the most relevant variables to include, on the basis of plausibly affecting patients’ decisions about which GP to consult. However, on close inspection much of these data presented problems. The questionnaire allowed non-exclusive answers to questions about GP status (principal, assistant, locum, registrar)

and length of time in the practice, and there were significant inconsistencies across questions. For example, nine of the seventeen GPs who said that they were an assistant/locum during the study, also said that they had been a 'principal in this practice' for between two and thirty-nine years. Although this is not impossible (principals can do extra locum sessions in their own practice), the pattern of data seen seemed very unlikely. There was also considerable missing data for some questions.

After examining these data, only GP age and gender appeared reliable, or not excessively missing even in those who returned questionnaires. Age and gender are likely to be related to other explanatory variables. Because of the changing demographics of general practice, female GPs are more likely to be younger, less likely to be principals, and less likely to be full time (although the latter was not asked in the questionnaire). Any interpretation of age and gender therefore has to be cautious, since any associations seen are likely to be confounded by expected associations with other variables not analysed.

The Cockburn attitude questionnaire measures GPs' orientation to particular features of their work and the care of patients (Cockburn 1987) (appendix C, p295). The scales constructed by the questionnaire parallel beliefs about 'good' practice held by the RCGP (RCGP 2001). For example, according to such beliefs, it would be appropriate for GPs to agree with the ideas that 'prevention is an important part of GP's work' or that 'patients should be active and equal participants in the consultation'. The plausibility of an association with patient choice of GP to consult depends on an assumption that patients share these perceptions of 'good' practice. GPs who disagree with the underlying concept of 'good' practice would therefore be expected to be less favoured by patients, and less likely to be identified as their usual or regular doctor.

Similarly, mean consultation length and mean enablement score have been proposed as measures of consultation quality (Howie 1991, Howie 1999). For consultation length, there is evidence that longer consultations are associated with different processes of care within the encounter (Freeman 2002). That patients' perceptions of

'good' and 'bad' GPs are consistent with 'quality' as measured by these variables is again implicit in the decision to include them in the analysis.

### **Data handling and univariate association with outcome**

Age, mean consultation length and mean PEI score were treated as four categories arbitrarily defined by quartiles. The Cockburn questionnaire scales were scored as in the original study as a three category variable indicating degree of agreement with the underlying concept (Cockburn 1987) (appendix C, p298). The distributions of these variables are shown in table 3.

There were statistically significant associations with GP age (with younger GPs much less likely to be identified as the usual or regular doctor) and GP sex (female GPs less likely to be identified). There were trends towards GPs with longer consultation lengths and higher PEI scores to be identified as the usual or regular doctor. However, although this supports underlying assumptions about patients preferring particular kinds of GP, the associations were not strong. There were no statistically significant associations with responses to the Cockburn questionnaire, and interestingly, the pattern of responses to the Cockburn questionnaire was not consistent with underlying assumptions about 'good' practice. Although the small numbers in some categories makes any strong conclusion hazardous, it may be that patients do not share the same assumptions, or that the questionnaire does not adequately measure what it purports to.

**Table 3: Distribution of GP level explanatory variables**

Variable	Categories	No (%) of GPs	Mean % of patients who say they are seeing their usual or regular doctor (95% confidence interval) calculated from one way ANOVA
Doctor sex	Male	121 (55.0)	64.0 (60.2 to 67.7)
	Female	74 (33.6)	53.1 (47.5 to 58.6)
	Missing	25 (11.4)	F=11.24 (194df), p=0.001
Doctor age (quartiles)	>=51	53 (24.1)	70.7 (64.8 to 76.5)
	>43 to <51	44 (20.0)	66.0 (60.3 to 71.7)
	38 to 43	52 (23.6)	61.9 (56.9 to 66.9)
	<38	47 (21.4)	41.0 (34.7 to 47.3)
	Missing	24 (10.9)	F=20.8 (195df), p<0.000
Doctor mean consultation length (quartiles)	3.6-6.7	54 (24.5)	60.6 (54.4 to 66.8)
	6.8-7.9	55 (25.0)	56.2 (49.8 to 62.6)
	8.0-9.3	56 (25.5)	56.5 (49.3 to 63.7)
	9.4-14.7	54 (24.5)	53.4 (46.1 to 60.6)
	Missing	1 (0.5)	F=0.771 (218df), p=0.511
Doctor mean enablement score (quartiles)	0-2.7	54 (24.5)	53.0 (45.7 to 60.3)
	2.8-3.1	56 (25.5)	54.8 (48.4 to 61.2)
	3.2-3.6	55 (25.0)	58.1 (52.5 to 63.8)
	3.6-5.9	55 (25.0)	60.4 (52.9 to 67.9)
			F=0.958 (219df), p=0.413

**Table 3 (continued)**

Variable	Categories	No (%) of GPs	Mean % of patients who say they are seeing their usual or regular doctor (95% confidence interval) calculated from one way ANOVA
Doctor responses to Cockburn attitude questionnaire Have psychological orientation	Disagree	4 (1.8)	60.3 (23.8 to 96.8)
	Neither agree nor disagree	165 (75.0)	58.2 (54.5 to 61.9)
	Agree	39 (17.7)	56.3 (54.6 to 61.2)
	Missing	12 (5.5)	F=0.118 (207df), p=0.889
Prevention is important part of GPs work	Disagree	4 (1.8)	72.3 (42.5 to 102)
	Neither agree nor disagree	151 (68.6)	57.9 (54.2 to 61.6)
	Agree	51 (23.2)	56.1 (48.7 to 63.5)
	Missing	14 (6.4)	F=0.856 (205df), p=0.426
Patient should be active and equal participants in consultation	Disagree	3 (1.4)	89.9 (57.0 to 123)
	Neither agree nor disagree	100 (45.4)	59.6 (52.5 to 61.3)
	Agree	105 (47.7)	57.9 (53.0 to 62.8)
	Missing	12 (5.5)	F=2.81 (207df), p=0.062
GPs should be open, listening and provide adequate information to patients	Disagree	4 (1.8)	47.4 (-23.6 to 117)
	Neither agree nor disagree	84 (38.2)	57.4 (52.5 to 62.4)
	Agree	120 (54.5)	58.6 (54.2 to 62.9)
	Missing	12 (5.5)	F=0.445 (207df), p=0.641
Patients should be involved in decision making about treatment	Disagree	17 (7.7)	63.0 (48.1 to 78.0)
	Neither agree nor disagree	149 (67.7)	56.8 (53.1 to 60.5)
	Agree	41 (18.6)	61.2 (53.6 to 68.8)
	Missing	13 (5.9)	F=0.959 (206df), p=0.385
Patients frequently consult with inappropriate or trivial problems	Disagree	42 (19.0)	65.0 (58.3 to 72.8)
	Neither agree nor disagree	145 (65.9)	56.4 (52.6 to 60.1)
	Agree	21 (9.5)	53.2 (39.9 to 66.5)
	Missing	12 (5.5)	F=2.89 (207df), p=0.058

### ***Explanatory variables at practice level***

Practice managers were asked to complete a large questionnaire some weeks after the main data collection (appendix D, p300). One (1.9%) practice did not respond, although its list size was already known, but for many variables, completion rates were poor. Table 14 in appendix E (p308) lists excluded variables, and the justification for this.

### **Included variables**

Listsize (question 19, appendix D, p303) and the kind of list system that practices had (question 22, appendix D, p303) were considered most relevant. The growth of practices, and the decline in personal lists (where patients can normally only see their own GP) are two of the most striking changes to post-war general practice. Shared lists have been shown to be associated with lower rates of longitudinal continuity than personal lists (Freeman 1990, Roland 1986), and larger practices with shared lists are generally believed to have reduced both longitudinal and personal continuity (McCormick 1996, Baker 1997). Practices that train GP registrars (question 3, appendix D, p302) have less satisfied patients, which has been interpreted as resulting from lower personal continuity (Baker 1995, Baker 1996). The organisation of appointments (question 9, appendix D, p302) potentially affects the negotiation of access by patients, as does the practice having a branch surgery (question 6, appendix D, p302) and therefore the GPs dividing their time between more than one site. The creation of fund-holding and other alternatives to the universal General Medical Services (GMS) contract was a major organisational change of the 1990s and therefore of interest (question 2, appendix D, p302).

### **Data handling and univariate association with outcome**

List size had a non-normal distribution and was treated as a five category variable arbitrarily defined by quintiles. List organisation, type of appointment system, area and training status were analysed in terms of the categories in the original questions. Because of small numbers in some of the original categories, responses to the

question about the kind of contract the practice held with the NHS was collapsed into General Medical Services (GMS) or not-GMS (the majority being standard fund-holders). The distribution of these variables is shown in table 4.

Increasing listsize was strongly associated with fewer patients seeing their usual or regular doctor, the strength of this effect being similar to that for patient age. Patients in practices accredited for training GP registrars were less likely to be seeing their usual or regular doctor, as were those in practices with a branch surgery. There was a non-significant trend for patients in practices with personal list systems to be more likely to be seeing their usual or regular doctor. Other associations were not statistically significant and generally weaker.

**Table 4: Distribution of practice level explanatory variables**

Variable	Categories	No (%) of practices	One way ANOVA, mean % of patients who say they are seeing their usual or regular doctor (95% confidence interval)
Practice list size (quintiles)	1425-3048	10 (18.9)	86.0 (78.2 to 93.4)
	3048-4593	11 (20.8)	70.3 (61.5 to 79.2)
	4594-6336	11 (20.8)	72.4 (53.7 to 79.1)
	6337-11036	11 (20.8)	56.5 (52.1 to 60.9)
	11037-16379	10 (18.9)	53.4 (43.7 to 63.1)
			F=14.5 (52df), p<0.000
Practice type of list system	Can see any GP	32 (60.4)	66.0 (60.4 to 71.7)
	Encouraged to see same GP	14 (26.4)	64.0 (56.1 to 72.0)
	Can usually only see registered GP	5 (9.4)	81.9 (65.7 to 98.1)
	Missing	2 (3.8)	F=2.8 (50df), p=0.071
Practice training or not	Not training	30 (56.6)	74.3 (68.3 to 80.3)
	Training	21 (39.6)	57.9 (53.1 to 62.8)
	Missing	2 (3.8)	F=16.8 (50df), p<0.000
Practice type of appointment system	Full appt system	41 (77.4)	67.0 (62.0 to 72.0)
	No appt system	3 (3.8)	80.5 (67.3 to 93.7)
	Mixed system	8 (15.1)	66.1 (50.5 to 81.8)
	Missing	1 (1.9)	F=1.04 (51df), p=0.360
Practice has branch surgery	No	37 (69.8)	70.8 (65.6 to 76.0)
	Yes	14 (26.4)	59.1 (50.6 to 67.5)
	Missing	2 (3.8)	F=5.87 (50df), p=0.019
Practice on General Medical Services (GMS) contract or not	Non-GMS	31 (58.5)	68.9 (62.1 to 75.6)
	GMS	20 (37.7)	67.3 (61.1 to 73.6)
	Missing	2 (3.8)	F=0.112 (50df), p=0.740

## Statistical methods for the analysis of hierarchical datasets

“It is a basic principle of statistics that variability in a body of data may possess structure, and that the analysis of the body of data must take account of that structure” (Leyland & Goldstein 2001) p1

There are two senses in which the PEI dataset can be considered to have a hierarchical structure, with patients clustered within practices. Firstly, the dataset is made hierarchical by the two stage sampling strategy. Practices were sampled first, and then patients within practices. Such samples are ubiquitous because they are more convenient and cheaper than true random samples of individual patients. However, if even small degrees of clustering or correlation between patients within practices is present, then an individual patient level analysis will be technically problematic. At a minimum, standard errors of estimated parameters will be falsely narrow, and the risk of a type 1 error substantially increased (Barcikowski 1981). At worst, parameter estimates themselves will be biased, although this is relatively unlikely unless there is considerable clustering or the effect of explanatory variables varies across practices (Snijders 1999, Hox 2002). Multilevel modelling is one way of addressing these technical problems. Other methods usually treat clustering as a nuisance to be controlled for, and do not allow practice level factors to be included in the analysis (Goldstein 1995).

Regardless of sampling strategy, a dataset may also be considered hierarchical on theoretical grounds. My assumption was that patients make choices about which GP to see depending on the nature of the problem they want to discuss, and their preferences for different aspects of care like personal continuity and access. These choices are partially constrained by the GPs available to them in their practice, and the way practices organise their appointment systems and follow up. These factors are at different levels. Some apply to the individual patient, some to the consultation, some to the GP being consulted and some to the practice. Most analytical methods require a focus on a single level like the patient or the practice, but if the research topic is conceptualised as multilevel, then analysis requires a method that can model this complexity. My substantive interest in the interaction of individual patients and

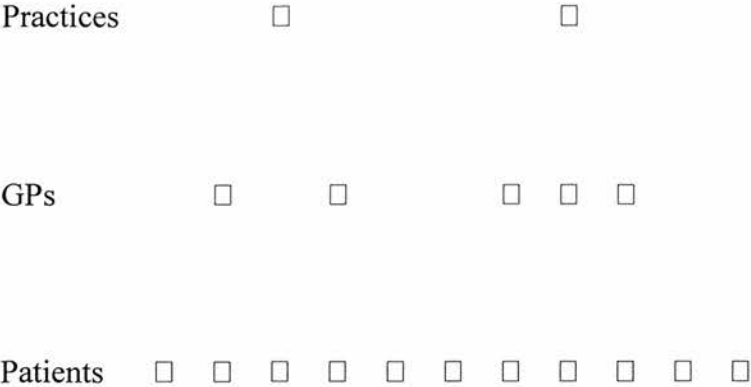
the context of their practices meant that multilevel modelling was the most appropriate analytic approach (Bryk 1992, Goldstein 1995, Kreft 1998, Snijders 1999, Leyland 2001).

A more detailed discussion of the analysis of hierarchical datasets, using both graphical and algebraic explanations is included in appendix F (p309). This includes a description of some alternatives, and a discussion of some of the advantages and disadvantages of multilevel modelling. What follows here is briefer, and focused on the application of multilevel modelling to this dataset.

**Using multilevel modelling with this dataset**

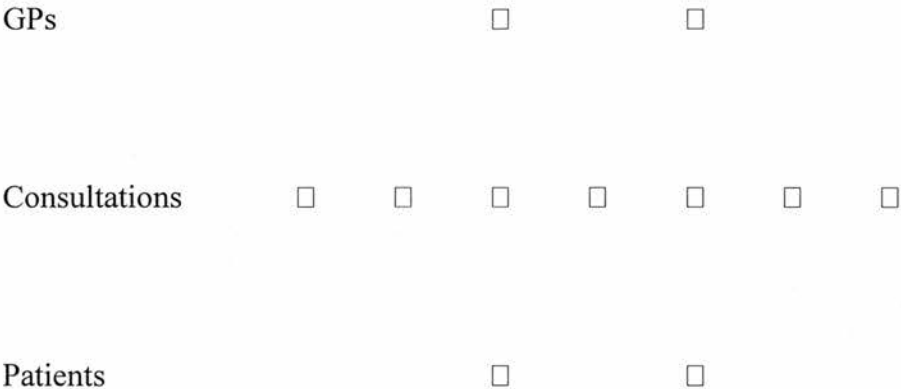
Since patients were asked to only fill in one questionnaire in the two week data collection period, the PEI dataset can be conceptualised as having three strictly hierarchical levels – patients within GP being consulted within practice (figure 1).

**Figure 1: A hierarchical conceptualisation of the PEI dataset**



However, this strict hierarchy is partly an artefact of the cross sectional data collection. Figure 2 shows a more realistic representation of the relationships between practices, GPs, patients and consultations. GPs and patients are clustered within practices. For each patient there are a series of consultations. Each consultation has characteristics that may vary, such as the problem the patient wishes to discuss that day. A different GP may be seen at every consultation. This is not a neat hierarchy. It is a cross-classification of consultations within GPs and patients, all being nested within practices (although for clarity, the practice level is omitted).

**Figure 2: A non-hierarchical conceptualisation of the underlying consultation process**



The PEI dataset therefore conflates patients and consultations. Over time, patient characteristics like gender are distinct from consultation characteristics like ‘the problem to be discussed’. However, in a single cross section where there is a one to one relationship between patient and consultation, this complexity is simplified. In this analysis, all patient and consultation variables were treated as ‘patient’ characteristics. The model constructed was therefore a three level, strict hierarchy of patients within GP consulted within practice.

Regression analysis of binary outcome data is conducted within the framework of the generalised linear model (McCullagh 1989), of which multilevel modelling is an extension (Hox 2002). The generalised linear model is defined by three components.

1. An outcome variable  $y$  with a particular error or residual distribution
2. A linear regression equation that produces a predictor  $\eta$  of the outcome variable  $y$
3. A link function that links the expected value of  $y$  to the predicted values for  $\eta$

A variety of link functions can be used for dichotomous data including the logit, probit and complementary log-log. Where the overall probability of ‘success’ is between 0.1 and 0.9, the different link functions give very similar results (Hox 2002). Here 62% of patients said that they were seeing their usual or regular doctor, so the

logit function was chosen because it was the simplest to implement in MLwin (Multilevel Models Project 1999, Rasbash 2001). In this analysis, the assumed probability distribution for the outcome variable is therefore binomial with mean  $\mu$  and variance determined by the mean. The linear predictor is the multiple regression equation for  $\eta$  and the link function is the logit function with  $\eta = \text{logit}(\mu)$  (Hox 2002). This model is written in MLwin as:

**Equation 1**

$$y_{ijk} \sim \text{Binomial}(1, \pi_{ijk})$$

$$y_{ijk} = \pi_{ijk} + e_{0ijk}[\pi_{ijk}(1 - \pi_{ijk})]^{0.5}$$

$$\text{logit}(\pi_{ijk}) = B_{1jk} + B_2x_{2ijk} + B_3x_{3jk} + B_4x_{4k}$$

$$B_{1jk} = B_1 + u_{1jk} + v_{1k}$$

$$v_{1k} \sim N(0, \Omega_v), \Omega_v = [\sigma^2_{v1}]$$

$$u_{1jk} \sim N(0, \Omega_u), \Omega_u = [\sigma^2_{u1}]$$

$$e_{0ijk} \sim (0, \Omega_e), \Omega_e = [1]$$

$\pi_{ij}$  is the probability that the  $i^{\text{th}}$  patient seeing the  $j^{\text{th}}$  GP in the  $k^{\text{th}}$  practice was consulting their usual or regular doctor. The linear regression equation ( $\text{logit}(\pi_{ijk}) = B_{1jk} + B_2x_{2ijk} + B_3x_{3jk} + B_4x_{4k}$ ) includes explanatory variables from all levels ( $x_{2ijk}$ ,  $x_{3jk}$  and  $x_{4k}$  represent explanatory variables at patient, GP and practice level respectively). Estimates of the strength of any association with the outcome variable are given by the parameters  $B_2$ ,  $B_3$ ,  $B_4$  and so on. These are reported in the tables of fixed effects as odds ratios, calculated as the exponential of each parameter.

There is assumed to be variation of individual patients due to patient, GP and practice effects. These are included in the model as the residual (or error) terms  $e_{0ij}$ ,  $u_{1jk}$  and  $v_{1k}$ . The residual at patient level ( $e_{0ij}$ ) is a scaling factor with mean zero and variance that is linked to the assumed underlying binomial distribution. Extra-

binomial variation (under- or over-dispersion) can be modelled by directly estimating this scaling factor.

The key difference from a single level regression model is the addition of the terms for GP and practice level variation. Effectively this modifies the single level model assumption of independence of patient residuals, to an assumption that residuals at each level are uncorrelated (see appendix F, p309, for a more detailed discussion). The model in equation 1 is a 'random intercepts' model in that it is assumed that the intercept ( $B_1$ ) is different for each GP and for each practice. The residuals at GP ( $u_{1jk}$ ) and practice ( $v_{1k}$ ) level are not directly estimated, but are assumed to be normally distributed with mean 0 and variances at GP ( $\sigma^2_{u1}$ ) and practice ( $\sigma^2_{v1}$ ) level. These variances are directly estimated and are reported in the tables of random effects.

The fixed effects parameters ( $B_2$ ,  $B_3$  and so on) can additionally be assumed to have a random coefficient. This effectively assumes that the association of explanatory and outcome variables is different for each GP and/or each practice. Since there was no evidence of such 'random slopes' found in this analysis, this is not further discussed here (see appendix F for details).

## Modelling strategy

There is no simple guide to choosing the ‘best’ model, in part because there is no ‘best’ model waiting to be discovered.

“Model specification is one of the most difficult parts of statistical inference, because there are two steering wheels: substantive (subject matter related) and statistical considerations. These steering wheels must be handled jointly. The purpose of model specification is to arrive at a model that describes the observed data to a satisfactory extent but without unnecessary complications. A parallel purpose is to obtain a model that is substantively interesting without wringing from the data drops that are really based on chance but interpreted as substance.” (Snijders 1999 p91)

The overall modelling strategy followed one of the strategies outlined by Snijders and Bosker (1999).

1. Conduct an initial, single level descriptive analysis to gain insight into the data structure.
2. Construct a level one model (here, patients) sequentially adding fixed effects, examining if there are significant level one interactions, and then if there are significant level one random slopes. The choice of which variables to focus on, which to enter first, and which to remove should be informed by both substantive knowledge of the field of research, and by tests of statistical significance.
3. Construct a level two model in the same way (GPs), and then additionally explore if there are cross level interactions.
4. Repeat the process at level three (practices).
5. Check model assumptions and fit

The alternative they suggest is to enter all variables simultaneously. However, with current software and algorithms this is likely to lead to non-convergence or other estimation problems. As already described, the initial descriptive analysis was carried out using the Statistical Package for the Social Sciences version 9.0 (SPSS Inc 1999), and the multilevel analysis using MLwin version 1.10.0006 (Multilevel Models Project 1999).

Because estimation for binary outcomes in MLwin uses quasi-likelihood techniques, the deviance statistic (-2 log likelihood) is not a reliable guide to model fit (see discussion on p317 in appendix F). Tests of statistical significance used were therefore t-tests for binary fixed effects, and Wald tests for the random effects and multicategory fixed effects (Rasbash 2001, Snijders 1999).

## Results of the multilevel regression model

### Fitting a random intercepts, 'empty' model

Table 5 shows the estimates for a random intercepts model with no explanatory factors entered (the 'empty' model). This variance components model gives an estimate of how much of the variation in the outcome is attributable to patient, GP and practice factors. The predicted probability of a patient seeing their usual or regular doctor was 0.63, compared to the actual probability of 0.62.

**Table 5: Variance components in the 'empty' model**

Random effects variance	Assuming a patient level binomial distribution Variance (SE)
Patient level	1 (0)*
GP level – intercept	1.434 (0.165)
Practice level – intercept	0.315 (0.143)

\* The value of 1 refers to a scaling factor to an assumed underlying binomial distribution with variance  $\pi^2/3 = 3.290$

The underlying variance of the binomial distribution was assumed to be  $\pi^2/3 = 3.290$ . The total variance was therefore 5.037. The percentage attributable to patient factors was 65.3% ( $3.29/5.037*100$ ), to GP factors 28.4% and to practice factors 6.3% (Snijders 1999, Rasbash 2001).

These figures can be interpreted as the intra-cluster correlation coefficient (ICC) (Snijders 1999, Goldstein 2001). Conventionally, the ICC is calculated for a two level hierarchy. In a three level hierarchy, its interpretation is more complex (and even more so for models where there are random slopes where there is no single number that summarises clustering) (Goldstein 2001). The ICC for patients within

GPs is 0.284. There are two interpretations of the ICC for patients within practices. Firstly, the total degree of clustering of patients within practices was 0.347 (0.284 + 0.063). Secondly, the degree of clustering of patients within practices allowing for differences due to the different composition of practices in terms of the GPs in each, was 0.063. This suggested that the context of the practice had major effects on patient experience of 'seeing the usual or regular doctor', but that much of this effect appeared due to differences between practices in terms of their composition in terms of the doctors working in each.

### **Fitting a model with explanatory variables**

For reasons of space, the individual steps of the analysis are not shown. Of note is that a significant interaction between patient age and gender was identified. Interactions between age, gender and other patient level variables were not significant, nor were significant cross level interactions found. After the initial patient level model was constructed, there were significant random slopes found at the GP level for four patient level variables (patient sex, the patient wanting to discuss a psychiatric problem, the patient wanting to discuss a prevention problem, and the patient having been asked to attend by a doctor). A random slope indicates that the association between these factors and the outcome varies for patients seeing different GPs. However, after entering GP and practice level variables, these random slopes were no longer significant and were removed from the model.

The fixed effects for the preferred model are shown in table 6, and the random effects in table 7.

**Table 6: Fixed effects of preferred model**

<b>Patient level</b>	<b>No. (%) of patients (n=19913)</b>	<b>Odds ratio (95% CI)</b>
Female patient aged		
<25	2236 (11.2)	1
25-34	2960 (14.9)	1.70 (1.49 – 1.94)
35-44	2238 (11.2)	1.88 (1.64 – 2.16)
45-54	1972 (9.9)	2.26 (1.95 – 2.62)
55-64	1436 (7.2)	3.32 (2.81 – 3.93)
65-74	1214 (6.1)	3.79 (3.15 – 4.56)
>74	783 (3.9)	4.51 (3.60 – 5.67)
Male patient aged		
<25	1071 (5.4)	0.86 (0.72 – 1.02)
25-34	1266 (6.4)	1.07 (0.91 – 1.25)
35-44	1166 (5.9)	1.70 (1.44 – 2.02)
45-54	1157 (5.8)	2.18 (1.83 – 2.60)
55-64	1030 (5.2)	3.68 (3.03 – 4.48)
65-74	897 (4.5)	4.15 (3.36 – 5.13)
>74	487 (2.4)	6.33 (4.69 – 8.54)
Patient wishes to discuss:		
New or urgent physical problem only	5180 (26.0)	1
Longstanding physical problem	7227 (36.3)	1.92 (1.78 – 2.08)
Emotional/psychological problem	1985 (10.0)	2.28 (2.01 – 2.58)
Social problem	545 (2.7)	1.46 (1.16 – 1.82)
Administrative problem	955 (4.8)	1.17 (0.99 – 1.37)
Action or advice to keep healthy	2174 (10.9)	1.34 (1.19 – 1.50)
Did not indicate problem	1847 (9.3)	1.36 (1.20 – 1.54)
Patient is an extra in a fully booked surgery	1182 (5.9)	0.43 (0.36 – 0.50)
Patient has been asked to attend by a doctor	5061 (25.4)	2.06 (1.89 – 2.26)
<b>GP level</b>	<b>No (%) of GPs (n=189)</b>	<b>Odds ratio (95% CI)</b>
GP age (quartiles)		
GP age >=51	50 (26.5)	1
GP age >43 to <51	43 (22.8)	0.93 (0.62 – 1.40)
GP age 38 to 43	51 (27.0)	0.83 (0.57 – 1.22)
GP age <38 years	45 (23.8)	0.33 (0.22 – 0.49)
GP is female	72 (38.1)	0.66 (0.50 – 0.87)
<b>Practice level</b>	<b>No (%) of practices (n=51)</b>	<b>Odds ratio (95% CI)</b>
Practice list size (quintiles)		
1425-3047	9 (17.6)	1
3048-4593	11 (21.6)	0.50 (0.24 – 1.03)
4594-6336	10 (19.6)	0.54 (0.27 – 1.09)
6337-11036	11 (21.6)	0.24 (0.12 – 0.46)
11037-16379	10 (19.6)	0.19 (0.10 – 0.37)
Practice type of list system		
Can see any GP	32 (62.7)	1
Encouraged to see same GP	14 (27.5)	1.37 (0.99 – 1.90)
Can normally only see registered GP	5 (9.8)	3.27 (1.87 – 5.70)

**Table 7: Random effects of preferred model**

Random effects variance	'Empty' model Variance (SE)	'Full' model Variance (SE)
Patient level	1 (0)*	1 (0)
GP level - intercept	1.434 (0.165)	0.764 (0.098)
Practice level - intercept	0.315 (0.143)	0.033 (0.052)

\* The value of 1 refers to a scaling factor to an assumed underlying binomial distribution with variance  $\pi^2/3 = 3.290$

## Checking model assumptions

As with any statistical model, underlying assumptions should be checked before results are accepted and interpreted. This is done here in terms of an examination of missing data, checking assumptions about the distribution of residuals, and exploring model fit for the preferred model.

### Missing data

MLwin handles missing data at higher levels by listwise deletion of all data nested within the higher level unit. To enter a GP level variable therefore means that GPs with a missing value are deleted, and so are the patients who had seen those GPs. Data exploration was consistent with GP data not being missing at random (p73), and non-random deletion of GPs might therefore alter the estimates for explanatory variables at other levels. A second model without GP level explanatory variables was therefore estimated to explore the effect of listwise deleting this set of GPs.

This model is shown in tables 8 and 9. There were no changes in the patient or practice level variables included (table 8). Comparing the results to the preferred model, it can be seen that there were differences in the odds ratios at practice level. The association between listsize and personal/longitudinal continuity is somewhat larger in magnitude, and the difference between smallest practices (list size <3048) and the next quintile (list size 3048-4593) became marginally statistically significant. The effect of a practice running a personal list system was also modestly increased. There are small changes in some of the estimates at patient level, although none alter the interpretation.

In terms of the random effects, the residual practice level variance is modestly higher in the model without GP explanatory variables, suggesting greater unexplained variation between practices (table 9). There are two, not mutually exclusive, explanations for this. One is that some of the differences between practices are due to differences between them in terms of the GPs that compose them. The second is that listwise deleting patients seeing GPs who did not return a questionnaire produces biased results at practice level (which is what would be predicted from the univariate analysis comparing GPs who did and did not return a questionnaire).

However, the most important thing to recognise is that both the models in tables 6-9 are flawed, because the GP level data was seriously incomplete. It was incomplete in that it did not include several variables that seemed highly likely to be important (eg whether or not a doctor was full or part time, whether or not the doctor was a partner, registrar/trainee or locum). It was also incomplete in that there was missing data, and this was probably not missing at random since GPs not returning a questionnaire had different patterns of consultation and identification as the usual or regular doctor.

The included GP variables in table 7 are therefore inadequate to explain GP level variation, and including them means non-random deletion of patient level data and potential bias in practice level data. Leaving out all GP level data prevents deletion of data from other levels, but it seems likely that ignoring composition of practices in terms of the GPs who work there will overestimate the amount of variation at practice level. In other words, some of the 'effect' of list size seems likely to be due to different kinds of GP working in larger and smaller practices. Overall, the model first presented and shown in tables 6 and 7 was preferred, but interpretation, particularly of the GP level variables, should necessarily be cautious. The model checking reported below is for this preferred model.

**Table 8: Fixed effects of model omitting GP level explanatory variables**

<b>Patient level</b>	<b>No. (%) of patients (n=21371)</b>	<b>Odds ratio (95% CI)</b>
Female patient aged		
<25	2407 (11.3)	1
25-34	3135 (14.7)	1.66 (1.46 – 1.88)
35-44	2385 (11.1)	1.84 (1.61 – 2.11)
45-54	2117 (9.9)	2.21 (1.92 – 2.55)
55-64	1534 (7.2)	3.15 (2.68 – 3.7)
65-74	1310 (6.1)	3.74 (3.31 – 4.46)
>74	818 (3.8)	4.53 (3.63 – 5.65)
Male patient aged		
<25	1147 (5.4)	0.86 (0.72 – 1.01)
25-34	1370 (6.4)	1.10 (0.94 – 1.29)
35-44	1275 (6.0)	1.66 (1.41 – 1.95)
45-54	1260 (5.9)	2.14 (1.81 – 2.53)
55-64	1127 (5.3)	3.60 (2.99 – 4.34)
65-74	971 (4.5)	4.11 (3.36 – 5.03)
>74	515 (2.4)	6.53 (4.88 – 8.72)
Patient wishes to discuss:		
New or urgent physical problem only	5638 (26.4)	1
Longstanding physical problem	7722 (36.1)	1.91 (1.77 – 2.06)
Emotional/psychological problem	2127 (10.0)	2.25 (1.99 – 2.53)
Social problem	586 (2.7)	1.44 (1.16 – 1.78)
Administrative problem	1030 (4.8)	1.14 (0.98 – 1.34)
Action or advice to keep healthy	2274 (10.6)	1.34 (1.20 – 1.50)
Did not indicate problem	1994 (9.3)	1.36 (1.21 – 1.53)
Patient is an extra in a fully booked surgery	1204 (5.6)	0.43 (0.37 – 0.50)
Patient has been asked to attend by a doctor	5394 (25.2)	2.05 (1.89 – 2.24)
<b>GP level</b>	<b>No of GPs (n=214)</b>	
<b>Practice level</b>	<b>No of practices (n=51)</b>	<b>Odds ratio (95% CI)</b>
Practice list size (quintiles)		
1425-3047	9 (17.6)	1
3048-4593	11 (21.6)	0.44 (0.20 – 0.96)
4594-6336	10 (19.6)	0.51 (0.23 – 1.11)
6337-11036	11 (21.6)	0.18 (0.09 – 0.37)
11037-16379	10 (19.6)	0.16 (0.08 – 0.33)
Practice type of list system		
Can see any GP	32 (62.7)	1
Encouraged to see same GP	14 (27.5)	1.22 (0.85 – 1.75)
Can normally only see registered GP	5 (9.8)	3.63 (1.96 – 6.71)

**Table 9: Random effects of model omitting GP level variables**

Random effects variance	'Empty' model Variance (SE)	Preferred model Variance (SE)	Model with GP variables excluded Variance (SE)
Patient level	1 (0)*	1 (0)	1 (0)
GP level - intercept	1.434 (0.165)	0.764 (0.098)	1.209 (0.140)
Practice level - intercept	0.315 (0.143)	0.033 (0.052)	0.023 (0.064)

\* The variance at patient level is constrained to a binomial distribution with a variance of  $\pi^2/3$ . The 1 (0) refers to the scaling factor value and variance.

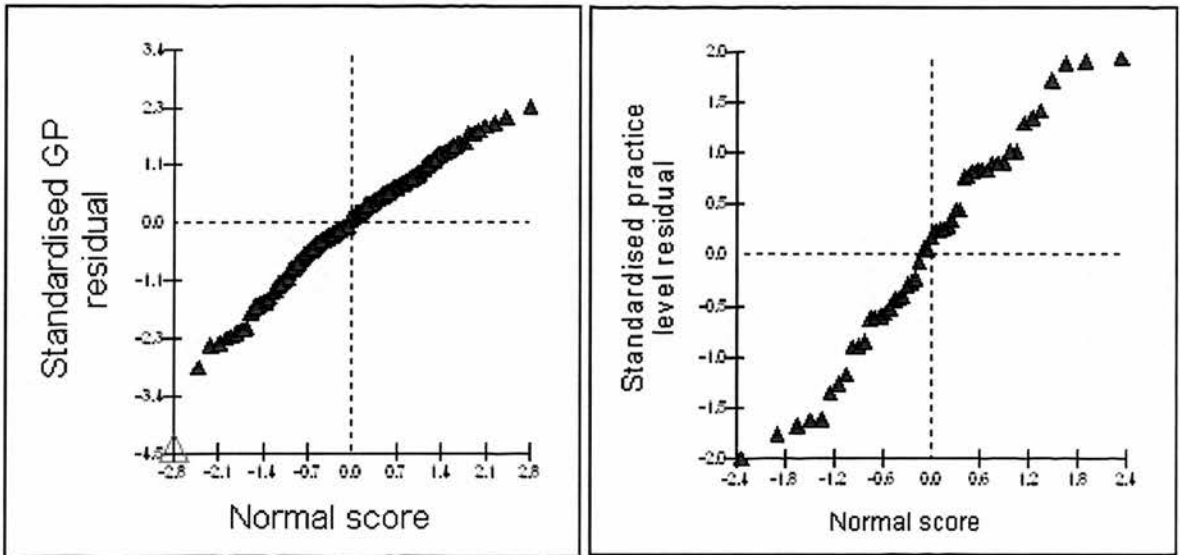
### Distributional assumptions

Residuals at patient level were assumed to have a binomial distribution, and residuals at GP and practice levels were assumed to be normally distributed, although the models are reasonably robust to minor deviation (Hox 2002).

To test the assumption of binomial variance at patient level, the variance scaling factor at patient level can be freely estimated rather than constrained to be one (Rasbash 2001). The unconstrained estimate was 1.010 (95% confidence interval 0.992 to 1.028), indicating that the binomial assumption was reasonable. The residual distributions at GP and practice level were examined using plots of standardised residuals against normal scores (figure 3).

At GP level, the normal assumption was judged adequate, although one GP (GP9) appeared discrepant (highlighted as the open triangle in this and all subsequent graphs). At practice level, there was evidence of some limited deviation from normality, particularly at the ends of the distribution. Examining these practices did not reveal any obvious miscoding of data, and the distributional assumption was judged adequate.

**Figure 1: Normal plots of GP and practice level residuals**



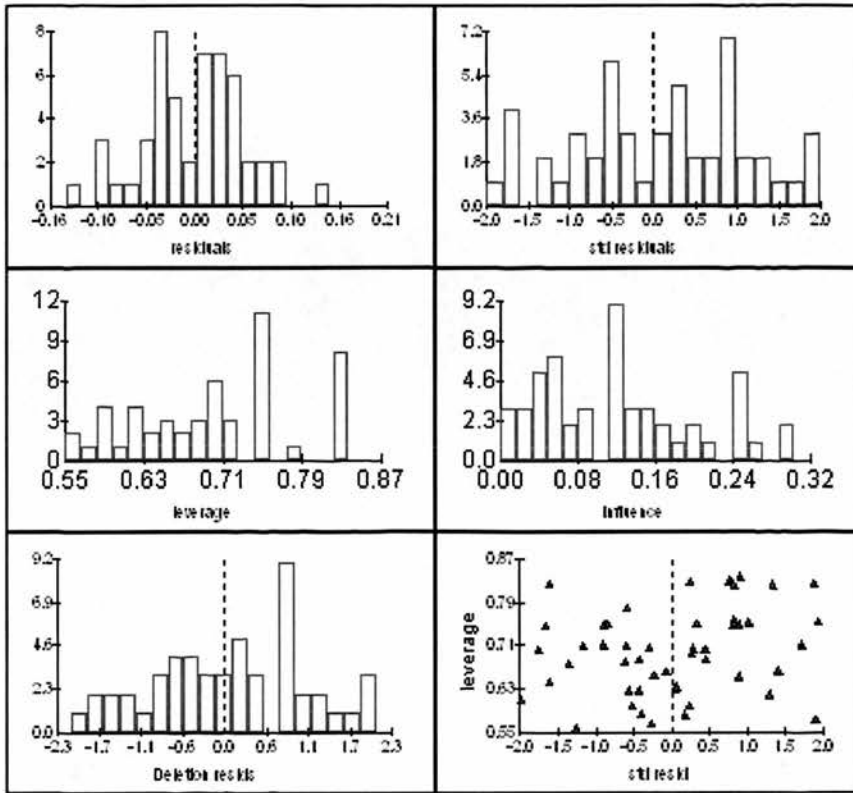
### Model fit and detection of outliers

MLwin provides a number of diagnostic statistics, although their performance is best understood for linear models with normally distributed outcomes (Rasbash 2001, Langford 1998, Lewis 2001). Their performance in generalised linear models is unclear, particularly at the lowest level where the distributional assumptions are non-normal (Rasbash 2001). Here they were used to search for outlying practices and GPs.

### *Practice level*

Figure 4 shows the diagnostics for the practice residuals. No practice standardised residual or deletion residual was  $> \pm 3$ . The measure of influence is the DFITS statistic, where it is suggested that units whose DFITS value exceeds  $2.5 \cdot \sqrt{(q_m/n_m)}$  should be examined (where  $q_m$  is the number of random coefficients and  $n_m$  the number of units at level  $m$ ) (Lewis 2001). Here, that would suggest that practices with a DFITS value  $> 0.35$  ( $2.5 \cdot \sqrt{(1/51)}$ ) should be examined more closely. No practice exceeded that value, and no practice therefore appeared particularly discrepant in terms of influence.

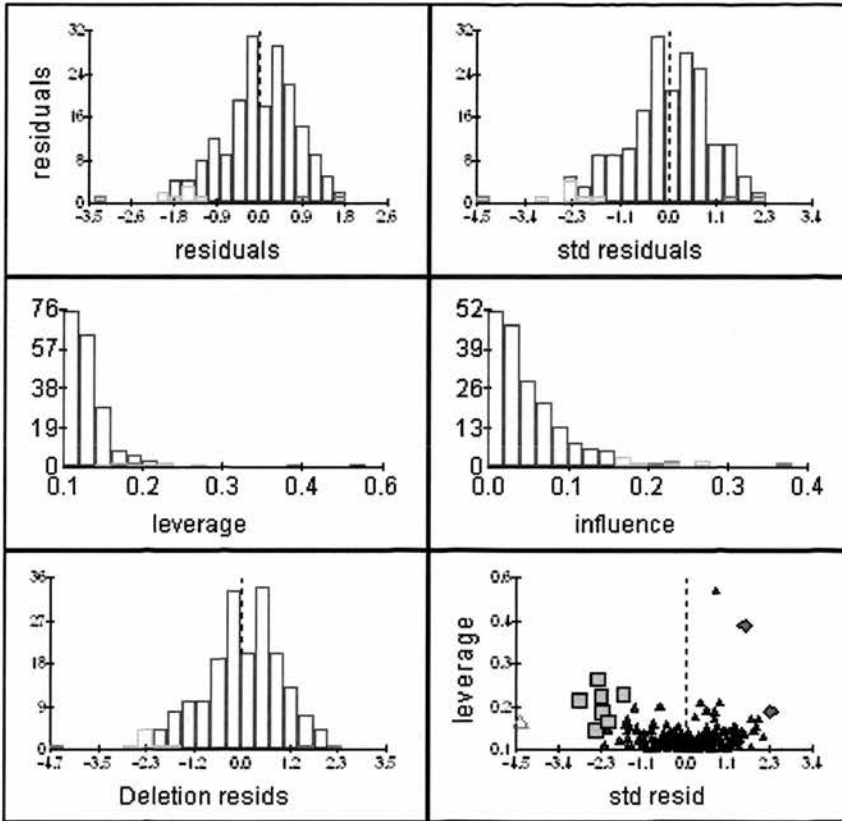
**Figure 2: Practice level diagnostics**



**GP level**

Figure 5 shows the diagnostics for the GP residuals. GP9, who was identified as discrepant in the GP level normal plot, was the only GP with a standardised and deletion residual with a value greater than  $-3$ . She is marked on all graphs in red and/or as a large open triangle. The calibration value for the DFITS measure of influence is 0.18. Values for nine GPs exceeded this. One was GP9. Six other GPs with large influence also had negative residuals (that is, they have lower than expected numbers of patients saying that they are their usual or regular doctor). These are marked as large squares. One had a high positive residual, and one a modestly high residual, but high leverage. The GP with the highest leverage value was not particularly influential because his residual was small and he saw few patients in the study period.

5  
**Figure 3: GP level diagnostics**



Examining these nine GPs in more detail, all seven of those with negative residuals indicated that they were assistants, locums or registrars in the study period (although two also indicated that they had been principals in this practice for 8 and 15 years). GP9 was particularly unusual in that she worked in a personal list practice where she was markedly divergent from the other GPs in the proportion of patients who identified her as the usual doctor (6% versus 60-98%). It seemed plausible that her lack of fit in the model was due to omission of variables about GPs' status within the practice.

It did not therefore seem useful to separately model these GPs, since their being 'outliers' was likely to be due to a model mis-specification. This reinforces that any interpretation of the included GP variables (age and sex) should be cautious, as should interpretation of practice level variables since there are potentially variations in practice composition that are not being explicitly modelled.

## Explained variance in the preferred model

The proportion of explained variation is given by equation 2, where  $\sigma^2_F$  is the variance of the linear predictor (for each patient, the predicted value of the outcome based on the fixed part of the model) (Snijders 1999 p225).

### Equation 2

$$\text{Proportion of explained variance} = \sigma^2_F / (\sigma^2_F + \sigma^2_e + \sigma^2_{u1} + \sigma^2_{v1})$$

Here  $\sigma^2_F$  was 1.434,  $\sigma^2_e$  was assumed to equal  $\pi^2/3$  as before, and the variance terms at GP and practice level were 0.764 and 0.033 (table 7, p90). The explained variance was therefore estimated as 26.0% of the total. Most of the practice level variation was explained by the two practice level variables entered, whereas there remained a considerable amount of unexplained variation at GP level, which was consistent with the likely omission of important explanatory variables.

## Model interpretation

There are two main kinds of explanation for the strong association of personal/longitudinal continuity with patient age. Firstly, it may be a cohort effect - older people have grown up with a particular experience of general practice (small practices, more personal care) which has shaped their expectations and preferences. Younger people have had a different experience, and express different preferences. The implication is that as the population ages, personal continuity will 'naturally' decline in importance for patients (Mihill 2000, Fleming 2001). This appears to be the assumption underlying the image evoked in many policy documents of a modern primary care system where the personal doctor appears increasingly irrelevant (Department of Health 2001, Department of Health 1997, Scottish Executive 2001, Scottish Office 1998). Alternatively, the age effect may be due to lifecycle changes - people have different needs and preferences related to the particular stage of life they are at (Mihill 2000). The implication is that as younger people age and their circumstances change, personal continuity is likely to become more important to them (Freeman 2002, Freeman 2001).

It is not possible to disentangle cohort and lifecycle effects with quantitative cross sectional data, and they may of course co-exist. The changing effect of patient sex with age suggests that lifecycle is likely to be important. The needs, experience of care, and constraints faced by men and women vary with age. Young women attend GPs more frequently for contraception, pregnancy, and with young children. Older men are more likely to have serious disease and are less likely to be working. Rather than seeing patient's preferences as fixed due to membership of an age cohort, it probably makes more sense to explore how age and other factors affecting preferences for care interact in an ongoing process. Exploring this quantitatively would require a longitudinal study.

The associations between personal/longitudinal continuity and the 'problems the patient wished to discuss' and being an 'extra' were consistent with my prior expectations, both from the literature and from my own experience of working as a GP. Patients who were 'extras' in fully booked surgeries are likely to have been offered less choice of which doctor they see. The data is also consistent with patients who have longstanding, emotional or social problems being more likely to have and to try to see a personal GP. The positive association with being asked to attend by a doctor seems likely to be because such appointments were easier to plan, although the data available does not allow this to be explored. Interestingly, patients having a problem that they did not want to discuss that day had no strong association with personal/longitudinal continuity which suggests that the immediate problem to be dealt with was more important in influencing choices about which GP to see.

However, the 'problems' data seems unlikely to capture the full complexity of the circumstances of the consultation. It effectively conflated 'new', 'urgent' and 'physical', and therefore seemed to assume that other kinds of problem were neither new nor urgent. It is not difficult to imagine new and/or urgent psychological or social problems, or urgent exacerbations of longstanding physical problems (eg an acute asthma attack). This also emphasises the lack of data about speed or convenience of access in the patient questionnaire.

At GP level, younger GPs and female GPs were less likely to be identified as the patient's usual or regular doctor. As already indicated, the interpretation of this is not simple since GP age and sex are likely to be confounded by employment status, length of time in the practice, and whether the doctor is full or part time. Even with the limited variables available though, there was some modification of practice level effects, in that the association of the outcome variable with list size was weakened when they were included. This suggests that (unexplained) variation in the composition of the practice in terms of the GPs working there may be an explanation for at least some of the apparent variation between practices. Other GP level variables were not significantly associated with the outcome.

At practice level, increasing list size was strongly associated with fewer patients seeing their usual or regular doctor, particularly for the largest 40% of practices (list sizes >6336), although the strict cut off implied by the use of quintiles is probably misleading. This is consistent with general assumptions that larger practices are associated with lower personal continuity, although there has been little previous direct evidence for this. Although there were no statistically significant differences between the smallest and mid sized practices, the study is relatively underpowered at practice level and there is therefore a risk of a type II error in concluding that no differences exist. Exploring this would require a larger study. Patients in practices where they can normally only see their registered GP were much more likely to be seeing their usual doctor. The univariate associations of personal/longitudinal continuity with training practice status and having branch surgeries were not significant once these two variables were accounted for.

The interpretation of 'personal lists' is reasonably straightforward, since the underlying practice organisation is relatively explicit. The interpretation of the listsize effect is more complex. A steady growth in practice size has been one of the major organisational changes of general practice under the NHS. It has been a feature of NHS policy for many years, encouraged via financial incentives for group practice and the provision of health centres. Given its central role in definitions of general practice, finding that larger practices provide less personal/longitudinal continuity is important, but why this is the case is less clear.

'Listsize' is presumably associated with different kinds of organisation. Although this study cannot examine it, one possible explanation is that the negotiation of access was more difficult in larger practices. This is consistent with research on the work of receptionists which suggests that making appointments is more complex and more rule driven in larger practices (Arber 1985). Additionally, it is possible that the GPs in this study working in smaller and larger practices were different in terms of their availability. GPs in smaller practices were more likely to be men and more likely to be older. Given the demographics of general practice, it seems likely that they would also be more likely to work full time, or near full time in the practice. So some of the listsize effect in this study may be driven by unmeasured GP variables.

More generally, the demography of UK general practice is changing, with increasing numbers of female and part time GPs. This, along with suggested changes in expectations of the balance between work and family for both sexes may be one of the drivers for the decline in personal lists (which require high levels of availability) and smaller practices (which are perceived to have less flexible work patterns) (Freeman 1997). Understanding this would require a more formal examination of the ways that different practices actually work, which is beyond the scope of either of the studies in this PhD.

## **Summary and discussion**

This chapter has presented an analysis of a large, multi-practice survey of patients. The strength of this was that it allowed an examination of practice level data, and that it included questions about 'continuity' that were usable for my purposes. Its weakness was that the conceptualisation of continuity was not completely clear (and hence referred to here as personal/longitudinal continuity), and there was obviously missing data.

However, had I designed and carried out such a survey, time and resource constraints would not have allowed me to conduct such a large study, and I suspect that my own conceptualisation of 'continuity' would have been similar. Model fit was judged adequate, although the GP outliers identified highlight the inadequacies of the GP

level explanatory data and imply that interpretation should be cautious. This emphasises that this analysis should be seen as primarily exploratory.

The model constructed was consistent with my conceptualisation of personal/longitudinal continuity as a doctor-patient relationship achieved by individual action within particular contexts. Patients have preferences for different kinds of care (seeing the same doctor, speed of access), and act on those preferences. This action is partly constrained by the context in which it is conducted, including the problem they are seeking help with, which GPs are available within a particular practice, and the culture and organisation of that practice.

The patient level variables analysed indicate that male and female patients of different ages achieved different levels of personal/longitudinal continuity, and that there was additional variation depending on the problem they wished to discuss and their route into care. For the latter, I largely assume that those who were 'extras' had problems they perceived as urgent, and those asked to attend by a doctor had been more able to plan their appointment in advance. This highlights the key weakness of this analysis in not explicitly accounting for access.

At GP level, the variables examined were clearly inadequate, but the data available was consistent with the kinds of GP available in the practice significantly influencing patients' experience of care. This highlights the importance of researching the consequences for patient experience of the changing demographics of general practice, even if analysis of this dataset cannot directly address this issue.

At practice level, personal list systems did offer greater personal/longitudinal continuity, although the absence of data about access makes it difficult to examine if they penalised patients in other ways. There was a strong association between increasing listsize and lower levels of personal/longitudinal continuity. As discussed above, 'listsize' is not a particularly explanatory variable in this context since the reasons why personal/longitudinal continuity should be reduced are not explicit. Given policy encouraging the continued growth of practices, this is another area where research into effects on patient experience is warranted.

These results largely fit what most people seem to already believe. It is usually taken for granted that small practices offer greater personal continuity (Baker 1995, McCormick 1996, Taylor 1997, Baker 1997, Haslam 1999); that younger and female GPs are less prepared to be as available as their older, mostly male predecessors were (Freeman 1997); and that personal continuity matters more to the elderly and those with chronic disease (Freeman 1997, Mihill 2000).

However, this interpretation of the data depends on an assumption that patients shared the definition of ‘continuity’ implicit in the outcome question, and that many of them valued relationships with a particular GP. These assumptions were not directly examined in the development of the PEI questionnaire. Along with the problems with the data identified earlier, this emphasises that this analysis should be considered exploratory, and the results interpreted cautiously. The data will be considered again in chapter eight, after the conduct and analysis of the qualitative study is described in the next four chapters.

## **Chapter 4 - Interview study design and methods**

### **Introduction**

The aim of this study was to explore the value given (if any) to different dimensions of ‘continuity’ by patients and GPs, how ‘continuity’ related to other valued processes and outcomes of care, and its uses to construct particular images of the GP and general practice within the interview.

As already indicated in the introduction and chapter one, it seemed clear from the outset that ‘continuity’ was a contestable concept, with number of meanings ascribed by different people for various purposes. As a result, my starting assumption was that understanding what ‘continuity’ meant to individuals would be best addressed using relatively unstructured, qualitative methods. The actual study design was something that developed in the first nine months of the PhD, driven by both theoretical and practical considerations. My understanding of ‘continuity’ was changing in response to my reading of the literature, the interviewing in the initial phase of the qualitative study, and discussion with my supervisors, and over this time the research questions became more focused. Linked to this, my understanding of the methods available was also increasing and changing. Within this changing theoretical context, the study itself had to fit the practical constraints of the time and resources available.

This chapter describes the justification and implications of choices made during the process of settling on a method. It begins by discussing the early data collection and how it influenced main study design; the design of the main study as it evolved; and the choice of a sample. It then addresses recruitment to the main study, and the process of interviewing and initial data handling. The final section then lays out the main analytic strategy, including the techniques used to try to ensure that interpretations were credible or valid.

## Early data

In the first year of the PhD, I conducted preliminary interviews with six GPs and four patients. The six GPs were a convenience sample consisting of one GP I knew, three GPs recruited via colleagues (one of whom I had met briefly before), and two retired GPs, one of whom I knew quite well. The four patients were recruited via two GPs I knew, who were asked to recruit one patient with a chronic problem and one without. As with the main study, interviews were audio-recorded and transcribed.

Transcriptions were read by, and discussed with my supervisors to address both the analysis of their content and my interviewing technique. The interview data from this part of the study is included in the analysis presented in subsequent chapters.

An additional source of data at this early stage was a workshop that I ran at an academic general practice conference. It was attended by about 15 GPs, nurses and non-clinical primary care academics. They were explicitly asked to define continuity, and its place in general practice and the NHS more widely. The discussion generated was helpful in several ways. It broadly followed the dimensions laid out in the literature, suggesting that this was a framework shared by primary care academics and teachers at least. Additionally, although most participants identified ongoing relationships as central, several also commented that they wondered if they made as much difference as GPs might like to think they did. This reinforced the idea that rhetorical use of ‘continuity’ might be important. Since no new ideas emerged from it, this data is not explicitly included in the analysis presented. However, it did help clarify my thinking at the time and served to increase my confidence that the topic guide then being constructed was reasonable.

This early work had two main consequences. Firstly, it helped clarify my thoughts about ‘continuity’ in general practice, and identified a number of areas of interest to explore further. An important consequence was that the approach to GPs and patients was changed from asking them to take part in a study of ‘continuity’, to asking them to take part in a study of ‘which aspects of general practice are valued by GPs and patients’ and ‘improving GP care - your views’ (appendix G, p324). This was because the first two GPs interviewed commented that ‘continuity’ was not a word

they regularly used in everyday life. Having been primed to think about ‘continuity’ before the interview though, they found it hard not to repeatedly use the word in the interview. It therefore seemed that to ask about it explicitly risked ensuring that ‘continuity’ would be found to be central.

Secondly, this interviewing served a training purpose. My background is in general practice, and therefore my overwhelming interviewing experience was the medical consultation. On the face of it, ‘good consultation skills’ for doctors and ‘good practice’ for qualitative interviews appear quite similar, for example in the way that both encourage open questions or exploration of interviewees’ ideas and concerns (Rubin 1995, Neighbour 1987). Additionally, one reason that research and other interview like encounters ‘work’ is because both sides share assumptions about what interviewing is, and how it should be conducted. These are culturally specific, and are partly driven by observation of interviews on television or in print (Atkinson 1997). So it is generally accepted that interviewers and doctors ask questions, and interviewees and patients give answers. Although the broad topic of discussion is partially agreed beforehand, the interviewer has more overt opportunities for defining the content because they are likely to have a clearer sense of what they are interested in (although interviewees, especially experienced ones, have opportunities for taking more control than this implies).

Despite these similarities, there are important differences in the way that medical and research interviews are conducted. These differences particularly relate to the purpose and length of the interview, and to the relationship between interviewer and interviewee including the degree of control exerted and who is approaching whom for help. For me, the most important difference was in purpose.

In medical consultations I broadly know what kind of story I am interested in, and I assume that patients share this understanding. It is almost always the story of a ‘problem’ that the patient wants dealt with in some way, either by me alone or jointly with the patient. Additionally, although there are quite often surprises, and the details of the journey may only be clear in retrospect, I have a reasonable confidence in what I am doing in consultations. There is an implicit structure that I understand (and

it appears understood by most patients as well). The experience of research interviewing was quite different. It initially provoked the kind of anxiety I remember from being a medical student and a new doctor. One result in the first patient interview I did was that when feeling uncomfortable, it was relatively easy to move into a more clinical interviewing mode. Having recognised this after discussion of the transcript with my supervisors, I became more aware of this and subsequently tried not to overly reproduce the medical interview, and to avoid following and helping construct overly clinical or 'problem' focused stories.

## **Settling on a method**

The qualitative study design evolved over the first nine months of the PhD. The two main methods originally considered were observation of consultations, and interviews.

Before starting this PhD, I had an interest in observation of the consultation, because it is where much of the work of general practice is done and has been a key topic for general practice research. Most observational research on the consultation has involved GPs recording a number of their consultations consecutively. This can be characterised as observing 'GPs consulting with their patients', and analysis has focused on the GP's style or 'consultation skills'. What has been less analysed is what patients do, or how particular problems are dealt with. I was (and still am) interested in the idea of observing 'patients' consultations with professionals'. That is, of observing a patient's sequential consultations with GPs and other clinicians. The idea was that this would allow an analysis of how patients are active in consultations; how this differs when they see clinicians they know and those they do not; and to see how problems were dealt with over time.

My original, quite vague, idea was that the observational data of patients' consultations with professionals could be usefully supplemented by interview of involved patients and GPs. One reason for this was derived from my experience of using video for general practice training. Here, observation of consultations where doctor and patient know each other can be difficult to interpret because of shared

assumptions not obvious to the observer. Such shared assumptions are of direct interest to an examination of relationships and ‘personal continuity’, and the interview data would (theoretically) allow these to be explored.

There were several reasons why this research design was not pursued. Most importantly, handling this kind of data would be methodologically challenging since current consultation models focusing on the doctor are not necessarily applicable. Given the time constraints imposed by my commitment to the quantitative study, and given that such research was not something that either of my supervisors had experience of, it was decided that sequential observation was not feasible for this PhD. Of less importance were the likely difficulties of finding practices where all or most staff willing to be observed, and the technical problems with ensuring that recording happened (although these would be significant issues in any such study).

After discussion of what volume of data I would be able to analyse well in the time available, we agreed that I would collect data largely via individual semi-structured interview. It was initially left open that focus groups might be used if it seemed likely to be helpful and if there was time. This kind of use of focus groups is sometimes called ‘member validation’, although my own belief is that participants agreement or disagreement with the researcher’s conclusions is not a test of validity (Seale 1999). Rather, it provides alternative perspectives on the data that may sensitise the researcher to assumptions made or areas not well explored. As such it can help ensure that the scope of the analysis is adequate. The PhD supervision process and presenting data to diverse audiences in seminars can be seen as serving similar purposes, albeit in different contexts and to largely professional audiences. In the event, and largely because of lack of time, focus groups were not used. The final study therefore only collected data using individual interviews with GPs and patients.

## Choosing a sample

Whereas participants in the early interviews had been largely a convenience sample, sampling in the main study was purposive. The overall aim of sampling was to achieve heterogeneity among participating GPs and patients in terms of their likely experience of, and beliefs about general practice. The sampling frame was relatively rigid for two reasons. Firstly, I had worked in Lothian for some years, and did not want my prior knowledge to influence which GPs I tried to recruit or avoid. Additionally, ethical committee approval required me to pre-specify sampling. There were two main considerations in designing the sampling frame. These were the relationship between patients and GPs in the study, and the kinds of GP and patient to be recruited.

A question that arose early was whether to explicitly link patients and GPs in any way. Two main options were considered. The first was to recruit patients and GPs separately. Effectively this would construct two distinct studies, albeit analysed in parallel and with a commitment to drawing them together. The second was to recruit GPs and patients with some kind of relationship with each other. This made more sense, given the importance of the rhetoric of personal continuity and of doctor patient relationships. Additionally, in the early interviews GPs talked about general practice largely in general terms, and found it difficult to talk about particular patients. Linking interviews offered the possibility of talking to GPs both in general, and specifically about individual patients already interviewed. This was intended to allow exploration of any tensions between overall claims about the nature of general practice and descriptions of the care of individuals.

To achieve linking, GPs were recruited first and patients then approached via a participating GP. This was because GPs' names and some of the characteristics of their practices were available to me in Lothian, and because recruiting patients first seemed to risk having many unlinked interviews if their nominated GP declined to participate.

GPs were sampled based on the characteristics of the practices they worked in. The sampling frame for practices was based on practice list size and deprivation score. The growth of practices is one of the most striking changes in UK general practice under the NHS, and seemed likely to influence longitudinal and personal continuity in particular (an assumption supported by the results of the quantitative study) (McCormick 1996). Deprivation was chosen as the second sampling criteria because of known differences in workload between practices serving affluent and deprived populations, and the plausibility of this affecting the experience of care and ‘continuity’ (an assumption not examined in the quantitative study) (Calnan 1988c, Carr-Hill 1996). Additionally, this data was easily available to me in Lothian.

Practices were selected at random from the top and bottom quartile of list size and from above and below the median deprivation score. Table 10 shows the sampling frame for the first eight practices. Sampling of the last two practices was left open and was intended to be guided by initial analysis.

**Table 10: Sampling frame for first eight practices recruited**

Deprivation List size	More deprived half	Less deprived half
Smallest quartile (<3800)	2 practices	2 practices
Largest quartile (>8350)	2 practices	2 practices

Within each practice, a GP was chosen at random to approach. This had no statistical intent, but rather was done to prevent my prior knowledge influencing the selection process. The sampling frame for patients was constructed on the basis of expectations about practice and patient characteristics that were likely to be relevant to ‘personal continuity’ in particular. Once a GP consented to take part, they were asked to identify patients in three groups: people with diabetes; people with high blood pressure (hypertension); and people ‘with no chronic disease’. One patient from each group was recruited. The rationale for this was that the way that people with and without a chronic problem perceived the value of personal continuity, other forms of continuity and access seemed likely to be different. The choice of diabetes

and hypertension as the two chronic diseases reflected differences in their usual pattern of care in general practice.

Diabetes care in general practice is usually done by a single GP and nurse in the practice working in a special clinic, although many patients also attend hospital. Diabetes care is probably the most protocol driven of any common disease. This pattern of care is often suggested as a model for the management of other chronic disease, although arguably it represents the importing of a hospital or specialist style of care into general practice. Hypertension is usually cared for in ordinary surgery by all GPs, and most patients will not attend hospital. Both conditions may involve considerable nurse contact, reflecting one of the important changes in general practice in the last 20 years.

Recruiting patients with these two conditions therefore appeared to offer the possibility of opening up discussion of organisation of care within general practice, and the relationships between GPs, primary care nurses and the hospital. A potential disadvantage that became increasingly apparent as the study progressed is that both diabetes and high blood pressure are relatively asymptomatic, and negotiation of urgent access is less likely to be important compared to some other chronic conditions like asthma. The patients with 'no chronic problem' were thought likely to be a group who would be younger, probably less likely to have close relationships with GPs or have attended hospital, and more likely to value access over personal continuity.

For patients with diabetes and hypertension, GPs were asked to identify patients that 'they knew well', and 'patients they had some personal knowledge of, but would not say they knew well' (appendix G, p328). The rationale was to try to ensure that GPs did not simply recruit patients that they had close relationships with, and additionally to open up the idea of 'knowing well' in the interview. In the main part of the study, it was intended to recruit about 10 GPs and 30 patients. This was chosen as likely to be adequate in terms of range and variability of data, and manageable given other commitments.

## Recruitment

GPs were approached by letter and asked to take part in a study of 'what GPs and patients value about general practice' (appendix G, p324). If they agreed to take part, then they were sent instructions for recruiting patients (appendix G, p325). Patients with 'no chronic disease' were approached by the GP in surgery and asked if I could contact them. Patients with diabetes and high blood pressure were not necessarily approached before their names were sent to me, although some GPs did so.

A list of chosen patients was sent back to me, and I then selected one patient in each group at random and wrote to them via the GP. This letter included a letter from the GP, and information about the study. It framed the study in terms of 'improving general practice – your views', and finding out 'what patients and doctors think are the most important aspects of general practice' (appendix G, p329-331). Patients could opt out of further contact either by returning a slip or by leaving a message on an answerphone. Otherwise I would telephone or visit them to discuss participation.

This 'opt out' method of recruitment was routine in the department at the time, and was given the required ethical committee approval. However, I would not use it if doing a similar study now since it is clearly not compliant with the most recent Data Protection Act, because patients with diabetes or hypertension were not necessarily asked their permission for me to be sent their names (although many GPs did contact all such patients first).

Nine GPs contacted declined to participate. Those GPs that gave a reason said that they did not have time to take part (table 11). Of these, four were in smaller, more deprived practices, three in larger, more deprived practices, and two in larger, less deprived practices. The two final GPs were therefore deliberately recruited from practices serving more deprived areas of Edinburgh. Attempts to contact two patients were unsuccessful. Eight patients contacted declined to participate, six with either hypertension or diabetes and two with 'no chronic disease'. Sampling of patients was incomplete in two practices, in both cases because of difficulty contacting or recruiting particular patients leading to long delays. Additionally, two of those recruited on the basis of 'having no chronic disease' had self identified chronic

problems. Ms Lewis had longstanding problems with alcohol and back pain, and Mr Coulter had intermittently troublesome angina.

**Table 11: Numbers agreeing and declining to participate**

	GPs	Patients
Agreed	6 in initial phase 10 in main study	4 in initial phase 28 in main study 10 with diabetes 9 with hypertension 9 with 'no chronic disease'
Declined (all in main study)	9	2 unable to contact 8 declined

My presentation to GPs was as a GP doing research since it was thought that this would increase recruitment. My presentation to patients was as a researcher from the Department of General Practice. At the time, the aim of this was to try to minimise the effect of me being a GP, since this might be expected to limit criticism of clinicians or services, and perhaps lead to more clinical styles of story telling by patients. In practice, most patients either asked if I was a GP (to which I said yes), or appeared to assume that I was. If I felt that there was any unvoiced question or doubt, then again I would say that I was a GP. Doing a similar study in the future, I would just present myself as a GP since there is implicit deceit in the approach used here. Clearly interviewee's perception of my role may influence the way the interview is conducted and interpretation of the data has to take account of this. However, I do not now see any good reason not to make that open from the outset to participants as well as readers.

At the time of the interview, I explained the study again to both patients and GPs and a consent form signed. Confidentiality and anonymity within the research team were emphasised, as was participants being able to change their mind and withdraw at any stage. At the end of the interview, I asked participants if they were willing for the interview to be used, and then if they were willing for their GP to talk to me about them. Two patients declined to give this permission.

## Interviewing and data handling

All interviews were semi-structured, by which I mean that I took a broad topic guide into the interview, both written and more importantly conceptually. The topic guide was initially based on my reading and understanding as a practitioner, and then modified in response to comments from my supervisors. As described below, the framework and the written topic guide changed as the study evolved. A later version of both GP and patient topic guides is included in appendix H (p331). Although there was considerable scope for participants to talk about what they wanted, there was an implicit structure set both by the initial letters, by any discussion prior to interview, and by my own evolving interests. At the end of each interview, there was a short structured collection of data on interviewee demography, practice organisation and use of services by patients (the front sheets of the attached topic guides). In the preparatory phase, I used the written topic guide to actively structure the interview, during the main study, it served largely as an aide memoire to my conceptual framework rather than being a list of questions asked in any particular order.

Apart from the two retired GPs in the preparatory phase, interviews with doctors were in their consulting room and were relatively formal (at least initially). After introductions, most GPs declined the offer to ask me much about the study, and waited to be asked questions. Almost all the GP interviews therefore started with similar questions. These were how they had come to be a GP, how they came to be in the practice they were currently in, and what they thought the important features of general practice were. The interview then followed what they had mentioned, although subsequently topics of interest to me that had not come up were pursued. Towards the end of the interview in the main study, I would ask them to talk about the patients that I had already interviewed. Inconsistencies between different parts of the interview, for example between the general and particular talk, or areas of possible tension were specifically raised. An example would be where a GP had said that patients seeing the same doctor was very important, but who had also said that nurses were better at carrying out routine, chronic disease management.

Unlike the doctors where there was usually a distinct ‘start’ to the interview, patients often began talking at the door as I came in. In those circumstances, the interview would begin with whatever they themselves first mentioned. Most frequently, this was a comment about the letter they had received introducing the study, and whether it was from ‘their’ doctor or not. Otherwise, interviews usually started with me asking how long they had been with their current practice and why they had registered there. I then asked patients if there was anything they used the GP about regularly, to describe their most recent consultation with a GP including the way access was organised, and their experiences of other health professionals in the practice and in hospitals. Again, the subsequent course of the interview was then partly guided by their initial replies, and partly by areas that I wanted to discuss.

What should be clear from this is that although the interview was not explicitly about ‘continuity’, the topic guide embodied a fairly strong conceptualisation of it. My personal experience is that ‘continuity’ is not a word that I use in routine conversation with GPs or patients unless I am talking about my research. However, clinicians usually recognise the word from their training and the literature, and when talking about my research with professionals, it is a concept that does seem useful as a way of organising how we talk about general practice and GPs’ work.

Something not dissimilar happened in some of the interviews with GPs. In most interviews, I explicitly asked the GPs to define ‘continuity’ at some point. Only a few of them had used the word unprompted, but having made it explicit, for some it then became a key word or concept to organise what was said. So for example, Dr Hunter initially talked about ongoing personal relationships with patients and did not use the word ‘continuity’. About half way through the interview, I specifically asked him about ‘continuity’, and he said:

“Well yes, continuity is really what I said at the very beginning, you’ve used the right word for it really, is just the length of time over which one looks at a patient and you see them developing...”

Dr Hunter, 43 year old man in a smaller practice

Subsequently, he repeatedly used the word. As was discussed in the literature review, one of the reasons that ‘continuity’ can be used in this way is that its lack of definition makes it an elastic concept that can encompass many aspects of clinical practice. There are other concepts used like this in the general practice literature, and to some extent by the GPs interviewed. These include ‘holism’ and ‘personal care’. One way of viewing these is as maps of the territory of general practice. Such maps are not complete descriptions. They are tools for organising conceptualisation of a topic. Just as maps of the physical landscape and political maps showing administrative boundaries are both very different and yet ‘describe’ the same territory, these conceptual maps are overlapping and blur into each other (Gieryn 1995).

As with the GPs, the study was not explicitly presented to patients as research into ‘continuity’. This reflected my prior assumption that health service users do not routinely talk about ‘continuity’ any more than GPs do. My experience of talking to patients and friends about my research is that ‘continuity’ requires prior explanation, although for patients as well as GPs, it does seem easily usable as a structure for discussion about general practice. In the event, only three patients used the word continuity spontaneously in the interviews, each on only one occasion. Again, the intention was to explore the place of ‘continuity’ within patients’ talk about general practice.

For patients as for GPs, I therefore took a map of ‘continuity’ into the interview in the form of the topic guide (both written and unwritten). Patient interviews therefore also included questions or probes about what (if any) implicit or explicit kinds of ‘continuity’ patients appeared to value, how these related to other valued aspects of general practice, and how they said they acted on these. For example, if patients did not mention the medical record, then I would specifically ask them about it.

Compared to the interviews with the GPs, these maps were less obviously directly applicable to the data generated. For example, the medical record was considerably less prominent and talk about it less complex, and discussion of negotiating access much more prominent in patient than in GP interviews. This was probably because 'continuity' is predominately a professional construction, and many of its dimensions relate to professional activities that patients either cannot or are reluctant to discuss in detail.

The patient topic guide changed more than the GP one as the study progressed, taking account of early analysis and further reading (Stimson 1975, Baruch 1981, Calnan 1988c, Calnan 1988b, Abbott 1988, Fugelli 2001). Specifically, I became more interested in 'access' beyond my initial conception of it largely as a barrier to personal continuity. Prompts were also included about whether and how patients judged if a doctor was 'good' or 'bad', trust, and how they established themselves as 'good' patients in everyday life and in the interview. The doctors guides also changed, with increasing emphasis on relationships with nurses and hospitals, and on their understanding of trust. However, these were aimed more at deepening the data in areas I had already identified as important, rather than in developing new areas.

The 'continuity' map I took into each interview was drawn from the literature and from my own experience. A key distinction was between 'continuity of carer' and 'continuity of care', or in an alternative but related construction, between 'personal continuity' and 'system continuity' (Breslau 1976, Starfield 1980). 'Personal continuity' embodies the idea of doctor-patient relationships as valuable. 'System continuity' focuses more on the organisation and process of care, and on professional action and work. This map did not determine the interview, but it did influence what I probed in more detail, and did implicitly (and sometimes explicitly) offer interviewees a structure to weave their talk through as with Dr Hunter above. By and large though, 'continuity' was a map that 'worked' in the sense that it did appear to encapsulate many assumptions about general practice shared by both the participants and myself.

The analysis done can be seen as an ongoing redrawing and revision of my original map, as a consequence of the struggle to make it a more fit or useful model of the data. The analysis is therefore not a literal description of the data. It is a representation that attempts to be faithful to the data, but not to reproduce it in its entirety. One implication is that what is presented here is one way among several of organising how GPs and patients talk about general practice. There are other ways like 'personal care' or 'holism', whose maps overlap with 'continuity' to some extent.

Particularly early on in interviews, there are analytical roads that are visible (at least in retrospect), but are not travelled down or explored. In the GP interviews, the accounts revolve around the nature of the GP-patient relationship, and the ways in which GPs 'know' their patients. Ideas not pursued include 'independence' and gender issues, although these are briefly described in chapter seven (p206), where they are shown to have similar uses as 'continuity' in the construction of a particular GP identity. In the patient interviews, the patient's experience of and conceptualisation of illness is largely ignored, except where it overlaps with their talk about health care. In part, this was by design since I was concerned not to construct 'medical' stories, but it is important to recognise that interviews are required to be focused, and that choosing an analytical focus and map necessarily means closing off other topics, and eliding other possible maps from the terrain.

Most interviews lasted 45 to 60 minutes. The shortest was about 30 minutes, the longest about 75. I made brief notes during the interview, and, with permission, all interviews were audio-recorded. For one interview recording failed completely, and in several sound quality was poor. After the interview, I listened to the tape, and made further notes. A secretary then transcribed the tape, and transcripts were corrected by me listening through again with further notetaking. The transcripts and these notes formed the main data for the analysis.

To preserve anonymity, transcripts were edited to remove material that specifically identified individuals or practices. Participants were allocated a name to identify them, rather than a number since this makes it easier to link individual quotes to

particular interviewees. The linking of the data presented some problems in this regard. In this thesis, the linkage is made explicit by allocated names sharing the same first letter if patient and GP are linked (for example, Mrs Hollis is registered with Dr Hunter's practice). A concern was that such explicit linking might make individuals identifiable. In particular, if a participant were to recognise one of their own quotes, then they could potentially identify the linked patient or GP. Within the thesis, such a possibility seemed remote enough to make it worth making the linkage explicit. However, use of overly identifying material was avoided (for example, clearly memorable stories about the patient told by both GP and patient).

Quotes from the transcripts are used throughout the data chapters to illustrate analytical points made. Where possible, the question that prompted the quote is included, or the specific context of the quote described to indicate the degree of prompting or probing that elicited it. However, many of the quotes used were not in response to direct questions, or have been selected from long passages of interviewee talk. One example would be where I have asked GPs how they came to be in their current practice, and as part of a relatively long story, they talk unprompted about differences between general practice and hospital. Another would be where patients have been asked about how they chose their current practice, but talk in detail about their experience of care there. In these cases, it is hard to succinctly define how the quote was elicited, and quotes are presented without contextualising data or information.

## **Analytical strategy**

Interview data cannot simply be taken as a set of 'facts' or a literal description of participants' 'experience' (Hammersley 1992, Silverman 2000). Such data are potentially problematic, as there is no simple correspondence between what is said in the interview, and what is thought or done in everyday life. To some extent, this represents a more general problem of the correspondence of research data and everyday life. As indicated in chapter two, my overall position was that interviewing does offer the possibility of accessing interviewees' perceptions of everyday life. This requires making a number of assumptions such as that participants will not

actively lie, and that the structure of interviews partly mirrors the structure of interactions in everyday life (Silverman 1993). Consequently, analysis should therefore be cautious, and additionally examine how participants construct themselves in the interview. Analysis of these constructions can illuminate more general concerns about the presentation of self that are also relevant outside the interview setting.

Two main analytical paths were taken. Firstly, a thematic analysis was developed which described the dimensions of continuity that are talked about in interviews, their perceived advantages and disadvantages, and their relationships with each other and with other aspects of general practice and health care identified as important. This was a relatively realist treatment of the data, in that it assumed a broad correspondence between what was said in the interview and what ‘actually’ happens, even though it did not assume that what was said was a literal description.

Secondly, the ways in which GPs and patients constructed particular images of GPs and other professionals in the interviews were developed. This analysis emerged from the observation that GPs used talk of ‘continuity’ and other features of general practice they said were important like ‘independence’ to construct a particular identity, emphasising the distinction between GPs and hospital doctors. This led to an interest in how boundaries were constructed within the interview, and thence to Abbott’s work on the ‘system of professions’ (Abbott 1988). In some ways, this was a less realist treatment since the initial focus was on work done within the interview rather than the content. However, the analysis also assumed that the ‘problem’ of GPs’ and other healthcare professionals’ identity was one that is played out in similar ways in other social settings in the UK, and so inference was not necessarily limited to this set of interviews.

NVivo qualitative analysis software was used mainly to help with data handling, rather than the coding fully embodying the analysis (QSR 1999). As with its sister programme NUD\*IST (N5 in its current incarnation), the coding allowed in NVivo is largely hierarchical with the idea that high level codes (eg ‘seeing the same doctor’) can be broken down into children codes (eg ‘advantages – personal’, ‘advantages –

technical', 'advantages – other' etc). I personally found this hierarchy problematic since it really only worked if transcripts were coded in very short fragments, and it tended to conceal ambiguity and contradiction within even short segments of talk. Additionally, the work involved in coding made me concerned that if I were to develop a very complex coding structure, I would find it difficult to change my mind and shift conceptual structure.

For these reasons, I used NVivo as an indexing tool, with high level, non hierarchical codes being used as a way of extracting relatively large pieces of text which contained any talk about the topic of interest, for example 'hospitals' or 'trust'. The intention was to keep extracts in context, and the original transcripts were preserved and frequently re-read. NVivo also has useful tools for annotating transcripts, and hyperlinking to other files. Example of use of the latter in this study were to link notes made to pieces of text that stimulated their writing and other relevant files, and hyperlinks in a patients' transcript that extract all of the GP's talk about that patient. One disadvantage of what I have done over a more comprehensive coding structure is that it is arguably less transparent (although the assumed transparency of a very complex coding structure to those outside the research team is probably somewhat dubious).

Underlying both analytical paths was a concern to ensure as valid (or plausible or credible) an analysis as possible, and to make reasonable generalisations from the data. Five main techniques were used to promote validity. First, data analysis was as comprehensive as possible. This was done by keeping data extracts in their context, and using complete transcripts as the main source. This entailed repeated re-reading and note taking. Second, and as part of this, an active search for deviant cases or counter examples was made and they were explicitly included in the analysis. An example is that when it became apparent that boundary work with hospital doctors was a major feature of most GPs' accounts, then GPs who did not do this had to be explicitly accounted for. Similarly, most patients said they valued seeing a particular GP that they knew well. My initial interpretation was that this unproblematically supported the GPs' talk about 'personal continuity'. However, examining the accounts of those who had no preference for any particular GP prompted an interest

in the speed or convenience of appointments ('access'). This led me to re-examine the accounts of those who valued personal continuity, modify my initially over-strong conclusions, and make more visible the differences from GPs' accounts.

Thirdly, a form of 'constant comparison' was used. Constant comparison is a term coined by the creators of 'grounded theory' (Glaser 1967, Strauss 1990). There it usually means an active seeking out of new cases or settings to 'test' or explore emerging theory. This leads to one form of theoretical sampling where choice of cases is determined largely by emerging analysis rather than being relatively pre-set as here. Here, I use constant comparison in the sense that analysis was ongoing and as an analytical framework emerged then this influenced the topic guide, and ideas could be explored with successive participants.

Fourth, I kept an analytical diary and made regular notes for myself and my supervisors. These have been an important resource in reminding me of roads initially taken, and then abandoned, and in reconstructing how I had reached particular dead ends, or fruitful analytical pathways. This helped keep analysis flexible.

Finally, my supervisors read a selection of transcripts and I wrote analytical notes for discussion in supervisions throughout the PhD. This helped ensure that the analysis was subjected to external critique as it developed, and was particularly useful for challenging some of my own assumptions about the nature of health care and research that I brought from general practice.

Related to, but somewhat separate from issues of validity, are questions of generalisability, or the extent to which the data and its interpretation can be extended to make inferences about 'UK general practice' (Silverman 2000, Seale 1999, Williams 2000b, Britten 1995). There are several ways in which various authors suggest that generalisations can be made (or at least, how the credibility of generalisation to the reader can be enhanced). One route taken here has been to be explicit about the context of the study, the sampling, and the characteristics of the participants (Seale 1999). This implicitly leaves it to the reader to make judgements about the relevance and transferability of the data to other settings. Certainly, the

imposition of a broad similarity of structure across the UK by the NHS seems likely to enhance transferability.

A second strategy used here was to theorise from the data (Seale 1999). Silverman suggests that this can be done by contextualising the data in particular organisational settings, making comparisons within the dataset to seek and try to explain cases that are anomalous, and laying out any wider implications of the data (Silverman 2000). The intent was not to create grand social theory, but to develop ways of understanding the data that may be of relevance and have explanatory power elsewhere. Similarly, existing social theory was used to help interpret data, and in turn, the credibility of such theory explored using new data (Seale 1999).

## **Summary and discussion**

This chapter has described how the qualitative study evolved from a broad and somewhat vague intention to try to understand what ‘continuity’ meant to GPs and patients, to a specific study. Interview data is relatively easy to collect, and its analysis is well described in the literature because it is the method of choice for many qualitative researchers (Silverman 2000, Silverman 1993, Coffey 1996, Lofland 1995). Through my supervision, I had access to experience of the collection and analysis of such data, and this was an important factor behind my choice of method. The final study design that emerged was based on my reading of the methodological and substantive literatures, my analysis of early data, and through discussion with my supervisors. It represented a compromise between achieving the aim of the study, the training component, and time and resource constraints imposed by my clinical and quantitative research commitments.

The study was designed to elicit accounts from a range of GPs and patients in a variety of settings. The sampling was deliberately for heterogeneity of likely experience and beliefs about general practice and ‘continuity’. Sampling therefore aimed to include participants with characteristics related to differences between practices and individuals thought to be relevant to the experience of ‘continuity’. My

substantive knowledge of the field, embodied in the topic guide and modified as analysis progressed, was used to guide conduct of the interview.

Analysis aimed firstly to produce both a thematic description of ‘continuity’ and its value to participants. This is addressed in chapters five to seven. However, as analysis progressed, it became clear that GPs routinely used ‘personal continuity’ to construct a particular professional identity for themselves. This is the main subject of chapter seven, and examines the kinds of professional claim made by GPs and how far patients appeared to accept them.

## **Chapter 5 – ‘Personal continuity’**

### **Introduction**

The main analysis focused on constructing a thematic description of ‘continuity’ and its value to participants. The topic for this chapter is ‘personal continuity’ or an ongoing relationship between patient and GP. Personal continuity is given a prominent place in definitions of UK general practice and in the literature on continuity (RCGP 1972, RCGP 2001, Freeman 1997, Freeman 2001). However, as indicated in chapter one, the relevance of personal continuity, and its value to individual GPs and patients had not been directly examined at the time this study commenced (although two questionnaire surveys addressing this topic were published after this study commenced (Kearley 2001, Schers 2002)).

This chapter initially highlights the prominent place of personal continuity in the interviews, although qualified in terms of when and for whom GPs and patients said personal continuity particularly mattered. The advantages and disadvantages ascribed to personal continuity by those who valued it are then discussed. This discussion is used to explore variation in emphasis both between GPs and patients, and within each group. The analysis is then developed to examine how discussion of personal continuity is framed by taken for granted assumptions about the nature of medical care and relationships between patients and doctors.

Quotes from participants are identified using pseudonyms. Full details are given in appendix I (p339). In brief though, participants in the preparatory phase interviews are identified by their names starting with a ‘P’ (eg Dr Pallister or Ms Pawson). In the main study, GPs and patients from the same practice are identified by their pseudonyms having the same initial letter (eg Dr Brian, Mr Ball, Ms Bannister and Mr Buchanan).

## Personal continuity in the interviews

All of the GPs said that a central feature of general practice was that patients had a relationship with a doctor that evolved and built up over time. Usually talk about the relationship appeared early in the interview when participants were asked why they became a GP, and what they thought was most important about general practice. Dr Norris was relatively unusual in that she used the word 'continuity' early on to describe this, but she expressed a common perspective.

*“BG You have used the word continuity quite a lot and at one point made a distinction between relationships and, I think you said, total continuity or something similar. I was kind of interested in what you meant by total continuity?”*

When I talk about continuity I suppose I'm thinking about seeing one person, but I know there is continuity in the notes, but that's what it means to me, so when I say continuity whatever the textbook definition is, I'm just thinking about ongoing relationships really.”

Dr Norris, 39 year old woman in a larger practice

A key feature was that such relationships were not transient within single consultations, but had a past, and potentially a future. Often GPs made a comparison with their experience or perceptions of hospital care, where they said relationships were usually short lived or episodic and personal continuity therefore absent. So when Dr Lawson was describing why she had become a GP, having worked for some years in hospital, she said:

*“I like to be able to follow patients through. I used to get really frustrated in outpatient clinics, you know, you never saw the same people, and you never got to follow them through.”*

Dr Lawson, 45 year old woman in a smaller practice

An ongoing relationship with a GP was also a prominent feature in the majority of patients' accounts, but there was more heterogeneity than for the GPs, and the context in which personal continuity was discussed was different. In particular, talk about personal continuity was interwoven with talk about speed and convenience of

access. For Mr Currie, a 'good' GP being someone that he could discuss his treatment with "jointly". The way that he achieved such discussion was by trying to see one particular GP with whom he had a longstanding relationship.

*"BG what you've said is that as time went by you began sort of having a discussion with the doctor about the tablets and stuff, does that mean that in the beginning that wasn't the case?"*

I have always been impressed by that particular GP, Dr Comrie. He listens without wasting a lot of time. And the impression I get is that he doesn't treat me as another number, he will talk the position over. ...

*BG And so would it be Dr Comrie that you would normally see?*

Yes, I normally see him. Always.

*BG And perhaps, thinking if Dr Comrie wasn't available?*

Well I would see someone else. If it was serious enough. I wouldn't if I was just going for the routine check"

Mr Currie, 69 year old man with high blood pressure in a larger practice

One source of variation between patients was the way in which they talked about balancing personal continuity and speed or convenience of access. The majority of patients said that they tried to see particular GPs for most of their consultations. As with Mr Currie, this was often with the proviso that if their problem were urgent then it would not matter who they saw, although many said they had not experienced such an emergency. At the other end of this range were patients who said that they made appointments simply to achieve rapid or convenient access. They said they had no preference for which GP they saw (or at least, did not act on any weak preference they might have).

Patients therefore routinely juxtaposed personal continuity and access, but both were valued in their own right, albeit to differing degrees. This emphasises that personal continuity and other dimensions of 'continuity' have to be understood in context. The

next section begins to address this by considering when GPs and patients say that personal continuity matters most.

## **When does personal continuity matter most?**

Although personal continuity was a central feature of all GPs' and most patients' accounts, almost all interviewees discussed situations when it particularly mattered or was irrelevant. In the GPs' accounts, this was often in response to a direct question, particularly where there was a contrast between discussion of general practice in the abstract and descriptions of individual patients. In the patients' accounts, the routine juxtaposition of personal continuity and access meant that such talk was more often unprompted.

The problems that patients had were used by most GPs to define when personal continuity was particularly helpful. One partial exception was Dr Brian who emphasised the way that patients responded to illness as crucial.

*“BG So, what kind of people do you think the personal bit does matter more to?”*

People who are afraid. Or feeling particularly vulnerable about something. If you are well, or if you are really, really ill - it doesn't matter who takes your appendix out or who does what - but if you are feeling a bit fragile anyway, then sometimes it does matter.”

Dr Brian, 38 year old woman in a smaller practice

Nonetheless, even for Dr Brian there were clearly still circumstances where the problem dominated. The second partial exception was those GPs who discussed the complexity of patients' problems. This complexity could relate either to the problems or diseases that patients had, or to their personality and way of dealing with professionals.

*“Continuity of care is knowing the case and I think that's, it's particularly important in general practice because a lot of these things are not just to do with medical facts. But sometimes that's important that a patient will only see me, because when they see somebody else ... if things have gone*

off a bit you know, twenty five different drugs, where the hell do you start if you're seeing somebody else's patient like that, whereas your own, you probably can. So there's those sort of complicated patients, complicated in a technical medical sense. But also a lot of general practice is people explaining who they are, what they are, and what they're looking for out of the consultation. Particularly if they're kind of, either eccentric people or awkward people or whatever, then coming to a doctor who understands that is important. ... there is the complicated patient, the fat folder patient, the fat folder patient who's not neurotic and there is actually a very complicated medical condition, and also just knowing who people are in the sense of what drives them or whatever.”

Dr Patrick, man in his early 40s in a larger practice

Even for Dr Patrick though, an important reason for understanding the “complicated” individual better was still to make sure that the problems they presented were appropriately dealt with. Other groups identified as particularly benefiting from personal continuity were those with chronic disease, especially malignancy, and those with psychological or emotional problems, including those where this appeared to be driven by social circumstances. Conversely, people with more acute or minor illness that could be expected to go away were seen as getting less benefit.

*“BG Do you think that [patients seeing a doctor who knows them] applies to all patients or do you think it's more important to some people than others?”*

I think it's most important for patients with ongoing illnesses for regular follow-up to be seen by the same person. I think for people presenting with acute symptoms of short duration, I don't think it matters quite so much.

*BG Could you explain why it doesn't matter quite so much?*

Well, I think the advantage of the patients with ongoing illnesses seeing the same doctor is that hopefully you are already familiar with their pattern of illness, how it affects them, how they normally react to it, what a given symptom might mean to them. In an acute illness, a lot of the time the patients are not particularly ill anyhow. It's usually minor illnesses that people present with which I think most doctors probably treat in a fairly similar way.”

Dr McLaren, 37 year old man in a larger practice

Understanding the patient was therefore presented as important predominately in terms of managing their problem. Several GPs suggested that older people seemed to value personal continuity more than the young, although this was sometimes qualified by saying that they were more likely to have chronic or complex problems, and that they were perhaps better able to fit appointments with particular doctors into their lives. The commonest reason given for why this might be problematic was that GPs were not always available, often because of (increasing) outside commitments.

This focus on the ‘problem’ was consistent with how the GPs talked about individual patients. By design, the GPs usually knew some of the patients interviewed well, and some less well. Sometimes they commented that the patient usually saw another GP who was assumed to be ‘their’ doctor. However, sometimes they said that the patient did not appear to see any GP on a regular basis. Although this could provoke discomfort, it depended on the circumstances of the patient being described. When talking in abstract about general practice, Dr Tulloch emphasised the importance of personal continuity, qualifying this by saying that it particularly mattered when patients had a chronic or serious disease or illness. However, when asked to describe Mr Todd, whom she did not know well, she said:

“I first saw him after an acute episode in 1990 and have seen him, I suppose, intermittently since then, certainly not, he’s seen a variety of different doctors over the years, so I certainly see him from time to time. I don’t regard him particularly as a regular [pauses and looks at notes]. ... He does see lots of different doctors. His pernicious anaemia was diagnosed by one of the registrars and he’s seen by quite a few different people, em, so that’s always less satisfying when you see somebody who perhaps, I don’t know whether it’s just that he, it suits him better, or he hasn’t particularly sort of clicked with somebody.”

Dr Tulloch, 43 year old woman in a larger practice

Like other GPs talking about individual patients whom they did not know well, Dr Tulloch largely focused on his medical problems and used the notes to construct the description (she flicked through them while talking about him). Although she said that Mr Todd’s disease management had been good in the sense that diagnoses had been made and diseases treated appropriately, his care appeared to lack the extra that

she had said made general practice distinctive and that she thought he would benefit from. This seemed to make her uncomfortable. In contrast, when describing Mrs Terry who had no chronic disease, the fact that she saw many different doctors did not appear problematic.

“She’s a young mum that I don’t know particularly well. In fact, when I did ask her if she would be willing to undertake this, it was because I was seeing her daughter with eczema. ... She’s one of those, you know, we occasionally see her with the children, but don’t know her particularly well. She always strikes me as just being a very sort of pleasant young mum, competent, seems to use the service appropriately.”

Dr Tulloch, 43 year old woman in a larger practice

With Mrs Terry, she did not feel that a personal relationship was necessary, although she commented approvingly that during pregnancy this woman did see the same doctor, appearing to make the assumption that this was a situation where women would prefer personal continuity (a sentiment that Mrs Terry agreed with, p132-133).

So, although the GPs made an initial general claim that personal continuity was at the heart of their work, this was effectively qualified elsewhere in the interview by focusing on those groups of patients who might most benefit from it. They defined these groups largely by the problems that patients presented for the GP to deal with. In this sense relationships with patients appeared to be strongly framed by the problems those patients had.

In the patients’ accounts as well, the ‘problem’ to be discussed was also prominent. As indicated above, patients’ talk about personal continuity was interwoven with talk about speed or convenience of access. A majority of patients consistently said that they preferred to see a particular GP, and were generally prepared to wait to see that doctor, although most qualified this by saying that in an emergency they would see anyone.

A few patients said that they had no preferences for which doctor they saw, and prioritised when they were to be seen. When talking about her use of general

practice, Mrs Hollis described it as either ‘routine’ (antenatal care, vaccinations) or for acute illnesses like coughs, and often for her children rather than her.

“I normally work and I find that trying to get an appointment can be real pain in the neck unless there is an open clinic, which is why it would be far better for me, if I could go along in an evening, and that’s not something that’s available ...

*BG Perhaps just thinking that through, one way that you could provide evening care would be to be seen in the evenings by doctors working on shifts, what you would lose from that would be seeing your own doctor, would be that something that was important to you?*

Not particularly.”

Mrs Hollis, 34 year old with no chronic problem in a smaller practice

Mrs Hollis’ main concern was fitting in appointments around her work and childcare. Although she did say she had a weak preference to see Dr Hunter because the other doctor in the practice had misdiagnosed her in the past (albeit with no adverse consequences), this was not something she actively pursued when making appointments.

The two other clearest examples of patients prioritising access were Mr Todd and Mr Leslie. As already discussed, Mr Todd provoked discomfort in Dr Tulloch because his care and assumed preferences contradicted her general beliefs. Mrs Hollis did not do the same for Dr Hunter. He said that she currently only used the practice for ‘routine’ care, with her only major illness in the past being a surgical procedure that he described as a “sharp clinical moment” with no long term consequences. Similarly Mr Leslie, who had high blood pressure did not make Dr Lawson uncomfortable. Although he said that he did not care which doctor he saw, he usually did see Dr Lawson because the practice was small and his care therefore appeared to match her belief that personal continuity mattered.

A number of patients lay more in the middle of this spectrum. They said that usually they had no strong preference for which doctor they saw, and prioritised access. However, this explicitly depended on the context. Ms Pawson and Mr Callaghan

were happy to see any GP for a new problem, but if they had to see a GP again about the same problem, then they tried to see the same one.

“I don't know if it's just the timing of when I call, but when I did call to make the initial appointment with my toe I was just given that doctor to go to, and because she's obviously seen it from the word go she just wants to monitor the progress of it so that's why you know sort of forthcoming appointments will be with her. But I'm not fussy who I see. Definitely not. Just whoever's free. Just whenever convenient.

*BG So would that mean when you ring up you are, are you looking to be seen at a particular time?*

The receptionist would allocate a doctor depending on when I could come. I'm on flexi-time so lunch time or early morning or after work suits me, so whichever doctor could make it.”

Ms Pawson, 29 year old with no chronic problems in a larger practice

These patients valued seeing the same doctor, but only within discrete episodes, and largely because they felt it led to more consistent and efficient care. Three other patients who also said they had prioritised access for their recent appointments, had had different preferences in the past when attending for antenatal care (Mrs Terry), particular illnesses in their children (Mrs Manderson), and distress about family and relationship problems (Ms Bannister, p177). Based on this past experience, they could also see circumstances where they might also prefer to see a particular doctor in the future.

“I'm still quite happy to see any doctor, if it's something that I'm more, if it's a general thing that I thought, 'I'm not feeling that great, I've got the cold or something'. If it was something that was worrying me or I wasn't sure about, I would possibly go back to the doctor that I seen during my pregnancy.

*BG Right. And do you want to just talk a bit more about why that would be?*

Again, because I felt I really trusted him and I built up a good - I liked the way he dealt with me, I felt he was thorough, I never, ever left the doctor's feeling, 'Oh, God, I've wasted

their time' you know, with my tail between my legs or anything. I always felt that I came out of there knowing that what he had told me was true and that he was confident in what he'd done."

Mrs Terry, 28 year old with no chronic disease in a larger practice

In the patients' accounts, there was therefore a relationship between the problem to be discussed and the strength of preferences expressed by patients for personal continuity and speed or convenience of access. Although there were exceptions, almost all patients with a chronic problem expressed a general preference for seeing a particular GP. This was usually qualified in terms of their preference being overridden in emergencies. In contrast, most of those without a chronic problem said that they usually prioritised access, although many qualified this by indicating circumstances where personal continuity had mattered in the past, or might matter in the future.

In contrast, there was no clear pattern of ways of talking about personal continuity in terms of the age and sex of the patient. Patients of all ages, and both sexes talked about personal continuity and access in terms of the reasons they went to the doctor. Clearly, the 'problem' a patient is likely to have is related to age and gender, but what Mrs Hollis called "routine" care like vaccinations and coughs or colds, was what patients of all ages and both sexes said were the kind of problems where seeing the same doctor mattered less. Similarly, all but a few patients talked about problems that stretched over several consultations as making it more important to see the same doctor.

This would suggest that making choices between access and personal continuity depended primarily on the particular circumstances surrounding the consultation, whether there was an expectation that the problem would be ongoing in some way, and perceptions of urgency. Although there was difference in emphasis, most patients did not appear to have fixed preferences, and the relationship between personal continuity and access appeared dynamic, rather than static. In these accounts, a perceived urgency or emergency meant that access always took precedence, but for most of the patients interviewed, personal continuity became

increasingly important for illnesses or problems that were ongoing in some way. Problems might be ongoing within the context of an illness or problem that did eventually resolve, or within the context of something long term.

Therefore, although GPs emphasised their knowledge of patients as people, they said that personal continuity and ongoing relationships mattered most where there was complexity and chronic problems. Similarly, most patients talked about making choices between personal continuity and access depending on the nature of the problem to be dealt with (although three had strong preferences solely for access). Implicitly, the problem being dealt with was central to deciding whether it is necessary or helpful to link together a series of consultations with personal continuity. Despite the focus on people and relationships inherent in discussion of personal continuity, the relationship therefore remained significantly (although not completely) framed by the disease or the problem, rather than being valued solely for itself.

This conclusion is not intended to minimise the importance given to personal continuity in these accounts by GPs and many patients. However, despite its prominence, it is important to recognise that in both sets of accounts personal continuity only routinely appeared to matter under some circumstances. In particular, personal continuity was most valued when the problem being presented was judged to make it worthwhile dealing with it within the context of an ongoing patient-GP relationship. When this was the case though, there were many benefits ascribed to it by both GPs and patients, and some disadvantages. The next two sections address these.

### **What advantages did GPs ascribe to personal continuity?**

Although the GPs all gave personal continuity a central place, there was more variation in the advantages it was said to bring. All but two GPs said that personal continuity led to better diagnosis and management of problems presented. Many also talked about it as leading to a form of care that was more friendly, more comfortable and more satisfying for both doctors and patients. Although Dr McLaren particularly

liked getting to understand “what makes them [patients] tick”, for him this was important predominately because it allowed more appropriate care of the problems that patients presented.

“I think knowing their circumstance is often a lot to do with it. A lot of symptoms that patients present are anxiety based or caused by social factors, and I think if you do not know these things you can disappear down a line of investigating symptoms that really do not require to be investigated, searching for a physical explanation for every symptom, and I think it’s much easier to come to that conclusion when you know the patient quite well. When you do not know them well, I think you can easily fall into the sort of hospital model of medicine where patients present symptoms, the doctor tries to make a diagnoses, and then tries to either investigate further or treat.”

Dr McLaren, 37 year old man in a larger practice

As did most of the other GPs interviewed, he frequently included a contrast with hospital care when discussing personal continuity. Knowledge of the patient, their family or home circumstances and their past presentation of problems was said to allow a wider perspective and a different action than simply a search for disease. By contrast, Dr West repeatedly downplayed any difference in the way that different kinds of doctors might handle problems. Like some other GPs, he strongly valued personal continuity as something that made his job interesting and enjoyable, and that patients seemed to prefer as well, but unlike the majority he did not claim it made for better management of disease or problems.

“In my case what I like about it is, that being a small practice it's very much perhaps the old fashioned general practice, I know the very great majority of my patients very, very well, and their families so I have more of a personal involvement so em, it's we do not only talk about medicine, we can talk about families, their children, their, and everything else. So it's very much I would imagine a family practice and I think probably quite a few of my patients would feel very comfortable coming here because it's, it's nice, small, friendly, and I think that is another sort of positive thing about general practice.”

Dr West, 44 year old man in a smaller practice

Dr Purcell was the other GP who made no connection between personal continuity and diagnosis and management of problems. The reasons for them being ‘exceptions’ in this regard are discussed in detail in chapter seven (p202). Here the key point is that although most GPs talked about both, the ‘technical’ was usually more emphasised in that much of the talk about care being more ‘personal’ was used to suggest that GPs could apply their skills in diagnosis and disease management better. At its strongest, this was framed in terms of GPs being better able to interpret symptoms in patients they knew well, and to tailor management and explanation to the individual’s needs and circumstances.

*“BG So what benefit does it bring for individual patients - knowing them and being able to put them in context?”*

Well you can take account of their, what they wish in terms of their treatment, their home circumstances in terms of whether they need ongoing care, their em, their family support in terms of whether they would be able to manage a disease at home or whether they would need to be admitted, particularly for terminal care purposes. If you know what a family set up is, you are much more likely to have a successful outcome and it's easier to make decisions about whether that person will manage at home, whether they need hospice attention, whether they need actual hospital admission at that particular point.”

Dr Elliot, 37 year old woman in a larger practice

The wider knowledge resulting from personal continuity allowed a broader perspective that meant that diagnostic and management decisions were better. A different form of ‘technical’ benefit was that diagnosis and management were more efficient and more consistent if patients were seeing one doctor over time who therefore knew them and knew what had been done in the past and why.

“I think most people staying with the same doctor, I think it helps. It does help. I suppose you achieve, you can get things done. We all do it slightly differently and I do not think any one way is better than the other, but you can at least get the job completed perhaps. I suppose if you have a bit of background knowledge to people it will help you solve, maybe in your mind, solve the problem a little bit quicker.”

Dr Comrie, 46 year old man in a larger practice

Although for most GPs, the ‘technical’ benefits were the most emphasised, like Dr West many did also talk about personal continuity as making their work more interesting, and as an important source of satisfaction with their work. When asked ‘what made general practice what it is’, Dr Patton initially briefly mentioned the “freedom” to organise her own work but then discussed the importance of personal continuity to her.

“And ultimately, I mean the job gets better because the longer you're in a practice, the sense of familiarity with it all and continuity, you know, it's nice seeing patients and their families coming in. The job is easier because you know, there's this wealth, there's a huge wealth of background that you know, that you carry around in your head and it makes the job easier. It also makes it more interesting when you can see the same problem happening, or you know where they've come from, you know how well they've done in life.”

Dr Patton, 40 year old woman in a larger practice

GPs also usually assumed that patients liked and preferred personal continuity. This was partly based on the GP enjoying seeing the same patients and assuming the feeling was reciprocal, and partly on their experience that many patients did seem to choose to come back to see them. One reason given for this was that patients developed trust in particular GPs based on their previous experience of consulting them. Talking about a patient she had seen that morning, Dr Potter initially describes the consultation in terms of the problem presented (diarrhoea in a toddler), but then said:

“I think it's much easier when you know the mum because I think she's known me for quite a long time and I think she trusts my in that I've dealt with other things before and so

em, when she came in she was quite happy when I examined the child. I think when I reassured her she was happy that I didn't think the child was seriously unwell or there were any problems.”

Dr Potter, late 30s woman in a larger practice

The kind of trust being claimed was in a particular GP rather than all GPs or doctors, although several GPs were careful to say that this did not mean that they were more competent than other GPs. Two GPs also talked about trust in the context of their own lives, saying that they trusted particular car mechanics and dentists to act in their best interests. As a consequence, they preferred to use these people, since they did not then worry about whether they were having unnecessary work done on their cars or teeth. They assumed that patients made similar judgements about GPs.

What was generally constructed in the GPs' accounts was an image of an ongoing GP-patient relationship that allowed GPs a wide knowledge of the patient that went beyond the symptoms presented in a single consultation. There was a repeated claim that this broad knowledge meant that the diagnosis and management of problems was more appropriate and more efficient. Additionally, but less prominently, the relationship was described as mutually satisfying by many GPs. GPs largely assumed that patients shared these beliefs, and additionally assumed that patients preferred such relationships because they developed personal trust in individual doctors. These latter claims are obviously more directly examined in the patient interviews, which are discussed now.

### **What advantages did patients ascribe to personal continuity?**

Those patients who said that personal continuity mattered now, or had mattered in the past were reasonably consistent in how they talked about its advantages (and disadvantages, although such talk was much less common). Those who did not value personal continuity did not talk about any advantages, but they also did not talk much about disadvantages either. For these patients, personal continuity seemed largely irrelevant rather than actively disliked. What follows therefore mainly refers to the

majority who generally valued seeing the same GP, or did so at least under some circumstances.

The advantages or benefits of personal continuity discussed overlapped with those of the GPs, although there was a difference in emphasis and some important incongruence. Most patients said that it was tedious and a waste of time having to repeat their stories to doctors who did not know them, usually citing this as a reason why seeing the same doctor was better. For these patients, the medical record was not an adequate replacement because the doctor might not have read it, or because it appeared difficult to use (this is further discussed in the next chapter). This appeared particularly true for patients with complex problems, but even some of those with no self identified chronic problem talked in this way.

“I think what I'm trying to say is, I think if you're prepared to build up a doctor as in one to one, you know where I'm seeing one, then I've seen another one, having to explain it again, and also they see my file in front of them, and they're having a quick read at it, not actually reading as in the case over a period of a fortnight, three weeks or a month or so like, you know, I think it would be better if it was yourself or Dr Green and I see you over a period of time all the time like, I get fed up seeing one, two, three and I know you have a little read of my file when I come to see you but other things on your mind, this and that, you're just having a read at it.”

Mr Gillies, 38 year old with no chronic problem in a larger practice

For some, personal continuity also appeared to be associated with a difference in the behaviour of the doctor in terms of how much interest they showed, or the attention they paid. Commonly the relationship with ‘their’ GP was said to be akin to a kind of friendship, rather than an ordinary doctor patient relationship in the sense of their experience with other doctors. This closeness meant that the GP could be relied on to take extra care.

“I suppose I’m old fashioned really, in the way, your GP was sort of a friend of the family, you know, em, it was somebody you always could rely on and they were always there for you.”

Mrs Gavin, 64 year old with diabetes in a larger practice

Such a relationship was often presented as a source of greater comfort and “ease” (Mrs Emslie) in the consultation. This was associated with talk about being treated as an individual, and being able to act differently, in particular being able to have more social chat and be more active in asking questions. For Mr Currie who had expressed a preference for discussing his problems and their management (p126), this made for a better process of care even if the treatments chosen by different doctors were actually the same.

“I mean blood pressure is known, it's a specific sort of disease after all, so I've no doubt that another doctor would prescribe me with exactly the same thing, and when I got to know him I would say, hang on, just a minute what is this one for?

*BG Right. I mean it sounds from that though that, you said that 'when I got to know him I would say', does that mean that you?*

Well I think so yes. I mean, you don't get, say a new chap and say well hang on a minute (laughs).

*BG Why not?*

(laughs, pause) Well I don't know. I think he is just a very nice doctor.”

Mr Currie, 69 year old man with high blood pressure in a larger practice

Implicitly though, there was a strong sense that contacts with doctors had the potential to be uncomfortable. This was explicit in some accounts where patients compared seeing ‘their’ GP with seeing other GPs. One reason why consultations with GPs had the potential to be uncomfortable appeared to be because patients felt that they had to justify their use of services, and therefore to present themselves as ‘good’ or legitimate patients (Stimson 1975, Baruch 1981, Hopton 1995). In some

patient accounts, this was explicit. From the start of the interview, Mrs Taylor had said she always tried to see 'her' GP.

*"BG And can I just check why you do that. I mean why is it better for you to see her than?"*

Because I think she, well, I've just always seen her and I have the impression that she knows me, she knows the kind of person I am, she knows that I'm not, I don't moan about my health to her because I only go when it's something really that I can't deal with myself. She knows I'm a bit of health freak in that I (laughs) take my vitamins and all my different concoctions in the morning. She knows that I eat well. ... [and then comparing seeing other doctors to seeing her own] But if it's a doctor I don't know or I've only seen maybe once before. I sit down at his desk and just wait for him to speak to me but I have known some up there that maybe just sit (leans back in chair and crosses arms and stares at me) and waiting, waiting for you to sort of you know, 'Well?', kind of, 'What are you here for?' They're not saying that but their manner is saying that"

Mrs Taylor, 71 year old woman with high blood pressure in a larger practice

For Mrs Taylor, seeing 'her' GP meant that she did not feel that she had to justify her presence at each consultation. Legitimacy was not obvious in the GPs' accounts in the sense that GPs did not explicitly identify it as an issue for patients, or clearly link it with personal continuity. However, when talking about individual patients, GPs not infrequently passed comment on their pattern of consultations, and sometimes the 'appropriateness' of this pattern (eg Dr Tulloch, p142). Asked to describe Mrs Manderson, Dr McLaren said:

*"As a person, I think she's a fairly capable, sensible sort of person who deals in a sensible manner with her children, has always brought her children to the surgery in appropriate circumstances if you like, and I think her children have had numerous health problems and I think she's had a good understanding of their illnesses, and probably uses our services appropriately is what I would say."*

Dr McLaren, 37 year old man in a larger practice

Additionally, when talking about 'difficult' or 'odd' patients, several GPs said that they had been able provide appropriate care because they had been able to understand and accept individuals despite their lack of conformity to the norm. Talking about a patient she had seen that morning, Dr Potter said:

"I think that she's somebody the previous GP there were lots of references and notes about not complying with treatment and some people have described her as an odd personality or - and she is an odd personality - but I think now that I've realised whatever I do she's not going to take advice then I really have to deal with her symptoms as they occur. ...

*BG And how would you say that your relationship had changed?*

Over the time? I think em, well earlier on I used to sometimes be irritated by her because I felt like I was trying to do the best medically for her, and that medical advice was that she needed this valve operated on, and that she needed these drugs whereas now I've become slightly more tolerant to her, or accepting of her, or understanding."

Dr Potter, woman in her late 30s in a larger practice

As well as patients who did not follow medical advice being perceived as difficult, so were those with problems such as alcoholism, and those who were anxious or worried excessively. Again though, having an ongoing relationship with the patient was said to modify how these were handled or perceived. When talking about Mr Harris, I asked Dr Hunter what difference he thought knowing him and his wife for many years made.

"I don't think it would be nearly so good, not nearly as satisfactory. Because you don't know quite what makes people tick, this is going back to the fundamentals of understanding your patients. I mean, I wouldn't like, I might think he's a fussy old git, with a troublesome wife at home, I wouldn't like to think I thought that, but I could think that, because you would read him maybe as just being an emotional fussy man. But you see him from a totally different angle when you see the way he handles his wife, he picks her up like Dresden China, there's an emotion there that you can therefore see where he's coming from, you understand therefore, all the other things that go on in his life."

### Dr Hunter, 43 year old man in smaller practice

Unlike comments about the appropriateness of consultations, this kind of talk is not that common in the GPs' accounts, and these are not explicit claims about an advantage of 'personal continuity'. However, from these kinds of stories, it seemed clear that patients did risk being seen as illegitimate or troublesome if they deviated from the GPs' expectations of how patients should act. This was also implicit in patients' accounts of making appointments, where many patients (particularly those in practices serving less affluent areas) said that receptionists routinely challenged them to demonstrate that they 'deserved' an appointment (eg Mrs Nathan, p166) in next chapter). Similarly, patients' discussion of health visitors was routinely accompanied by talk about presenting themselves as 'good' mothers (chapter six, p195).

There therefore appeared to be an at least partially shared understanding of what a 'good' patient is. In the GPs' accounts, it seemed clear that doctors routinely made judgements about the appropriateness of patients' response to illness and use of services. In the patients' accounts, the prominence of talk about not bothering GPs and not being 'anxious' about minor problems suggested that patients generally understood these expectations and modified their behaviour to professionals to try to match them (eg Mrs Taylor, p143).

Trying to see 'their' GP appeared to be an important way for many patients to avoid having to continually re-establish their legitimacy. From their descriptions, this also allowed them some greater latitude in the consultation in terms of being able to ask questions and be involved in decision making. Their legitimacy and greater freedom of action in the consultation were embedded in the ongoing relationship with 'their' GP. Also embedded in this relationship was a particular trust or confidence that many patients said they had in 'their' doctor. Many patients talked about shared experiences and mutual knowledge setting each consultation in the context of the actual past and a potential future.

“Well, there's a link comes and you've a got a confidence because they have cared about you and sorted things out. You get a confidence ... He [a previous doctor] had a way with

him to say, because when you were having the children and he was your doctor, now I was very sick with the 3rd child with kidney problems. He used to say to me, 'Now don't worry, I'll be there' and I always thought he would be there ... But it was just that took me through the months, you know, knowing that he'd be there and looking after me sort of thing"

Mrs Murray, 67 year old woman with diabetes in a larger practice

For some patients, this was talked about in terms of their doctor taking particular care over them (eg Mrs Gavin, p140), not making them feel that they were wasting the GPs' time (eg Mrs Terry, p132-133), or being more interested in them than doctors that did not know them. For these patients, 'their' doctor had or took a different kind of responsibility for the future.

"I think I've just got that one thing in my head that the doctor I'm going to know what's wrong with me and he knows what I was like a fortnight ago, a month ago, so when I go I feel he has an idea of what's going on. Whereas I think when you're seeing different doctors, I honestly feel they're only there to help you out as far as they can that day, because you're only seeing them that day."

Mrs Percie, 71 year old woman with rheumatoid arthritis in a larger practice

Trust in particular doctors existed in the context of a general trust in all doctors. This was most obvious when patients talked about seeing GPs in an emergency. Immediately before the quote below, Mr Henderson had described when he had seen another GP in his current practice. He had said that he would usually wait to see Dr Hunter, but indicated that this had been a situation where he did not feel he could wait. This prompted a follow up question.

*"BG I was interested in how you might, or your experience of having a preference for seeing one doctor, versus occasions perhaps when you wanted to be seen quickly?"*

Oh if it vital, if I have to be seen quickly, I'll put that to one side obviously. You can't just say "Well I demand to see Dr X", I mean, we're thinking about the Dr Findlay days when the Doctor would grab his black bag and rush out to Mrs So-

and-so, because she was having a fit of the vapours or something, oh no, no, forget that. No, you would put that to one side and say if it's something serious, 'What I need is a qualified medical practitioner to have a look at this right now, I don't care who it is.'

Mr Henderson, 54 year old man with high blood pressure in a smaller practice

This general trust in 'doctors' was described in terms of believing them to be competent in the application of their technical knowledge. It was a feature of the majority of patients' accounts and appeared largely taken for granted. Most often it appeared in response to questions by me, following up discussion of 'good' and 'bad' doctors which usually emphasised consultation style or personality.

*"BG One of the things you haven't mentioned in that is, I guess, them being good or bad at diagnosis, or good or bad at choosing treatments.*

Em, I pretty much take it for granted that a GP after studying for all the years that they do em, would, it's pretty much a pre-requisite for the job isn't it, and I think the way that the authorities work these days someone who doesn't do their job properly in a position like a GP ain't going to last very long anyway. So you pretty much take it for granted that you are going to get the best diagnosis and treatment. Whether you do or not [shrugs and laughs]. Because it's your GP and if you are in a position like I am where you do trust the GP, even if you question it you still come away thinking, 'well that's what I've been told', so you just do what they tell you."

Mr Ball, 31 year old man with no chronic disease in a smaller practice

Mr Ball had a strong preference for one particular doctor following a series of consultations with her for a "stress" based illness. Like most patients, he had talked about this preference in terms of the GPs' personal qualities. That is, the GP had listened to him sympathetically, had taken him seriously, had given him time, had taken care and had helped him at a difficult time in his life. For these reasons, he particularly trusted that GP to do the same in the future, and intimated that he was more likely to take her advice. However, although this implied that he trusted her medical judgement better, this was still expressed in the context of a general trust in

all ‘doctors’, and their use of ‘medical’ knowledge, and a reluctance to make explicit judgements about technical ability.

This disjunction between claims of general trust, and expressions of personal trust in a particular GP could provoke discomfort if probed. Mr Williams had said that he liked seeing his GP because he trusted his medical judgement based on his past experience of him dealing with various injuries. When asked about this further, he became less fluent and seemed uncomfortable.

*“BG Do you think there is a difference in the way that you trust your doctor and the way you trust other doctors?”*

No, I would say that I probably think along, more along the line, in general terms, that I would, you know, I suppose it's more just trusting doctors in general, I put more, eh, I can't say I trust my doctor more than any other doctor but certainly, I would, because I'm dealing with him more, then obviously I would put, more trust in him to a certain extent but it's difficult to explain that as well. Put, yeh, so I would say I trust all doctors but I would say I'm more happy to trust my GP, because I've had dealings with him. But then I'm seeing different doctors every time I go to the hospital, and eh, they are all different, they deal with you and treat you in different ways but I still, you know, trust them to the same extent, if you, medically, if you see what I mean.”

Mr Williams, 29 year old with diabetes in a smaller practice

This discomfort in the interview suggested that even implicit expressions of distrust in doctors risked patients presenting themselves as illegitimate. This emphasises that ‘trust’ and ‘legitimacy’ are linked, which is discussed in more detail below.

## The relationship between trust and legitimacy

At one level, the link between trust and legitimacy was evident in the way that several patients talked about personal trust altering the way they talked to doctors. In particular, some patients said that they were more likely to tell a trusted doctor things that were difficult or embarrassing, and that were potentially threatening to their legitimacy.

“Well I think sometimes if you go to those sort of clinics and you've all different doctors, you are just a number, on a sort of file or something like that, you are not a person, you know, whereas up there I get treated like, you know. I mean I can walk into my doctor and she will say ‘right Lucy what can we do for you?’ That's the difference it makes to me anyway.

*BG And that's something that you think is quite important?*

Yes, I think so. You've got to trust your doctor. If you don't trust your doctor, you're not going to be honest with them, and then something is going to go wrong with you. That's why I was always honest with my doctors about my drinking and smoking. It's stupid not to be. ...

*BG Thinking about that, coming back to trust, we talked a bit about trust and you said that you trusted your doctors, em, do you trust them because they are a doctor, I mean do you trust all doctors?*

I don't trust all doctors, no. Just the ones that I get to know. You know that I can sit and talk to one to one.”

Ms Lewis, 46 year old woman with alcoholism in a smaller practice

The second way in which a link was apparent was that within the interview, most patients were reluctant to make explicit judgements about doctors' technical skills. One way in which this was obvious was in the lack of emphasis on personal continuity altering diagnosis and management of problems. Even when patients made such claims, they frequently hedged them around with disclaimers about not really knowing what doctors might remember, or what they might do with their knowledge. A minority of patients did explicitly say that the most important thing about a GP or other doctors was that they ‘get it right’ in the sense of making correct diagnoses and

choosing the best treatment. When asked how they might judge that, most said that they could not, or like Mr Ball, that they assumed that doctors were well trained and checked up on by the NHS. Mr Ethan, who preferred to see Dr Elliot if possible, exemplified this position.

“The caring and all, and bedside manner and all that comes into it, but, and these are things that I'm lucky that Dr Elliot has in abundance, but em, the top priority is someone who knows what they are doing and gets it right.

*BG And can I ask how you would judge that?*

I can't (laughs). Well I mean if she gives me tablets and I'm cured, then I'm cured. Em, if she says to me I think you've got diabetes and I go along and find out I have then I think she has done well, but if she tells me I've got a throat infection and I end up having something much more serious then (shrugs), but so far I've been lucky.”

Mr Ethan, 52 year old with diabetes in a larger practice

Despite his “top priority” being that GPs “get it right”, he was reluctant to claim that he could easily judge this. When I asked further questions, he became quite uncomfortable, although reflecting on this later in the interview, he did suggest reasons why Dr Elliot might be more likely to get it right. These included her greater personal knowledge of him, and that he felt more comfortable in the consultation and could therefore ask questions more easily. He therefore perceived her as more willing to take him seriously and more likely to deal with what concerned him.

The discomfort provoked by questions about GPs' technical skills is interesting. It seemed to be driven by trust in doctors being one of the features of the ‘good’ or legitimate patient. Dr Elliot described Mr Ethan as a “professional man, no nonsense” who asked lots of questions, and responded to being given “plenty of information” to act on himself. From her perspective, the relationship is the most ‘consumerist’ of any described by the GPs, but even Mr Ethan said he felt

constrained in his dealings with doctors<sup>2</sup>. So having already described a consultation with another GP where his unfulfilled expectation was that she would measure his blood pressure, he then later responded to a question about how he reacted when GPs acted in ways he thought were 'bad' by saying:

"I would go away sheepishly and not say a damned thing. As I did, when I was thinking, well why hasn't she taken my blood pressure? But I didn't say it. You know, it's silly, and I've talked earlier about it being a client sort of thing and em, you know you should be a customer, you know they shouldn't treat you any differently from somebody who is selling apples. If someone sold you four apples, or if I asked for four apples and they gave you two I would tend to say something (laughs). But I was sitting there thinking you should be taking my blood pressure and she doesn't, I'm not inclined to do that with a doctor. You know, I'm a wee bit wary of them, you know, they are like lawyers and these senior professional people. You know and your life in their hands, you tend not to be as honest as you would with say someone who is selling you a pound of mince, you know (laughs)."

Mr Ethan, 52 year old with diabetes in a larger practice

In some ways trust and legitimacy within particular relationships can be seen as reciprocal. That is, patients trusted 'their' GP to be interested in them as an individual and properly apply their medical knowledge, whereas GPs trusted 'their' patients to appropriately respond to illness in their use of services. However, this relationship was clearly not symmetrical.

The GPs took patients' trust in them largely for granted, and did not talk about making particular efforts to engender trust. In part, this may be because patients said they avoided explicitly challenging trust. The commonest response to a GP acting 'badly' was to avoid that GP in the future, although even here, 'badness' was usually

---

<sup>2</sup> Mr Ethan was also unusual in terms of how the interview was organised. He was keen to participate but was quite definite that he wanted the interview to take place at his work and booked a conference room for it. Effectively this constructed a space for the interview that was very much his territory, but that was not personally revealing of him. He formally interviewed me about the study aims before allowing my interview of him to begin.

expressed in terms of rudeness rather than incompetence in the use of medical knowledge.

*“BG I mean we have been talking about good doctors, perhaps turning that around, what would make a bad doctor?”*

I don't know. I don't think there is a, I think in saying what would make a bad doctor it's probably difficult, a bad doctor is a doctor who has probably not got time for you, or to listen to your aches and pains. I would say that is a bad doctor, but probably medically it doesn't make him a bad doctor.”

Mr Callaghan, 58 year old with diabetes in a larger practice

Based on the ease and fluency with which they talked, within the interviews it appeared more legitimate for patients to make judgements about GPs' personal characteristics than their technical care. Expressions of trust in particular GPs were therefore usually framed in terms of personal characteristics, while general trust was framed in terms of 'doctors' being technically knowledgeable and competent. However, when asked how personal trust compared to more general trust in any doctor, most patients became uncomfortable, suggesting that expressing even implicit lack of trust in doctors' technical skills or application of medical knowledge risked illegitimacy.

This reinforces that in contrast to trust, legitimacy appeared to be always potentially at risk. Neither GPs nor patients took it for granted. When discussing individual patients, GPs routinely categorised them in terms of their use of services or response to medical advice, and patients expected to have to repeatedly demonstrate that they were a 'good' patient. Seeing 'their' doctor was one way of reducing the need for this demonstration, and appeared to give them a greater freedom of action in the consultation. However, the reluctance to make explicit judgements about doctors' technical abilities and patients' talk about having a general trust in all doctors to be technically competent suggests that there were limits to this freedom. Medical knowledge and judgements about its use appeared to remain predominately, but not completely the province of doctors.

It is important to recognise that the interview itself presented its own implicit challenges to legitimacy, particularly for the majority of patients who either knew I was a GP or appeared to assume it. Other interviewers or data collection in other contexts might elicit data with a different emphasis. However, even though this is likely to be true, it reinforces that GP-patient relationships operate within the context of expectations on both sides of how ‘good’ GPs and patients act. If the patients interviewed talked the way that they did because they knew or assumed I was a GP, then that suggests that they are likely to act in similar ways in their dealings with GPs in everyday life.

Overall, both patients and GPs talked about the benefits of personal continuity covering a similar spectrum from the more technical or medical to the more personal, but the emphases were different. The majority of GPs emphasised the benefits of personal continuity in more ‘technical’ terms, claiming that it made for better diagnosis and management of disease. Although GPs also described personal continuity as increasing their own satisfaction with their work and assumed that patients also preferred it, for most this was less prominent. Patients emphasised that consultations with ‘their’ GP or a GP who knew them well were more comfortable, and they could act more freely in asking questions and being involved in decisions. This was linked with not having to continually re-establish legitimacy with the doctor, and having a particular trust in ‘their’ GP. One reason for this difference in emphasis seems likely to be the apparent risk of illegitimacy for patients making explicit judgements about the medical work that GPs did.

### **What disadvantages did personal continuity have?**

Negative talk about personal continuity was less common than positive talk, and was usually elicited by a direct question. For GPs, the most commonly discussed disadvantage related to misdiagnosis. Knowing a patient well was sometimes said to blind the doctor to slowly evolving change, or mean that they (mis)interpreted new symptoms too much in terms of past presentations. Like most of the doctors talking about disadvantages, Dr McLaren expressed this using what appeared to be a stock

example (missing slowly evolving hypothyroidism is a classic cautionary tale in medical training).

“It works against you seeing the same patients all the time in that you can become blinded I suppose to some things. We all know of instances where you’ve maybe been seeing a patient many times, then your partner sees him once and says, ‘Oh, no, they must be hypothyroid, why didn’t you note it?’”

Dr McLaren, 37 year old man in a larger practice

In the patients’ accounts, the parallel to this was where patients talked about the possibility of GPs who knew you missing change, or the risk that relationships could get stuck in a rut. For most this was discussed as a possibility rather than something that had happened to them, but two patients (Mrs Manderson and Mr Coulter) talked about times when the doctor who knew them did appear to have missed something significant, and a new person had seen it.

“Well I think it might be a pretty good idea to have a change. And I’ll tell you why I think that, as a matter of fact. Before I had this hip, there was a student there, and she, I’m not too sure but I rather think she was in her last year, it doesn’t matter whether she was or wasn’t. And she whispered to him, she said ‘I think he is needing a hip replacement’, she said, ‘no’ he says, ‘not at all’. Then he had another look and he said ‘you’re right’. [tape turns over.]

*BG Right I’m interested in that idea, that he has seen you too often and he has got his mind set [his words, off the end of the tape], do you want to just explain that?*

Well he has, I’ve seen this guy there too often, I’m assuming now I’m a regular attender. And he just says, well, he looks alright, he looks healthy, he’s a big chap, he has been living too long, but apart from that, he’s alright, complaining needlessly, maybe, and these thoughts could be running through his mind. He just says ‘oh he’s fine’. And a fresh, a fresh, might, like that illustration I gave you, could be helpful. Anyway, I’m going to stick with Comrie anyway.”

Mr Coulter, 80 year old with angina in a larger practice

For both Mr Coulter and Mrs Manderson, this experience did not seem to alter their preference for seeing ‘their’ GP if possible, and in that sense the risk appeared a price worth paying for the benefits of personal continuity.

Similarly, although many GPs described enjoying and being more satisfied seeing patients they knew well, this closeness was also said to be sometimes problematic. This was linked to several comments about seeing the same patients day in and day out potentially ‘grinding you down’, and to talk of the difficulties of not being able to maintain boundaries between professional and personal lives from GPs who lived in the practice area. Again in response to a direct question about disadvantages, Dr Hunter replied:

“I don’t let the patients call me Harry. I don’t think that’s right at all, they should always call me Dr Hunter and I think you should always keep that barrier there. ... I think you should always get close enough, but then no closer, because you never know when you’ve got to say things that they don’t want to hear, and it’s too difficult if you’re too intimately involved.”

Dr Hunter, 43 year old man in a smaller practice

The closeness was said to be potentially harmful to both GP and patient, although GPs emphasised the former. Where harm to patients was discussed it was often in terms of patients becoming ‘dependent’ on the GP.

*“BG Do you think that ever works against you? Or do you think knowing people is ever a problem? I think the patients become very dependent on you and I think some, over dependent. You know ones who'll say "if I have a heart attack I'm not phoning unless it's you doctor" and I think we can become flattered with patient’s dependence on us. ... And I think when that sometimes happens it's very difficult to see the patient clearly. It's often an advantage if they can for some other reason see another doctor occasionally just to break that.”*

Dr Patton, late 30s woman in a larger practice

Dependency was not well explored in the interviews. This was partly because these questions were asked relatively late on in the general discussion and I was usually

anxious to move on to discussing individual patients, and partly because I did not properly get beyond my taken for granted understanding of the term. There was much less discussion of this nature in the patients' accounts. Apart from discussion about the difficulty of getting rapid or convenient appointments with a preferred GP, problematic talk about seeing the same doctor was relatively uncommon (although my personal belief is that waiting 'too long' to see a particular GP would risk being perceived to be 'dependent'). Although most talk about feeling more comfortable with 'their' GP and being able to talk more openly was positive, one patient hinted that this might open the patient in ways they might regret. In the rest of the interview, Mrs Emslie talked about it being important and good that Dr Elliot was easy to talk to.

"I tell you, I find it as well though, she puts you that at ease that you couldn't hide things from her. Unless you were a right devious person because she puts you at your ease. I think she will get things out of you that is maybe worrying you. You might not even be wanting to tell her, because she puts you that at ease, you know."

Mrs Emslie, 51 year old woman with no chronic problems in a larger practice

Overall, both GPs and patients did not talk about disadvantages as a reason to avoid relationships. Having spoken at some length about the benefits of personal continuity, Dr Brian commented that sometimes it was helpful when patients saw someone different because they could see them "with a fresh eye".

*"BG So you mean there are disadvantages to knowing people well as well as? Life is a series of compromises. Yes, because you sometimes don't see things, or you see them but you are so entrenched in managing other parts, you don't go for that."*

Dr Brian, 38 year old woman in a smaller practice

For Dr Brian, the "fresh eye" represented an occasionally helpful second perspective in the context of a more generally useful set of ongoing relationships. The disadvantages therefore appeared to be something that an aware GP could try to avoid, whereas GPs largely talked as if there was no adequate substitute for the kind of knowledge of the patient that came from personal continuity. Similarly, even for

the two patients who felt that ‘their’ GP had missed significant change, in neither case did this alter their preference for seeing that doctor if possible (as with Mr Coulter above). In that sense, and reinforced by the relative lack of spontaneous talk about them, disadvantages were cast as a necessary, although partly avoidable, price to pay for the kinds of benefit described above.

## **Summary and discussion**

Personal continuity or an ongoing relationship between GP and patient was given a central place in all of the GPs’ interviews, and the majority of the patients’ interviews. There was considerable congruence between GPs and patients. The range of advantages and disadvantages of personal continuity discussed was similar. Unlike talk about the advantages, discussion of disadvantages was limited and usually prompted by me. However, there were also important points of difference between GPs and patients.

Of particular note was that personal continuity and access were routinely juxtaposed in the patient interviews. Some patients did not value personal continuity, and instead prioritised speed or convenience of access. Even those patients who had a general preference for personal continuity routinely talked about balancing this against access depending on the circumstances of the consultation. In contrast, talk about access was relatively limited in the GP interviews, where it was usually described in terms of lack of ‘availability’ of the GP. This area of clear divergence is one where current government policy emphasising access may be reflecting patient concerns that are less visible to GPs, or little emphasised by them.

A second area of difference was that although the range of advantages and disadvantages of personal continuity identified by GPs and patients was similar, there was considerable variation in emphasis. Most (but not all) GPs prioritised the benefits in terms of the diagnosis and management of problems being presented to them. Greater GP and patient satisfaction and patient trust were less commonly emphasised. In contrast, most (but not all) patients focused on preferring the process of consultation with a GP they knew, characterising it as more friendly and

comfortable, and saying that they were more able to ask questions and be involved. This was at least partly driven by patients not having to re-establish themselves as legitimate users of general practice each time, something that appeared to be of general concern to patients. Patients appeared reluctant to make too many claims that the application of medical knowledge by 'their' GP might be better although this is one of the features of the doctor implicit in patients saying that they have particular trust in 'their' GP.

One explanation for this is the relationship between trust and legitimacy. Presenting themselves within the interview as not trusting doctors' competence in the application of medical knowledge appeared to be perceived by patients as risking their legitimacy. It seems likely that similar risks occur in everyday life. What this emphasises is that despite the relationship being presented as mutual by both GPs and patients, it was far from symmetrical. GPs took patients' trust in them for granted, and patients were reluctant to say they distrusted any doctor or to make explicit judgements about 'technical' care or doctors' use of expert medical knowledge. In contrast, legitimacy was something that patients seemed to have to continually establish and work to maintain. Personal continuity therefore has to be seen in the wider context of shared understandings of 'good' GPs and patients, and the way in which their relationships should be conducted.

An interesting area of congruence related to the way in which personal continuity was discussed in terms of the 'problem' to be considered. Patients talked at length about making choices about personal continuity and access in terms of the circumstances of the consultation and the problem to be discussed. This was paralleled by the GPs identifying groups of patients who they thought particularly benefited from personal continuity. These groups were almost exclusively defined in terms of the problems they presented to the GP. This finding is consistent with survey data showing that the relevance and value of personal continuity varies depending on the problem being considered (Kearley 2001, Schers 2002).

Although both GPs and patients used personal continuity to give priority to the GP-patient relationship and therefore to the patient as person, in these interviews this

relationship therefore appeared as much framed by ‘the problem’ as ‘the patient’. In the GP interviews this was reinforced by a focus on the ‘technical’ benefits of personal continuity in the sense of it leading to better diagnosis and management of problems. This was supported by psychological and social problems being largely discussed in terms of avoiding inappropriate medical investigation or treatment. What this suggests is that, despite the claims to a broad perspective of the person and a kind of holism, the consultation and the relationship remained significantly framed by a biomedical model with a focus on ‘problems’ to be solved, and diseases to be diagnosed and managed.

Personal continuity therefore appeared conceptualised within the frame of taken for granted assumptions about the nature of medical work, and the nature of doctor-patient relationships. What was described was not ‘pure’ biomedicine, not least because ‘biomedicine’ is an ideal type constructed by social scientists rather than a description of actual medical practice (McKeganey 1989, Good 1993, May 1996, Rhodes 1996, Good 1999). However, despite the apparent emphasis on the ‘personal’ and the ‘person’, there remained a strong ‘biomedical’ framing in the focus on ‘the problem’.

The way that personal continuity can happen is therefore partly structured by the kinds of problems that are allowed as relevant. In the UK, few ‘medical’ problems are disallowed because GPs are (medical) generalists, although this is not a universal feature of primary care in other countries (Horder 1998). However, the GPs in this study clearly privileged patients with some problems as more ‘needing’ the benefits of personal continuity which they predominately, but not universally, emphasised in terms of better diagnosis and management of problems. This was true even where personal continuity was said to benefit those with social and psychological problems, since two key benefits identified were avoiding ‘medicalising’ the problem by investigation or referral, and reducing ‘inappropriate’ consultation.

This is consistent with other research evidence showing that GPs are more homogenous in their commitment to manage physical problems presented to them, and vary more in their perceptions of the legitimacy of the psychological and the

social (Calnan 1988a, May 1996, Dowrick 1996). That patients understood that not all problems were equal was indicated by the attention they paid to issues of their legitimacy as users of health services in their accounts.

Overall, this analysis suggests that personal continuity is an important part of general practice. In this study, personal continuity was valued by all of the GPs and most of the patients. It had a range of claimed benefits, and a smaller range of potential disadvantages, although these were emphasised in a variety of ways both within and between accounts. However, it is clear that personal continuity has to be understood in a wider context from the differences between the way that GPs and patients talked about access, and the way in which personal continuity was framed by at least partially shared understandings of the ‘problem’ and the ‘right’ kind of relationship. The next chapter begins to open up one kind of context by exploring how practice structure and organisation influences how personal continuity is achieved by patients and GPs, and the medical record as a taken for granted presence in the consultation and the relationship.

## **Chapter 6 – Personal continuity, the appointment and the medical record**

### **Introduction**

This chapter discusses personal continuity in the context of practice structure and organisation, and in particular in terms of two other dimensions of ‘continuity’: longitudinal continuity and continuity of information. Of particular interest was how patients and GPs created and maintained personal continuity since the interweaving of talk about personal continuity and access indicated that patients made choices between the two when making appointments, or otherwise negotiating access to general practice. The first section of the chapter therefore examines the way in which personal continuity is realised by the negotiation by patients of a sequence of appointments with ‘their’ GP over time. Such patterns of consultation are usually called ‘longitudinal continuity’ in the European literature (Freeman 2001, Freeman 1997).

The medical record is usually cast as a key determinant of ‘continuity of information’ (Freeman 2001, Freeman 1997). Although few GPs and no patients specifically identified the medical record as central to general practice, it was often referred to in passing. When mentioned, all GPs and most patients explicitly said that it was not a substitute for personal continuity. However, taking this at face value seemed likely to under-estimate its importance because it appeared to have a taken for granted presence in all consultations. In that sense, it can be seen as a near constant feature of general practice, and therefore the taken for granted partner for all ongoing relationships. The second half of this chapter examines how GPs and patients talked about the medical record, and explores some of the relationships between it and personal continuity.

## Personal continuity, longitudinal continuity and the appointment

In the GPs' accounts, personal continuity was usually talked about as a consequence of patients seeing the same doctor over time. However, the content and frequency of consultations, and the length of time they had taken place over influenced the nature of the relationship that emerged.

“I suppose to know well is partly to do with frequency of contacts, you know, if I've seen somebody once in the past year and no more than once annually, I wouldn't claim to know them very well. I would know who they are, I would probably be able to tell you something about their history but I wouldn't claim to know them. If I've seen them several times over a period of a year or two years, I would hope to have had some understanding of their current illness, their previous illness, maybe other social problems that may or may not be relevant, and probably that you are just a bit more familiar with them, you know what type of person they are. You kind of know what makes them tick a little bit whereas with the other patients you don't.”

Dr McLaren, 37 year old man in a larger practice

The kind of relationship that emerged was also influenced by the nature of ongoing contacts. Dr Perry described knowing one woman particularly well because she had had multiple, major physical problems, which meant that their relationship had “more signposts” than others with the same frequency of contact. Although relationships were generally discussed in the context of a series of consultations over time, particularly memorable consultations or episodes were also said to set or change the nature of the relationship. Asked to tell me about Mrs Emslie, Dr Elliot said:

“I have a soft spot for her because when I, in the early days of being at the surgery her husband had a heart attack on a Saturday morning and he had a genuine central crushing chest pain, looked peely wally, sweaty, felt sick. He had a classical, something that I could help and I think that's coloured my view on the family since then.”

Dr Elliot, 37 year old woman in a larger practice

In this case, dealing with a 'classical' medical emergency was something the GP specifically enjoyed, but it had also marked the start of, and set the tone for a set of close relationships with this family. Dramatic consultations that were emotionally or personally revealing of the patient could also be memorable and influential in this way.

A few GPs also commented that it was not possible for all patients and all doctors to form a good relationship, because of differing styles and personalities. Because of the partial dependence on the content of consultations and personalities, GPs therefore usually cast patients seeing the same doctor over time as a necessary, but not sufficient condition for a close relationship to develop. The same construction was apparent in the patients' accounts, where talk about the relationship was interwoven with talk about making appointments with particular doctors.

"I do try [to see the same doctor] but it's hard. You sometimes canny always get an appointment. I like, I would prefer to see my own doctor, you know, like constantly, which it's Dr Panton that I see as I say most of the time. And I try to make an appointment, it's either a week away or two weeks away, and that's quite hard to keep to, you know like your own doctor, so you just have to see whoever's available."

Ms Peter, 33 year old with no chronic problems in a larger practice

For Ms Peter, as for others who valued personal continuity, the relationship had been created through repeated consultation with 'her' GP, and the benefits of the relationship happened in those consultations. In both sets of accounts therefore, patients seeing the same doctor over time was the main way in which close personal relationships were said to develop and be maintained. Linked to this, the main benefits of personal continuity described in chapter five were realised in the consultation, and so achieving these again required patients to see 'their' doctor.

Seeing the same doctor or other professional over time is usually described in the literature as *longitudinal continuity* (Starfield 1980, Freeman 1997, Freeman 2001). Both GPs and many patients talked about the relationship, and patients seeing the

same doctor over time interchangeably, this conflating personal and longitudinal continuity. This conflation appeared partly created by the way in which longitudinal continuity, and therefore personal continuity were organised. This was predominately done by the patient negotiating the appointment.

### **Negotiating the appointment**

In both GPs' and patients' interviews, it was the patient who appeared to have prime responsibility for organising longitudinal continuity, and therefore of partially creating the conditions for personal continuity. Although most GPs said they actively encouraged some or most patients to see the same doctor (particularly those with chronic or psychological problems), only two said they actually made appointments, and indicated that this was on relatively rare occasions where they felt it particularly important. The exception to this was when some GPs talked about practice policies for ensuring that drug users only saw one doctor except in exceptional circumstances. GPs said that this was to minimise problems caused to the practice or other patients. None of the practices in the study had personal lists, where patients generally have to see the doctor they are registered with except in emergencies.

In practices with open surgeries, organising the appointment could be achieved by patients acting alone, since they could choose when to come to the surgery and wait to be seen. Otherwise the appointment was arranged via a receptionist. Most GPs talked quite abstractly about receptionists facilitating this process, although few talked about it in any detail. Although several recognised that the receptionist had a difficult task in making appointments, only one identified this as potentially problematic (Dr Tulloch, discussed on p165). The main perceived difficulty was that GPs did not always have appointments available. This was frequently linked either to GPs having work or family commitments outside the practice, or to demand being too high for the resources and appointments available.

“It's quite hard sometimes on the receptionists, especially if a doctor's surgery has more outside commitments and patients are hankering to see 'their' doctor. If it's a practice that has no policy at all for patients seeing the same doctor, I mean it's much easier on the receptionist.”

Dr Pallister, 62 year old man retired from a larger practice

This kind of discussion was less common in the accounts of GPs from smaller practices. They appeared to assume that the process of ongoing personal contact was a ‘natural’ feature of being small, and not something that required much organisation on the part of the patient. Certainly, this appeared largely true in the two single handed practices involved in the study, because both had no appointment system, and a patient turning up to be seen would see the sole GP unless they were away.

In all but these two practices, access to the doctor was therefore said to be largely negotiated between patient and receptionist, with the GP taking a more peripheral role of encouraging patients to see the same doctor, and encouraging receptionists to prioritise this. In the GPs’ accounts, access was usually described as problematic in terms of a lack of availability of the GP. In that sense, access was primarily constructed as a barrier to patients seeing the same doctor, and therefore a barrier to developing or maintaining personal continuity.

This is in contrast to the way that patients talked. As already noted, talk about personal continuity and access was in near constant conjunction, and was usually framed by discussion of the problem to be discussed (see chapter five). One area where this was particularly explicit was where patients talked about their dealings with receptionists. All but two single-handed practices either had a full appointment system or a mixture of open surgeries and appointments. Like the GPs, patients from these practices talked about the receptionist as the main point of negotiation of the appointment, but how they described the negotiation reflected how they valued personal continuity and access. Mr McDonald strongly valued seeing Dr McLaren. When asked how he would arrange to see a GP, he said:

“So you phone up the surgery. ‘When’s Dr McLaren on?’ ‘Oh, he’s on a Wednesday afternoon?’ ‘Can I have an appointment for Wednesday afternoon?’ ‘Yes, is 3.30 OK?’ ‘Fine.’ As simple as that.”

Mr McDonald, 70 year old with high blood pressure in a larger practice

By contrast, Mr Callaghan said he usually asked for the quickest convenient appointment, unless he was asked to see a particular GP. The latter was common, since many of his appointments were for the follow up of his diabetes and were organised by the practice with a particular GP. Otherwise, he said he had no strong preference for whom he saw.

“I usually just say I want an appointment. Like sometimes when I go up and I’ve been up to see the doctor has told me to come in like Comrie. He gets all my notes. He gets them from the Infirmary. They go to the practice but he is the one, so if he wants to see me and I go up and see him he will say come back and see me in a fortnight. So I will just automatically walk out and say I’ve to see, but if I phone, like today if I pick up the phone and say look I need to come in for some antibiotics or something like that, I just take whatever doctor is available, I’m not going to insist I wait for three days to see Dr Comrie or Dr Cheadle, I just take whoever is available.”

Mr Callaghan, 58 year old diabetic in a larger practice

Patients generally said that they either asked for a time or for a particular GP first, but a few commented that the receptionists seemed to either not encourage or to implicitly discourage patients from requesting to see particular GPs, focusing instead on the time of the appointment.

“I think they would rather that you would just phone up and accept whichever doctor was available. I have that feeling, but don’t ask me why. There’s no way that I could say ‘because of’, you know.”

Mrs Taylor, 74 year old with high blood pressure in a larger practice

Interestingly, Mrs Taylor's GP was the only one who specifically identified receptionists as having potentially different agendas from the GPs in her practice.

*"BG Perhaps thinking about that word "continuity", how would you em, how would you define that, what do you mean by that 'continuity'?"*

It's encouraging the patient to see the same doctor for the same problem, to build up this on-going relationship. ... If I'm seeing somebody for the first time, and it looks like it might be an ongoing problem, I'll encourage them to come back and see me to discuss whatever, problem has arisen. We have an ongoing problem with reception staff, because they see themselves very much as the patient's advocate and if a patient wishes an appointment on a Tuesday afternoon and I'm not available, they will feel that they're doing the right thing by the patient, by giving them an appointment with somebody else. So we have an ongoing problem in trying to get the receptionist to realise just how important it is, to ask which doctor rather than what time."

Dr Tulloch, 43 year old woman in a larger practice

Talk about negotiating appointments was largely absent in interviews with patients registered with the two single-handed practices without appointment systems, and less prominent in the other two small practices with a mixture of appointments and open surgeries. Those who were most enthusiastic about open surgeries were patients who worked and particularly liked being able to choose when to come to fit around their job, although others commented that not having an appointment meant longer waits in the surgery itself. The need to negotiate the appointment therefore seemed to be a particular feature of larger practices, although the system in any one practice was largely taken for granted<sup>3</sup>.

Despite the need to negotiate described, most patients talked about receptionists relatively neutrally, describing their interactions with them as business like. Where receptionists were talked about positively, it was either in terms of having friendly

---

<sup>3</sup> In this study 'larger' means practices with list sizes greater than about 9000, and 'smaller' practices with list sizes less than 3500

face to chat to, or for a few patients in terms of not having to justify a request for an appointment.

*“BG Do you think the receptionists know you at all?”*

Oh, yes. Well they should do. Yes, they always greet you by name.

*BG And do you think that's helpful?”*

I think it is, because you're not, this may sound weird but they now realise that I don't make appointments for the sake of appointments. I'm not wasting the doctor's time. I mean I might only be in there for ten minutes.”

Mr Currie, 69 year old with high blood pressure in a larger practice

This parallels the way that seeing a known GP reduced the need to demonstrate legitimacy, but challenges to legitimacy were also the main source of negative comment about receptionists.

*“They are there, they are receptionists, they aren't doctors or nothing, you shouldn't have to explain to them, why you are wanting an appointment. I've says, once or twice I've says to them when I went up 'you know you are just the receptionist dear, I said don't ask me on the phone why, I says, because it's nothing to do with you'. But I found speaking to friends and that, that they've got the same complaint.”*

Mrs Nathan, 58 year old with diabetes in a larger practice

Such negative comment was most common in the accounts of patients registered with practices serving more deprived populations. This might either represent greater pressure on appointments in these practices, or a difference in the way that receptionists treat patients from different areas or with different accents. Patients did describe themselves as more active in challenging receptionists, than is apparent in their accounts of GPs. A concern with legitimacy appeared to be a common feature of use of general practice, but the way in which patients present themselves as responding to it depended on the context. Negotiating an appointment was therefore potentially more than just a routine transaction, and has to be seen in a wider context

of varying practice structure and the nature of relationships between patients and different members of staff.

Like the GPs, the patients presented the choices made in the negotiation of the appointment as being largely their responsibility. Although many patients seemed to assume that GPs preferred them to see the same doctor, only a few said that they had explicitly discussed this with a GP or had ever been asked to see a particular doctor. More commonly, patients appeared to take it for granted that the GP valued the relationship, or said they did not know what their GP or the practice preferred.

*“BG You said quite strongly that you prefer to see the one doctor, do you think the doctors feel the same way, do they encourage you to stick to the same doctor, or do you think?”*

Mmm now there’s a thing. Eh, I never thought of that, eh, I suppose they do, would like you to stay with them. I’d hope so anyway.”

Mrs Gavin, 64 year old with diabetes in a larger practice

Like the other GPs interviewed, Dr Green talked at some length about the value of patients seeing one doctor and having an ongoing relationship, both in terms of his own satisfaction and in terms of benefits to the patient. Mrs Gavin said that he had been her GP for over 15 years, but the value of this seemed more implicit in the relationship, than explicitly negotiated. With some exceptions, patients either assumed that GPs shared their belief in its importance without it being explicitly discussed, or seemed unaware of the importance accorded to personal continuity by the GP.

*“BG Is it something for example that Dr Elliot has ever said to you - I think it's important that you see me, or other doctors?”*

No it's just purely something that I am generating, um, in, the driver is mine, you know it's entirely my desire to see her because I feel that the relationship is better.”

Mr Ethan, 52 year old with diabetes in a larger practice

As in this case, even where both sides of the relationship said that longitudinal and personal continuity was important, this often seemed to be an implicit understanding, and responsibility for organising the appointment appeared largely to fall to the patient. For patients who valued personal continuity, this value was realised by organising longitudinal continuity with ‘their’ GP when possible given other considerations.

It is also interesting that patients who valued personal continuity largely talked about relationships with one GP. If that GP was not available, then most said they would see any other doctor rather than having a particular preference.

*“BG Thinking about times when you’ve rung up and you haven’t been able to see her*

To see my own doctor, uhuh.

*BG Do you then just take any doctor or would you then choose another one?*

Oh, no, I would never choose another doctor.

*BG Well, in terms of just for that appointment, say you can’t get her-*

Uhuh, I’d just say, just whoever’s available, I’ll take whoever’s available. Uhuh.

*BG So you wouldn’t say well there’s four other doctors available, I’ll have that one, you just say-*

Yeah, no, no because I don’t know them well enough and yeah, I haven’t got any particular rapport with any of the others so I mean it wouldn’t be I wouldn’t ask you know.”

Mrs Taylor, 71 year old with high blood pressure in a larger practice

Where patients did express preferences for ‘other’ GPs, these were usually in terms of avoiding a doctor than actively seeking to see one. What was lacking was any sense that patients decided between different doctors on the basis of the problem they had, and who was best placed to deal with it. If patients had a preference for a GP,

then it appeared to be a general one, rather than them acting as ‘consumers’ making choices of the ‘right’ GP for a particular problem on a particular day.

This was paralleled by the way that patients described how they started seeing ‘their’ GP. This often seemed to be due to them being the first doctor who saw them when they registered, or the first to see them with a major illness, or due to doctors retiring and them seeing someone else. There was little sense that patients actively tried out many different doctors before ‘finding’ the one that suited them. The exception to this was Mr Henderson. He had previously described “trying out” various GPs in his previous practice, and when asked to describe this process, he said:

“I start off with Dr A., I see her a couple of times, then for whatever reason, maybe she’s not available, maybe she’s on holiday, and I see someone else. And I discover, yes, this guy seems quite switched on, so you make a kind of mental note in the back of your mind somewhere, maybe next time I’ll go and see him instead, and then he’s not available, or you have a bad reaction. ... and I thought, “Well OK, I’m not happy with this guy, so let’s go to Dr D”, and Dr D was one I stuck with for quite a long time, the open sunny disposition guy, who did seem to, he would look up, volumes about drugs, “Let me just check what else are you taking, right, OK” ...

*BG Right, and em, thinking, I mean, perhaps just thinking about that process again, I mean, it sounds like you went to each of them several times.*

Well it was a 20 year period that I was at that practice, so yes probably, that would be true.”

Mr Henderson, 54 year old with high blood pressure in a smaller practice

However, even Mr Henderson did not appear to have made considered choices from a range of possible GPs to see at each consultation. At any moment, he appeared to have one GP that he was involved with and tried to see. Apart from one occasion, he described changes in GP in terms of chance events or lack of availability. Given that most patients attend only a few times per year, what this suggests is that it is unlikely that many will ‘know’ enough GPs to make specific choices at each consultation. Patients appeared to act as consumers in negotiating appointments by balancing off

different preferences, but for the patients in this study, the choice usually appeared to be between ‘their’ known GP and relatively unknown other GPs, balanced against access. This suggests limitations to one of the claims for larger practices, that they offer patients a wider choice of doctors, because patients may lack the knowledge of these doctors for the ‘choice’ to be particularly meaningful.

### **The relationship between personal and longitudinal continuity**

Although GPs and many patients conflated personal and longitudinal continuity, the two were not synonymous. This was clearest in the accounts of some of the patients. Ms Pawson organised longitudinal continuity for problems that required more than one consultation, for reasons largely to do with consistency and efficiency. The relationship with the GP was largely irrelevant and she prioritised access (p132). However, the GP who had recruited her felt that she had a strong relationship with Ms Pawson, and that she would come to see her for most problems. This was based on most of Ms Pawson’s appointments in the last eighteen months having been with her. However, this was by chance, rather than being based on an explicit discussion or understanding of her motives. The GPs’ observation that Ms Pawson had had longitudinal continuity meant that she assumed that Ms Pawson valued the relationship.

By contrast, most of Mrs Manderson’s consultations were relatively acute ones, including those with her children who had asthma. In these circumstances, and given her work, she prioritised speed or convenience of access and rarely saw the same GP. She usually did not achieve longitudinal continuity, but she did value personal continuity in that she felt she had a relationship with Dr McLaren, had greater trust in his paying attention to her and dealing with the problems she presented, and when possible tried to see him. Dr McLaren did not think she minded who she saw. This seemed to be based on him looking at her notes during the interview, and making a judgement based on her degree of longitudinal continuity.

Initially, Mr Buchanan said that he did not mind which GP he saw, and particularly liked the Brian practice because it had open surgeries so that he could be seen when it suited his work shifts. His main priority therefore appeared to be access. Reflecting

on this later in the interview though, he said that he did think it important to see a GP he knew and liked. In this practice, he knew and liked both GPs so it did not matter which he saw. He achieved personal continuity without having to actively create longitudinal continuity. He commented that, now that he had high blood pressure, if he were to move to a larger practice he would probably have to make an effort to stick to a few doctors to maintain seeing GPs he knew.

“As I say I do not mind going to whichever doctor because I know the two or three of them, now if you go, you know. [In a previous practice], there is about four or five on one rota, ... if you have an ongoing problem that meant regular usage, then I think you would be tempted to try and make appointments with one doctor in that group so that you've got one person who has all the facts and you would try and stick to that. I think, that's the way I would do it if I was not in the Brian practice ... I would want to make sure that I got the same, you know, on average I would make sure I got the same doctor, I would not not go if I could not get that doctor, if you know what I mean. I would prefer to see the same one.”

Mr Buchanan, 45 year old with high blood pressure in a smaller practice

It is also interesting that three other patients who strongly emphasised access usually did see the same doctor. Mrs Hollis was registered with a two doctor practice, and usually saw the GP for whom she had a weak preference, even though she said she never actively pursued this. From Dr Hunter's description of the practice structure, this was probably because he offered more open surgeries than his partner. Many of Mr Callaghan's consultations related to his diabetes and were triggered by the practice writing to him with an appointment for a particular doctor. Mr Leslie expressed no preference for whom he saw, but he did usually see the same GP because he was registered with a single-handed practice.

These three patients achieved longitudinal continuity largely because of practice structure or organisation, even though they said that personal continuity was not important to them. The kind of relationships they had with their GPs may therefore have been partly taken for granted. Access was something that continued to require at least some choice and often negotiation with the receptionists, and may therefore

have been more emphasised in their accounts. As described by Dr Tulloch above (p129), and himself below (p177), Mr Todd was the clear exception.. Although he said that he liked seeing one particular doctor that he knew socially, this was pleasant when it occurred rather than something he personally tried to ensure happened, and from his and Dr Tulloch's description he had no clear pattern of longitudinal continuity.

Personal and longitudinal continuity were therefore clearly potentially distinct, even if for most patients the two were closely related. For those who valued personal continuity, then a reasonably high degree of longitudinal continuity seemed necessary to allow it to develop and to reap its perceived benefits. However, longitudinal continuity was not in itself a sufficient condition for personal continuity. For Mrs Manderson, there was a perception of a relationship that transcended the relative absence of longitudinal continuity. The lack of routine explicit negotiation between patients and GPs is re-emphasised by Ms Pawson's and Mrs Manderson's GPs wrongly judging their preferences for personal continuity based on observation of the longitudinal continuity they achieved. Equally, it was possible for patients to have longitudinal continuity without perceiving a strong or valued relationship.

Longitudinal continuity therefore frequently appeared to be a necessary condition for the creation and maintenance of personal continuity. It was not sufficient in itself, since personal continuity was contingent on other factors such as the frequency or nature of the consultations, the personalities and preferences of GP and patient, and the structure and organisation of the practice. The conflation in all the interviews with GPs and patients who valued personal continuity reflected this relationship. Given that the benefits of personal continuity described in the previous chapter were largely received within the consultation, it seemed clear that without significant longitudinal continuity, personal continuity was hard to maintain.

## Personal continuity and the medical record

With small variations in form and content, the medical record is a ubiquitous feature of UK general practice. Compared to talk about personal continuity or access, there was much less talk about medical records. Particularly in the patient interviews, most of what was said was in response to questions or probes by me.

Both GPs and patients appeared to take it for granted that the record would be available in almost all consultations. Although patients usually said that they were uncertain what it actually contained, the GPs expected that the notes would be a fairly complete record of medical ‘facts’ because something would have been written for most consultations, and hospital letters and results would usually be filed there.

Early on the interview when talking about their work in the abstract, only a few of the doctors explicitly identified the medical record or ‘notes’ as an essential or important feature of UK general practice. Where it was mentioned early on, the focus was on the more ‘technical’ aspects of care, often saying that the record helped avoid repeated or unnecessary investigation or treatment.

“One of the core things about British general practice is that GPs keep patient records of previous hospital admissions and specialist referrals and health consultations and so on. ... I think for the patient it's good to have someone or something that has records of their previous investigations and health just so that people are not over-investigated for conditions, or that things are not repeated and so on.”

Dr Potter, late 30s female in a larger practice

More commonly, the notes were taken for granted in that there appeared to be an assumption that they would be available when a patient was seen, and that they would contain a near complete and potentially useful record of that patient’s contacts with health services in the past. This assumption was most visible when GPs talked about times when the notes were missing.

“I think that is incredibly useful and you really notice that when you don't have the notes. You know people say you know I'm on the pink tablet and they don't know, and they don't know what their blood pressure was or when they had an MI. I mean that is incredibly important”

Dr Norris, 39 year old woman in a larger practice

When talking about individual patients in the interview, doctors routinely picked up and scanned the notes as they talked. Where the notes were not available in the interview, they often commented that their discussion of the patient might therefore be limited in terms of the detail they could remember. This reinforces the taken for granted presence, value and use of the medical record.

Only Dr Comrie said he did not particularly value the notes, since they did not normally add much to the knowledge he got from talking to patients directly, or alter how he dealt with a particular problem. Many of the GPs emphasised that what was recorded in the notes was the “bare bones of the medical history” (Dr Tulloch), and that this could not substitute for knowledge acquired through personal contact, or for the benefits that personal continuity brought. Even where the notes did contain information about a patient's life more generally, or their personality, this was perceived as different from knowledge acquired through personal contact, and appeared more problematic in its potential uses. Dr Hunter described Mr Henderson in the following terms:

*“BG Right, perhaps moving on to your patients, do you want to just tell me a bit about Mr Henderson?”*

Yeah, I don't know him very well, ... he's a fairly new patient. ... I haven't seen him in his capacity of him telling me just how much he's suffered in his previous life. What I learned about him was really through the records, when they finally wound their way north, and I had already had several consultations with him. ... I think you only really know a patient when they've told you, because then **they** know how much **you** know. ... He may actually not realise I know as much about him as possible, as I do, but that's not a major obstruction to me continuing to look after him. I feel comfortable with that, ... but it means that I don't feel I can really get under his skin yet, know what really makes him

tick, at the moment, because he hasn't offered it himself. It wouldn't stop me telling him I knew it, ... but at the moment, we're not really in that area, so I'm just leaving it."

Dr Hunter, 43 year old man in a smaller practice

For Dr Hunter, the 'facts' of this man's life as recorded by other GPs and in letters from other health professionals had a different status than what the patient might tell him himself. Like other GPs, he clearly distinguished personally acquired knowledge, from what other doctors might record.

Most of the talk about the record was in the context of its use within a consultation with a patient. However, a major constituent of the record in the form of letters from hospitals and other professionals was described as used in a different way. Many GPs in larger practices talked about practice systems for handling mail, and in particular letters about patients from the hospital. GPs in smaller practices seemed to take it for granted that they would see all important letters, and did not emphasise systems for achieving this. The fact that all the GPs read all of the mail was said by some to be an important way that knowledge about patients was disseminated around practices.

"If there is major new things going on, I feel that the whole practice does tend to get to know about them because of our system's communication. I think everybody looking at the mail and everyone looking at the results is a lot of work but it actually does make quite a big difference."

Dr Norris, 39 year old woman in a larger practice

Hospital letters all usually all end up filed in the individual patient's notes and so presumably would be available for use in the consultation, but there was an additional benefit claimed for GPs being aware of particular patients and their circumstances before the consultation started.

When asked, most patients make some observation of the way that doctors appear to use the record, although many said that they did not really know. Some patients said that the notes often did not appear to have been read, or appeared to be hard to use (eg Mr Gillies, p139). This was particularly true when they were very large, or when the problem was complex or more personal. The more complex replies usually came

when patients related their perceptions of the medical record with their own experience of written records at work. Mr Henderson (described by Dr Hunter above) is an example of this. He preferred to see Dr Hunter because he liked his “direct” style and because he thought that his ongoing physical problems were best dealt with by someone who knew him and the way these affected him. The notes could not substitute for this.

“I mean any other doctor would simply be forced to look at the records and try to piece together something at the time, which with all due respect, I mean I know doctors are professional people and intelligent people, but I mean, there’s a limit on what you can be expected to do in 5 or 10 minutes. Yeah. So it’s easier I think if you’re seeing someone who knows you, yeah. And can immediately say “Ah yes, last time you were in, you had this reading and so on and so forth”

*BG Right, so it sounds then like, I mean in your experience in a sense, the notes aren’t enough*

Can the notes ever be enough? I mean it’s, there is an interaction on a personal level. You get to know each other’s style, you know what sort of questions he’s expecting to hear, and you know what kind of response you’re going to get from him, so in a sense, it just speeds it up, you get a result quicker.”

Mr Henderson, 54 year old with high blood pressure in a smaller practice)

As with Mr Henderson, several other patients linked their understanding of GPs’ use of notes with their own work experience. Mrs Terry commented that in her job as a customer services manager, she “knew” customers that she had repeated contact with in a way that could not be reproduced in their written file.

This discussion of the record in terms of it being unable to substitute for personal continuity parallels the GPs’ accounts. Several patients said that the record could not provide the ‘personal touch’, or replace other aspects of personal continuity that were valued like seeing someone whom they trusted, or seeing someone who knew them as a legitimate service user (eg Ms Lewis, p147). For Ms Bannister, this was largely in terms of what was not recorded in them.

“I think you do try to build up a relationship with your GP. Apart from anything else, just flicking through your case notes doesn’t um, doesn’t give any idea of the worries that certain things may have caused and they may not even see things in your case notes that are there. Whereas if you’ve known somebody over a period of time and they’ve dealt with you and your family, they remember certain things and they do know how you would react I think.”

Ms Bannister, 50 year old with diabetes in a smaller practice

The three exceptions to this (Mr Todd, Mrs Hollis and Mr Callaghan) were patients who said they have no preference for seeing a particular doctor. For them the record was talked about as containing relevant information about the past for any doctor to use, and made personal continuity irrelevant.

*“BG Have there ever been times when it’s been important to you to see the same doctor?”*

Not really. You see, after each consultation they write up the notes and any doctor has got the notes every time you go, you see, they know what’s happening.”

Mr Todd, 82 year old diabetic in a larger practice

Overall though, discussion by patients of the notes and their uses by doctors was relatively muted. Patients largely described the medical record as something constructed and used by professionals. Although several talked about wanting to read their records, none actually had or had requested to. To read the notes meant asking the doctor for them, and for some, this was seen as risking their legitimacy as a ‘good’ patient.

“I should have access to my medical records, if I wanted to. Whether I could see it, if I see it in writing, I am sure I am entitled to say ‘what did you write there?’ but I never see his records. But I suppose they wouldn’t want me to see them either, he might just say I don’t want to see this boy again, he’s a bad lad, he’s a funny one, I don’t want him. I think I’ll get him to go to another practice.”

Mr Coulter, 82 year old with angina in a larger practice

Given this, and that patients also seemed to take the presence of the record largely for granted, it is unsurprising that patient talk about the medical record was relatively limited, and usually was in response to direct questions by me.

### **The relationship between personal continuity and the medical record**

The medical record provides what the literature usually calls *continuity of information* (Rogers 1980, Freeman 2001). Whether or not the GP personally knew the patient, they expected to have the ‘bare bones’ of their medical history in the form of the notes in all or nearly all consultations. Although most patients said they had little idea of what was written about them or how it was used, they also expected that the GP would have the record available.

Both GPs and patients characterised the notes in terms of them not replacing personal continuity, but it also seemed clear that personal continuity did not substitute for the medical record, and that there was an interaction between the two. Because it is GPs who use the medical record, this interaction was most visible in the GPs’ accounts. The notes were frequently cast as the definitive record of diagnoses made, treatments given and investigations done. Asked to talk about Mr Murray, whom he had recruited on the basis of not knowing her well, Dr McLaren said:

“She’s the sort of patient that I’ve maybe seen once in the last year, probably she may have come in with an infection or something like that but I would never say that I’m her main doctor. So I know a little about her but again if she came in for something I would have to have a good read through her records first before I came to any conclusion or made a decision.”

Dr McLaren, 37 year old man in a larger practice

GPs therefore presented the notes as the main source of routinely accessible medical knowledge about patients expected to be available to all GPs. By contrast, they usually said that more personal knowledge of an individual patient was held in the

GP's memory and so often within a particular relationship<sup>4</sup>. When discussing Ms Bannister whom she had seen during a stressful time in her life, Dr Brian said:

“She may regret some things that she said to me. I hope she doesn't but she may. But if she does, then they are here [taps head] and they don't really go anywhere else.”

Dr Brian, 38 year old woman in a smaller practice

This emphasises the use of individual memory to record knowledge of the person, but this was qualified by some GPs describing an interaction between notes and memory. Partly depending on where and when they were interviewed, some GPs had the notes available and some did not when talking about individual patients. What this made clear was that the knowledge held in memory was less available out of the context of the consultation, and that the notes were an important trigger for memory. Dr Norris was interviewed without the notes being available, and when asked about Mrs Nathan, a woman with diabetes whom she “didn't know well”, replied:

“I can hardly remember her. I'm sorry, that sounds terrible. She is diabetic and I think I saw her with depression at one stage. ... If you wanted to know more about her I would need to look in her notes. ... If I saw her notes, I would remember who she was and then I would have a feel for who she was and how it was.”

Dr Norris, 39 year old woman in a larger practice

Several GPs talked about deliberately writing down particular words or phrases down that then reminded them of the detail of previous consultations. What was written by a particular GP therefore had a use to them beyond the actual words recorded. Interpreting what was written by others could also be partly dependent on how well the GP knew the writer.

---

<sup>4</sup> Although note that some GPs also described verbal discussion of patients by clinicians and other practice staff. Although such information was again largely held in memory, it was not *necessarily* held within a particular GP-patient relationship. This is further discussed in chapter seven.

“I know my partners now very well, and I can interpret their sort of shorthand, and I think vice-versa. The things they write in their notes, I can sort of read between their lines and I think they can between mine, whereas a locum or somebody not knowing either us or the patient, would perhaps not pick up on some of the subtleties.”

Dr Tulloch, 43 year old woman in a larger practice

So, although the notes were ubiquitous, the same record could allow different readings depending on the context of its use and the relationship between writer and reader (including where they were one and the same). GPs said that the main record of personal continuity was the memory of the relationship, the patient and their problems, but this partly depended on the more mundane written record.

This was reinforced by GPs' use of the notes in the interview. Even when discussing patients they knew well, GPs often flicked through the notes as they did so, and checked events, dates or details in the paper record. The personal description was interwoven with the 'facts' in the record to construct a single account. In contrast, when talking about patients they did not know well, descriptions of patients were constructed largely with reference to the notes, usually with little detail about what kind of person the patient was, or information about the wider context of their lives. The focus was then almost exclusively on the problems presented, often with additional comments on the way that the patient used general practice, for example in terms of how frequently they attended.

In both situations, the notes appeared to provide a taken for granted core of knowledge. GPs expected to have this whether or not they knew the patient, although the interpretation of what was written could be influenced by their own personal knowledge held in memory. Patients also expected GPs to have and to use the notes, although they were cautious in suggesting what those uses might be. This was in contrast to longitudinal and personal continuity, which appeared more dependent on patient action to achieve, and therefore more contingent on patient preferences and circumstance. One reason that personal continuity may have been more visible and more emphasised is because GPs and patients more routinely experienced its

absence. The very ubiquity of the notes may mean that they were more taken for granted.

GPs made personal continuity central to what is distinctive about general practice. However, in these accounts it actually appeared less constant than the medical record and more contingent on circumstance and patient action. What this emphasises is that the cradle to grave medical record is a key context for personal continuity in UK general practice. Equally, the set of relationships and resulting knowledge held in memory were an important context for the use of the record. Consequently, for at least some GPs and some patients, the same record was capable of different readings and different uses.

## **Summary and discussion**

This chapter has explored the relationships between personal continuity, longitudinal continuity and the continuity of information embodied in the medical record. Patients and GPs appeared to experience these three dimensions as less distinct than their conceptualisation in the formal definitions of ‘continuity’ discussed in chapter one.

Longitudinal continuity, or seeing the same doctor over time was the main way in which personal continuity was said to be created and maintained. In the GPs’ accounts, a high degree of longitudinal continuity appeared necessary to create personal continuity, although this was partly contingent on the problems to be discussed and the personalities of GP and patient. GPs conflation of the personal and longitudinal continuity was most visible where they misjudged patient preference for personal continuity on the basis of their observed longitudinal continuity.

In the accounts of patients who valued personal continuity, longitudinal continuity was discussed interchangeably with personal continuity. To create and benefit from personal continuity appeared to require patients to try to organise longitudinal continuity with ‘their’ GP. That personal and longitudinal continuity were potentially distinct was demonstrable for the minority of patients where personal continuity was of less significance, and for those who valued particular relationships but did not achieve longitudinal continuity with their preferred doctor.

Despite the centrality of personal/longitudinal continuity in the GPs' accounts, patients appeared to have prime responsibility for organising longitudinal continuity. In practices with open access surgeries, this most commonly involved deciding which open surgery to attend. In those with appointment systems, it involved negotiation by patients with receptionists, with GPs often apparently unaware of the precise nature of the work being done. This is likely to be why patient talk about personal/longitudinal continuity was intertwined with talk about access, and why GPs largely ignored access except in the weak sense of their lack of 'availability'.

Patients described this negotiation as a choice between which GP to see, and when to see them, although the choice was usually said to be between 'their' GP and any other. What was missing was any sense that patients chose the most appropriate GP for a particular problem from the whole range of GPs theoretically available to them. The most appropriate GP was almost always 'their' GP, whom they had an ongoing relationship with. Few patients appeared to actively try out many GPs before choosing 'their' one. Most appeared to develop a valued relationship with the first GP they had repeated contact with. This seems likely to reflect that most patients consult relatively infrequently, and so may have little knowledge of the nature of the alternative doctors on offer. This implies limits to the idea of consumerism in this context, since the choices available are effectively constrained by lack of information, and is consistent with other research indicating that consumerist ideas poorly fit patient accounts (Lupton 1996).

Longitudinal continuity appeared more directly dependent on practice organisation and structure than personal continuity. While personal continuity was contingent on factors other than longitudinal continuity, trying to make longitudinal continuity as easy to organise as possible would seem likely to make it easier for patients who value personal continuity to achieve it. Longitudinal continuity therefore appears more amenable to intervention, although any such intervention should also take account of the value of rapid and convenient access to all patients, which was dominant among those who did not value personal continuity.

Continuity of information has been examined in terms of the cradle-to-grave medical record that is a particular feature of UK general practice. Both GPs and patients assumed the record would be present in most consultations, but its very ubiquity meant that it appeared taken for granted. GPs expected the notes to contain a near complete record of tests, hospital attendance, drug prescription, and previous consultations. There were important interactions between their personal knowledge and memory, and the record, particularly the hand written notes. Both GPs and patients made it clear that they did not see the record as being able to substitute for personal continuity, and in contrast with personal/longitudinal continuity, the two were emphasised as distinct. Despite this distinction though, there appeared to be a complex interaction between personal continuity and continuity of information.

Effectively, the record appeared to provide a core of (narrow) routinely available medical knowledge about patients. To some degree, this was relevant to all patients, and it was expected to be available to any GP via the medical record. Patients also expected the record to be routinely available, but appeared uncertain of its contents or uses. The record therefore appeared to contain a particular story of the patient, written by professionals for professionals to use. For some patients, this was supplemented with a (broader) personal knowledge usually acquired within an ongoing relationship. This also represented a professional story about the patient written largely in memory, but it was one that patients appeared more able to influence, because they had had some control over which GP they saw, and because the relationship seemed to allow them more latitude in the consultation. This broader personal knowledge constructed by personal continuity was said to be specific and central to general practice, but it appeared more contingent on circumstance and patient action than the narrower medical knowledge constructed by continuity of information.

Personal continuity cannot therefore be easily separated from other dimensions of continuity, or from assumptions about the nature of medical work, 'doctors' and 'patients'. It *can* be distinguished from longitudinal continuity and continuity of information both conceptually, and within some of these accounts, but it is apparent that there are complex relationships between these different dimensions of

continuity. Chapter eight further discusses this and in particular, explores the influence of health service structure. However, before this, the next chapter examines the ways in which the GPs used 'continuity' to construct a particular professional identity, and examines two other dimensions of 'continuity'.

## **Chapter 7 – Cross boundary and team continuity, and the construction of GPs’ professional identity**

### **Introduction**

The previous two chapters have presented a largely thematic analysis of ‘continuity’. This chapter continues that by first considering two further dimensions: ‘cross boundary continuity’ and ‘team continuity’. These were much less prominent or explicit than personal, longitudinal and informational continuity. In some senses, they can therefore be seen as being of less value or less immediate relevance to participants. However, as analysis progressed, these ideas opened up a second analytical path examining the ways in which GPs constructed their professional identity.

Thus in this chapter, as well as considering ‘continuity’ thematically, the way in which GPs constructed a particular identity in the interview by negotiating their boundaries with other professionals is examined. The construction of such boundaries is relevant to the ways that participants present ideas associated with continuity across the primary-secondary care interface, and within the primary health care team (Freeman 2001, RCGP 2001).

This analysis therefore partially shifts the focus from the specific content of what GPs and patients said, to the way in which they talked, and the way in which a particular image of GPs and their work was constructed. In particular, in the second part of the chapter, the patient data is given a somewhat different status here than previously. Abbott proposes that in the public arena, professionals seek to establish particular, archetypal images of their members that the public may accept or reject (Abbott 1988). The discussion of professional identity therefore predominately uses data from the patient interviews to examine how far the kinds of claim made by the GPs about the nature of their relationships with hospital doctors and primary care nurses were accepted or rejected by patients.

The first section discusses ‘cross boundary continuity’ and ‘team continuity’ in a similar way to previous chapters. Subsequently, the nature of GPs claims about their relationship with hospital doctors and primary care nurses is examined using both GP and patient data. The ways in which GPs deploy claims about knowledge in constructing boundaries with other professionals are then examined.

## **Cross boundary continuity**

Most of the GPs constructed the general practice-hospital interface as one that they actively and appropriately managed by ‘gatekeeping’ or the control of referral to the hospital. They justified ‘gatekeeping’ in terms of the claimed benefits of personal continuity and the medical record in improving the diagnosis and management of problems already discussed in chapter five. GPs often framed this in terms of a more judicious application of the ‘medical model’ in the sense of knowing when to apply medical knowledge, and when to take another approach. This rhetoric was strongly linked to talk about efficiency, particularly avoiding repetition or over-investigation. Contrasting her day to day work with working in the out of hours GP co-operative where she was seeing patients in a way she said was similar to Accident and Emergency, Dr Potter commented:

“Well I think if you've got a good knowledge of a patient, say somebody is a somatiser or who has had frequent hospital admissions for which there's been no organic basis identified, you would then when you've seen them in the surgery you can treat them appropriately or try to avoid over-investigating somebody or try and deal with it more appropriately. Whereas if you're in the co-op situation and somebody is presenting with say chest pain, you're immediately going to think ‘Do I need to admit this person’ or do something.”

Dr Potter, woman in her late 30s in a larger practice

Like out of hours care for Dr Potter, GPs usually said that care by hospital doctors was episodic and focused on medical care for particular problems or diseases. This made it important that patients saw the ‘right’ specialist, and GPs said that their broader understanding of the patient and the problem meant that they could ensure

this happened. Asked if his relationships with patients were different if they were also attending the hospital, Dr Hunter said:

“I’ve got a lot of friends in hospital and I refer to people not departments again ... I do my utmost to try and get to understand the person I’m referring to as much as anything else. So that you can then make remarks, you know, “rather an anxious patient” or whatever you. Whilst these not facetious or meant to warn the consultant “Mind your back” sort of thing, you know I think it works for everybody’s sake, you know they will give extra reassurance and understand that this patient comes from a certain direction.”

Dr Hunter, 43 year old man in a smaller practice

Although GPs usually conceded that the specialist had a deeper understanding of a particular area of medical knowledge, they also identified this as the specialist’s limitation when patients had other problems, or where the context of the patient’s life was relevant. Because of their broader knowledge and perspective, some GPs emphasised that they retained an overall responsibility for the patient even after referral.

“I was quite influenced by Balint when I started, you know, that thing getting the thing by the scruff of the neck and shaking it till it worked, you know, always quite appealed to me that I was, the GP is the man in charge, no matter who else is there, he's the guy in charge, if anyone's in charge. And I think that is, that still is the way, our most important role, the one that ties it all together and actually makes it happen. Got a problem, you see me.”

Dr Patrick, 40 year old man in a larger practice

The kind of *cross-boundary continuity* constructed was of GPs controlling not only most entry to hospital care via referral, but also retaining considerable responsibility and influence after referral. GPs’ justification for this was their broad knowledge and understanding of the patient and their problems developed through personal continuity and possession of a complete medical record. This could be used in combination with medical knowledge, and knowledge of available services to ensure that the patient was directed to the right specialist for their problem and them as an individual.

Not all patients had attended hospital, or had much direct experience of others attending hospital. However, all patients who talked about the hospital took the referral system for granted. In that sense, the GP as gatekeeper was present in their accounts.

“I mean if there has been some problem maybe the doctor's sent me to the Infirmary and things like that you know.”

Mr Pugh, 63 year old with high blood pressure in a larger practice

However, what was different was that there was little sense of GPs retaining responsibility for patients after referral. For the problem that led to a specialist referral, patients said that the specialist was more expert, and therefore implicitly the better person to consult. For a few patients, this was explicit. Having talked about the importance of trusting and having confidence in the GP (p144), Mrs Murray later reflected on the limits of this given her previous experience.

“Uhuh, well, put it this way now talking of confidence, if I wasn't well and I thought it was anything to do with the diabetes, I think I would by-pass them and go straight to the clinic. Because their profession is in that area and I wouldn't really like to put off any time if I had any experience like I had before. ... Over the years you learn what happens to your body and if anything, if there was a bad infection and I had high sugars and I couldn't get them down with the insulin, that's what I would do. I don't think I would phone my GP, I think I would phone the diabetic clinic because I have all the confidence in there knowing that the top men are dealing with the diabetes all the time.”

Mrs Murray, 67 year old with diabetes in a larger practice

Patients therefore did not appear to share the GPs' more active constructions of cross boundary continuity. One likely reason is that patients did not share GPs' emphasis of the benefits of personal continuity in terms of better diagnosis and management of disease. Additionally, patients were generally reluctant to make too many comments about the way that doctors worked or used their medical knowledge. Since such work and the claimed 'technical' benefits of personal continuity underlie the GPs' claim to

actively manage the primary-secondary care interface, this probably explains the difference in the conceptualisation of cross boundary continuity.

Finally, it is also worth noting that a second kind of cross boundary continuity is implicit in one of the ways that the medical record is created. An important source of information for GPs within the record was that provided by letters from the hospital. The writing of these letters is embedded in the customary practices of the referral system, but appeared completely taken for granted by both GPs and patients.

Overall, the way in which cross boundary continuity was conceptualised partly relied on the taken for granted organisational context of the referral system. GPs justified their claimed role as active managers of the primary-secondary care interface on the basis of using their personal knowledge of the patient to improve the application of their medical knowledge, and if necessary, to guide the patient to the 'right' service or specialist. In contrast, patients did not appear to view GPs' role in such active terms, although this at least partially reflects a more general reluctance to comment on professional work. The meaning that GPs attributed to the organisational context therefore partly depended on the way in which they constructed personal, longitudinal and informational continuity. Again, this emphasises both the overlap and interaction between different dimensions of continuity, and that the conceptualisation of these dimensions in the interview was partly dependent on the wider organisational context.

## **Team continuity**

Here, I use the 'team' to refer to clinicians working in primary care, but particularly general practice settings. The focus is on practice nurses, although other kinds of primary care nurse are also discussed. Unlike other dimensions of continuity including 'gatekeeping', no participants explicitly constructed '*team continuity*'. Rather it was implicit in the way that GPs and patients discussed general practice care more generally.

In both GP and patient interviews, talk about nurses was less common than talk about hospital doctors. It was more often explicitly prompted by a direct question by me,

usually about practice nurses. In both sets of interviews, on the few occasions when nurses were talked about unprompted, it was often with short references to individual patients seeing the practice nurse for a particular procedure. The focus in both sets of interviews was on the tasks done. Additionally, in the GP interviews, there was some prompted discussion about the changing role of the nurse, and the expansion in the scope of their work. GPs usually described nurses' work in terms of health promotion, disease prevention work and chronic disease management, generally following pre-set protocols. Although two doctors also briefly talked about nurses beginning to do acute care for self limiting or minor conditions, this was not actually happening in any of the practices in the study at the time.

Discussion of other nurses within primary care, such as health visitors, district nurses, midwives and community psychiatric nurses was more limited. Neither GPs nor patients talked about any without prompting. Although most of the younger women in the study had seen health visitors, few of the patients in the study had much experience of seeing other kinds of primary care nurse.

GPs implicitly constructed the team as creating 'continuity' in two ways. Firstly, some described the team as a useful source of knowledge about individual patients. This came about through formal meetings usually involving clinicians (doctors, nurses, health visitors etc), and less formal conversations also involving reception and administrative staff.

"I think in general we do try to, we try and pick up on, there's things we all need to know about so and so, and we'd try and bring it up in practice meeting, involve, inform people or put certain letters round all the doctors."

Dr Patrick, 40 year old man in a larger practice

For some, the status of the less formal conversations seemed a bit dubious, and was talked about as less credible or as "gossip" (Dr Potter). Discussion of formal meetings was infrequent in the accounts of GPs from smaller practices, where informal mechanisms seemed assumed to be adequate because of the smaller number of professionals involved, and the perceived higher levels of longitudinal and

personal continuity. The sense though, was of a supplement to the knowledge that GPs already had through personal continuity and the medical record.

The second kind of ‘continuity’ constructed was in terms of the consistency of care provided by practice nurse involvement in chronic disease management. This kind of talk was linked to discussion of the increasing number of guidelines and protocols that GPs said they were expected to implement. This is interesting because other than here, there is relatively little talk about guidelines by the GPs despite their prominence in the literature and in current policy. GPs said that nurses were better at carrying out protocol driven care because they were more likely to follow the guideline.

“I think a nurse is extremely good, better than doctors at monitoring illness and following protocols and I think that whilst that doesn’t demean them, I think that they actually have a more logical mind and can stand back. Doctors are forever breaking their own protocols, because they keep making exceptions as to why this, that and the other shouldn’t be followed on the protocol, whereas a nurse is much better at just remaining logical over the whole thing, so she will logically go through the process and actually, I think that’s probably safer, so in monitoring asthma, monitoring diabetes, all these sort of, monitor type jobs, I think, should be done by nurses, I think doctors really, aren’t very good at it, and really shouldn’t have their time occupied by it.”

Dr Hunter, 43 year old man in a smaller practice

In the interview, I often followed up such statements with a question about whether the GP thought that nurses managing chronic disease was problematic in terms of fragmenting care and reducing longitudinal or personal continuity with the GP. All those asked said this was not a problem, because much of what nurses did was extra work created by guidelines and contractual obligations for health promotion, and patients therefore still saw and maintained their personal continuity with the GP. GPs therefore cast the consistency of care created by practice nurse work for patients with chronic disease as separate to, and unthreatening of personal continuity with the GP.

One reason for choosing to interview people with diabetes and high blood pressure was that I expected them to have relatively high rates of contact with practice nurses,

and for at least some patients to have personal or ongoing relationships with them. However, even those patients who did see practice nurses often said little about them, and largely in response to direct questions.

In contrast to talk about 'their' doctor, patients usually discussed practice nurses in relatively impersonal terms. Only Mr Coulter said that he actively tried to see a particular practice nurse because they came from the same part of the country and he liked to chat about that with her (although several patients said there were practice nurses they tried to avoid because they were rude or rough). Even for Mr Coulter though, the focus was on the tasks or procedures done. Like other patients, he described nursing tasks as delegated by the doctor. Talking about the last time he had seen a nurse, he said:

“That was something nice and simple, taking the wax out of my ear. Something, well I'll say it anyway, elementary little, the doctor obviously couldn't be bothered doing it himself. I would have thought anyway. But maybe it was her duties. And she keeps you informed of why they are doing this and why they are doing that, and they make sure that it won't happen again, recommending. See the doctors don't do that. At least I don't think they do anyway.”

Mr Coulter, 80 year old with angina in a larger practice

Although the task focus dominated patients' accounts, some others also talked about nurses working in a different way to GPs. This was often in the sense of nurses being easier to talk to, or explaining things in more everyday language and making suggestions about what patients could do. A few also commented on the limitations of practice nurses in terms of their knowledge (eg Mr Ethan, p212), or not being able to prescribe.

“I think say if I had a water infection or something like that, I would probably just chat to the nurse and just say “well you know, I’m not sure whether” and you know, she might suggest cranberry juice or something like that, you know in the way that perhaps a doctor would say “oh go away for a few days and come back if it’s not better” at least there’s something you can be doing meanwhile. The one thing about the nurse, is that she can’t prescribe things, em, so, generally she has to then go and consult the doctor.”

Ms Wallace, 34 year old with no chronic problems in a smaller practice

Overall, talk about practice nurses was surprisingly limited, even for those patients who did seem to have had considerable contact with one or more of them. Practice nurses appeared to be seen predominately as professionals who carried out particular tasks. The way they talked to patients mattered, and in some cases was said to be more friendly or open than the way that doctors talked to patients. However, there was no real sense that patients saw practice nurses as professionals that they could or should develop ongoing relationships with. Compared to talk about GPs, longitudinal continuity with the nurse was therefore not imbued with the same meaning in terms of personal continuity.

As with talk about practice nurses, GPs usually talked about other kinds of nurse as doing necessary and important work supplementary to the work of GPs themselves and unthreatening to personal continuity with the GP. The exception was antenatal care, which in Lothian was increasingly being done by community midwives.

“Antenatal work, we’ve now got a community midwife coming in, our plan is to share with her, I have to keep a list up there because I forget who’s supposed to come when, but we are hoping to alternate, but again, one or two partners, that just like to hold onto the patients themselves, so that’s always a bit difficult, it does mean that their appointments are more fully booked, so there can be a little bit of tension there as well.”

Dr Tulloch, 43 year old woman in a larger practice

As Dr Tulloch's partners are implied to do, some GPs talked about shifting work to community midwives with some regret, partly because they enjoyed it, and partly because it might change the way they knew and worked with new parents.

“Well the other things that have changed, we've become more specialised and the midwives have taken over most of the ante natal. We don't see the girls at the ante natal we've no idea what they're like when they start to come in with their kids. There's no real, you've no starting point as to what this person is like.”

Dr Patrick, 40 year old man in a larger practice

Unlike most of the GPs in the study, this doctor worked in an area where community midwives had done antenatal care for some years. This is consistent with any effects of shifting workloads to nurses not necessarily being immediately apparent.

In the patients' accounts, the younger women in the study usually mentioned health visitors, but only a few patients talked about community midwives and district nurses<sup>5</sup>, and one about a community psychiatric nurse. For women with children, health visitors were talked about in more personal terms than practice nurses, and there was a stronger sense that contacts with them were part of an ongoing relationship. As with talk about GPs, Mrs Hollis was the exception, saying that she saw health visitors only for technical procedures like immunisations. However, for the interviewees in this study, all these relationships had now ended, and most seemed to have been limited to when children were still babies. Patients described most health visitor contacts as relatively routine and structured by the times of baby clinics and health checks. There was no discussion of needing to negotiate access, or using health visitors for acute problems.

---

<sup>5</sup> Community midwifery was not well developed in most of the practices involved in the study. Only one patient had had prolonged contacts with district nurses, although this was for care of his wife rather than personally.

“To begin with, they came round initially, and then I went to them once, first of all once a week, it was odd really, because I sort of thought I had to, so I did. And I think it’s actually more for the mum to feel that there’s something to do or there’s someone there to go to, but I religiously went, thinking if I didn’t go, they’d report me or something, or they’d think I wasn’t looking after my little girl (laughs), but in fact it was I think just a point of contact a sort of social em, sort of thing for you in the early days when it might be tough. But I mean I quite enjoyed going, because you know, it was quite sort of nice meeting other people with small babies and also actually, you know how you quite like to know sort of how much your baby weighs every week and that they’re growing and the fact that they’re chatting and, or whatever, it’s quite nice to have someone else endorse the fact that you’re doing the right thing.”

Ms Wallace, 34 year old with no chronic problems in a smaller practice

A common feature of talk about health visitors related to legitimacy. All of the women who mentioned health visitors talked about the risk of health visitors thinking that they were bad mothers. As with Ms Wallace, the tone was most often humorous, but there was still a sense that there was a stronger imposition of the need to be legitimate than when seeing the GP. From the data available, it is not possible to explore whether this relates to the different professionals involved, or (probably more likely) from the different requirements of being a ‘good’ patient, and being a ‘good’ mother.

One patient had had a close relationship with a community psychiatric nurse (CPN) whom she had seen for counselling. As described above, Ms Pawson only tried to see particular GPs for ongoing problems within discrete episodes, and largely to promote consistency and efficiency (p132). She talked about her relationship with ‘her’ CPN in much the same terms that most other patients talked about why they preferred seeing ‘their’ GP.

“He took me seriously, he obviously knows what he's talking about. I don't know how long he's been a counsellor for but just his approach to everything was slowly but in such a way that every step trust was built, you know, he wouldn't let me say anything if I wasn't happy doing it or wouldn't let me do

anything if I wasn't happy doing it so it was a kind of slow approach which built up trust. But I think em, just speaking to him was brilliant and you know, I felt I could trust him.”

Ms Pawson, 29 year old with no chronic problem in a larger practice

Much like her use of general practitioners though, this relationship had been bounded by a problem that had been resolved by the counselling. Important as it had been, the relationship was not ongoing because the problem was not.

In summary, participants defined ‘team continuity’ less explicitly than other dimensions. In the GP interviews, discussion of practice nurses constructed team continuity in the sense of the team being a supplementary source of information about individual patients, and practice nurse work being a source of consistency of care via the routine application of protocols and guidelines. Effectively, they said that the ‘team’ was external to the core of their work. Although patients also described practice nurses’ work as predominately task based, neither of these two kinds of team continuity seemed that apparent to them. When asked, GPs said that the growth in protocol driven nursing work did not threaten their own longitudinal or personal continuity with patients. Interestingly, patients expressed little desire to see particular practice nurses, or indicated that they had personal relationships with them. In that sense, there was an agreement that team continuity was not a substitute for personal continuity with the GP.

However, the data about other nurses indicated that longitudinal and personal continuity with other nurses was valued in at least some circumstances. The relationships described appeared much more bounded by the problem being dealt with than relationships with the GP though. This presumably reflects the greater specialisation of midwives, health visitors and CPNs (Williams 2000a). Similarly, although the GPs appeared to perceive little threat to their role from changes to practice nursing, it seemed clear that more established changes to other nurses’ work had made some difference to the nature of the GP-patient relationship.

The data presented above has been analysed in terms of ‘continuity’, but it was equally apparent that the kinds of claim GPs were making about cross boundary and

team continuity served other purposes in the interview, and that these claims were at least partly reliant on how GPs had constructed other dimensions of ‘continuity’ including personal and longitudinal continuity. The next section addresses this by extending the analysis to examine the way that GPs constructed a particular professional identity for themselves.

## **The construction of a general practice identity**

Early in the study, it became clear that GPs were repeatedly distinguishing themselves and their work from hospital doctors and their work. The strength with which GPs maintained this distinction throughout the interview, led to an interest in boundary work, and the ideas of Abbott. As outlined in chapter one, Abbott writes persuasively about the need to understand professions in terms of their relationships with other professions. His focus is on how professional territory is created by the work done by professions as groups to construct boundaries between themselves and other professions. In this context, professions’ claim to jurisdiction over territory are made and accepted or rejected in three arenas – the workplace, the public arena (which he largely characterises as the court of public opinion), and the legal/administrative arena (where professional roles are embodied by rules or laws) (Abbott 1988).

Other researchers have used similar ideas at a more micro level to examine how individual professionals talk, and how they construct their own identity at least partially in relation to other kinds of professional (Gieryn 1995, Llewellyn 1997, Broadbent 1998, Norris 2001). Based on the inclusion of cross boundary and team continuity in the continuity literature, I had an interest in talk about the hospital and primary care nurses. Discussion of the hospital was common without prompting, but my developing interest in how boundaries were being constructed was then an additional reason for asking about nurses, and practice nurses in particular.

### **General practice and the hospital**

A striking feature of the GPs’ accounts was the how prominent talk about hospital doctors or specialists was throughout, whether GPs were talking about their careers,

what they thought was most important about general practice or discussing individual patients. They repeatedly made distinctions between themselves and their work, and hospital doctors and their work. GPs frequently contrasted themselves with hospital doctors in terms of having the advantages of personal continuity and a comprehensive medical record. Having already made the distinction several times himself, Dr McLaren was explicitly asked how hospital care differed from general practice, and replied:

“The actual day-to-day working is obviously completely different, you’re, as I said, previously in hospital you’re just seeing patients as snapshots, particularly nowadays with very short hospital admissions, I would be very surprised if doctors working in hospitals get to know their patients at all. I think that’s certainly something that’s changed in the last sort of five to ten years, where the average hospital admission now is for about 24 to 48 hours or something isn’t it, so doctors in hospitals get to know a lot about medical conditions but less about the people. ... Probably the biggest difference between the two is the difference between knowing a lot about the illness or the disease and knowing a lot about the patient, and, we hopefully know a fair amount about the illness or disease and a lot about the patient, and I think the one helps the other.”

Dr McLaren, 37 year old man in a larger practice

Most GPs therefore repeatedly deployed various forms of ‘continuity’, and particularly personal continuity, throughout the interviews to distinguish themselves from hospital doctors in terms of their broadness of perspective and ongoing responsibility. The two exceptions are discussed in the next section (p202). GPs also made this distinction when talking about other aspects of general practice. Unlike ‘continuity’ (and particularly ‘personal continuity’), they usually talked about these other aspects when discussing career choices early in the interview, less commonly when talking about general practice in the abstract, and rarely when discussing individual patients.

Several GPs said that an attractive feature of general practice was that GPs were more ‘independent’. They had more control over their work because they were less

beholden to medical or administrative/managerial hierarchies. In reply to the question about what defines general practice, Dr Green said:

“I think it’s [general practice] full of individuals you know, it’s full of individuals and there’s a lot of people who, you know they’re in it because they want to do something on their own and they want to be left alone. They don’t want to be part of a big system, you know the big structure, the big hospital system.”

Dr Green, 39 year old man in a larger practice

GPs also made the distinction between hospital and general practice when discussing the relationship between their work and personal or family lives. They usually presented general practice as being more compatible with these than the hospital equivalent, often in terms of its shorter period of training. When asked why he had become a GP, Dr Patrick talked about always wanting to be a “generalist” rather than a specialist, and then said:

“And the other reason was just the career structure. I did not fancy slogging my way up through, seeing as I had seen registrars with MRCP, or MRCS and then can’t get an SR post. Frankly, that just did not appeal to me either. My other concerns were my family, being committed I suppose, so I was keen to get on with my life.”<sup>6</sup>

Dr Patrick, 40 year old man in a larger practice

In this kind of talk, there were differences between male and female GPs. Both men and women emphasised the uncertainty and length of hospital specialist training. Women also talked in more detail about childcare, and the advantages of general practice in terms of the wider availability of part time posts making it easier to manage family and work responsibilities. These accounts suggest that general practice offers a more flexible career structure for women, but this is probably too

---

<sup>6</sup> MRCP refers to passing the examination for Membership of the Royal College of Physicians, and is a prerequisite for specialist training in hospital medicine. FRCS or Fellowship of the Royal College of Surgeons (referred to here as MRCS) is the equivalent for surgeons. SR refers to a senior registrar post, beyond which doctors can apply for consultant jobs.

simple an interpretation. The one woman who wanted to work full time had a different perspective.

“I applied for the GP post and there was nothing really full-time for females. All the jobs that were coming up at that time were for part-time and I really didn’t want to do part-time. I needed to work full-time because of financial things”

Dr Lawson, 45 year old woman in a smaller practice

All of the men in this study worked full time, and my personal experience is that there are few part time posts intended for men. ‘Flexibility’ can therefore also be seen as steering women into the low status/power (part time, often non-principal) end of a low status/power part of medicine. Gender is not something that has been handled explicitly in this analysis, but that is not to underestimate its importance in an analysis of medical careers and the nature of general practice (Brooks 1998). Here, it is enough to note that many of the GPs presented general practice as more compatible with their non-working lives (including Dr Lawson, who said that she was “counselled out” of her original preference for a hospital speciality because she was a woman). As well as general practice providing more ‘personal’ care for patients, it was therefore also described as a setting where there was less impingement on the personal life of the doctor.

This talk constructed general practice as a better place to work than the hospital. Better in the sense of patients receiving a different (often more effective or efficient) kind of care; and in being a setting where doctors were more independent and could get on with the rest of their lives. However, the persistence with which GPs made this distinction in the interview, and the variety of topics they used to do this work indicates that this boundary was problematic for these GPs. Why it should be problematic was not always explicit in the interviews, and in retrospect I do not think it was well probed, partly because in the early interviews it was off the main topic of ‘continuity’ and partly because I took it for granted.

However, it does seem clear that many of these GPs assumed that most hospital doctors did not have a particularly positive image of general practice. In a few of the

interviews, this was discussed in terms of GPs not being as knowledgeable about particular specialities.

“There’s still quite a lot of consultants who have a, feeling about general practice, which is remarkably old fashioned and who take a view that, you know, we may know a little bit about everything, but we’re completely ignorant about their speciality. I mean, you could argue that they only know about their speciality and are completely ignorant about everything else, you know, but I don’t think one is better than the other, you know, I think we need specialists and we need generalists.”

Dr Hunter, 43 year old man in a smaller practice

This was also apparent when other GPs talked about their career choices and how colleagues or friends had perceived these, or how they had viewed general practice as medical students.

“I’d been offered a psychiatry clinical assistant post at that time. The chap I worked with thought I was wasted as a GP and I should consider psychiatry. ...

*BG The other thing you said there was that the psychiatrist said that you were wasted as a GP?*

He didn't say it quite in so many words but it was ‘wouldn't you prefer to do psychiatry, I think you could do psychiatry, you would have a good career in psychiatry’. It's kind of my joke I suppose, lots of doctors think that, why did you end up in GP, couldn't you do anything else?”

Dr Brian, 38 year old woman in a smaller practice

Despite the strength with which general practice was presented as an important part of medicine, and offering distinct advantages to patients over narrower, specialist perspectives, talk like this emphasised that this view is not necessarily shared by other doctors. This indicates that these GPs perceived hospital doctors as considering general practice as a lower status form of medical work. This is a likely reason why the boundary with hospital doctors was so problematic for the majority of the GPs interviewed, and why they so repeatedly emphasised the distinctness of their work.

Two GPs are ‘exceptions’ to this, in that their negotiation of the boundary with the hospital was somewhat different.

### ***Two doctors who constructed different boundaries with the hospital***

Dr Purcell and Dr West differed from the other GPs in the way they talked about the hospital. In their accounts, boundaries with hospital doctors were less distinct, and there were differences in the way that ‘continuity’ and particularly personal continuity was used. Dr Purcell had started in practice in the early 1950s and retired in the late 1980s. He initially talked about general practice, as it had been when he first began working.

“I think it's become quite different now in that there's more actual em, there's more actual medicine done in general practice now. I think the doctors that do it now, do what they were trained for, more. In those days we em, I'm talking about when I started, we tended to be, fingerposts for different consultants [points in various directions]. When there was ever anything that came up that really needed dealt with we referred it to different consultants. That's not to say we weren't using our training entirely but em I don't think we actually did so much. We did a fair bit of minor surgery I suppose but even that, not so much as they do nowadays, you know, like sebaceous cysts and things of that kind. That was always our complaint when young doctors met, we're not really doing any medicine. But it was the system, it was just it was difficult to know how else we could, what could be done in those days.”

Dr Purcell, 75 year old man retired from a larger practice

This was a recurrent theme for him. The problem of general practice in the past was that it did not involve much medicine, although this had changed later in his career. Like the other GPs, he talked about ongoing relationships with patients as important. These were a source of great pleasure to him (he talked of the “tremendous privilege” of being trusted and taken into someone else’s family), but he ascribed this to human nature rather than the work of general practice.

“I think they like to see their own doctor, they're the person they're familiar with. Not from a really a medical point of

view but just, you go to a shop you like to see the same assistant, somebody you can chat to.”

Dr Purcell, 75 year old man retired from a larger practice

The image constructed of his career was that GPs and hospital doctors were the same in the sense that they had the same training, but that GPs had been unable to use this training. Unlike most of the doctors in the study he did not emphasise a distinct form of practice that linked ‘personal continuity’ and ‘medicine’. The sense was that the NHS had prevented GPs from practicing proper medicine by excluding them from the hospital. In his account, the boundary with hospital doctors was therefore relatively blurred, in that it was an administrative or structural issue rather than due to GPs ‘naturally’ having a different role or practicing a distinct kind of medicine. One consequence is that his construction of cross boundary continuity was also different. Rather than actively managing the primary-secondary care interface as gatekeepers, he described GPs as signposts (“fingerposts”) pointing patients with particular problems to consultants.

Dr West also talked about personal continuity and relationships as an important part of his work, but relatively disconnected from the ‘medicine’ that he did. Like several of the other GPs in the study, he initially worked in specialist training posts in the hospital. Unlike them he did not describe becoming a GP in terms of realising that general practice was a ‘better’ way of practicing medicine.

When talking about his work, he usually minimised differences with hospital doctors, and described working much like a hospital general physician but with more “social and emotional” problems to deal with. He liked knowing his patients, and he liked working in what he saw as a ‘small, friendly’ practice (p136). Dr West came to the UK to study medicine, and his practice is one that particularly serves other immigrants from the same country. He said that, when his predecessor retired, he was the only doctor available to take on the practice who shared their language and culture. He felt a strong duty to do so, and his identity as a GP appeared largely bound up with that commitment and sense of duty.

The common feature of these two GPs was that although they valued relationships with patients, they did not claim benefits in terms of better diagnosis and management of problems. Dr Purcell's position echoes an important theme in the general practice literature from when he started work in the early decades of the NHS. Exclusion from the hospital was seen by many GPs then as the central problem of general practice, and the main NHS reform to fight for (Anonymous 1955, Grant 1957, Honigsbaum 1979). Although he is the only GP in this study to take this position, his account is therefore consistent with Armstrong's analysis of 'continuity' as a relatively recent construction. Dr West's position was more clearly unique, in that his identity appeared bound up with his particular personal biography. He also made a claim of distinctness from the hospital, but it was in serving a particular community rather than through a particular form of medical practice.

This emphasises that the same organisation and health service structure can support different meanings and interpretations. The same referral system that Dr Purcell describes as passive signposting reflecting an inability to use medical training, can be reconstructed as active gatekeeping requiring a particular use of medical knowledge unique to general practice. Such uses are dependent on a reconstruction of personal continuity into a medical tool as well as a source of pleasure and work satisfaction for GPs. Dr West's lack of alignment with this reconstruction emphasises that it is also not inevitable, nor necessary to create a stable individual professional identity. Implicitly, other general practice identities are possible, although the uniqueness of his biography among these GPs is not that helpful in indicating what these possibilities might be.

### ***The hospital in the patients' accounts***

Like the GPs, some patients also used talk about the hospital to emphasise points they wanted to make about general practice. Such explicit and unasked for comparison was less frequent in the patient accounts, and patient talk about the hospital was more commonly in response to direct questions from me.

Most, but not all, patients talked about hospitals as impersonal places where you went only when sufficiently ill and where the focus was on dealing with a particular problem. It was not necessary for interviewees to have personal experience of hospital care to 'know' this (although those who had not attended themselves often talked about friends or relatives who had).

“You are not expecting the personal touch in the hospital. Normally when you get to the hospital stage you are going there to get a job done, that's why you've been referred.”

Mrs Emslie's friend who says he never goes to the doctor

Those patients with direct experience of hospital usually characterised them as places where it was unusual to see the same doctor or nurse, or to have an ongoing relationship with a particular professional. Patients rarely presented this as problematic, and few appeared to have expectations of receiving such care in hospital.

“I don't remember ever feeling that anybody was treating me like a number particularly, I was um, I've always been lucky I think in that they have always been quite pleasant and um, but, if they didn't, well, I mean you are virtually a number, you are just going through a routine check up and you go from one person to another one to another one to another one and some of it's nurses and one of them is a doctor but there's all these bits in the clinic. I think I see about four people in that one check up, four or possibly more. And you're passed from one to the other and they are working to quite a tight schedule.”

Ms Bannister, 50 year old with diabetes in a smaller practice

Diabetes care is more protocol driven than for many other diseases, but patients who had attended hospital with other problems talked in similar ways (for example, Mr Coulter with angina and prostate problems, Mr Ellison with hip problems, Mrs Taylor with a heart valve problem and so on). The majority who normally saw a succession of different hospital doctors did not usually describe this as problematic. Most said that it did not matter in hospital because the focus on disease made the relationship less relevant, sometimes adding that it might be nicer in some senses, but it was not necessary.

A few patients did see the same hospital doctor most times they attended, and they usually talked about the value of this in similar terms to the value ascribed to seeing the same GP. For Mrs Murray, the single most important relationship she had had with a doctor was with a hospital consultant. In the past, she had been very unwell in hospital, and had been accused by the consultant then looking after her of fabricating her illness by manipulating her drugs. A different consultant identified that the problem was with her prescribed treatment, and made her well by changing her drugs. She described her subsequent outpatient consultations thus:

“So from that, there is one of the consultants still there and I just hope every time I go that I don’t have to - and funnily enough over all the years, I’ve never, ever been, he’s never called me out you know to go and see him so I’ve been quite fortunate.

*BG So is that clinic organised that you just go in a queue and they just, you don’t know who you are go to see when you turn up?*

No, no, but that’s only very recently because this doctor who sorted me out used to write on the line that it was him I had to see. So I saw him but they have changed their rotas now so you can’t go and say that you’ve got to see a certain doctor because they’re often not on duty that day.

*BG And which, I mean did you want to see him or would you?*

Oh, yes, oh yes, I was always very pleased to see him but I don’t mind now because it doesn’t upset me going to the clinic now.”

Mrs Murray, 67 year old with diabetes in a larger practice

Afterwards, when it had particularly mattered, she had only seen the ‘right’ consultant. Having had her legitimacy so explicitly challenged, this had mattered a great deal to her because she trusted him, and said that he could understand what she had been through, how she was improving, and how much effort she made to get well. However, unlike in general practice, seeing ‘her’ consultant depended almost exclusively on the actions of the doctors. It was not something she appeared to have much control over. The relative lack of talk from patients about personal and

longitudinal continuity in the hospital may therefore reflect both that it is less common to receive them, and that patients have less control over organising appointments.

GPs emphasised the advantages of personal continuity and a wider knowledge of patients in terms of better diagnosis and management of problems presented. In contrast, patients who had attended hospital usually appeared to assume that the hospital specialist was best placed to diagnose and manage complex disease (eg Mrs Murray, p188).

“Well I've been to the physiotherapist and I've tried the tablets, he's tried different tablets for me. I mean he [the GP] has tried to get me better you know but I don't know what it is. I'm glad I'm going to the hospital though. I did ask him. I said to him I would like to go and see somebody and find out just what this is like, how it's got as bad as it has, you know.

*BG Is that something that you've discussed with GPs, reasons why this might have?*

Aye, that's what I say. I'd like to know just exactly how this came. I can't understand how it came all over so suddenly, if you know what I mean.”

Mrs Percie, 71 year old with rheumatoid arthritis in a larger practice

Mrs Percie had seen her GP for some months with her longstanding, but recently troublesome arthritis. She had a strong preference for this particular GP, partly because he always tried his best to help, and partly because he knew her and understood her problems. However, like others in the study, she assumed the hospital doctor would understand her disease better.

In brief summary, it was striking how GPs used a range of claims about particular advantages of general practice to construct a strong sense of their distinctiveness compared to hospital doctors. Personal continuity was one of the most prominent of these. Its use in this way relied on its claimed benefits in terms of better diagnosis and management of problems. The accounts of the two GPs who were divergent in

their construction of their boundary with the hospital make it clear that such a construction is neither universal nor necessary.

The patients largely concurred with the GPs in terms of hospital care having a different process and being less personal and less under their control. However, the meaning they ascribed to this appeared different from the GPs. This reflected that patients did not generally express the benefits of personal continuity in terms of better diagnosis and management of disease. Instead, they prioritised benefits in terms of the process of the consultation with the GP (chapter five, p139). Although many patients said that personal continuity made *general practice* care better, it therefore did not have particular relevance when discussing the *hospital*. Rather, patients believed hospitals to be the best place to receive medical care for particular problems and expected hospitals to focus on these problems.

Therefore, despite agreement on many of the ways that general practice care was different from hospital care, GPs' and patients' accounts differed in terms of the consequences attributed to this. Along with the accounts of Drs Purcell and West, this reinforces that the conceptualisation of continuity is related to, but not determined by, structure and organisation. The next section addresses the construction of professional boundaries further, by examining how GPs and patients discussed the work of practice nurses.

### **General practitioners and primary care nurses**

As discussed in chapter one, I had an expectation that the boundary between GPs and practice nurses would also be prominent. This was because GPs and practice nurses work alongside each other in partially overlapping roles, and practice nurses are increasing the scope of what they do (Broadbent 1998, Williams 2000a). There therefore appeared clear grounds for jurisdictional dispute (Abbott 1988). Given this, there was surprisingly little unprompted discussion of nurses in either set of interviews. What talk there was, was predominately about practice nurses, although this partially reflected the focus of my questions.

GPs predominately discussed practice nurses in terms of the delegation of specific tasks such as cervical smears, or of protocol driven chronic disease management and associated health promotion.

“We have needed them more and more over the last few years and we have increased their hours accordingly. ... They are doing a lot of things like running the asthma and diabetic clinics and we have in a sense off loaded a fair amount, but on the other hand we are now expected to do a lot more in terms of health promotion and prevention and that sort of thing, so that’s really is a big part of their role is running the clinics to prevent illness. That and em, cervical cytology and things that’s prevention of illness as well, so they do a lot of the screening but they also do bloods and they do dressings and they do all the other things that nurses do.”

Dr Elliot, 37 year old woman in a larger practice

Often talk about nurses was associated with talk about guidelines or contractual obligations such as health promotion, usually suggesting that nurses were needed for the GPs and the practice to cope with an increasing workload driven by these. As indicated above (Dr Hunter, p191), some GPs said that nurses were better at protocol driven care because they were more likely to follow guidelines. Additionally, a few doctors commented that nurses were better at giving explanations in terms that patients understood. However, despite GPs saying that the tasks done by nurses were important, they usually talked about following guidelines negatively, as an overly routine kind of care, where the focus was on the protocol, not the patient.

“So if somebody comes with cardiovascular disease, I mean our nurses literally have a tick box, you know has that been checked out, how often have you had the angina, flu vaccine whatever.”

Dr Norris, 39 year old woman in a larger practice

Dr Hunter’s comment that he did not intend to “demean” nurses by saying that they were better at following guidelines reinforces this interpretation (p191). Associated with this kind of talk, was an emphasis that responsibility for overall care remained with the GP since nurses lacked both the training and the inclination to work independently outside the structure provided by protocols or defined tasks.

“I mean I agree that they could take a lot off us, but at the same time, I think people who work with a nurse practitioner would find that they would bring a lot to the doctor as well, because one thing that nurses have never been totally keen on is taking responsibility for their decisions. And therefore everything, well not everything, but a lot of things might need to be checked by a doctor and I don't think they are ever going to get over that role, they haven't the training to take over that role.”

Dr Elliot, 37 year old woman in a larger practice

Other GPs also used ‘responsibility’ like this, indicating that nurses lacked the training and inclination to do more than doctors allowed them to do. This reinforces the image of the practice nurse as carrying out a limited (although important and necessary) set of tasks. GPs also often clearly distinguished ‘nurses’ in general, and particular nurses that they worked with. Dr Brian was at pains to point out that *her* practice nurse was excellent, and organised and competent. She was also careful to say that this was a characteristic of that nurse, not of nurses in general. She interrupted my first question about nurses to say:

*“BG I mean perhaps, nurses are*

Some nurses. Whatever you are going to say, say some nurses.”

Dr Brian, 38 year old woman in a smaller practice

Interestingly, when talking about the increased workload that necessitated more nursing time, some GPs characterised this in terms of a shift from the hospital to general practice. Dr Comrie used the metaphor of a ladder, with hospital doctors above GPs, themselves above nurses. When talking about her nurse practitioner, Dr Tulloch used a similar metaphor.

“I think gradually we are delegating a little more, things like the, she’s taking on the computerisation of the INR results and she’s going to relieve us on that sort of thing, which used to take quite a bit of partner time, as well as seeing some of the routine patients em, I think most of us are, I think we realise that actually more and more is being demanded of us, and we can’t do it, and actually we’re being expected to do a lot of what used to be secondary care, so it’s almost as if

we're sort of moving up a step and therefore we have to make sure that there are others moving up a step behind us, and particularly the nurse practitioner."

Dr Tulloch, 43 year old woman in a larger practice

The impression was of nurses starting to work in a space that GPs were vacating because they themselves were shifting to a territory that the hospital had relinquished, particularly that previously occupied by the general physician. Talking about how her work had changed, Dr Lawson said:

In some ways, at times I get frustrated about the amount of work that is coming out of the secondary care side to primary care ... I actually quite like it now. I think the fact that we are losing the role of general physicians and we have come to take it over, I quite like."

Dr Lawson, 45 year old woman in a smaller practice

The use of these metaphors reinforces the idea that GPs did see themselves as being in a lower status part of medicine (or at least, accepted that within medicine more generally, general practice was seen as a lower status kind of work).

The boundary negotiated with nurses was very strong. Mostly, doctors talked about it being their decision as to what kind of work the practice nurse should do and many used the word 'delegate'. Particular tasks were routinely delegated, including protocol driven care and monitoring of chronic disease (although a few GPs also talked about the possibility of nurses doing protocol driven diagnosis of acute, minor illness). However, the boundary work itself was much less prominent than that done for hospital doctors, and was largely prompted by direct questions about nurses. This would suggest that these GPs found the boundary with practice nurses less directly problematic than that with hospital doctors.

### ***Practice nurses in the patients' accounts***

As discussed above, patients also talked about practice nurses' work largely in terms of procedures and tasks done (p191). In that sense, patients appeared to perceive practice nurses as complementary to GPs, but often with the implication that they

lacked the technical knowledge or ability that GPs had, or were limited in what they were allowed to do (as when patients commented about nurses not being able to prescribe<sup>7</sup>). At its strongest, a few patients did not value seeing practice nurses at all because of this. After talking about the hospital diabetes clinic he attended, Mr Ethan commented:

“However, em, and the general practice the actual nursing clinic, the diabetic clinic I find a waste of time, the nurse doesn't answer any questions. She just takes my blood pressure and I'll say is it high and she will say oh, it's maybe a wee bit high and she won't be able to answer any questions. So I tend not to go to that.”

Mr Ethan, 52 year old with diabetes in a larger practice

Even patients who emphasised nurses' technical knowledge and skills, did so in a way that suggested they used them in a limited context of knowing when to refer on to the doctor. Interestingly, some patients talked about GPs' relationships to the hospital in a similar way (eg Mrs Percie p199, Mrs Emslie's friend p205).

“I think nurses are very, very knowledgeable and very often I think a nurse can diagnose without even seeing the doctor. I mean I've never really had a nurse do that but I have the feeling that they probably could or that they have the knowledge to say, 'Well I think Mrs Taylor, perhaps you should see Dr Tulloch, you should see your doctor, make an appointment to see Dr Tulloch'. I think they would have the knowledge to do that, I'm quite sure, yeah.”

Mrs Taylor, 71 year old with high blood pressure in a larger practice

There appeared to be a general assumption that the practice nurse could carry out their allocated tasks. However, there was no strong sense that patients much appreciated practice nurses for their specialist knowledge or skills in the way that GPs and especially hospital doctors appeared valued.

---

<sup>7</sup> At the time of the study, nurse prescribing had only just begun and was limited to items that related directly to 'nursing' tasks such as dressings, laxatives and simple analgesia.

Overall, there was more congruence between GPs' and patients' accounts than for discussion of hospital doctors and the hospital. The emphasis on tasks was similar, and the GPs' assumption that practice nurse work did not threaten their own personal continuity with the patient was supported by patients placing little value on personal or longitudinal continuity with practice nurses. As already indicated though, patients did value personal and longitudinal continuity with some other primary care nurses.

Again though, this emphasises the importance of the meanings brought to particular forms of organisation. The same longitudinal continuity between a patient and an individual professional could support a range of meanings for both GP and patient. From the patients' perspective, longitudinal continuity with the GP was most commonly constructed as a pre-requisite for a valued, and continuing relationship. Longitudinal continuity with health visitors was also important, but the relationships involved appeared less commonly valued and were clearly bounded by the age of children. Longitudinal continuity with practice nurses was not valued, because the relationship was not.

Although patients' accounts therefore seemed congruent with GPs' in terms of the boundary constructed with practice nurses, it seems likely that changes in work patterns may alter patient and professional perceptions. In particular, an increase in longitudinal continuity with practice nurses offers at least potential ground for the attribution of new meanings to their relationships with patients. However, in these accounts at least, this did not appear to have happened.

### **Medical knowledge and general practice identity**

Work and knowledge are at the heart of Abbott's System of Professions (Abbott 1988), and other theories of profession (MacDonald 1995). For Abbott, successful jurisdiction over an area of work requires a claim to expert knowledge that is widely accepted by other professionals, the public and the state or other large scale administrative organisations (Abbott 1988). MacDonald includes these ideas within a more general theory of professions using knowledge claims to pursue a 'professional project' intended to gain a monopoly over a particular area of work, and an increase in status for members of the profession (MacDonald 1995).

This section discusses the kinds of claims about knowledge made by the GPs. In particular, the ways in which GPs deployed personal knowledge and abstract medical knowledge in the interviews to construct a distinct identity in relation to hospital doctors and practice nurses is revealing.

Three kinds of knowledge were apparent in GPs' accounts: knowledge of the individual patient; knowledge of local services and where to refer; and the more abstract 'medical' knowledge GPs brought to bear on the patient's problem. GPs' knowledge of the individual was gained from the ongoing relationship embodied in longitudinal and personal continuity, from the comprehensive general practice medical record, and more weakly from formal and informal discussion within the primary health care team. Knowledge of local services came from working in one area for long periods. The more abstract medical knowledge was that of the diagnosis and management of disease and illness.

These different kinds of knowledge came together in the consultation with the individual patient, where GPs said they managed the problems patients presented by applying all available and relevant knowledge. GPs claimed that this led to more appropriate application of their medical knowledge, and therefore to better diagnosis and management of problems. Despite the broad biopsychosocial rhetoric, this construction effectively gave priority to the 'biomedical', although as discussed in chapter five, there was variation between GPs in the emphasis given (May 1996, Dowrick 1996, Calnan 1988a). This construction therefore gave high priority to the expert knowledge of disease and its treatment, with other knowledges predominately valued because they improved its application.

Medical specialists claim areas of knowledge and expertise for particular diseases or body systems. In contrast, a central feature of the majority of GPs' accounts in this study was the construction of a strong identity that presented them as doing 'medical' work that was distinct from this. Their claim cut across the specialist one, but as several conceded, hospital doctors were more expert about the diseases or areas within which they specialised. The 'problem' of these GPs' identity compared to

hospital doctors therefore appeared embedded in the relationship between general practice and medical knowledge.

The way that GPs talked about practice nurses reinforces this interpretation. GPs negotiated the boundary with nurses in an apparently simpler way. The GPs appeared to take for granted the security of their boundary with nurses, because it was based on control of 'medical' knowledge. As Dr Elliot said, nurses cannot take over what GPs do because they lack the "training" (p210). The medical knowledge that was most emphasised when talking about practice nurses was that embodied in guidelines. GPs described such work as a necessary but routine application of a protocol without much regard for the patient as an individual. Although some GPs said that nurses were better at this kind of activity, it was also clear that they did not particularly value this work.

Most patients did not explicitly talk about guidelines or protocols in the way that GPs did. The exceptions were some of the people with diabetes who commented that their hospital diabetes care followed a largely predetermined routine (eg Ms Bannister, p205). The repetitiveness of the work done made the underlying protocol explicit. Even without most protocols being so explicit, patients appeared to view practice nurses' work as task based, and as delegated by doctors. Like the doctors, they talked about this work as necessary, but they did not seem to value the person doing it in terms of wanting to develop ongoing relationships with them.

This parallels the GPs' assumption that patients valued relationships with them more than with nurses. Patients did not talk about investing much in personal relationships with practice nurses. This was despite some seeing the same practice nurse over time, and many saying that practice nurses were easier to talk to than GPs and other doctors. When talking about GPs, 'feeling at ease' and being able to talk openly was an important reason for seeing a particular GP. It was both a consequence of a particular relationship, and a reason for maintaining it. When talking about practice nurses, it appeared simply as something that nurses did, without being given meaning in terms of relationships with particular nurses.

Patients therefore appeared to ascribe different meanings to similar behaviours, depending on the context. The GP-patient relationship seemed to be treated as different from the GP-practice nurse one. One possible reason may be different perceptions and value placed on the 'medical' or 'nursing' work done. These differences could also reflect the sampling of patients via GPs, and the interviews being done by a GP creating a particular emphasis in the interviews. However, many of the patients in this study had had repeated contacts with practice nurses, which was one of the aims of the sampling. Additionally, people with diabetes and high blood pressure make up 5-10% of the adult population and these are two of the patient groups that practice nursing work has particularly involved.

These data are consistent with Abbott's concept that routinised professional knowledge is not of much use for professional claims, and therefore is not professionally valued. He discusses examples in other professions where professional work has been routinised or formalised in an explicit way.

"The most important divisions of labor divide fully professional work into routine and non-routine elements, with the two falling to different segments of a profession or even to paraprofessionals. Clear examples are the gradual delegation of conveyancing and costing to managing clerks by solicitors and of drafting to draftsmen by architects, as well as the separation of curriculum planning from classroom teaching. In every case, the eventual result has been the degradation of what had been professional work to non-professional status, sometimes accompanied by the degradation of those who do the work. ... It was by drawing the line between compounding medicines and prescribing them that the British apothecaries left their brother chemists out of the unification of the British medical profession in 1858." (Abbott 1988 p125)

Routinisation potentially opens professional work up to outside scrutiny and therefore outside control. In professional terms routinised work is degraded because it is of less use for jurisdictional claims, and therefore usually delegated to a subordinate group. This is consistent with the lack of value accorded much nursing work in both sets of accounts.

By implication, the finding in this study that practice nurses have not translated longitudinal continuity (seeing the same nurse over time) into personal continuity (a valued patient-nurse relationship) may be because the work they do is routinised and therefore professionally degraded. Guidelines may increase the consistency and co-ordination of care, but they do so in a way that may threaten rather than enhance professional status. Practice nurses doing protocol driven clinical work may therefore not improve their professional position any more than nurses taking blood samples has.

From this data, even if a growing role for practice nurses reduces longitudinal continuity with the GP because patients' care is fragmented among more professionals overall, what may matter is the meaning given to particular consultations by patients, and whether a consultation is perceived as being embedded in a relationship. For the patients in this study, this rarely happened with practice nurses.

In some senses therefore, the GPs' complacency about changes in the work of the practice nurse not threatening 'personal continuity' may be justified. It is however, somewhat undercut by what appeared to be closer and more important relationships with other kinds of nurse such as health visitors where there seemed to be more recognition of a particular expertise and more emphasis on an ongoing relationship. The lack of threat felt by GPs in this study is therefore no guarantee of what will happen in the future. Unlike the taking of blood or doing a smear, the complexity of protocol driven care of chronic disease seems likely to create spaces and opportunities for nurses to actively change their professional position.

Interestingly, several of the GPs talked about vacating several areas of general practice work including guideline driven chronic disease management and management of acute minor illness. This was in preference for an ill-defined shift into work currently done by the hospital. Again, this is consistent with Abbott's conception of professions as a system. As hospital doctors' work changes, the "vacancy" produced can be seen as opening up an opportunity for GPs, which in turn opens a space for nurses to work in (Abbott 1988 p111). The 'moving up the ladder'

metaphor used by two GPs is interesting in itself, because it does clearly construct a hierarchy with hospital doctors at the top (with the most desirable work, GPs in the middle, and practice nurses at the bottom (eg Dr Tulloch, p210-211).

Abbott suggests that such re-organisations of professional work take time to work their way through the system, and that their consequences are often only apparent in retrospect. In particular, based on a historical analysis, he suggests that it takes ten or more years for changes in the workplace to alter public perceptions of professionals (Abbott 1988). From this perspective, it is too early to tell how general practice will be changed by the evolution of the practice nursing role.

Linked to the lack of value placed on tasks delegated to nurses was talk by GPs about retaining 'responsibility' for the patient. This rhetoric is also present in 'official' general practice documents.

**“Team working** is now a key feature of general practice with professional isolation being less common. However the general practitioner fulfils a key role within the team and is a central player in the team success of primary care. In particular the general practitioner takes responsibility. The GP continues to take responsibility long after social workers, physiotherapists and practice nurses have finished work.”  
(RCGP 2001 p10)

GPs also used 'responsibility' when talking about their relationship with hospital doctors. However, whereas 'responsibility' in the nursing context revolved around nurses lacking the training or inclination to take over the GPs' role, in the hospital context it related to personal continuity and broader knowledge of the individual patient. The same language was used to the same purpose of constructing boundaries, but with two very different assumptions about the underlying expert knowledge. With nurses, 'responsibility' was grounded on GPs having and controlling medical knowledge. The patients' accounts were consistent with them broadly accepting this claim. With the hospital, 'responsibility' was based on a claim to broad, personal knowledge that cut across specialist claims to particular areas of medical knowledge. In the patients' accounts, this claim appeared less accepted, since patients did not

commonly ascribe ‘technical’ benefits to personal continuity, and did not appear to share the GPs’ conceptualisation of cross boundary continuity.

The key to understanding the work done to create the very strong GP-nurse boundary was that it relied on the GPs’ assumption of control of abstract medical knowledge of disease and illness. Consequently, they could and did take this boundary for granted. The key to understanding the work done to construct GPs boundary with hospital doctors was that the same abstract medical knowledge was problematic. Many of the GPs in this study conceded the validity of specialist claims to control particular areas of medical knowledge. Personal continuity, and GPs’ claim to better use of their medical knowledge cut across these specialist claims. However, the relative weakness of this claim was indicated both by GPs’ repeated shoring up of their boundary with hospital doctors, and the taken for granted nature of their relationship with nurses.

## **Summary and discussion**

GPs conceptualised the primary-secondary care interface as an active one that they managed through gatekeeping, and said they retained responsibility for the patient after referral. They justified this in terms of the ‘technical’ benefits of knowing the patient in context via personal continuity, and the possession of the complete medical record. The activity of hospital doctors in writing letters partly creates the medical record, but the GPs took this for granted rather than constructing it in terms of cross boundary continuity. In contrast, although the patients took the referral system for granted, they appeared to conceive the GPs’ role in less active terms. This was probably due to not sharing the ‘technical’ emphasis of the benefits of personal continuity, and either not knowing about, or being reluctant to comment in detail on the work done by professionals.

The kind of cross boundary continuity described largely matches the claims made by the RCGP and other general practice organisations (RCGP 2001). However, it appeared to be a largely professional creation. Its conceptualisation relied on both the

underlying organisation of care, and the ways in which other dimensions of continuity, and particularly personal continuity, were constructed.

In one sense, team continuity was absent from the accounts. That is, although GPs and patients took it for granted that other clinicians worked in primary care, there was little spontaneous talk about 'the team', and the way in which team continuity was constructed was often implicit rather than explicit. This was particularly true in the patient interviews, although again this may reflect patients' lack of knowledge or reluctance to discuss the detail of professional work. GPs constructed two kinds of 'continuity' as flowing from the team. The first was as a source of information about individual patients. In this sense, the team included other GPs and sometimes receptionists as well as nurses, and was cast as supplementary to personal continuity. The second kind of 'continuity' was in terms of a consistency of care from nurse involvement in guideline driven chronic disease management.

In neither case was there any sense that the 'team' could substitute for the personal relationship with the GP as has been suggested by some authors (Marsh 1991, Fleming 2001). GPs appeared to assume that changes to practice nurses' role were unlikely to alter the nature of their relationship with patients. Patients largely appeared to concur with GPs on this point, and none described seeking longitudinal continuity or valuing personal continuity with particular practice nurses. However, from their descriptions of care from other kinds of nurse, it was clear that personal and longitudinal continuity with health visitors, and in one case a CPN, was important to patients under some circumstances. These circumstances were more bounded by care for particular problems than was the case for GPs, but this suggests at least the possibility of consequences for personal continuity with GPs as a result of changes to practice nurses' work. The way that GPs discussed more established shifts of antenatal care to midwives supports this possibility.

This reinforces the notion that conceptualisations of 'continuity' are at least partly dependent on the organisation of health care and professional work, and that organisational change may have consequences that are not immediately apparent. The second part of the chapter moved away from the thematic analysis of

‘continuity’ into an examination of the ways that GPs used ‘continuity’ and other concepts to construct a particular professional identity.

The focus of the interview was ‘continuity’, and ideas related to ‘personal continuity’ like knowing the whole person in context. An inevitable consequence of this was that other issues raised by interviewees were not explored in the same depth. In the GP interviews, these included the idea of ‘independence’, talk about the relationship between work and personal life, and gender issues. Each of these could have been the focus of a different study. What matters here is that GPs deployed these topics alongside ‘continuity’ and particularly personal continuity, with the shared purpose of distinguishing GPs from hospital doctors.

There was a repeated, and often unprompted, construction of a strong boundary. This in itself suggests that the boundary with hospital doctors was one that was problematic for the GPs. There is certainly some evidence in these accounts that the strong identity created was partly necessary because other doctors did not accept the value of general practice claimed by the GPs. In contrast, and somewhat unexpectedly, the boundary with practice nurses was much less prominent. In some ways though, it was a stronger and more secure boundary in that GPs appeared to take it more for granted.

The differences in the nature and negotiation of these two boundaries appeared to be the underlying uses of knowledge. The security of the boundary with nurses relied on GPs’ assumption that they controlled medical knowledge and expertise, with nurses doing delegated, routine, protocol driven work. However, medical knowledge appeared to also create the problem of the boundary with hospital doctors. Here, GPs’ claimed a distinct form of medical practice based on the better application of medical knowledge because of their broader knowledge and understanding of individual patients gleaned from personal and informational continuity. However, this claim appeared weaker because the boundary negotiated seemed to require much more work to maintain. This was supported by the differences between the claims made about the hospital by GPs, and patients’ assumptions about hospital care.

The boundary work done was consistent with Abbott's conception of the system of professions (Abbott 1988). Although patients' largely agreed with GPs' descriptions of practice nursing work and did not appear to value either longitudinal or personal continuity with practice nurses, it seemed likely that changing experience of care will lead to changes in patient perceptions.

What this emphasises is that how GPs and patients conceptualise 'continuity' is partly dependent on the organisation of UK general practice and UK healthcare more generally. However, GPs and patients bring different meanings to organisation. Although both took 'appointments', the medical record and the referral system for granted, the conceptualisations of 'continuity' used differed between GPs and patients. GPs constructed the various dimensions of 'continuity' at least partly to create a particular professional identity in relation to hospital doctors. The two 'exceptions' to this indicate that this identity is neither inevitable nor necessary. Patients' constructions of 'continuity' were more local, in that they largely referred to areas where patients were explicitly active (making appointments and consulting with doctors), and the benefits of 'personal continuity' in particular were framed as internal to general practice. The next chapter draws together the data from both studies, and considers it in its wider context.

## **Chapter 8 – Discussion**

### **Introduction**

This chapter draws together and develops the analysis of the two studies in this thesis. The findings are summarised here in the first section of this chapter, and further considered in terms of the organisational context, and the place of personal continuity within a ‘professional project’ of NHS general practice (MacDonald 1995, Abbott 1988). Subsequently, there is further discussion of the strengths and weaknesses of the methods used, the ways in which the studies were integrated, and the implications for the substantive interpretation of the data and my own research training. Finally, the usefulness of ‘continuity’ as a concept for research and policy is considered in relation to formal definitions of ‘continuity’ (Freeman 2001, Starfield 1980), and some avenues for further research laid out.

### **Summarising the findings**

This section is divided into three parts, ordered somewhat differently from the data chapters. The first examines the definition and value of ‘continuity’ in the interviews with GPs and patients. It presents a summary of the thematic, more realist analysis of the interview data reported in chapters five to seven, and considers this in relation to the organisational context of UK general practice. The second discusses the distribution of personal/longitudinal continuity, using data from both studies but particularly the survey data in chapter three. The third focuses on the use of ‘continuity’ for the construction of a professional identity for the GPs in the interview study discussed previously in chapter seven. This is extended here to place an understanding of the work done in the interviews in the wider context of the professional project of NHS general practice (MacDonald 1995, Abbott 1988).

## **The definition and value of ‘continuity’ in UK general practice**

All of the GPs, and a majority of the patients valued personal continuity, or an ongoing relationship between patient and GP, and ascribed a number of benefits to it. There were differences in emphasis of the benefits. GPs emphasised that personal continuity led to better diagnosis and management of problems, with less focus on more satisfying work for doctors, and a preferred kind of care for patients. Patients emphasised feeling more at ease in consultations with ‘their’ trusted GP, not having to continually re-establish their legitimacy, and therefore having more latitude to be active and involved in the consultation. They focused less on ‘technical’ benefits, the only prominent one being avoiding repetition and therefore increasing efficiency. Disadvantages were less prominent in both sets of interviews, and included GPs missing slow change or taking patients for granted, and for a few GPs, the threat of intrusion into their personal life.

Both GPs and patients who valued personal continuity also shared a construction of longitudinal continuity with the GP as a necessary, but not sufficient condition for the creation and maintenance of personal continuity. The GPs conflated the two completely, and often made judgements about the strength of the relationship based on the degree of longitudinal continuity they had had with a patient. Based on the patient data, some of these judgements appeared incorrect.

To ensure they got the benefits of personal continuity, patients who valued it organised longitudinal continuity with ‘their’ GP by negotiating appointments with the receptionist, or choosing when to attend open surgeries. The limits of a consumerist construction of this negotiation was apparent in patients generally describing it in terms of choosing to see ‘their’ GP or virtually any other, rather than choosing the ‘best’ GP for any particular problem. For patients who valued personal continuity, there was therefore a similar conflation of longitudinal and personal continuity as in the GP interviews. However, it was also clear that some patients got longitudinal continuity but did not build or value personal continuity as a result, and some patients who valued personal continuity did not achieve longitudinal continuity

because of the nature of the problems they had or other priorities in their lives making access problematic.

A key difference between GPs and patients was that in the patient interviews, talk about personal continuity was interwoven with talk about access. For some patients, access dominated and personal continuity was not valued. For the majority, personal continuity was valued, but speed of access took priority under some circumstances. The main determinant of this choice appeared to be the kind of problem to be discussed at a particular consultation. This paralleled the way that GPs identified some patients as benefiting more from personal continuity than others, and defined this largely in terms of the problem(s) the patient had.

This emphasised that despite extensive talk about the patient as a whole person, the relationships involved remained significantly framed by an understanding of medical work as the diagnosis and management of problems. This indicates that 'continuity' has to be understood within the context of taken for granted assumptions about the nature of medical work, and the organisation of general practice.

The GPs said that the medical record provided continuity of information by being a routinely available source of the 'facts' of the medical history. Like GPs, patients took it for granted that the medical record would be present in all or most consultations, and usually said that the record could not substitute for personal continuity. The exception to this was patients who did not value personal continuity who usually commented that the medical record held all necessary information for their care.

However, patients frequently commented that they did not really know what was in the medical record and could not easily judge how GPs used it. In contrast, some GPs talked in detail about the interaction between their knowledge of the patient from within a relationship, and the taken for granted knowledge of the patient contained in the record. Although GPs said that the record could not substitute for personal continuity, it also seemed clear that personal continuity did not usually substitute for the record in its role as a near constant source of the medical 'facts', less contingent on circumstance than personal continuity.

GPs used the ‘technical’ advantages of personal continuity to justify gatekeeping or a particular form of cross boundary continuity. They described ‘gatekeeping’ as deciding firstly whether a patient would benefit from hospital or other referral, and then which specialist or other service they should see. Several GPs commented that part of their role was avoiding referral of patients who did not need, or had to be protected from, repeated hospital referral and investigation. Some GPs additionally said they retained responsibility for patients after referral. In contrast, although patients took the interface and the referral system for granted, they did not construct GPs as particularly active. This was probably partly because they did not share the GPs’ construction of personal continuity as altering the use of medical knowledge, and partly because of a more general reluctance to talk in detail about professional work.

In the GP interviews, the ‘team’ appeared to create ‘continuity’ in two senses. Firstly, the team provided a kind of continuity of information in the sense of discussion of patients in formal meetings and corridor chats supplementing knowledge of patients gained through personal continuity. This was absent from the patient interviews, which may again reflect a reluctance to discuss professional work in detail. Secondly, GPs described nursing work as a source of consistency of care for some patients because nurses reliably carried out protocol driven tasks. Patients largely concurred with this perception of nursing work as task or procedure driven, although there was little sense of the protocol or its consistency being that visible to them.

What was absent from both sets of interviews though, was any sense that the team could substitute for personal continuity. This was most explicit in the construction of personal continuity almost exclusively in terms of relationships between GPs and patients, and longitudinal continuity in terms of patients seeing the same GP. Neither GPs nor patients valued personal and longitudinal continuity with practice nurses. A few patients did describe personal relationships with other kinds of primary care nurse, but these were more clearly circumscribed by care for particular problems than relationships with the GP.

The definition of 'continuity' implicit in these interviews was therefore somewhat complex. At its heart was personal continuity with the GP, partially created by patients organising longitudinal continuity with the GP, which required patients to balance personal continuity against speed or convenience of access. Other dimensions of continuity were less prominent, although to some extent that appeared to be because participants took them for granted (Porter 1984). Examples of this include the medical record, which both GPs and patients took for granted as a near constant source of the medical 'facts' about patients, the referral system, and assumptions about the nature of 'medical' and 'nursing' work.

The conceptualisation of different dimensions of 'continuity' in both sets of interviews was therefore clearly related to the structure and organisation of general practice. Inherited from the National Insurance system, the medical record belongs to the state rather than the doctor, and follows the patient if they move (Honigsbaum 1979, Honigsbaum 1989). It is a potentially lifelong record, partially created by the GP (although it is only relatively recently that it has become customary for GPs to routinely write in it, or write in any detail), and partially by letters from other professionals or agencies. It is customary for hospital doctors to write letters to the GP when they see the patient. This custom has its roots in the referral system, which originally developed in the late 19<sup>th</sup> century as a way of regulating competition between GPs and specialists for paying patients (Loudon 1978). Although the record technically 'belongs' to the state, it is largely constructed by professionals for other professionals to use, and until recently, patients had no right to read it.

List based registration was also inherited from National Insurance, and creates a structure that encourages longitudinal continuity by limiting the number of GPs that patients can easily see (albeit one that may have been weakened by the growth of practices and increased population mobility). Similarly, GPs' lack of involvement in organising access has its roots in pre-NHS competition for fee paying patients (Digby 1999). Since refusal to consult meant the loss of income, or potential future income, GPs usually met whatever demands for consultation were placed upon them by patients presenting at the surgery or requesting a visit. The growth of group practice and the development of shared list systems under the NHS was associated

with the evolution of appointment systems with receptionists employed to run them (Morrell 1998). However, as with the older forms of access, GPs remained relatively uninvolved. Negotiating the appointment has not been something that GPs have historically done, and the way in which the NHS currently pays them does not encourage close concern with speed or convenience of access for patients.

The constructions of 'continuity' in the interviews are therefore at least partially embedded in the organisation of general practice. However, this kind of account risks making structure and organisation too deterministic. Although largely taken for granted by the participants in this study, the relationships between the various dimensions of continuity discussed above are not inevitable. Although the medical record has been a constant feature of NHS general practice, its use has not been so constant, as efforts to encourage routine and detailed recording of consultations make clear (Zander 1978). Its interaction with personal continuity is therefore likely to have changed.

Similarly, although broad structures have been relatively constant, the details and everyday work of practice organisation have changed, including the creation of appointment systems and receptionists to staff them. To some extent, this is apparent from the quantitative results. There were clear differences in the experience of personal/longitudinal continuity in practices of differing size and with different ways of organising their list. Since there have been major changes to listsize and list organisation under the NHS, it is likely that these have influenced the experience of personal and longitudinal continuity by patients.

Although often taken for granted in these interviews, the medical record, the referral system, and the appointment are therefore not 'natural' features of general practice or health service organisation. They are historically situated within a particular health care system. The interdependence of different dimensions of continuity in these accounts partially reflects this context, and are likely to change as the organisational arrangements do. Changes to structure and organisation will affect the experience of 'continuity' by patients and GPs, although the consequences of any change are likely to be hard to predict with any precision given the complexity of the system.

However, it should also be clear that the meanings brought to organisational arrangements are active constructions by participants. Both GPs and patients construct their relationship as important in ways that relationships with practice nurses are not constructed, but the benefits ascribed differ both between GPs and patients, and within each group. In particular, patients emphasised the benefits of personal continuity for their experience of general practice. They reaped these benefits within the consultation with 'their' GP, and in that sense personal continuity was largely conceptualised as altering the process of care. Personal and longitudinal continuity appeared less relevant for their experience of care from other primary care professionals, and in the hospital.

In contrast, GPs emphasised the benefits of personal continuity in terms of better diagnosis and management of problems prioritised the conduct of medical work. Although this has claimed benefits for individual patients, they also used this to construct particular conceptions of the primary-secondary care interface and the primary health care team that were external to the process of consultation within general practice. This incongruence with the patients' accounts appeared to be partly because patients appeared reluctant or unwilling to comment in too much detail about professional work.

There was therefore a creative construction by participants of personal and other kinds of 'continuity' in the context of a particular organisation of health care. Organisation did not wholly determine 'experience' because GPs and patients actively created meanings, but the meanings that were possible partly depended on the organisation. GPs and patients brought different meanings to the same organisation of care. In some senses, they are describing the same thing when they discuss 'personal continuity', but the differences underline that ascribing meaning can serve purposes beyond 'description' of the 'facts'. This analysis has examined this in terms of the way that the GPs constructed an identity in relation to hospital doctors, and this is considered in more detail below.

## **The distribution of personal/longitudinal continuity**

The quantitative data only adequately supports interpretation at patient and practice level. As discussed in chapter three, the GP level data is problematic, although it did highlight the importance of understanding how the changing demography of general practice may influence the organisation and experience of care. Although the qualitative data cannot examine the distribution of continuity in the way that the quantitative data does, it is relevant here since listsize was one factor defining the sampling of practices, and patients were sampled for some heterogeneity of 'problem'.

In the analysis of the survey data, two factors were significantly associated with lower levels of personal/longitudinal continuity at practice level. In the largest 40% of practices and those practices without personal lists, patients were much less likely to be seeing their usual or regular doctor. The interpretation of personal lists is reasonably clear, and in theory there is an obvious policy recommendation to re-establish personal list systems.

The interpretation of the list size effects is less clear. One possible explanation is that negotiation of access is more difficult in larger practices. The interview study data is consistent with this. Certainly, in the smallest practices a few patients made little effort to negotiate access since whoever they saw, they could be confident that they would know them well. More generally, talk about seeing 'their' GP being difficult or having to wait longer to see the GP of their choice was more common in the accounts of patients registered with larger practices. This is consistent with other research showing that receptionists' work in larger practices is more complex, and associated with the application of relatively rigid rules (Arber 1985). However, another possible explanation is that some of the apparent listsize effect may be due to unmeasured compositional differences between larger and smaller practices in terms of the GPs who work in them. Unpacking 'listsize' will require further research.

At patient level, older patients were much more likely to be seeing their usual or regular doctor. There was an interaction with patient sex, with younger men being less likely than younger women to get personal/longitudinal continuity. By middle

age, these sex differences were much reduced and there was a trend for them to reverse. Compared to patients with new or urgent physical problems, those with longstanding physical problems and emotional or psychological problems were more likely to be getting personal/longitudinal continuity. Patients seen as an extra were less likely, and those whom the GP had asked to attend more likely.

These results are partly consistent with the qualitative data. Certainly the importance of the 'problem' to be discussed in the consultation and an increased perception of urgency implied by being an extra are congruent, but the age association is not. In the qualitative study, age did not appear that important. Patients of all ages talked in some detail about balancing off preferences for seeing particular doctors and speed or convenience of access. This balancing was talked about as depending primarily on the circumstances of the consultation, and particularly the problem at hand. In contrast, the quantitative data shows that even after adjusting for the problem the patient wanted to discuss, age remained strongly associated with the patient seeing their usual or regular doctor.

One explanation for this is that the measure of the 'problem' in the quantitative study did not adequately capture the complexity of this. Additionally, unmeasured perceptions of urgency might change the associations seen. It is also possible that despite the similarities of the way in which patients of all ages talked in the qualitative study, there are other factors influencing the strengths of patient preferences, and the ways in which patients negotiate access to care. These might include cohort effects, or the effect of past experience of care (older patients probably have had more consultations with 'their' GP), or differences in lifestyle at different ages (older patients may be less likely to have work or family commitments and so might find it easier to negotiate 'convenient' appointments). The qualitative study also had relatively few 'young' patients included (appendix I, p339). Three patients were in their late 20s, and a further five in their 30s.

This incongruence cannot be fully resolved using these two datasets. I believe that the quantitative dataset probably overstates the strength of the age association. This is based partly on an understanding of the importance of unmeasured patient level

variables such as access that comes from the qualitative analysis, and partly on the recognition that this cross sectional dataset conflates ‘patient’ and ‘consultation’ in ways that may be misleading. However, despite the similarity of rhetoric in the accounts of older and younger patients in the qualitative study, I suspect there are greater differences between people of different ages than this suggests. Disentangling this would require more research, and ideally longitudinal methods.

What can be concluded is that preferences for personal and longitudinal continuity are not fixed in individuals. Rather, they are contingent on circumstance and on patients balancing disparate preferences and considerations to make choices within the constraints of what practices offer. Future research on this topic needs to account for this complexity more effectively than the analysis of the patient survey presented here.

### **‘Continuity’ and the construction of a general practice identity**

Within their interviews, GPs constructed themselves as distinct from hospital doctors in a variety of ways. Personal continuity was the most obvious of these, but others included ‘independence’ and discussion of work and family for the same purpose. In doing this, personal continuity was used predominately to construct the work of general practice as a distinct form of medical work, with the relationship improving the diagnosis and management of problems. The strength with which this boundary was repeatedly negotiated unprompted suggests that it was problematic for these GPs. The problem seemed to lie in the assumption that hospital doctors had more expertise in the application of medical knowledge in their area of specialism. Claims to expert knowledge based on personal continuity attempted to cut across specialist claims, but the apparent insecurity of the boundary suggests that this strategy had only limited power.

Patients usually described the hospital as impersonal, and even those few who had experienced close personal relationships with hospital doctors appeared to have little control over whether or not this happened or was maintained. Patients therefore concurred with the GPs’ construction of general practice as having personal continuity whereas hospitals did not. However, patients took it for granted that this

was how hospitals worked and did not appear to see this as problematic. Patients ascribed greater expertise in the application of medical knowledge to hospital doctors. Because they did not share GPs' attribution of 'technical' benefits to personal continuity, they did not share the construction of a distinct form of medical work in general practice.

In contrast, GPs took for granted the security of their boundary with nurses, and practice nurses in particular. When asked about practice nurses, they described their work in terms of delegated tasks and the following of protocols. Although GPs said that such work was necessary and important, they did not appear to value it very much, and certainly not enough to do it themselves. Talk about personal continuity was notably absent, and the construction of the boundary relied on GPs assumption of the control of medical knowledge. Interestingly, some GPs used metaphors of 'moving up the ladder', which implicitly accepted a hierarchy of status from nurse, to GP, to hospital doctor, and a rearrangement of professional work creating vacancies and opportunities for changes in jurisdiction.

Patients also constructed nursing work largely as carrying out tasks, although several commented that nurses were easier to talk to and explained what they were doing better. What was particularly interesting was that despite this, only one talked about the quality of the relationship with the nurse as important, and none appeared to actively try to organise personal continuity with a particular nurse. Even those who had seen the same nurse repeatedly did not imbue the relationship with the same meaning attributed to personal continuity with the doctor. Again, this seemed to reflect patients' assumption that GPs had medical expertise that nurses lacked.

Underlying these two boundaries were therefore assumptions about knowledge and its uses. Personal continuity had a particular intra-professional use for these GPs in constructing a distinct medical identity in relation to hospital doctors. The relative weakness of this position was indicated by the more secure inter-professional boundary negotiated with practice nurses. This relied on a construction of general practice work as involving the use of expert medical knowledge, and of nursing work as routinised and therefore professionally degraded. This analysis is now further

developed by considering these knowledge claims in terms of the professional project of NHS general practice.

### ***Personal continuity and the professional project of general practice***

As discussed in chapter one, the division between general practice and the hospital has been conceptualised as both structural, and in terms of knowledge and power. From a structural perspective, the foundation of the NHS is often described in terms of the exclusion of GPs from the hospital (Honigsbaum 1979, Honigsbaum 1989, Stevens 1966).

“The physician and the surgeon retained the hospital, but the general practitioner retained the patient.” (Stevens 1966)

In contrast, Armstrong has emphasised the ‘hospital’ in terms of it being the central site of the production of medical knowledge and power, encapsulated in the idea of ‘hospital medicine’. Both patients and GPs were clients of the hospital and its knowledge. From his perspective, general practice was redefined by new constructions of patients (and doctors) as individuals with an emphasis on the doctor-patient relationship, and of diseases as chronic. For him, the creation of ‘continuity’ was a consequence of this reconstruction of medical knowledge (Armstrong 1979, Armstrong 1983, Armstrong 1985).

The analysis of the interview study here is consistent with Armstrong’s analysis of general practice primarily defining itself in relation to the hospital. However, the strength with which GPs made this distinction suggests that their identity remains problematic in relation to the hospital. In that sense, ‘biographical medicine’ does not seem to have provided a completely successful solution to the underlying problem of general practice identity within medicine.

An alternative theoretical context for these data is to consider ‘personal continuity’ as part of a professional project of general practice (Larson 1977, MacDonald 1995). A professional project is an attempt by an occupational group to pursue control of an area of work and increase their social status. To achieve this requires defining a body of expert knowledge, and using it to establish professionally controlled education and

training of members (“producing the producers”) (MacDonald 1995 p189, Larson 1977). This section considers the degree of success of the professional project of UK general practice, and in particular of the Royal College of General Practitioners.

As part of the justification for a separate College of General Practice in 1951, one of its founders defined general practice as follows:

“To regard general practice merely as minor medicine, minor surgery, minor ENT work is, nevertheless to miss the whole point. It is the doctor-patient relationship which is the first and dominant fact. The general practitioner is the doctor who sees disease in all its forms first. Often he sees it in its earliest stages. He sees the social background, the home, the office, the factor. He has seen and knows other members of the family. He sees the patient not once – like the consultant – but many times. There is continuity in their relationship.”  
(Rose 1951 p174)

Rose explicitly used the relationship and wider knowledge of the patient to construct an identity distinct from the hospital doctor. He takes existing features of general practice like longitudinal continuity and personal relationships, and reshapes them into medical tools that define a particular kind of medical work, rather than merely describing a way of organising care.

This concern with defining the work of general practice was associated with an emphasis on education and training that incorporated these ideas (Pereira Gray 1998, RCGP 1972). This culminated in the creation of compulsory postgraduate training for general practice in the late 1970s (Pereira Gray 1998). The success of this within general practice may be judged by the striking similarity between the identity claimed by the GPs in this study, and Rose writing nearly fifty years earlier. One exception to this was Dr Purcell, who was one of only two GPs in this study who were not vocationally trained. The other retired GP (Dr Pallister) had had long involvement in postgraduate education, and in that sense had been repeatedly trained.

It is also interesting to examine other ways in which ‘personal continuity’ has been used by general practice as part of its professional project. Abbott defines professional work as the application of sufficiently abstract knowledge to particular

client problems (Abbott 1988). For him, abstraction is a crucial feature of professional knowledge, and distinguishes crafts from professions. Crafts claim to control techniques, whereas professionals claim to control the abstract knowledge that allows techniques to be correctly applied. The strength of the professional claim is that it is more general, more flexible, and more resistant to outside competition (Abbott 1988).

However useful knowledge of an individual patient might be in actual practice, if it cannot be abstracted and formalised, then it represents more of a craft skill than a professional knowledge. The key abstraction of ‘personal continuity’ has been the ‘consultation’. The consultation has been of central concern to general practice academics since the formation of the NHS (which arguably is when the idea of a ‘general practice academic’ first made any sense). It is our “sole arena, where almost everything we do as doctors is done” (Norell 1987). The ‘consultation’ was the subject of one of the two central research themes of general practice in the period up to the 1970s, and this body of research is one that Armstrong uses as evidence of the construction of ‘biographical’ medicine (Armstrong 1979).

Arguably, the key output of this research has been the creation of ‘consultation skills’, and the linked discourse of ‘patient centred medicine’ (Byrne 1976, Pendleton 1984, Tuckett 1985, Neighbour 1987, Tate P 1994, Stewart 1995). Indeed, it is the ‘consultation’, rather than ‘personal continuity’ per se, that is at the heart of general practice postgraduate training, and is now formally assessed using video in the two main postgraduate general practice examinations (NOSA 2002, Royal College of General Practitioners 2002).

‘Consultation skills’ have also been an important factor in the establishment of general practice in the universities and academia. The ‘consultation’ and ‘consultation skills’ were one of the first parts of the medical school curriculum commonly controlled by departments of general practice. Establishing a university presence has been an essential component of professional projects in the 20<sup>th</sup> century, since the universities are the site of the production of most new professional knowledge, and the site of training of most new professionals (Abbott 1988). The

relationship between research, the universities and professional status has been emphasised by one of the more influential recent figures in the RCGP.

“Published research is the only way to turn a craft into a profession and a profession into a discipline. It is the only way to turn decision making from hopeful guesswork into a rational, reasonable plan of action. Since a discipline is a subject with a defined body of knowledge, the literature becomes the proof of the existence of the discipline – a shorthand for the discipline itself. Without a literature there is no discipline.” (Denis Pereira Gray writing in RCGP 1992 p48)

What this reinforces is the importance of the interaction between organisation and knowledge. When the NHS was created, the medical encounter was long established, as was list based registration for much of the population, the referral system and the idea of the GP having responsibility for the ‘continuing care’ of the patient. However, personal continuity as understood by the GPs in this study is a more recent, active construction of general practitioners that uses these ‘facts’ for a particular purpose. The abstraction into ‘consultation skills’ represents a second active reconstruction of the same ‘facts’. A purely structural account of ‘continuity’ ignores this construction whereas it is central to Armstrong’s analysis of ‘biographical medicine’ as a new discourse (Armstrong 1979). However, Armstrong pays little attention to the individual GPs and GPs as a group as *active* participants in the reconstruction of knowledge, and ‘biographical medicine’ is painted as more powerful and overwhelming than this analysis indicates. Understanding the reorganisation of knowledge as a professional project is more illuminating.

In terms of its uses within general practice training and the universities, ‘personal continuity’ and its abstraction into the ‘consultation’ therefore appear to have been a reasonably successful knowledge claim. However, in other ways, it appears less successful. As already indicated, although most of the GPs in this study used ‘personal continuity’ to create a shared individual identity, it appeared to bring less security to boundaries with hospital doctors than ‘medical knowledge’ did to boundaries negotiated with nurses. Using the patient data from the interview study,

the success of the claims made for personal continuity can be further examined in terms of their acceptance in the “public arena” (Abbott 1988).

There are two important ways in which the GPs’ claim based on personal continuity appeared weaker than the claims based on medical knowledge. Firstly, patients appeared relatively inhibited about judging GPs and other doctors in terms of their application of medical knowledge. To question or judge any doctor’s use of medical knowledge too explicitly seemed to pose risks to patients’ legitimacy. This is consistent with their acceptance of medical knowledge as an ‘expert’ knowledge only easily or properly judged by ‘experts’ (Abbott 1988). In contrast, patients freely made personal judgements about GPs in terms of their manner, how much they ‘cared’, the attention they paid, how well they listened, and so on. In this sense, neither the knowledge gained from ‘personal continuity’ or GPs’ ‘consultation skills’ appeared to be accepted as ‘expert’.

Second, some patients had experienced personal relationships with hospital doctors and said that they valued them. However, they appeared to have relatively little influence over which doctor they saw there, and therefore less control over whether or not such a relationship was created or maintained. For Abbott, professionals being able to define the terms on which a client consults is a sign of professional strength (Abbott 1988). In contrast, personal continuity with the GP was partially dependent on patient action to create longitudinal continuity, and patients used their judgements about GPs’ personal qualities in making choices about which GP to see. Patients therefore had greater control of the context of the consultation in general practice. From Abbott’s perspective, this is an indicator of a relatively weaker professional status for general practice compared to hospital doctors (Abbott 1988).

Both of these can of course be read as support for the GPs’ claim to a distinct form of practice, in that the GPs’ and patients’ accounts were congruent on the centrality of personal continuity to general practice. However, an alternative reading is that personal continuity is part of a professional project that has not yet fully defined an ‘expert’ knowledge in patients’ eyes, and does not as fully control the context of the consultation as hospital doctors.

This suggests limitations to ‘personal continuity’ and ‘consultation skills’ as a professional claim. Patients do not seem to accept it as constructing a professional knowledge in the way that they do ‘medical knowledge’. To some extent this may not matter. The main audiences for claims based on ‘personal continuity’ are other professionals and the state. Patients agreement that there is greater personal continuity in general practice, and that personal continuity is important may be enough to make it a usable claim for these audiences. What this highlights though, is that personal continuity seems more reliant on the continuation of particular forms of organisation and is therefore less successfully abstracted than more specialist claims, where expertise is less dependent on organisational context.

The next section continues this theme of the interaction of knowledge and organisation by considering some current sources of change that may influence how ‘continuity’, and more broadly ‘general practice’, are conceptualised and experienced.

### ***Internal and external sources of change***

Abbott identifies internal and external sources of change in the system of professions (Abbott 1988). This section examines the possibilities for internal change in the sense of possible reorganisations of the knowledge of general practice and medicine more generally. It uses the examples of ‘early diagnosis’ and ‘primary care epidemiology’ as a potentially different kind of claim to a particular field of general practice work. External change is considered in terms of the reorganisation of services, which is currently largely driven by the state. This uses changes to access as an example for discussion.

Alongside the ‘consultation’, a second important concern of early general practice research was to describe the morbidity of patients seen, with a focus on ‘early diagnosis’ (Fry J 1957, Hodgkin 1963, Fry J 1973, Morrell 1998). This can be seen as a different kind of attempt to define a particular field of clinical work for general practice. The influence and attraction of this in the past is indicated by the status

accorded MacKenzie and Pickles by the RCGP<sup>8</sup>. Both have eponymous lectures in their memory, and both are routinely held to be the fathers of general practice research in a way that Balint<sup>9</sup> is not (RCGP 1992).

To a large extent, this area of research faded from prominence in the 1980s, reflecting that its claims were never really accepted more generally within medicine. However, it may have been given new life by clinical epidemiology, and the evidence based medicine (EBM) movement (Sackett 1991, Sackett 2000). EBM conceives a particular link between research and clinical practice, with a hierarchy of 'evidence' that constructs particular methods as suitable for answering particular clinical questions.

From the EBM perspective, research is valued, but for clinical practice what is claimed to be required is an ability to search the literature for 'evidence', appraise what is found in terms of the hierarchy of 'good' evidence, and synthesise it into an 'evidence based summary' or a guideline for everyday clinical use (Sackett 2000). The focus is on the clinical uses of research knowledge, and although laboratory research is not without value, it is seen as having less immediate relation to clinical practice. The strength of this position is that it offers GPs (and others) the promise of clinical expertise. If a GP practices 'evidence based medicine', then they can be confident that they are as 'expert' as the specialist. A weakness is that this expertise is only available where 'good' evidence exists, but where this is the case, then the knowledge appears relatively easily formalised into guidelines and protocols, and is therefore degraded for professional purposes. As the qualitative study indicated, this is unlikely to be of much use to GPs in constructing useful 'expertise' (Abbott 1988).

---

<sup>8</sup> MacKenzie was an early cardiologist who gave up a London consulting practice to move back to general practice in St Andrews where he carried out research on the natural history, diagnosis and treatment of heart disease. Pickles was a country GP who meticulously documented the spread of infectious disease in the relatively isolated communities served by his practice.

<sup>9</sup> Balint was a psychotherapist who worked with groups of GPs. His work can be read as providing the first clear exposition of 'biographical medicine' and creating the basis for what was to become consultation research.

Nonetheless, EBM does represent a significant reorganisation of medical knowledge, with a shift from a laboratory to a clinical focus (although of course there is a simultaneous reinforcement of the laboratory by the explosion in knowledge of molecular genetics, and the claims made for it). The reorganisation of medical knowledge implicit is likely to create opportunities for different groups, general practice included. The increasing numbers of clinical trials and examination of diagnostic test performance in primary care may reflect GPs taking advantage of this opportunity. One potential use of EBM is that it explicitly defines the kind of research that will be ‘needed’ to demonstrate the ‘effectiveness’ of different forms of ‘continuity’ in UK general practice.

A second potential use is that it may allow the construction of a distinct form of medical practice that does not rely on personal continuity. By demonstrating that effective tools of diagnosis and management are different in primary and secondary care, EBM offers the promise of a ‘scientific’ proof that the clinical work of general practice is distinct. From this perspective, it is interesting that a recent proposed definition of European general practice explicitly constructs ‘general practice’ without a longitudinal or relational dimension (Olesen 2000). Rather, it is based on the idea of a distinct primary care epidemiology (an EBM claim), consultation skills (an abstraction of, but not necessarily reliant on, personal continuity), and a claim to a broad biopsychosocial perspective.

‘Internal’ reorganisation of medical knowledge may therefore offer opportunities both to reinforce an identity based on personal continuity by showing that is ‘effective’, and to claim a distinct form of primary care medical practice and expertise that does not rely on personal continuity or ongoing relationships. The long term consequences of this ongoing reorganisation of medical knowledge are uncertain, but this discussion does emphasise that conceptualisations of ‘continuity’ are unlikely to be static.

There are many ways in which health services are currently being reconfigured that seem likely to impact on ‘continuity’ and the kinds of claim to jurisdiction that GPs can make. These changes external to the profession include commissioning of

secondary care, new forms of primary care provision such as out of hours co-operatives, NHS Direct/NHS24, Advanced Access, and specialised clinics within general practice, and the creation of a single electronic health record (Department of Health 1997, Department of Health 2001, National Primary Care Collaboration Development Team 2003). Speculating on the potential effects of all of these would require too much space, so this section focuses on the reconfiguration of access to primary care, since this has a prominent place in recent policy and resonates with an important difference between GPs and patients in the interview study.

A common feature of many changes to access is the use of the telephone. In part, this has been driven by social and technological change. Telephone penetration is now near complete in the UK, mobile telephones have made telephone contact easier, and commercial call centres have created models and technology for systematically and efficiently managing telephone encounters. Abbott suggests that such changes create opportunities for professionals to reconstruct organisation and knowledge (Abbott 1988).

In this respect, Advanced Access is particularly interesting (National Primary Care Collaboration Development Team 2003). Advanced Access takes up the government agenda of routine access to GPs within forty eight hours, and claims to achieve this by 'doing today's work today'. One of the ways in which this is achieved is that patient requests for appointments are routinely handled by a GP, who decides if the patient can be managed on the telephone, requires an appointment or visit, and if so, whether consultation should be with a GP, a nurse or another professional (National Primary Care Collaboration Development Team 2003). This effectively brings a feature of the organisation of out of hours care in general practice co-operatives into daytime general practice. One unintended consequence may be a reduction in the ability of patients to negotiate which doctor they see, since the duty doctor answering the phone may decide that their 'problem' does not require a face to face consultation, or may allocate them to see an available clinician rather than the GP of their choice.

In the accounts of the GPs here, access was something largely ignored, or taken for granted as receptionists' work. Advanced Access reconstructs it as medical work, and creates a new space for the medical encounter. Rather than being mere telephone calls or conversations, these are now conceptualised as 'telephone consultations' (Lattimer 1998).

An alternative model used by NHS Direct and NHS24 is of telephone consulting by nurses working to a protocol. Nurses may therefore replace GPs in doing this work in practices, and two of the GPs commented on other practices where this was already happening. The way that other kinds of protocol driven nursing work were discussed in this study would suggest that GPs may not find it hard to give this work up (although I suspect they may be more unwilling to give it up to nurses working in NHS Direct or NHS24, which means ceding control over access rather than delegating it to an employee).

There is therefore a complex interaction between technological change, the agendas of powerful stakeholders, and the construction of expert knowledge. Other organisational change including the electronic health record, and the likely creation of more specialised clinics in general practice driven by the proposed new GP contract can be examined in the same terms, although this is not further developed here.

The consequences of these changes are hard to predict. As already discussed, changes in the work done and who does it may take some years to lead to changes in jurisdiction (Abbott 1988). What is clear though, is that the dependence of 'continuity' and 'access' on the current structure and organisation of health care makes them also dependent on state or managerial intervention. Current state policy places general practice at the heart of the NHS, and promises control over secondary care commissioning and a significant increase in resources via the new contract (albeit with major 'quality' and 'clinical governance' strings attached). However, that is a position that is weak if state attention shifts elsewhere, or if the rhetoric of efficiency also used by GPs to justify their place (Starfield 1994, RCGP 2001)

rebounds on them if nurses or other professionals are shown to be as 'effective' and cheaper.

In this respect as well as those already described, an identity based on 'personal continuity' is probably weaker than one based on a more disease based medical knowledge. That does not mean that specialities are not subject to change. A brief consideration of the shifting boundary between cardiology and cardiothoracic surgery consequent on the development of angioplasty and other percutaneous interventions shows otherwise.

However, although hospital doctors have been subject to considerable managerial and state intervention, these external forces have less obviously challenged their identity in terms of the knowledge they have and the work they do. 'Personal continuity' and general practice core values appear perennially under threat in way that is not paralleled by hospital specialities (Batten 1956, Scott 1965, Anonymous 1973, McCormick 1996, Taylor 1997, Baker 1997, Haslam 1999). This reflects the different status of the claims to expert knowledge by GPs and hospital doctors, and the greater dependence that general practice 'core values' have on patient action, and the structure and organisation of health services.

This discussion has centred on the uses of 'continuity' by GPs for their own professional purposes, how successful this has been, and some of the implications of ongoing reorganisation of medical knowledge, and of health service structure. However, like the GPs in this study, this analysis largely ignores the value given to personal continuity by most patients. Patients valuing personal continuity in terms of ease, comfort and involvement in care is important to recognise, even if it is somewhat problematic for GPs' professional identity claims. A similar analysis of patients' uses of 'continuity' to construct their own identity as 'good' patients would also have been possible, but is only implied in chapter five rather than fully developed. However, like other analytical paths identified but not taken, time and resource constraints required a focus, which here has been on the GPs.

Again what this emphasises is that patients and GPs actively construct meaning for their experience of healthcare and work, although the range of possible or plausible

meanings is partly determined by structure and organisation. One of the questions this begs is what status should be given to the thematic analysis? It reinforces that the data cannot simply be read as a description of 'experience' or the 'facts'. Rather, GPs and patients can be seen as making a set of claims for a variety of purposes. There is a relationship between these claims, and the 'real world', but it is one that is complex. The data tells us a great deal about GPs' professional identity and the world of professional work that they move in. It also identifies a set of testable claims about the effects of various dimensions of 'continuity', and allows clearer consideration of possible unintended effects of organisational and knowledge change. This is returned to in the final section, but first the strengths and limitations of the studies are examined.

## **Strengths and limitations of the studies**

This section discusses the two studies separately, and then the ways in which they were used together and the limitations of this.

### **The patient survey**

The strengths and limitations of the quantitative survey have been systematically addressed in chapter three. To briefly summarise, the key advantage was the availability of a larger dataset than it would have been possible for me to collect on my own, which included many questions measuring variables of interest to me. The key disadvantage was that the conceptualisation of some of these variables did not match my own (although to some extent this is a post hoc or post interview study conclusion). Additionally, there were variables of interest to me that were not measured or not measured well enough to be usable. The analysis was therefore primarily exploratory.

Given the context of the studies in terms of the original fellowship application, and the training component, these advantages and disadvantages to some extent represent unavoidable trade offs. Certainly, the research training inherent in working to understand someone else's data, and in learning multilevel modelling was very valuable. The substantive output was also interesting, even if only as only as

providing research evidence confirming or consistent with taken for granted assumptions about personal/longitudinal continuity.

One lesson that it taught me was that researchers will often share the same taken for granted assumptions as participants. Certainly, the conflation of personal and longitudinal continuity, and the lack of interest in access in the PEI study paralleled the way that the GPs in the qualitative study talked. Survey design that fails to get beyond taken for granted assumptions seems likely to risk merely confirming them, as may have happened here. Overall though, helping make explicit relationships between practice size and personal/longitudinal continuity, and highlighting the likely importance of changing general practice demography is important. Similarly, identifying the complexity of the interaction between patient, GP and practice emphasises the importance of using appropriate methods to analyse this.

### **The interview study**

The strengths and limitations of the interview study have been less clearly articulated (chapters two and four). Strengths of the study included it being carefully planned in co-operation with my supervisors. Sampling was purposive, and intended to produce heterogeneity of experience of general practice of both GPs and patients. Linking GP and patient participants was used primarily to highlight dysjunction between general or abstract statements by GPs, and the care of individual patients. Analysis aimed to tread a path between a relatively realist, thematic account of ‘continuity’, and a parallel focus on one kind of work being done within the interview. Of concern for both analyses was to try to get beyond taken for granted assumptions of both participants and myself, and to try to understand the data in its historical and organisational context.

There were also a number of limitations obvious in retrospect. As discussed in chapter four, ‘continuity’ was the central concept structuring the analysis. An inevitable consequence was that other analytical paths were not taken (including ‘independence’ or ‘gender’ in the GP interviews), or not developed beyond their relevance to ‘continuity’ (such as legitimacy and trust in the patient interviews). Additionally, given its apparent appeal as an organising concept, there were good

reasons for not making ‘continuity’ an explicit topic in the recruitment information or in the interview. One consequence was that interviews did not include an explicit exploration of ‘discontinuity’. This is unlikely to be a mirror image of ‘continuity’, and its exploration would have been interesting in itself (there are parallels with research into ‘satisfaction’ and ‘dissatisfaction’ (Coyle 1999)).

The data is strong on the negotiation of boundaries and professional identity by GPs, but I have no accounts of those same boundaries from hospital doctors and nurses. Given Abbott’s conceptualisation of a ‘system of professions’, the understanding of GPs’ professional identity is therefore partial, although still important. The ways in which practice nurses conceive their work and their relationship with GPs seems particularly important to understand, given the overlap with general practice in the same workplace, and their growth in numbers and responsibility (Williams 2000a).

As indicated in chapter four, my presentation to patients as a ‘researcher’ rather than a ‘GP researcher’ was implicitly deceitful and I would not do it again. Since most patients either asked me if I was a GP, or seemed to take it for granted that I was, it was not even a particularly successful deceit.

However, the key limitation relates to the sampling of patients. Reflecting assumptions that I shared with the participating GPs, access was not highly prioritised when designing the study. One largely unsuccessful aim of the patient sampling was to open up discussion of different ways of organising chronic disease care (in special clinics or hospital for people with diabetes vs ordinary surgeries for people with high blood pressure). A more successful aim was to ensure that a variety of relationships existed between interviewed GPs and patients. However, sampling was relatively narrow in terms of access, because both diabetes and high blood pressure are chronic diseases with few acute exacerbations or emergencies. Care is therefore easier to plan in advance than for some other chronic conditions like asthma.

The relationships between access, personal continuity and the problem discussed in this study may therefore be partial, although given the size of the study this was likely to be the case whatever the sampling frame used. However, the general point

that patients balanced off access, personal continuity, and the problem seems likely to be relevant to most patients in most general practice settings, although the ways in which patients with different problems than those in this study manage such a balancing act may well be different.

This makes explicit the problem of generalisation, or the extent to which the data and its interpretation can be extended to make inferences about 'UK general practice' (Silverman 2000, Seale 1999, Williams 2000b, Britten 1995). This analysis has used the strategies of contextualising the data in a historical and organisational context, and of theorising from the data to justify the generalisability of the conclusions (Seale 1999, Silverman 2000). My own belief is that despite clearly being partial in some respects, the data has wider resonance. That is of course also a judgement for the reader to make.

### **Mixing methods and integrating data**

Learning and conducting two very different methods at the same time was intellectually and practically difficult. However, it was actually made easier by the relative lack of integration of the two studies. As discussed in chapter two, these two studies were necessarily distinct because they were planned and conducted near simultaneously. This therefore was not a single mixed methods project with a clear, pre-specified relationship between the studies in the way described in the literature. This distinctness eased my task in switching between methods and underlying assumptions.

In writing the PhD, the qualitative analysis has probably been of more use in interpreting the quantitative results than vice versa, although as the discussion above of the incongruence of the interpretation of 'age' and 'problem' in the two datasets indicates, each did challenge the other to at least some extent. There were a number of other outcomes that relate more to my research training and experience than substantive conclusions.

One is in some ways somewhat mundane. My experience of analysing the survey data at the same time as my understanding of 'continuity' was evolving, reinforced something that I already knew in theory: researchers should avoid measuring

concepts that they do not clearly understand, or where they do not know how respondents understand them.

More generally, it is interesting that I had as much difficulty integrating the two analytical strands of the qualitative study, as I did the qualitative and quantitative study. The interview data was read from two different perspectives: one relatively realist and emphasising the content of what was said; one less realist and examining the way in which the interviews were constructed. I found the incongruence of these readings as problematic as the differences between the 'qualitative' and 'quantitative' studies. This reinforces my belief that the qualitative/quantitative divide is somewhat overblown, and the problems generated by differences between methods transcend such the dichotomy implied (Bryman 1988, Barbour 1998, Seale 1999).

Mixing methods (including mixing within the qualitative study), therefore made me more conscious of the need to think through my overall stance to data and research, and in particular the fallibility of data and interpretation. The common thread across both studies is an attempt to be explicit about the limitations of different methods, and use this to make reasoned and reasonable interpretations of complex data.

A final important outcome was my developing interest in understanding the interaction of 'individuals' and their 'contexts'. In the qualitative, this was operationalised both within the thematic analysis, and by considering the data in the context of organisational history and structure, and more general theories about the sociology of professions; in the quantitative, by using a particular statistical model.

In some ways, I already 'knew' all of these lessons at the start of the PhD. My unsurprising conclusion is that intellectual 'knowing' and actual 'doing' are somewhat different. This is consistent with Seale's belief that research is a craft skill, although one that can be profitably informed by intellectual debate about ontology, epistemology and methodology (Seale 1999). I hope to fruitfully apply these lessons in future research.

## Implications of this research

The more ambitious of the aims of the research conducted for this thesis was to explore the definition and value of ‘continuity’ in UK general practice to GPs and patients. Having completed the research, an interesting question to ask is to examine how useful the concept of ‘continuity’ is for research and policy.

There seems little doubt that ‘continuity’ has resonance with health service users, professionals, researchers and policymakers. The usefulness and power of ‘continuity’ in reaching an understanding of the organisation and experience of general practice care here is one example. The prominence of ‘continuity’ in the NHS R&D Service Delivery and Organisation programme Listening Exercise is another, and was reflected in Continuity of Care being the first research programme commissioned (Fulop 2000, NHS R&D 2001). Similarly, the centrality of the rhetoric of ‘continuity’ in definitions of general practice and policy documents (from ‘seamless services’ to ‘joined up thinking’) is testament to its appeal. ‘Continuity’ therefore clearly serves important purposes for many stakeholders in health care, and in that sense is an important field of research.

However, as indicated in chapter one, it should also be clear that universal definitions of ‘continuity’ are somewhat problematic, and there is no clear agreement on definition. Indeed, it may be its very lack of an agreed definition that makes ‘continuity’ so useful for rhetorical purposes, since it can simultaneously be a constant ‘core value’ and flexible to change. The penultimate act of this thesis therefore compares the conceptualisations of ‘continuity’ by the GPs and patients in the interview study with the definition of ‘continuity’ used to lay out the field of research for the NHS R&D Continuity of Care programme (Freeman 2001).

When this was published part way through the research, it presented an attractive framework to me since it put the patient’s experience of care at its heart, and because its conceptualisation of continuity reflected research rather than professional identity purposes. ‘Continuity’ is defined as follows:

“The experience of a co-ordinated and smooth progression of care from the patients’ point of view (*experienced continuity*). To achieve this central element the service needs:

- Excellent information transfer following the patient (*continuity of information*)
- Effective communication between professionals and services (*cross boundary and team continuity*)
- To be flexible and adjust to the needs of the individual over time (*flexible continuity*)
- Care from as few professionals as possible consistent with other needs (*longitudinal continuity*)
- To provide one or more named individual professionals with whom the patient can establish and maintain a therapeutic relationship (*relational or personal continuity*)” (Freeman 2001).

In comparing my analysis with this definition, there are several features of interest. Firstly, the implied construction of ‘experienced continuity’ by service organisation seems somewhat problematic. The data here indicate that individuals constructed their ‘experience’ based on, but not determined by the organisation of care. Both GPs and patients took features of organisation like the referral system and the medical record for granted, but the meanings ascribed to these differed between GPs and patients, and from the SDO definition.

Similarly, patients who valued personal continuity with the GP constructed longitudinal continuity with the GP as important, since it was the main way in which they created and maintained the relationship. In contrast, because personal relationships with nurses were not valued, neither was longitudinal continuity with them. ‘Longitudinal continuity’ that was valued was effectively defined as ‘longitudinal continuity with the GP to maintain and benefit from personal continuity with the GP’, not ‘care from as few professionals as possible consistent with other needs’. The latter effectively assumes a form of ‘team continuity’ that was not mirrored in the interview data here. The formal definition therefore embodies assumptions about how dimensions of ‘continuity’ are conceptualised that were not shared by the participants in the interview study.

Second, in both sets of interviews the various dimensions of ‘continuity’ were interdependent, and had a complex interaction. Although the NHS R&D definition is helpful in outlining what dimensions of ‘continuity’ may be relevant, it also implies that these dimensions are distinct. This may be misleading when trying to understand how individuals experience ‘continuity’ in the context of particular health systems and ways of organising of care.

Third, whilst it could be argued that access to care is not conceptually related to ‘continuity’, the findings from this study show that patients’ experience of access and personal/longitudinal continuity were deeply interwoven. However, the relationship was very different in hospitals, emphasising again the importance of organisational context. With the exception of Roger and Curtis’ definition (Rogers 1980), ‘access’ and ‘continuity’ are usually constructed as distinct concepts. However, the findings from this study suggest that it does not make sense to research or consider ‘continuity’ in UK general practice without also simultaneously considering access. Whether this will be true under new organisational arrangements is one obvious research question that emerges from this conclusion.

Fourth, there was little in these data that could be mapped to the concept of *flexible continuity*. Arguably, ‘flexibility’ was implicit in some of the benefits ascribed to personal continuity by patients, relating to patients being more active in the consultation, and in GPs paying more attention to the patient as an individual. Similarly, a lack of ‘flexibility’ was implicit in the idea of GPs taking patients they know well for granted and missing change. It therefore seems reasonable to consider flexibility as an important possible effect of some dimensions of continuity. However, based on these data, it did not convincingly appear to be a distinct dimension of ‘continuity’.

Finally, the definition brackets out uses of ‘continuity’ beyond those that alter patient experience. However, it seems clear that ‘continuity’ serves other purposes. This thesis has analysed one such use for constructing a general practice identity, but others may include the uses of ‘continuity’ in policy documents and strategy, and by

patients to construct themselves as moral actors. Such uses are important topics for research in their own right.

The likely reason for these differences between the formal definition and the analysis here is because universal definitions are largely context free. The NHS R&D definition is helpful in laying out dimensions that may be relevant in many different contexts. However, the data here indicates that understanding ‘continuity’ in UK general practice (or any other specific organisational context) requires an understanding of interactions between different dimensions of ‘continuity’, and interactions between ‘continuity’ and other valued aspects of health care. Additionally, it shows that individuals construct a variety of meanings for otherwise largely taken for granted health service structure and organisation.

Here, it is helpful to reconsider Starfield’s distinction between ‘continuity’ and ‘longitudinality’ (Starfield 1980). For her, ‘continuity’ is a set of mechanisms for linking together healthcare encounters (place, person, record, letter, guideline and so on). ‘Longitudinality’ is the particular relationship or ‘attitudinal contract’ between family practitioner and patient. This parallels the distinction made by Breslau et al between ‘system continuity’ and personal relationships (Breslau 1976). Although not explicit, both distinguish the organisation of care from the set of meanings that construct particular relationships. A not dissimilar distinction is present in the NHS R&D definition, where ‘experienced continuity’ is the meanings ascribed to organisational characteristics. However, this data suggests that personal continuity is just such a meaning, rather than a form of organisation.

Additionally, meanings are ascribed more widely than the doctor-patient relationship, to other ways of organising care such as the referral system and appointment systems. Meanings are partly dependent on organisation because they have to be plausible given a particular form of organisation. But organisation is also partly dependent on meanings because professionals and patients are active in maintaining particular forms of organisation, as for example where the patients organised ‘longitudinal continuity with the GP’ to achieve ‘personal continuity’.

‘Continuity’ is therefore both a feature of the organisation of care, and a set of meanings or claims about that organisation. It seems clear that policymakers, professionals and patients believe that ‘continuity’ matters, in the sense that health systems need mechanisms to link together disparate patient encounters. Organisation can create a variety of such mechanisms, but the way that these work in practice will partly depend on the meanings ascribed to them by patients, professionals and others active in the workplace. This interaction between organisation and meaning is potentially fertile ground for research. Some possible directions for future research are briefly discussed next. These are discussed in the context of the MRC framework for the design and evaluation of complex interventions to improve health, although its focus on randomised controlled trials (RCT) is probably too narrow (Campbell 2000). However, taking the ideas of evidence based medicine for granted for now, the irony of UK general practice identity depending on research largely done in US secondary care suggests that ‘effectiveness’ evidence is relevant to consider. Given the data here, the focus is on researching personal and longitudinal continuity in UK general practice. Some of the research discussed would of course be of value irrespective of the surrounding ‘effectiveness’ framework.

The framework consists of a cyclical process starting with ‘modelling’ the field of study to help define both the intervention and the outcomes to be measured. ‘Modelling’ is somewhat vaguely defined, but can include a range of quantitative and qualitative observational research. The data here can be seen as part of the necessary modelling before conducting an exploratory and then definitive intervention study whether that be an RCT or other design (EPOC Group 2003, Fulop 2001). Evaluating the implementation of ‘effective’ interventions in actual practice is the final stage, which may also form a re-modelling of the field of study to start another cycle (Campbell 2000).

Other possible areas of research that can be seen as part of initial ‘modelling’ of the field of study include conducting better conceptualised and designed survey research on how personal/longitudinal continuity is experienced, and its relationship with access and practice organisation. A patient survey aiming to address this is currently being conducted by another research group (Baker 2002). However, it only plans to

include data from thirty-five practices, which is likely to limit its ability to draw many conclusions about the effects of organisation. The second part of this project intends to examine patient preferences for 'access' and 'continuity' more directly using conjoint analysis, although the plausibility of the conclusions will depend on careful consideration of the validity of the underlying assumptions of conjoint analysis (Baker 2002). Properly examining the effects of practice organisation is likely to require larger surveys, at least in terms of the numbers of practices involved. An alternative approach would be case study examination in a small number of practices of the detail of the work actually done to maintain and create 'continuity' (Fulop 2001).

One area in which such detailed work might be helpful, is in the kind of consultation research that I was interested in pursuing five years ago (chapter four, p106). That is, research taking a more longitudinal approach to analysing consultation observational data, and making the 'patient' and the 'problem' explicit in the analysis alongside the doctor and their consulting 'style'. This offers the possibility of reconnecting research about 'personal continuity' and research about the 'consultation', although the methodological challenges are considerable.

A second area where more detailed research would be useful is in the work of receptionists and patients in the negotiation of access to general practice. This should ideally include an examination by a range of professionals of the negotiation of access within new forms of organisation like NHS Direct, NHS24, out of hours co-operatives and practices which have implemented Advanced Access or other changes.

Such additional work might inform the development of an intervention study, although the data already presented would support at least some kinds of study. Clearly, any dimension of 'continuity' can be constructed as an intervention, but the data here indicate that personal continuity was the dimension emphasised by GPs and patients as particularly important for the effectiveness and experience of general practice. However, given the dependence of personal continuity on the meanings ascribed by GPs and patients and the contingent nature of relationships, designing an

intervention to directly increase personal continuity would be very difficult. Teaching ‘consultation skills’ and ‘patient centred medicine’ is one possible example of such an intervention, but this constructs the intervention from an abstraction rather than from the relationship itself. Interventions aimed at facilitating longitudinal continuity seem more feasible, and more likely to be generalisable. Based on the data here, making it easier for patients to organise longitudinal continuity would make it easier for those who value personal continuity to achieve it<sup>10</sup>. The intervention is therefore aimed at the organisational context, rather than directly at the experience of care.

A commonly suggested intervention is to recreate personal lists, where patients can normally only see their registered GP (Baker 1997, Pereira 1979). However, these seem unlikely to be widely implemented whatever the evidence (Freeman 1997). An alternative would be to intervene to modify the size of the ‘clinical team’. The interview data was consistent with other research showing that the negotiation of the appointment is more complex in larger practices (Arber 1985). Similarly, the survey data showed that fewer patients achieved personal/longitudinal continuity in larger practices. Currently, the ‘clinical team’ and the ‘practice’ as an organisational unit are usually synonymous (although personal lists can be seen as the main exception to this). Larger practices have advantages in terms of organisational flexibility, economies of scale for buildings, equipment and staff, and possibly for provision of some chronic disease care. From this data and other research there appear to be disadvantages in terms of longitudinal and personal continuity (Baker 1996, Campbell 2001). There is no absolute reason to conflate the practice and the clinical team, any more than clinical teams in hospitals are synonymous with the hospital or even the speciality.

---

<sup>10</sup> The data is also compatible with the idea that interventions aiming to increase longitudinal continuity with nurses would have less effect on personal continuity, because relationships with nurses were less consistently valued (for the moment at least). At the least, more research using a different sampling strategy would be required to explore this further.

One possible intervention would therefore be to create smaller ‘clinical teams’ within larger practices. This was effectively the strategy adopted by Becker et al when clinics within the same paediatric service were organised as ‘usual’ care where patients saw any available staff from a large pool, and ‘continuity’ care where patients saw staff from a smaller assigned team (Becker 1974a). Decoupling the clinical team and the practice might allow the benefits of personal continuity for individual patients, while also allowing the benefits of larger practices in managerial terms. Clearly, this leaves many questions unanswered before constructing an actual intervention, including the planned size of such teams; the way in which larger shared lists might be divided; how receptionists would run the associated appointment system of other way of organising access; and whether ‘teams’ would have at least some shared resources such as a single diabetes or minor surgery clinic.

Alternative interventions might include reorganisations of appointment systems or access more generally, although given the relative lack of understanding of the current work of receptionists, although this would require further preliminary research to better understand the work and negotiation of access. However, Advanced Access and other new ways of organising access including daytime co-operatives for housecalls can also be seen as natural experiments, where observational research may be helpful in establishing effects on ‘continuity’ and other relevant outcomes. This highlights the question of which outcomes it would be appropriate to measure in a study of the effect of facilitating longitudinal continuity.

The GPs emphasised outcomes of personal continuity in terms of the diagnosis and management of disease, the patients largely in terms of facilitating the comfort and efficiency of, and their involvement in the consultation with the GP. Both of these are testable claims, and could form the basis for developing relevant outcomes to examine in any intervention study. These may be more easily testable than outcomes like mortality and morbidity, given the heterogeneity of general practice work, and the multitude of other variables affecting these more downstream outcomes.

Constructing outcomes from the GPs’ claims about diagnosis and management of disease and problems would almost certainly require monitoring of ‘marker’

conditions rather than an examination of all of general practice work. Such markers might include diagnosis of acute conditions like urinary tract infection where there is a simple ‘gold standard’ test (Nazareth 1993); length of time between first presentation and diagnosis of more serious disease like cancer; or rates of compliance/concordance with treatment (Ettlinger 1981).

The patients’ claim is largely un-operationalised in continuity research. In this context, the construct most commonly used to measure patient experience is general ‘satisfaction’, for which the association with longitudinal and personal continuity seems generally accepted. Indeed, the guidance for the call for proposals for the NHS R&D Continuity of Care Programme explicitly excluded studies measuring satisfaction as the sole or primary outcome (NHS R&D 2001). However, general measures of ‘satisfaction’ seem unlikely to adequately capture perceptions of legitimacy and involvement in the consultation (although measuring ‘legitimacy’ seems likely to construct its own challenges to the ‘good’ patient). Developing relevant measures of this aspect of patient experience would seem worthwhile, and would parallel attempts to measure ‘trust’ (Mechanic 1996, Thom 2003, Pearson 2000). Additionally, patient involvement in the consultation is measurable, although such measurement is likely to be challenging.

Clearly, there is a long way between the research presented here and an intervention study that is likely to produce valid and generalisable results, but these data would help inform the development of such a study. Given the distinction made earlier between ‘organisation’ and ‘meaning’, any intervention aiming to facilitate longitudinal continuity is likely to be capable of considerable local variation. It would therefore be helpful to conduct a separate, qualitative evaluation of the process of the study, alongside any planned outcome measurement. This would be essential in any exploratory and highly desirable in any definitive trial done.

Finally, since only those boundaries constructed by GPs were explicit, the analysis of professional identity presented here is clearly partial. Nurses also claim a commitment to understanding the patient as a person, and the work of primary care nursing and general practice is in the process of reorganisation (Williams 2000a).

Understanding boundaries and professional identity would therefore better be done by a study that seeks to involve all or most relevant professionals including other primary care clinicians, managers and those working in the new primary care organisations and hospital doctors. This approach would be relevant in examining the ways in which a single intervention is interpreted and implemented within the context of a research trial. Such an understanding would also be informative in understanding the implementation and effects of new forms of organisation like managed clinical networks for particular diseases, and new forms of technology like the electronic health record. This may be particularly relevant for understanding unintended effects of change, and how and why different stakeholders promote or resist particular changes.

## **Conclusion**

It seems reasonable to conclude that personal continuity between patient and GP matters to both GPs and patients. The benefits ascribed to it in this research differed between GPs and patients (albeit with much overlap), but there were reasonably clear claims made for its effectiveness that could be further examined in future research. Irrespective of the more rhetorical uses by GPs, many patients clearly valued personal continuity with the GP for their own good reasons. These data also indicated that the way that personal continuity ‘works’ depends on the wider context of general practice organisation, and assumptions about the nature of medical work and professional-patient relationships. Other forms of ‘continuity’ were relevant and mattered to many participants, but were more taken for granted particularly by patients.

This reinforces the importance of understanding ‘continuity’ in its wider context. The contexts explicitly considered here were the structure and organisation of UK general practice, and assumptions about the nature of medical work and professional-patient relationships. Patients’ experience of personal/longitudinal continuity was at least partly influenced by practice organisation, emphasising the potential impact of structural change. GPs used particular constructions of medical work and relationships to create a distinct professional identity for themselves. Although such

rhetorical use should make interpretations of the thematic data cautious, it is also important to recognise that the ‘crisis’ of general practice morale in the 1950s was partly a problem of identity and purpose. If current NHS structure with its division between general and hospital practice is worth broadly preserving, then security of professional identities may be important to maintain. This applies equally to the professional identities of nurses and other professionals which this analysis has not been able to directly consider.

‘Continuity’ is therefore not a simple concept because there is a complex interaction between ‘organisation’ and the meanings attributed to it by various stakeholders and participants in healthcare. Paralleling this interweaving of organisation and meaning, ‘continuity’ is also entangled with other sweeping concepts like ‘access’. However, it is a useful concept for understanding healthcare because of its relevance to patients, professionals and policymakers, and because it offers a powerful way for researchers to conceptualise some of these interactions, and examine the value of processes and outcomes of healthcare to different stakeholders.

## References

Abbott A (1988). *The system of professions* Chicago University Press, London.

al-Bashir MM & Armstrong D (1991). "Preferences of healthy and ill patients for style of general practitioner care: implications for workload and financial incentives under the new contract." *British Journal of General Practice*, 41, 6-8.

Allsop J (1995). "Shifting spheres of opportunity: the professional powers of general practitioners within the British National Health Service," in *Health professions and the state in Europe*, T. J. Johnson, G. V. Larkin, & M. Saks, eds, Routledge, London, pp. 75-85.

Alpert J J (1964). "Broken appointments." *Pediatrics*, 34, 127-132.

Alpert J J, Robertson LS, Kosa J, Heagarty MC, & Haggerty RJ (1976). "Delivery of health care for children: report of an experiment." *Pediatrics*, 57, 6, 917-930.

Annandale E (1998). *The sociology of health and illness: a critical introduction* Polity Press, Cambridge.

Anonymous (1955). "The General Practitioner and Hospital Medicine". College of General Practitioners Research Newsletter 10, 1-3.

Anonymous (1973). "Continuity of care." *Journal of the Royal College of General Practitioners*, 23, 749-750.

Arber S & Sawyer L (1985). "The role of the receptionist in general practice: a 'dragon behind the desk'?" *Social Science & Medicine*, 20(9), 911-921.

Armstrong D (1979). "The emancipation of biographical medicine." *Social Science & Medicine - Medical Psychology & Medical Sociology*, 13A(1), 1-8.

Armstrong D (1982). "The doctor-patient relationship 1930-1980," in *The problem of medical knowledge: examining the social construction of medicine*, 1st edn, P. Wright & A. Treacher, eds., Edinburgh University Press, Edinburgh, pp. 109-122.

Armstrong D (1983). *Political anatomy of the body: medical knowledge in Britain in the twentieth century* Cambridge University Press, Cambridge.

Armstrong D (1985). "Space and time in British general practice." *Social Science & Medicine*, 20(7), 659-666.

Atkinson P & Silverman D (1997) "Kundera's *Immortality*: the interview society and the invention of self." *Qualitative Inquiry* 3(3), 324-345.

- Baker R (1996). "Characteristics of practices, general practitioners and patients related to levels of patients' satisfaction with consultations." *British Journal of General Practice*, 46(411), 601-605.
- Baker R (1997). "Will the future GP remain a personal doctor?" *British Journal of General Practice*, 47(425), 831-833.
- Baker R (2002). *Continuity of care: patients' and carers' views and choices in their use of primary care services*, NHS R&D Service Delivery and Organisation Continuity of Care Programme, London.
- Baker R & Streatfield J (1995). "What type of general practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction." *British Journal of General Practice*, 45(401), 654-659.
- Balint M (1957). *The doctor, his patient and the illness*, 1st edn, Pitman, London.
- Balint M (1965). "Whole person medicine." *New Society*, 5(131), 16-17.
- Banahan BFJ & Banahan BFI (1981). "Continuity as an attitudinal contract." *Journal of Family Practice*, 12(4), 767-768.
- Barbour RS (1998) "Mixing qualitative methods: quality assurance or qualitative quagmire." *Qualitative Health Research* 8(3), 352-361.
- Barcikowski RS (1981) "Statistical power with group mean as the unit of analysis." *Journal of Educational Statistics* 1981, 6, 267-285.
- Baruch G (1981). "Moral tales: parent's stories of encounters with the health professions." *Sociology of Health and Illness*, 3(3), 275-295.
- Batten LJ (1956). "Essence of general practice." *Lancet*, 2, 365-365.
- Becker MH, Drachman RH, & Kirscht JP (1974a). "A field experiment to evaluate various outcomes of continuity of physician care." *American Journal of Public Health*, 64(11), 1062-1070.
- Becker MH, Drachman RH, & Kirscht JP (1974b). "A new approach to explaining sick-role behavior in low-income populations." *American Journal of Public Health*, 64(3), 205-216.
- BMA General Practitioners Committee (2002). *Your contract, your future: contract and explanatory notes from the GPC*, British Medical Association, London.
- Bowling A (1997). *Measuring health: a review of quality of life measurement scales*, 2nd edn, Open University Press, Buckingham.

Brannen J (1992). "Combining qualitative and quantitative approaches: an overview," in *Mixing methods: qualitative and quantitative research*, J. Brannen, ed., Abingdon, Aldershot, pp. 3-37.

Breslau N (1982). "Continuity reexamined: differential impact on satisfaction with medical care for disabled and normal children." *Medical Care*, 20(4), 347-360.

Breslau N & Haug MR (1976). "Service delivery structure and continuity of care: a case study of a pediatric practice in process of reorganization." *Journal of Health & Social Behavior*, 17(4), 339-352.

Breslau N & Mortimer EA Jr (1981). "Seeing the same doctor: determinants of satisfaction with specialty care for disabled children." *Medical Care*, 19(7), 741-758.

Britten N, Jones R, Murphy E, & Stacy R (1995). "Qualitative research methods in general practice." *Family Practice*, 12(1), 104-114.

Broadbent J (1998). "Practice nurses and the effects of the new general practitioner contract in the British NHS: the advent of a new professional project?" *Social Science and Medicine*, 47(4), 497-506.

Brooks F (1998). "Women in general practice: responding to the sexual division of labour?" *Social Science and Medicine* 47(2), 181-193.

Bryk AS & Raudenbush SW (1992). *Hierarchical Linear Models* Sage, London.

Bryman A (1988). *Quantity and quality in social research* Unwin Hyman, London.

Bryman A (1998). "Qualitative and quantitative research strategies in knowing the social world," in *Knowing the social world*, T. May & M. Williams, eds., Open University Press, Buckingham, pp. 138-156.

Bucks RS, Williams A, Whitfield MJ, & Routh DA (1990). "Towards a typology of general practitioners' attitudes to general practice." *Social Science & Medicine*, 30(5), 537-547.

Burch A (personal communication 2002). Multilevel Modelling Project and MLwin Support. <http://multilevel.ioe.ac.uk/support/index.html> . Institute of Education, London.

Burton P, Gurrin L, & Sly P (1998) "Extending the simple linear regression model to account for correlated responses: an introduction to generalised estimating equations and multilevel modelling." *Statistics in Medicine* 17, 1261-1291.

Byrne PS & Long BEL (1976). *Doctors talking to patients : a study of the verbal behaviour of general practitioners consulting in their surgeries* HMSO, London.

- Calnan M (1988a). "Images of general practice: the perceptions of the doctor." *Social Science & Medicine*, 27, 579-586.
- Calnan M (1988b). "Towards a conceptual framework of lay evaluation of health care." *Social Science and Medicine*, 27(9), 327-933.
- Calnan M (1988c). "Lay evaluation of medicine and medical practice: report of a pilot study." *International Journal of Health Services Research*, 18(2), 311-322.
- Calnan M & Gabe J (1991). "Recent developments in general practice: a sociological analysis," in *The sociology of the health service*, 1st edn, J. Gabe, M. Calnan, & M. Bury, eds., Routledge, London, pp. 140-161.
- Calnan M & Williams SJ (1995). "Challenges to professional autonomy in the United Kingdom? The perceptions of general practitioners." *International Journal of Health Services Research*, 25(2), 219-241.
- Campbell SM, Hann M, Hacker J, Burns C, Oliver D, Thapar A, Mead N, Safran G, Roland M (2001). "Identifying predictors of high quality care in English general practice: observational study." *BMJ* 323, 784-787
- Campbell M, Fitzpatrick R, Haines A, Kinmonth AL, Sandercock P, Spiegelhalter D, & Tyrer P (2000). "Framework for design and evaluation of complex interventions to improve health." *BMJ*, 321, 694-696.
- Carr-Hill RA, Rice N, & Roland M (1996). "Socioeconomic determinants of rates of consultation in general practice based on fourth national morbidity survey of general practices." *British Medical Journal* 312, 1008-1012.
- Carroll L, Sullivan FM, & Colledge M (1998). "Good health care: patient and professional perspectives." *British Journal of General Practice*, 48(433), 1507-1508.
- Cartwright A (1967). *Patients and their doctors* Routledge & Kegan Paul, London.
- Cartwright A & Anderson R (1979). *Patients and their doctors 1977*, Royal College of General Practitioners, London, Occasional Paper 8.
- Charney E, Bynum R, Eldredge D, Frank D, MacWhinney JB, McNabb N, Scheiner A, Sumpter EA, & Iker H (1967). "How well do patients take oral penicillin? A collaborative study in private practice." *Pediatrics*, 40(2), 188-195.
- Chisholm J (1998). "Primary care and the NHS white papers." *British Medical Journal* 316, 1688-1689.
- Christakis DA, Wright JA, Koepsell TD, Emerson S, & Connell FA (1999). "Is greater continuity of care associated with less emergency department utilization?" *Pediatrics*, 103(4), 738-742.

- Coburn D (1992). "Freidson then and now: an "internalist" critique of Freidson's past and present views of the medical profession." *International Journal of Health Services Research*, 22(3), 497-512.
- Coburn D & Willis E (2000). "The medical profession: knowledge, power and autonomy," in *Handbook of social studies in health and medicine*, G. L. Albrecht, R. Fitzpatrick, & S. C. Scrimshaw, eds., Sage, London, pp. 377-393.
- Cockburn J, Killer D, Campbell E, & Sanson-Fisher RW (1987). "Measuring general practitioners' attitudes towards medical care." *Family Practice* 4(3), 192-199.
- Coffey A & Atkinson P (1996). *Making sense of qualitative data: complementary research strategies* Sage, London.
- Collings JS (1950). "General practice in England today: a reconnaissance." *Lancet*, (i), 555-585.
- Coyle J (1999). "Exploring the meaning of 'dissatisfaction' with health care: the importance of 'personal identity threat'." *Sociology of Health and Illness*, 21(1), 95-124.
- de Leeuw J & Kreft I (1995). "Questioning multilevel models." *Journal of Educational and Behavioural Statistics* 11, 171-190.
- Denzin N & Lincoln YS (2000). "The discipline and practice of qualitative research," in *Handbook of qualitative research*, 2nd edn, N. Denzin & Y. S. Lincoln, eds., Sage, Thousand Oaks, California, pp. 1-28.
- Department of Health (1997). *The new NHS: modern and dependable*, HMSO, London.
- Department of Health (2001). *The NHS plan: a plan for investment, a plan for reform*, HMSO, London.
- Diez-Roux AV (2000). "Multilevel analysis in public health research." *Annual Review of Public Health* 21, 193-221.
- Digby A (1999). *The Evolution of British General Practice 1850-1948* Oxford University Press, Oxford.
- Dowrick C, May C, Richardson M, & Bundred P (1996). "The biopsychosocial model of general practice: rhetoric or reality?" *British Journal of General Practice* 46, 105-107.
- Edmunds J & Calnan M (2001). "The reprofessionalisation of community pharmacy? An exploration of attitudes to extended roles for community pharmacists amongst pharmacists and General Practitioners in the United Kingdom." *Social Science and Medicine*, 53, 943-955.

- Ejlertsson G & Berg S (1984). "Continuity-of-care measures. An analytic and empirical comparison." *Medical Care*, 22(3), 231-239.
- Ejlertsson G & Berg S (1985). "Continuity of care in health care teams. A comparison of continuity measures and organisational solutions." *Scandinavian Journal of Primary Health Care*, 3(2), 79-85.
- Elston MA (1991). "The politics of professional power: medicine in a changing health service," in *The sociology of the National Health Service*, J. Gabe, M. Calnan, & M. Bury, eds., Routledge, London, pp. 58-88.
- EPOC Group (2003). Cochrane Collaboration Effective Practice and Organisation of Care Group. <http://www.epoc.uottawa.ca/> Accessed 21-4-2003. University of Ottawa.
- Eriksson EA & Mattsson LG (1983). "Quantitative measurement of continuity of care. Measures in use and an alternative approach." *Medical Care*, 21(9), 858-875.
- Ettlinger PR & Freeman GK (1981). "General practice compliance study: is it worth being a personal doctor?" *British Medical Journal Clinical Research Ed*, 282, 1192-1194.
- Ettner SL (1999). "The relationship between continuity of care and the health behaviors of patients: does having a usual physician make a difference?" *Medical Care*, 37(6), 547-555.
- Fleming DM (2001). "Continuity of care: a concept revisited." *European Journal of General Practice*, 6, 140-145.
- Fleming MF, Bentz EJ, Shahady EJ, Abrantes A, & Bolick C (1985). "Effect of case mix on provider continuity." *Journal of Family Practice* 23(2), 137-140.
- Flint C, Poulengeris P, & Grant A (1989). "The 'Know Your Midwife' scheme--a randomised trial of continuity of care by a team of midwives." *Midwifery*, 5(1), 11-16.
- Foucault M (1973). *The birth of the clinic* Tavistock Publications, London.
- Freeman G (1984). "Continuity of care in general practice: a review and critique." *Family Practice*, 1(4), 245-252.
- Freeman G & Hjortdahl P (1997). "What future for continuity of care in general practice?" *BMJ*, 314, 1870-1873.
- Freeman G, Shepherd S, Robinson I, Ehrich K, & Richards S (2001). *Continuity of care: report of a scoping exercise for the National Co-ordinating Centre for NHS*

*Service Delivery and Organisation R&D*, National Co-ordinating Centre for NHS Service Delivery and Organisation R&D, London.

Freeman GK (1987). "Measuring continuity of care." *Family Practice*, 4(4), 249-250.

Freeman GK (2001). "The concept of continuity of care in European General Practice." *European Journal of General Practice*, 6, 118-119.

Freeman GK, Horder JP, Howie JG, Hungin AP, Hill AP, Shah NC, & Wilson A (2002). "Evolving general practice consultation in Britain: issues of length and context." *British Medical Journal* 324, 880-882.

Freeman GK & Richards SC (1990). "How much personal care in four group practices?" *BMJ*, 301, 1028-1030.

Freeman GK & Richards SC (1993). "Is personal continuity of care compatible with free choice of doctor? Patients' views on seeing the same doctor." *British Journal of General Practice*, 43(377), 493-497.

Freeman GK & Richards SC (1994). "Personal continuity and the care of patients with epilepsy in general practice." *British Journal of General Practice*, 449(386), 395-399.

Freidson E (1970a). *Profession of medicine* Dodd Mead, New York.

Freidson E (1970b). *Professional dominance* Aldline, Chicago.

Freidson E (1993). "How dominant are the professions?" in *The changing medical profession: an international perspective*, Hafferty F.W. & McKinlay J.B., eds., Oxford University Press, Oxford, pp. 54-68.

Freidson E (1994). *Professionalism reborn: theory, prophecy and policy* Polity Press, Cambridge, UK.

Fry J (1957). "Five years in general practice: a study in simple epidemiology." *British Medical Journal*, (ii), 1453-1457.

Fry J (1973). *Common diseases: their nature, incidence and care* Kluwer Academic Publications, Lancaster.

Fugelli P (2001). "Trust - in general practice." *British Journal of General Practice* 51, 575-579.

Fulop N, Allen P, Clarke A, Black N (2001). *Studying the organisation and delivery of health services: research methods* Routledge, London.

Fulop N & Allen P (2000). *National listening exercise: report of the findings*, NHS R&D Service Delivery and Organisation Programme, London School of Hygiene and Tropical Medicine.

Gieryn T (1995). "Boundaries of science," in *Handbook of Science and Technology*, Jasanoff et al., eds., Sage, London.

Gill JM & Mainous AG III (1998). "The role of provider continuity in preventing hospitalizations." *Archives of Family Medicine*, 7(4), 352-357.

Gill JM, Mainous AG. III & Nsereko M (2000). "The effect of continuity of care on emergency department use." *Archives of Family Medicine*, 9(4), 333-338.

Glaser B & Strauss A (1967). *The discovery of grounded theory* Aldine, Chicago.

Goldstein H (1995). *Multilevel statistical models*, 2nd edn, Edward Arnold, London.

Goldstein H, Browne W, & Rasbash J (2002). Partitioning variation in multilevel models. *Understanding Statistics* (in press). Downloadable from <http://www.ioe.ac.uk/hgpersonal/Variance-partitioning.pdf>

Goldstein H & Rasbash J (1996). "Improved approximations for multilevel models with binary responses." *Journal of the Royal Statistical Association A* 159, 505-513.

Good BJ & Good MJD (1993). "'Learning Medicine": The constructing of medical knowledge at Harvard Medical School," in *Knowledge, Power and Practice: The anthropology of medicine and everyday life*, Lindembaum S. & Lock M., eds., University of California Press, Berkeley, pp. 81-107.

Good MJD & Good BJ (1999). "Clinical Narratives and the Study of Contemporary Doctor-Patient Relationships." in *Handbook of Social Studies in Health and Medicine*, Albrecht G., ed., Sage, London, pp. 243-258.

Gordis L & Markowitz M (1971). "Evaluation of the effectiveness of comprehensive and continuous pediatric care." *Pediatrics*, 48(5), 766-776.

Grant ID (1957). "The third James MacKenzie Lecture: Our heritage and our future." *College of General Practitioners Research Newsletter*, 4, 7-23.

Gray DJ (1979). "The key to personal care." *Journal of the Royal College of General Practitioners*, 29(208), 666-678.

Guba EG & Lincoln YS (1994). "Competing paradigms in qualitative research," in *Handbook of Qualitative Research*, N. Denzin & Y. S. Lincoln, eds., Sage, London.

Ham C (1998). "Financing the NHS." *British Medical Journal* 316, 212-216.

- Hammersley M (1992). *What's wrong with ethnography: methodological explorations* Routledge, London.
- Hansen MF (1975). "Continuity of care in family practice. Part 3: measurement and evaluation of continuity of care." *Journal of Family Practice*, 2(6), 439-444.
- Harrison S & Ahmad IU (2000). "Medical autonomy and the UK state 1975 to 2025." *Sociology*, 34(1), 129-146.
- Haslam D (1999). "Personal view: The beginning of the end." *BMJ*, 318, 1633.
- Haug MR (1973). "Deprofessionalisation. An alternative hypothesis for the future." *Sociological Review Monograph*, 20, 195-211.
- Haug MR (1988). "A re-examination of the hypothesis of physician deprofessionalisation." *Milbank Quarterly*, 66(Suppl 2), 48-56.
- Hedeker D & Gibbons RD (2002). MIXOR.  
<http://tigger.uic.edu/~hedeker/mixreg.html>
- Hemingway H, Saunders D, & Parsons L (1997). "Social class, spoken language and pattern of care as determinants of continuity of carer in maternity services in East London." *Journal of Public Health Medicine* 19(2), 156-161.
- Hennen BK (1975). "Continuity of care in family practice. Part 1: dimensions of continuity." *Journal of Family Practice*, 2(5), 371-372.
- Hjortdahl P (1992). "Continuity of care: general practitioners' knowledge about, and sense of responsibility toward their patients." *Family Practice*, 9(1), 3-8.
- Hjortdahl P & Borchgrevink CF (1991). "Continuity of care: influence of general practitioners' knowledge about their patients on use of resources in consultations." *BMJ*, 303, 1181-1184.
- Hjortdahl P & Laerum E (1992). "Continuity of care in general practice: effect on patient satisfaction." *BMJ*, 304, 1287-1290.
- Hodgkin K (1963). *Towards earlier diagnosis in primary care* Churchill Livingstone, Edinburgh.
- Honigsbaum F (1979). *The division in British medicine: a history of the separation of general practice from hospital care 1911-1968*, First edn, Kogan Page, London.
- Honigsbaum F (1989). *Health, happiness and security* Routledge, London.
- Honigsbaum F (1985). "Reconstructions of general practice: failure of reform." *BMJ*, 290, 823-826.

Hopton J, Milburn K, & Smith C (1995). *Patient's perspectives on primary care* Department of General Practice, University of Edinburgh, Final report to the Scottish Office Home and Health Department Health Services Research Committee.

Holder JP (1998). "Developments in other countries," in *General Practice under the National Health Service 1948-1997*, I. Loudon, J. P. Holder, & C. Webster, eds., Clarendon Press, London, pp. 247-277.

Howie JG, Heaney DJ, Maxwell M, Walker JJ, Freeman GK, & Rai H (1999). "Quality at general practice consultations: cross sectional survey." *BMJ*, 319, 738-743.

Howie JG, Porter AM, Heaney DJ, & Hopton JL (1991). "Long to short consultation ratio: a proxy measure of quality of care for general practice." *British Journal of General Practice* 41, 169-170.

Hox J (2002). *Multilevel analysis: techniques and applications* Lawrence Erlbaum Associates, London.

Information and Statistics Division of the NHS in Scotland (2002). Continuous Morbidity Recording. <http://www.show.scot.nhs.uk/isd/cmr/cmr.htm> .

Jacyna LS (1988). "The laboratory and the clinic: the impact of pathology on surgical diagnosis in the Glasgow Western Infirmary, 1875-1910." *Bulletin of the History of Medicine*, 62(3), 384-406.

JCPTGP (2002). Joint Committee on Postgraduate Training for General Practice website. <http://www.jcptgp.org.uk/index.asp> Accessed 30-9-2002.

Jewson ND (1976). "The disappearance of the sick-man from medical cosmology, 1770-1870." *Sociology*, 10, 224-244.

Jung HP, Wensing M, & Grol R (1997). "What makes a good general practitioner: do patients and doctors have different views?" *British Journal of General Practice*, 47(425), 805-809.

Katz S, Vignos PJJ, Moskowitz RW, Thompson HM, & Svec KH (1968). "Comprehensive outpatient care in rheumatoid arthritis. A controlled study." *JAMA*, 206(60), 1249-1254.

Kearley KE, Freeman GK, & Heath A (2001). "An exploration of the value of the personal doctor-patient relationship in general practice." *British Journal of General Practice* 51, 712-717.

Klein R (1989). *The politics of the NHS*, 2nd edn, Longman, London.

Kreft I & de Leeuw J (1998). *Introducing multilevel modeling*, 1st edn, Sage, London.

- Kuhn TS (1970). *The structure of scientific revolutions*, 2nd edn, University of Chicago Press, Chicago.
- Langford I & Lewis T (1998). "Outliers in multilevel data." *Journal of the Royal Statistical Association* 161(2), 121-160.
- Larkin GV (1995). "State control and health professions in the United Kingdom: historical perspectives," in *Health professions and the state in Europe*, 1st edn, T. J. Johnson, G. V. Larkin, & M. Saks, eds., Routledge, London, pp. 45-54.
- Larson MS (1977). *The rise of professionalism* University of California Press, Berkeley.
- Lattimer V, George S, Thompson F, Thomas E, Mullee M, Turnbull J, Smith H, Moore M, Bond H, & Glasper A (1998). "Safety and effectiveness of nurse telephone consultation in out of hours primary care: randomised controlled trial." *British Medical Journal*, 317, 1054-1059.
- Leeuwenhorst Working Party (1977). "The work of the general practitioner." *Journal of the Royal College of General Practitioners*, 27, 117-117.
- Lewis T & Langford I (2001). "Outliers, robustness and the detection of discrepant data," in *Multilevel modelling of health statistics*, 1st edn, A. Leyland & H. Goldstein, eds., John Wiley and Sons Ltd, Chichester, pp. 75-90.
- Leyland A & Goldstein H (2001). *Multilevel modelling of health statistics*, 1st edn, John Wiley & Sons Ltd, Chichester.
- Light DW (1993). "Countervailing power: the changing character of the medical profession in the United States," in *The changing medical profession: an international perspective*, Oxford University Press, Oxford, pp. 69-80.
- Lincoln YS & Guba EG (2000). "Paradigmatic controversies, contradictions, and emerging confluences," in *Handbook of qualitative research*, 2nd edn, N. Denzin & Y. S. Lincoln, eds., Sage, Thousand Oaks, California, pp. 163-188.
- Llewellyn S (1997). "Purchasing power and polarised professionalism in British medicine." *Accounting, Auditing and Accountability Journal* 10(1), 31-59.
- Lofland J & Lofland LH (1995). *Analysing social settings: a guide to qualitative observation and analysis*, 3rd edn, Wadsworth Publishing Company, Belmont.
- Loudon I (1984). "The concept of the family doctor." *Bulletin of the History of Medicine*, 58(3), 347-362.
- Loudon I (1986). *Medical Care and the General Practitioner 1750-1850* Oxford University Press, Oxford.

- Loudon I, Horder J, & Webster C (1998). *General practice under the National Health Service 1948-1997* Clarendon Press, London.
- Loudon IS (1978). "Historical importance of outpatients." *BMJ*, (i), 974-977.
- Lupton D (1996). "Your life in their hands: trust in medical encounter," in *Health and the sociology of emotions*, 1st edn, V. James & J. Gabe, eds., Blackwell Publishers Ltd, Oxford, pp. 157-172.
- MacDonald KM (1995). *The sociology of the professions* Sage Publications Ltd, London.
- Mainous AG III & Gill JM (1998). "The importance of continuity of care in the likelihood of future hospitalization: is site of care equivalent to a primary clinician?" *American Journal of Public Health*, 88(10), 1539-1541.
- Manian FB (1999). "Whither continuity of care?" *New England Journal of Medicine*, 340(17), 1362-1363.
- Marquis MS, Davis AR, & Ware JE (1983). "Patient care satisfaction and change in medical care provider: a longitudinal study." *Medical Care* 21(8), 821-829.
- Marsh GN (1991). "The future of general practice. Caring for larger lists." *BMJ*, 303, 1312-1316.
- Mason J (1994). "Linking qualitative and quantitative data analysis," in *Analysing qualitative data*, Bryman A. & Burgess R.G., eds., Routledge, London, pp. 89-110.
- Mattsson LG & Westman G (1987). "Evaluation of provider continuity in primary care: actual versus random and potential continuity." *Family Practice*, 4(4), 251-259.
- May C, Dowrick C, & Richardson M (1996). "The confidential patient: the social construction of the therapeutic relationship in general medical practice." *The Sociological Review*, 44, 187-203.
- Mays N & Pope C (1996). *Qualitative research in health care* BMJ Books, London.
- McCormack J & Greenhalgh T (2000). "Seeing what you want to see in randomised controlled trials: versions and perversions of UKPDS data." *British Medical Journal* 320, 1720-1723.
- McCormick A, Fleming D, & Charlton J (1995). *Morbidity Statistics from General Practice 4th National Study 1991-1992*, Office of Population Censuses and Surveys, London.
- McCormick J (1996). "Death of the personal doctor." *Lancet*, 348, 667-668.

- McCullagh P & Nelder J (1989). *Generalised linear models* Chapman and Hall, London.
- McKeganey N (1989). "On the analysis of medical work: general practitioners, opiate abusing patients and medical sociology." *Sociology of Health and Illness*, 11(1), 24-40.
- McKinlay JB (1988). "Introduction." *Milbank Quarterly*, 66(Suppl 2), 1-9.
- McKinlay JB & Arches J (1985)., "Towards the proletarianization of physicians." *International Journal of Health Services Research*, 15(2), 161-195.
- McWhinney I (1997). *A textbook of family medicine*, 2nd edn, Oxford University Press, Oxford.
- Meads G (1996). *A primary care led NHS: putting it into practice* Churchill Livingstone, London.
- Mechanic D (1996). "Changing medical organisation and the erosion of trust." *The Milbank Quarterly*, 74(2), 171-189.
- Mihill C (2000). *Shaping tomorrow: issues facing general practice in the new millenium*, British Medical Association General Practitioners Committee, London.
- Miller G (1997). "Introduction: context and method in qualitative research," in *Context and method in qualitative research*, G. Miller & R. Dingwall, eds., Sage, London, pp. 1-11.
- Morgan DL (1998). "Practical strategies for combining qualitative and quantitative methods: applications to health research." *Qualitative Health Research* 8(3), 362-376.
- Morrell D (1998). "Introduction and overview," in *General Practice under the National Health Service*, 1st edn, I. Loudon, J. P. Horder, & C. Webster, eds., Clarendon Press, London, pp. 1-19.
- Multilevel Models Project (1999). MLwin version 1.10.0006. London, Institute of Education.
- National Primary Care Collaboration Development Team (2003). Advanced Access. [http://www.npdt.org/scripts/default.asp?site\\_id=5&id=48](http://www.npdt.org/scripts/default.asp?site_id=5&id=48) .
- Navarro V (1988). "Professional dominance or proletarianization? Neither." *Milbank Quarterly*, 66(Suppl 2), 57-75.
- Nazareth I & King M (1993). "Decision making by general practitioners in diagnosis and management of lower urinary tract symptoms in women." *BMJ*, 306, 1103-1106.

- Neighbour R (1987). *The inner consultation: how to develop an effective and intuitive consulting style* MTP Press, Lancaster.
- NHS R&D SDO Programme. Continuity of Care Programme (2001). <http://www.sdo.lshtm.ac.uk/continuityofcare.htm> . NHS R&D Service Delivery and Organisation Programme.
- NHS R&D Service Delivery and Organisation Continuity of Care Programme (2001). Brief for medium and long projects. <http://www.sdo.lshtm.ac.uk/PDF/CofCMediumandLongTermBrief.pdf> Accessed 25-9-2002.
- Norell J (1987). "Uses and abuses of the consultation," in *"While I'm here doctor"*, A. Elder & O. Samuel, eds., Tavistock, London.
- Norris P (2001). "How 'we' are different from 'them': occupational boundary maintenance in the treatment of musculo-skeletal problems." *Sociology of Health and Illness* 23(1), 24-43.
- NOSA (2002). National Office for Summative Assessment website. <http://www.nosa.org.uk/> Accessed 30-9-2002.
- Oakley A (1998). "Gender, methodology and people's ways of knowing: some problems with feminism and the paradigm debate in social science." *Sociology* 32(4), 707-731.
- Olesen F, Dickinson J, & Hjortdahl P (2000). "General practice--time for a new definition." *BMJ*, 320, 354-357.
- Parry N & Parry J (1976). *The rise of the medical profession* London, Croom Helm.
- Parston G & McMahon L (1998). "A third way? England - yes; Scotland maybe." *British Medical Journal* 316, 213-214.
- Pearson SD & Raeke LH (2000). "Patients' trust in physicians: many theories, few measures and little data." *Journal of Internal and General Medicine*, 15, 509-513.
- Pendleton D, Schofield T, Tate P, & Havelock P (1984). *The consultation: an approach to teaching and learning* Oxford University Press, Oxford.
- Pereira Gray, DJ (1998). "Postgraduate training and continuing education," in *General Practice under the National Health Service 1948-1997*, I. S. Loudon, Horder J, & Webster C, eds., Clarendon Press, London, pp. 182-204.
- Pereira GD (1979). "The key to personal care." *Journal of the Royal College of General Practitioners*, 29, 666-678.
- Phillips C (1995). *Logic in medicine*, 2nd edn, BMJ Books, London.

- Pinsent RJFH. (1969). "Continuity of care in general practice." *Journal of the Royal College of General Practitioners*, 14, 249-261.
- Porter M. & Macintyre S (1984). "What is, must be best: a research note on conservative or deferential responses to antenatal care provision." *Social Science & Medicine*, 19(11), 1197-2000.
- QSR (1999). NVivo version 1.0. Qualitative Solutions and Research, Australia.
- Raddish M, Horn SD, & Sharkey PD (1999). "Continuity of care: is it cost effective?" *American Journal of Managed Care*, 5(6), 727-734.
- Rasbash J, Browne W, Goldstein H, Yang M, Plewis I, Healy M, Woodhouse G, Draper D, Langford I, & Lewis T (2001). *A user's guide to MLwin* Multilevel models project, Institute of Education, London.
- RCGP Scotland & BMA Scottish General Practitioners Committee (2000). *Valuing Scottish General Practice*, Royal College of General Practitioners (Scotland), Edinburgh.
- RCGP (1972). *The future general practitioner* Royal College of General Practitioners, London.
- RCGP, General Practitioners' Committee of the BMA, & NHS Alliance (2001). *Valuing General Practice*, RCGP, London.
- RCGP Working Party (1983). *Promoting prevention*, RCGP, London, 22.
- Reiser S (1978). *Medicine and the reign of technology* Cambridge University Press, Cambridge.
- Rhodes LA (1996). "Studying biomedicine as a cultural system," in *Medical Anthropology: Contemporary Theory and Method*, Sargent C.F & Johnson T.M., eds., Praeger Publishers, Westport, pp. 165-180.
- Rice N & Leyland A (1996). "Multilevel models: applications to health data." *Journal of Health Services and Research Policy* 1(3), 154-164.
- Rodriguez G & Goldman N (1995). "An assessment of estimation procedures for multilevel models with binary responses." *Journal of the Royal Statistical Association A* 158(1), 73-89.
- Rogers J & Curtis P (1980). "The concept and measurement of continuity in primary care." *American Journal of Public Health* , 70(2), 122-127.

- Roland M, Mayor V, & Morris R (1986). "Factors associated with achieving continuity of care in general practice." *Journal of the Royal College of General Practitioners*, 36(284), 102-104.
- Roos LL, Roos NP, Gilbert P, & Nicol JP (1980). "Continuity of care: does it contribute to quality of care?" *Medical Care*, 18(2), 174-184.
- Rose FM (1951). "General practice and special practice." *BMJ* (i), 173-175.
- Rowley MJ, Hensley MJ, Brinsmead MW, & Wlodarczyk JH (1995). "Continuity of care by a midwife team versus routine care during pregnancy and birth: a randomised trial." *Medical Journal of Australia*, 163(6), 289-293.
- Royal College of General Practitioners (2002). Membership (MRCGP) examination and membership by assessment of performance (MAP): Video Assessment of Consulting Skills in 2002.  
<http://www.rcgp.org.uk/rcgp/exam/videoworkbook/intro.asp>
- Royal College of General Practitioners (1992). *Forty Years On: the story of the first forty years of the Royal College of General Practitioners*, edited Gray DJP, 1st edn, RCGP, London.
- Rubin HJ & Rubin IS (1995). *Qualitative interviewing: the art of hearing data* Sage, London.
- Sackett DL, Haynes RB, Guyatt GH, & Tugwell P (1991). *Clinical epidemiology: a basic science for clinical medicine* Little, Brown and Company, London.
- Sackett DL, Straus SE, Richardson WS, Rosenberg W, & Haynes RB (2000). *Evidence based medicine: how to practice and teach EBM*, 2nd edn, Churchill Livingstone, London.
- Saks M (1983). "Removing the blinders." *Sociological Review*, 31, 1-21.
- Schers H, Webster S, van den Hoogen H, Avery A, Grol R, & van den Bosch W (2002). "Continuity of care in general practice: a survey of patients' views." *British Journal of General Practice*, 52, 459-462.
- Schuttermaier JR & Schmitt D (2001). "Smoke and mirrors: modernist illusions in the quantitative versus qualitative research debate." *Sociological Research Online* 6(2).
- Schwandt TA (2000). "Three epistemological stances for qualitative inquiry: interpretivism, hermeneutics and social constructionism," in *Handbook of qualitative research*, 2nd edn, N. Denzin & Y. S. Lincoln, eds., Sage, Thousand Oaks, California, pp. 189-213.

Scott R (1965). "The eleventh James MacKenzie Lecture: Medicine in Society." *Journal of the Royal College of General Practitioners*, 9, 3-16.

Scottish Executive (2001). *Our national health: a plan for action, a plan for change*, Scottish Executive, Edinburgh.

Scottish Office Department of Health (1998). *Designed to care: renewing the National Health Service in Scotland*, HMSO, Edinburgh.

Seale C (1999). *The quality of qualitative research* Sage, London.

Shear CL, Gipe BT, Mattheis JK, & Levy MR (1983). "Provider continuity and quality of medical care. A retrospective analysis of prenatal and perinatal outcome." *Medical Care*, 21(12), 1204-1210.

Shortell SM (1976). "Continuity of medical care: conceptualization and measurement." *Medical Care*, 14(5), 377-391.

Silverman D (1993). *Interpreting qualitative data* Sage, London.

Silverman D (2000). *Doing qualitative research: a practical handbook*, 1st edn, Sage, London.

Sloane P & Egelhoff C (1983). "The relationship of continuity of care to age, sex, and race." *Journal of Family Practice* 16(2), 402-405.

Smedby B, Smedby O, Eriksson EA, Mattsson LG, & Lindgren A. (1984). "Continuity of care. An application of visit-based measures." *Medical Care*, 22(7), 676-680.

Smedby O, Eklund G, Eriksson EA, & Smedby B (1986). "Measures of continuity of care. A register-based correlation study." *Medical Care*, 24(6), 511-518.

Smith CH & Armstrong D (1989). "Comparison of criteria derived by government and patients for evaluating general practitioner services." *BMJ*, 299, 494-496.

Snijders T & Bosker R (1999). *Multilevel analysis: an introduction to basic and advanced multilevel modeling* Sage, London.

SPSS Inc. (1999). *Statistical Package for the Social Sciences Version 9.0*. Chicago, SPSS Inc.

Starfield B (1980). "Continuous confusion?" *American Journal of Public Health*, 70(2), 117-119.

Starfield B (1994). "Is primary care essential?" *Lancet*, 344, 1129-1133.

Starfield BH, Simborg DW, Horn SD, & Yourtee SA (1976). "Continuity and coordination in primary care: their achievement and utility." *Medical Care*, 14(7), 625-636.

Steckler A, McLeroy KR, Goodman RM, Bird ST, & McCormick L (1992). "Toward integrating qualitative and quantitative methods: an introduction." *Health Education Quarterly* 19(1), 1-8.

Steinwachs DM (1979). "Measuring provider continuity in ambulatory care: an assessment of alternative approaches." *Medical Care*, 17(6), 551-565.

Stevens R (1966). *Medical Practice in Modern England* Yale University Press, New Haven.

Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR (1995). *Patient centred medicine: transforming the clinical method*. Sage, London.

Stimson G & Webb B (1975). *Going to see the doctor: the consultation process in general practice* Routledge & Keagn Paul, London.

Strauss A & Corbin J (1990). *Basics of qualitative research: grounded theory procedures and techniques* Sage, London.

Sturdy S (1992). "The political economy of scientific medicine: science, education and the transformation of medical practice in Sheffield, 1890-1922." *Medical History*, 36(2), 125-159.

Tate P (1994). *The doctor's communication handbook* Radcliffe Medical Press, Oxford.

Taylor MB (1997). "Compassion: its neglect and importance." *British Journal of General Practice*, 47(421), 521-523.

The Editor of the Lancet and Expert Collaborators (1927). *The conduct of medical practice* The Lancet, London.

Thom DH, Ribisl KM, Stewart AL, Luke DA, & The Stanford Trust Study Physicians (2003). "Further validation and reliability testing of the trust in physician scale." *Medical Care*, 37(5), 510-517.

Titmuss RM (1958). *Essays on the welfare state* George Allen and Unwin Ltd, London.

Tuckett D (1985). *Meetings between experts : an approach to sharing ideas in medical consultations* Tavistock, London.

van Weel C (1994). "Teamwork" *Lancet*, 344, 1276-1279.

Walby S, Greenwell J, Mackay L, & Soothill K (1994). *Medicine and nursing: professions in a changing health service* Sage Publications, London.

Wall EM (1981). "Continuity of care and family medicine: definition, determinants, and relationship to outcome." *Journal of Family Practice*, 13(5), 655-664.

Wasson JH, Sauvigne AE, Mogielnicki RP, Frey WG, Sox HC, Gaudette C, & Rockwell A (1984). "Continuity of outpatient medical care in elderly men. A randomized trial." *JAMA*, 252(17), 2413-2417.

Weatherall DJ (1994). "The inhumanity of medicine." *BMJ*, 309, 1671-1672.

Wensing M, Jung HP, Mainz J, Olesen F, & Grol R (1998). "A systematic review of the literature on patient priorities for general practice care. Part 1: Description of the research domain." *Social Science & Medicine*, 47(10), 1573-1588.

Williams A & Boulton M (1988). "Thinking Prevention: Concepts and Constructs in General Practice," in *Biomedicine Examined*, Lock M. & Gordon D.R., eds., Kluwer Academic Publishers, Dordrecht, pp. 227-255.

Williams A (2000a). *Nursing, Medicine and Primary Care* Open University Press, Buckingham.

Williams M (2000b). "Interpretivism and generalisation." *Sociology*, 34(2), 209-224.

Williams SJ & Calnan M (1996). *Modern Medicine: Lay Perspectives and Experiences* UCL Press, London.

Williams SJ & Calnan M (2002). "Perspectives on prevention: the views of general practitioners." *Sociology of Health and Illness*, 16(3), 372-393.

Witz A (1992). *Professions and patriarchy* Routledge, London.

Yang M (2001). "Multinomial regression," in *Multilevel modelling of health statistics*, A. Leyland & H. Goldstein, eds., John Wiley and Sons, Chichester, pp. 107-125.

Zander LI, Beresford SAA, & Thomas P (1978). *Medical records in general practice*, Royal College of General Practitioners, London, Occasional Paper 5.

# Appendices

## **Appendix A: Adult patient questionnaire for the PEI study**

## CONSULTATIONS IN GENERAL PRACTICE

University of Edinburgh  
Imperial College, London  
Coventry Health Authority  
Oxfordshire Health Authority

### Patient Health Questionnaire

This questionnaire contains questions about your health, your reasons for visiting the doctor today and your feelings about your consultation. It is part of a study being carried out by the organisations listed above. The questionnaire is anonymous and there is no need to put your name on it.

- 1) Please complete pages 2, 3, 4, 5 and 6 of the questionnaire while you are waiting to see the doctor.
- 2) Once you have done this, please use the gummed strip on the edge of page 7 to seal the form.
- 3) When you go in to see the doctor, please hand the form to him / her.

**PLEASE LEAVE BLANK  
FOR DOCTOR'S USE ONLY**

GP ID	_____
Date	_____
Consultation time in:	_____
Consultation time out:	_____
open surgery	<input type="checkbox"/>
extras/fit ins	<input type="checkbox"/>
student present	<input type="checkbox"/>
temporary resident	<input type="checkbox"/>

- 4) After your consultation, the doctor will return the form to you - please then turn to page 8 and answer the remaining questions.

**This questionnaire is completely confidential.  
Your doctor will not see your answers.**

**Could you please tell us:**

Your age: \_\_\_\_\_

Your sex:      male        
                         female     

What language(s) do you normally speak at home?

\_\_\_\_\_

What language(s) do you expect to use  
in your consultation with the doctor today?

\_\_\_\_\_

**Please tick as many boxes as apply to you in the lists below:**

**1) Which of the following problems do you have?**

A new or urgent physical health problem

A long-standing physical health problem

An emotional and/or psychological problem

A social problem (that is, a problem relating to employment, housing, family / partner, money)

An 'administrative' problem (like needing a 'sick note' or other certificate, or getting help to fill in a form)

None of the above

**2) Which of the following would you like to discuss with the doctor today?**

Your new or urgent physical health problem

Your long-standing physical health problem

Your emotional and/or psychological problem

Your social problem

Your administrative problem

Action or advice to keep you healthy (e.g. immunization, ante natal care, screening)

**3) Do you want a prescription today for:**

A repeat supply of medicine you are already taking?

Something new - that is, medicine you are not currently taking ?

**4) Are you here today because the doctor asked you to attend?**

**5) We should like to know if you have had any other complaints, and how your health has been in general over the past few weeks. Please answer all the questions simply by circling the answer which you think most closely applies to you. Remember we want to know about present and recent complaints, not those you had in the past.**

**IT IS IMPORTANT THAT YOU TRY TO ANSWER ALL THE QUESTIONS.**

Have you recently:

<b>Been able to concentrate on whatever you're doing?</b>	Better than usual	Same as usual	Less than usual	Much less than usual
<b>Lost much sleep over worry?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Felt that you are playing a useful part in things?</b>	More so than usual	Same as usual	Less useful than usual	Much less useful
<b>Felt capable of making decisions about things?</b>	More so than usual	Same as usual	Less so than usual	Much less than usual
<b>Felt constantly under strain?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Felt you couldn't overcome your difficulties?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Been able to enjoy your normal day-to-day activities?</b>	More so than usual	Same as usual	Less so than usual	Much less than usual
<b>Been able to face up to your problems?</b>	More so than usual	Same as usual	Less so than usual	Much less able
<b>Been feeling unhappy and depressed?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Been losing confidence in yourself?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Been thinking of yourself as a worthless person?</b>	Not at all	No more than usual	Rather more than usual	Much more than usual
<b>Been feeling reasonably happy, all things considered?</b>	More so than usual	About same as usual	Less so than usual	Much less than usual

*(c) David Goldberg and the Institute of Psychiatry 1988 adapted with permission of the Publisher NFER-NELSON Publishing Company Limited, Darville House, 2 Oxford Road East, Windsor, Berkshire SL4 1DF*

6) Please read the list below carefully. Thinking about the last two or three weeks could you tell us whether you have had any problems or difficulties with any of the following:

	YES	NO
Problems with your husband/wife/partner or family?	<input type="checkbox"/>	<input type="checkbox"/>
Problems with money?	<input type="checkbox"/>	<input type="checkbox"/>
Problems with poor housing conditions?	<input type="checkbox"/>	<input type="checkbox"/>
Problems with work or unemployment?	<input type="checkbox"/>	<input type="checkbox"/>
Would you like to talk to the doctor about any of these problems today?	<input type="checkbox"/>	<input type="checkbox"/>

Please answer the following questions about your choice of doctor:

7) Is the doctor you are seeing today your usual or regular doctor?

Yes	No	I do not have a regular doctor	I do not know which doctor I shall be seeing today
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please answer the next question by circling the appropriate answer on the scale below, where '1' means that you do not know the doctor at all and '5' means that you know the doctor very well.

If you do not know which doctor you will be seeing, please leave questions 8 and 9 blank.

8) How well do you know the doctor you are seeing today?

(don't know doctor at all) 1    2    3    4    5 (know doctor very well)

9) If it had been possible, would you rather have seen a different doctor today?

YES                  NO

**PLEASE NOW GO TO PAGE 6.**

**Please tick here if you received help to fill in this form:**

**PLEASE NOW:-**

- **seal the form by sticking the gummed strip (at the right hand edge of this page) onto page 2**
- **give the form to your doctor when you see him / her, so that your doctor can complete page 1**

**YOUR DOCTOR WILL NOT SEE YOUR ANSWERS AFTER YOU SEAL THE FORM**

**Now that you have seen the doctor, please:**

- 1. slit open the seal at the right hand side of this page**
- 2. answer the questions on page 9**

Please answer the questions below by ticking the appropriate boxes.

**PLEASE ANSWER ALL THE QUESTIONS:**

**1) As a result of your visit to the doctor today, do you feel you are...**

	MUCH BETTER	BETTER	SAME OR LESS	NOT APPLICABLE
able to cope with life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
able to understand your illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
able to cope with your illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
able to keep yourself healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	MUCH MORE	MORE	SAME OR LESS	NOT APPLICABLE
confident about your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
able to help yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

<b>2) Did you receive a prescription from the doctor today?</b>	<b>YES</b>	<b>NO</b>
	<input type="checkbox"/>	<input type="checkbox"/>
<b>If you did receive a prescription, was it for:</b>	<b>YES</b>	<b>NO</b>
<b>3) A repeat supply of medicine you are already taking?</b>	<input type="checkbox"/>	<input type="checkbox"/>
and/or	<b>YES</b>	<b>NO</b>
<b>4) Something new - that is, medicine you are not currently taking?</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5) Was the doctor interrupted during the consultation?</b>	<b>YES</b>	<b>NO</b>
	<input type="checkbox"/>	<input type="checkbox"/>

**THANK YOU VERY MUCH FOR YOUR HELP.  
PLEASE RETURN THE COMPLETED FORM TO THE RECEPTION DESK.  
NO ONE IN THE PRACTICE WILL SEE YOUR ANSWERS.**

## **Appendix B: GP questionnaire for the PEI study**

Dr. number: \_\_\_\_\_

**SECTION 1**

CONSULTATIONS IN GENERAL PRACTICE - DOCTOR QUESTIONNAIRE

- 1) What is your age? ..... \_\_\_\_\_
- 2) What is your gender? ..... \_\_\_\_\_
- 3) How long have you been qualified in medicine? ..... \_\_\_\_\_
- 4) How many years have you been in general practice (including training year)? ..... \_\_\_\_\_
- 5) Are you vocationally trained for general practice? ... \_\_\_\_\_
- 6) Were you a registrar during the study period? ..... \_\_\_\_\_
- 7) Were you an assistant / locum during the study period? \_\_\_\_\_
- 8) How long have you been a principal? ..... \_\_\_\_\_
- 9) How long have you been a principal in this practice? \_\_\_\_\_
- 10) Are you a member / fellow of the RCGP? ..... \_\_\_\_\_
- 11) Other than English, what language(s) can you speak at home?  
\_\_\_\_\_  
\_\_\_\_\_
- 12) Other than English, what language(s) can you use at consultations?  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*

**Thank you for your help. Please return the completed form directly to us in the enclosed envelope.**

CONSULTATIONS IN GENERAL PRACTICE - DOCTOR QUESTIONNAIRE

13) Do you use a computer during consultations? ..... \_\_\_\_\_

14) If yes do you use it...

a) to write 'new' prescriptions? usually / often / occasionally / never

b) to write 'repeat' prescriptions? usually / often / occasionally / never

c) to keep clinical records? usually / often / occasionally / never

d) for other reasons (please specify)?  
\_\_\_\_\_ usually / often / occasionally / never

\_\_\_\_\_ usually / often / occasionally / never

\_\_\_\_\_ usually / often / occasionally / never

15) If you use a computer to keep clinical records, do you also keep a paper record?. ..... \_\_\_\_\_

16) If you do keep a paper record, do you make the paper record...

a) during the consultation? \_\_\_\_\_

b) after the consultation? \_\_\_\_\_

c) both during and after the consultation? \_\_\_\_\_

\*\*\*

## **Appendix C: Cockburn questionnaire for the PEI study**

GP name: \_\_\_\_\_

## MEASURING QUALITY AT CONSULTATIONS

### GP ATTITUDE QUESTIONNAIRE

We would like to know your attitudes towards various aspects of medical care. Please indicate how you feel about each of the statements below by circling the appropriate number on the scale from 1 to 7, where 1=strong agreement and 7=strong disagreement.

**Please answer all the questions.**

1. I feel that it is a waste of time trying to persuade patients to give up smoking.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

2. I believe that I should always inform patients about their prescribed treatment, making sure they understand my explanations.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

3. An important part of my role as a GP is simply to listen to patients' worries.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

4. Counselling patients with personal problems can help them to cope better in the future.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

5. Considering the amount of stress and responsibility involved, doctors' incomes are barely adequate.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

6. My medical expertise is often wasted because I see so many people who are not sick.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

7. Identification of modifiable risk factors such as smoking is a very important aspect of my work.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

8. Often patients make a convenience of me by bringing problems which they should solve themselves or take elsewhere.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

9. I believe that effective medical treatment depends on a partnership in which the patient plays an active part.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

10. Providing emotional support for patients is important for my personal satisfaction.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

11. It is important for me to be frank and open with patients.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

12. I believe that GPs are very influential in persuading patients to change their lifestyles.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

13. I think that it is my job to treat physical disease and leave tasks such as counselling to their professions.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

14. Patients are more likely to follow my advice concerning their physical complaints than advice concerning their social or emotional problems.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

15. I think that all doctors should be paid a fixed salary.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

16. The majority of patients do not wish to be involved in decision making about their treatment.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

17. I believe that the only efficient health care system is one based on free enterprise.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

18. The more information I give patients about their diagnosis and treatment, the more likely they are to comply with instructions.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

19. I usually don't attempt to help patients with psychological problems because they are the result of life situations over which I have little or no control.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

20. Only a fee-for-service system can guarantee patients their right to choose their own doctor.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

21. Most patients would prefer the doctor to take responsibility for their medical problems.

STRONGLY AGREE    1    2    3    4    5    6    7    STRONGLY DISAGREE

## Scoring the Cockburn questionnaire

Subscale scores are constructed by adding scores for each question. Questions marked \* are scored in reverse (Cockburn 1987).

### Subscale Questions

Have psychological orientation	13, 14, 19
Prevention is an important part of GPs' work	1, 7*, 12*
Patient should be active and equal participants in consultation	9*, 10*, 11*, 18*
GPs should be open, listening and provide adequate information to patients	2*, 3*, 4*
Patients should be involved in decision making about treatment	16, 21
Patients frequently consult with inappropriate or trivial problems	6, 8
Role of government	5, 15*, 17*, 20

## **Appendix D: Practice questionnaire for the PEI study**

**CONSULTATIONS IN GENERAL PRACTICE**

**University of Edinburgh  
Imperial College, London  
Coventry Health Authority  
Oxfordshire Health Authority  
Lothian Health**

**A study of quality of care in general practice**

**PRACTICE QUESTIONNAIRE**

We would be grateful if you could complete this questionnaire as fully as possible. If there are any questions that you cannot easily find the answer to, please leave them blank and go on to the next question.

Thank you for all your help with this study.

Name of Practice : .....

*If you have any problems completing this questionnaire or have any questions you would like to ask please contact Harbinder Rai on 0181-746-8153 or Jeremy Walker on 0131-650-2682*

*This questionnaire has been modified from a questionnaire developed at NPCRDC , University of Manchester*



## SECTION 2 : ORGANISATION

*This section asks about various organisational aspects of the practice*

2. Which of the following best describes your practice?

- (i) Standard fund-holding
- (ii) Community fund-holding
- (iii) Non- fund-holding
- (iv) Total purchaser
- (v) P-CAPS practice
- (vi) PCPI practice
- (vii) other

If other please write in .....

3. Is the practice currently accredited as a training practice for GP registrars? Yes <sub>1</sub> No <sub>2</sub>

4. Is the practice accredited by a University as an undergraduate teaching practice? Yes <sub>1</sub> No <sub>2</sub>

If 'No' does the practice host students on an ad hoc basis? Yes <sub>1</sub> No <sub>2</sub>

5. Does the Practice take Nursing or other students on formal training attachments? Yes <sub>1</sub> No <sub>2</sub>

6. Does the practice have a branch surgery? Yes <sub>1</sub> No <sub>2</sub>

7. What are your daily opening hours (main **and** branch surgeries)? .....

8. Does the surgery close during the middle of the day? Yes <sub>1</sub> No <sub>2</sub>

If 'Yes' how many hours per day, does it close for? .....

9. Are the practices general surgeries carried out by:  
 (a) a full appointment system? Yes <sub>1</sub> No <sub>2</sub>

(b) no appointment system (open surgery) ? Yes <sub>1</sub> No <sub>2</sub>

(c) a partial appointment system (mixed appointments and open surgery)? Yes <sub>1</sub> No <sub>2</sub>

10. What is the booking interval for routine appointments (e.g. 10 minutes)? .....

11. Does each partner have his/her own consulting room? (exclude branch surgery).....

12. How many people can be seated in the main surgery's waiting room? .....  
 (exclude branch surgery)

13. Does the practice have a computerised age / sex register? Yes <sub>1</sub> No <sub>2</sub>

14. Does the practice have a computerised repeat prescribing system? Yes <sub>1</sub> No <sub>2</sub>

14a Does the practice have any written policies on prescribing? Yes <sub>1</sub> No <sub>2</sub>

14b. Does the practice hold a regular review of clinical topics? Yes <sub>1</sub> No <sub>2</sub>

14c. Does the practice have written information for patients about prescribing and repeat prescribing? Yes <sub>1</sub> No <sub>2</sub>

14d. Has the practice carried-out an audit of repeat prescribing in the last 3 years? Yes <sub>1</sub> No <sub>2</sub>

15. Has the practice used PACT or SPA data to review prescribing in the last 3 years? Yes <sub>1</sub> No <sub>2</sub>

16. Do the doctors in the practice carry out clinical audit? Yes <sub>1</sub> No <sub>2</sub>

a). If yes, when was the last clinical audit? .....

b). and what was its subject? .....

17. Does the practice have any written guidelines for locums? Yes <sub>1</sub> No <sub>2</sub>

18. How does the practice organise its out of hours care?

Co-operative <sub>1</sub>

Deputising service <sub>2</sub>

In-house <sub>3</sub>

Other <sub>4</sub>

If other, please explain .....

### SECTION 3: PRACTICE POPULATION

*This section asks about certain aspects of the practice patient population.*

19. What is the list size of the practice? .....

19a. What proportion of the practice population is aged under 5? .....

19b. What proportion of the practice population is aged 65 - 74? .....

19c. What proportion of the practice population is aged over 75? .....

19d. How many patients left the practice from 1<sup>st</sup> April 1997 - 31<sup>st</sup> March 1998? .....

19e. How many patients joined the practice during March 1998? .....

20. What proportion of patients are in deprivation bands 1-3 ?

1 ..... ( %)      2 ..... ( %)      3 ..... ( %)      4. No band ..... ( %)

21. How many night visit claims does the practice make per year .....

22. Patients registered at this practice: (*please tick one box only*)

(a) can only see the doctor they are registered with, except in an emergency

(B) are encouraged to see the same doctor each time but can choose to see another doctor

(C) can choose to see any doctor in the practice

23. What number of patient contacts does the practice have per year per 1000 patients?

(a) GP consultations .....

(b) Nurse consultations (practice nurse, nurse practitioner) .....

- (c) Night visit claims for patients of the practice .....
- (d) Home visits .....
- (e) Total contacts in practice .....

**SECTION 4: SERVICES.**

*This section asks about whether the practice provides various types of services to its patients.*

24. Are any of the following clinics / services provided **on site** (as opposed to dealing with these issues in routine surgeries)

(please tick as many as is appropriate)

- |                             |                          |                                      |                          |
|-----------------------------|--------------------------|--------------------------------------|--------------------------|
| a). Epilepsy clinic         | <input type="checkbox"/> | b). Minor surgery                    | <input type="checkbox"/> |
| c). Health promotion clinic | <input type="checkbox"/> | d). Family planning clinic           | <input type="checkbox"/> |
| e). Counselling service     | <input type="checkbox"/> | f). Physiotherapy service            | <input type="checkbox"/> |
| g). Chiropody service       | <input type="checkbox"/> | h). Dietetic service                 | <input type="checkbox"/> |
| i). Stop smoking clinic     | <input type="checkbox"/> | j). Child health Surveillance clinic | <input type="checkbox"/> |
| k). Dermatology clinic      | <input type="checkbox"/> | l). Maternity services               | <input type="checkbox"/> |
| m). Diabetes clinic         | <input type="checkbox"/> | n). Angina clinic                    | <input type="checkbox"/> |
| o). Asthma clinic           | <input type="checkbox"/> | p). Hypertension clinic              | <input type="checkbox"/> |
| q). Cardiovascular clinic   | <input type="checkbox"/> |                                      |                          |

**SECTION 5: SPECIAL SERVICES**

*This section asks about specialist services which some practices might provide. It may be that many of the questions do not apply for your practice. However, please*

**Diabetes**

- 25. Does the practice have a written management protocol for diabetes? Yes <sub>1</sub> No <sub>2</sub>
- 26. Does the practice have a register of patients with diabetes Yes <sub>1</sub> No <sub>2</sub>
- 27. Does the practice have a recall system for diabetes? Yes <sub>1</sub> No <sub>2</sub>
- 28. Has the practice carried-out an audit of clinical care for diabetes in the last 5 years ? Yes <sub>1</sub> No <sub>2</sub>  
If yes, in what year was this completed? .....
- 29. Does the practice provide written information for diabetic patients (i.e. leaflets, diet sheets etc.)? Yes <sub>1</sub> No <sub>2</sub>

**Ischaemic Heart disease**

- 30. Does the practice have a written management protocol for angina or heart disease? Yes <sub>1</sub> No <sub>2</sub>

31. Does the practice have a register of patients with angina or heart disease? Yes <sub>1</sub> No <sub>2</sub>
32. Does the practice have a recall system for angina or heart disease? Yes <sub>1</sub> No <sub>2</sub>
33. Has the practice carried-out an audit of clinical care for angina or heart disease in the last 5 years ? Yes <sub>1</sub> No <sub>2</sub>

If yes, in what year was this completed? .....

**Asthma**

34. Does the practice have a written management protocol for asthma? Yes <sub>1</sub> No <sub>2</sub>
35. Does the practice have a register of patients with asthma? Yes <sub>1</sub> No <sub>2</sub>
36. Does the practice have a recall system for asthma? Yes <sub>1</sub> No <sub>2</sub>
37. Has the practice carried-out an audit of clinical care for asthma in the last 5 years ? Yes <sub>1</sub> No <sub>2</sub>

If yes, in what year was this completed? .....

**Hypertension**

38. Does the practice have a written management protocol for hypertension? Yes <sub>1</sub> No <sub>2</sub>
39. Does the practice have a register of patients with hypertension? Yes <sub>1</sub> No <sub>2</sub>
40. Does the practice undertake annual calibration of sphygmomanometers? Yes <sub>1</sub> No <sub>2</sub>
41. Has the practice carried-out an audit of clinical care for hypertension in the last 5 years ? Yes <sub>1</sub> No <sub>2</sub>

If yes, in what year was this conducted? .....

**SECTION 6: PATIENTS**

*This section asks some questions about patients' access to services*

42. Can patients normally get a repeat prescription within 24 hours? Yes <sub>1</sub> No <sub>2</sub>
43. Can patients normally get an appointment on the same day if they request it? Yes <sub>1</sub> No <sub>2</sub>
44. Can patients get medical advice over the telephone if they believe that a consultation is unnecessary ? Yes <sub>1</sub> No <sub>2</sub>

*Disabled Access - OUTSIDE*

45. Are there allocated parking spaces for your patients with a disability? Yes <sub>1</sub> No <sub>2</sub>
46. Is there a ramp to the main doors or no steps? Yes <sub>1</sub> No <sub>2</sub>

If 'YES' go onto question 48

If 'NO' go onto question 47

47. If the practice has steps but no ramp for wheelchair access, are staff trained to help wheelchair

- bound patients gain access? Yes <sub>1</sub> No <sub>2</sub>
48. Are the main doors wide enough to accommodate wheelchairs? Yes <sub>1</sub> No <sub>2</sub>
49. Are there handrails near the steps? Yes <sub>1</sub> No <sub>2</sub> NA <sub>3</sub> (*no steps*)

*Disabled Access - INDOORS*

50. Are all relevant doors wide enough to accommodate wheelchairs? Yes <sub>1</sub> No <sub>2</sub>
51. Is the height of the reception counter adequate? Yes <sub>1</sub> No <sub>2</sub>
52. Is there adequate manoeuvring space for wheelchairs  
in the reception area? Yes <sub>1</sub> No <sub>2</sub>
53. If patients are seen on more than one floor, is there a lift? Yes <sub>1</sub> No <sub>2</sub> NA <sub>3</sub>
- 53a. Are steps clearly marked with white lines Yes <sub>1</sub> No <sub>2</sub> NA <sub>3</sub> (*no steps*)
- 53b. Are glass covered doors clearly marked? Yes <sub>1</sub> No <sub>2</sub>
54. Is there at least one toilet suitable for patients in a wheelchair Yes <sub>1</sub> No <sub>2</sub>
55. Does the practice have an induction loop? Yes <sub>1</sub> No <sub>2</sub>
56. Does the practice have a policy for visiting:  
disabled patients at home Yes <sub>1</sub> No <sub>2</sub>  
house bound elderly patients Yes <sub>1</sub> No <sub>2</sub>  
house bound mothers of young children Yes <sub>1</sub> No <sub>2</sub>

**Miscellaneous**

57. How many in-coming telephone lines do you have for use by patients? .....
58. Does the practice have access to and call upon signers for patients who  
use British Sign Language Yes <sub>1</sub> No <sub>2</sub>
59. Does the practice have access to and call upon translators for patients  
consulting whose first language is not English? Yes <sub>1</sub> No <sub>2</sub>

**Thank you for your co-operation in completing this questionnaire and for your continued support of the study. Please now return the completed questionnaire in the FREEPOST envelope provided.**

## Appendix E: Variables excluded from the quantitative analysis

**Table 12: Patient level explanatory variables considered but excluded**

Variable	Reason for exclusion
Patient seen in 'open' surgery (p1)	Not reliably completed based on inconsistencies between GPs in the same practice, and with description of practice appointment system in practice questionnaire
Prescription expectations (Q3, p3))	No strong theoretical reason to include
Social questions (Q6, p5)	Inconsistencies with responses to 'social' questions already included (Q1-2, p3).
Student (p1)	No strong theoretical reason to include
Help to complete form (p6)	No strong theoretical reason to include
Post consultation questions (Q1-5, p7)	No strong theoretical reason to include

**Table 13: GP level explanatory variables excluded**

Variable	Reason for exclusion
Was the GP: A registrar during study period? (Q6) An assistant/locum during study period? (Q7) How long a principal? (Q8) How long a principal in this practice? (Q9)	Inconsistencies in responses
How long qualified? (Q3)	Collinear with age
How many years in general practice? (Q4)	Inconsistencies with other questions, collinear with age
Is GP vocationally trained? (Q5) Is GP a member/fellow of RCGP? (Q10)	The usual rationale for these questions is that they are proxies for attitudes and beliefs. These seemed more directly measured by the Cockburn questionnaire
Cockburn scale measuring attitude to role of government and state	No strong theoretical reason to include
Languages spoken at home and in consultation? (Q11-12)	Patient expectation of language to consult in was judged more important

**Table 14: Practice level explanatory variables excluded**

<b>Variable</b>	<b>Reason for exclusion</b>
List turnover (Q19)	24 (45%) missing
Deprivation (Q20)	27 (51%) missing
Can patients get a same day appointment? (Q43)	5 (9%) missing, only 2 practices replied 'no' to this question
Can patients get telephone advice if an appt is unnecessary? (Q44)	3 (5.7%) missing, all those replying said 'yes'
What special clinics does the practice have? (Q24)	Difficult to interpret
Staff available or skillmix, and proportion whole time (section1)	Significant numbers of cases with missing data, implausibility of numbers of staff identified and listsize.
Other questions	No strong theoretical reason to include

## **Appendix F: An extended description of multilevel modelling**

Following de Leeuw and Kreft, I am going to distinguish statistical models, techniques and algorithms (de Leeuw 1995, Kreft 1998). *Statistical models* consist of a number of equations describing relationships between random quantities. A *statistical technique* transforms data into a number of statistics. These include simple descriptive statistics, but here particularly the parameters of a statistical model. Techniques are often derived from *statistical principles*. So the principle of maximum likelihood is the basis for many of the techniques used for estimating the parameters of a multilevel model. Techniques are implemented by *algorithms*. There may be several possible algorithms that can be used to implement techniques, and different software programmes can use these in different ways. In some circumstances, the same technique implemented with a different algorithm or a different programme may give different results (eg more reliable estimation, different estimates of parameters or their standard errors).

My focus is on statistical models. In other words, what set of equations most appropriately describe the relationships in my data, and what are the underlying assumptions about the kinds of relationships that might exist. The techniques used to estimate these models, and the algorithms used to implement these techniques, are beyond the scope of this thesis. Where information is available about their performance that might affect the estimation of the chosen model, this will be discussed, but on the whole I take it as read that appropriate techniques and algorithms are being used if they are generally accepted in the current literature. I chose the MLwin software because it was favourably reviewed as a comprehensive, flexible, reasonably easy to use, and reasonably documented package (Kreft 1998). Additionally, training and technical support were available in the UK (Burch 2002).

### **Multilevel modeling**

Multilevel modelling is one of the names for a set of statistical techniques that includes hierarchical linear modelling, random effects or random coefficient models, mixed models, and covariance components models. One reason for the varying nomenclature is that the techniques developed more or less simultaneously in several

disciplines. Multilevel modelling can be seen as the coming together of the statistical principles, techniques and algorithms associated with random coefficient regression, and the theoretical stance of contextual analysis which focused on the importance of considering individuals simultaneously with contexts (Bryk 1992, Goldstein 1995, Rice 1996, Kreft 1998, Burton 1998, Snijders 1999, Diez-Roux 2000, Leyland 2001)

The multilevel model is an extension of the generalised linear model (McCullagh 1989, Goldstein 1995). This section therefore starts by describing a single level linear regression model, indicates its inadequacies in dealing with hierarchical data, and how multilevel modelling can address these. For clarity, the description uses text, algebra and graphical representation. The latter is only helpful for normally distributed outcomes and explanatory variables. The analysis presented in this thesis uses a categorical outcome, so to help convey the concepts, the graphics and explanation use a tutorial dataset that comes with MLwin (used with permission, personal communication Amy Burch, Multilevel Models Project 2002). The algebraic notation used follows Goldstein (Goldstein 1995, Rasbash 2001).

The illustrative dataset was collected to investigate school performance in terms of the examination scores of pupils attending. It has data on 4059 pupils in 65 London schools, and the outcome measure is the individual exam score at 16. For the purposes of this discussion, the only explanatory factor used will be those pupils' London Reading Score at age 11, which is taken to be a measure of ability at the time of entry to secondary school. Both the exam score at 16 and the reading score at 11 are normally distributed. For this analysis they have been standardised as z-scores, and centred around their mean<sup>11</sup>.

### **A single level regression model**

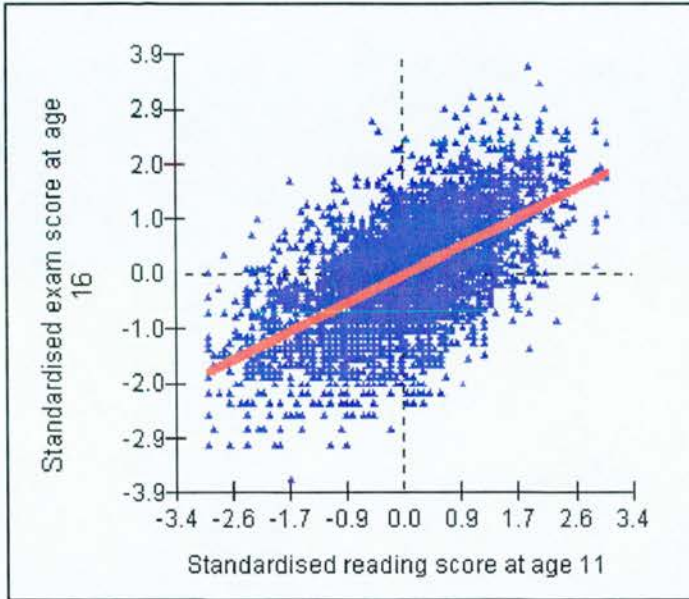
The individual level relationship between reading score at 11 and exam score at 16 is shown in figure 6. In general, the higher the reading age at 11, the higher the exam

---

<sup>11</sup> In other words, the mean exam score for all pupils has been made 0. A score of  $-1$  indicates a score that is one standard deviation below the mean. A score of  $+1.5$  indicates a score that is  $1\frac{1}{2}$  standard deviations above the mean.

score at 16. This relationship can be summarised by the single level, ordinary least squares regression line shown.

<sup>6</sup>  
**Figure 4: Single level regression model ignoring schools**



The equation of the line is:

**Equation 1<sup>3</sup>**

$$y = B_0 + B_1x$$

where  $y$  is the exam score at 16, and  $x$  is the reading age at 11. That is, the outcome  $y$  is linearly related to an explanatory variable  $x$ , by the two parameters  $B_0$  (the intercept) and  $B_1$  (the slope of the regression line). The statistical model being estimated is:

#### Equation 4

$$y_i = B_0 + B_1x_i + e_i$$

$$e_{ij} \sim N(0, \Omega_e), \Omega_e = [\sigma^2_e]$$

For the  $i^{\text{th}}$  individual, the outcome  $y_i$  differs from this line by a residual term  $e_i$ . In multilevel modelling, the random term  $e_i$  is conceptualised as the residual variation due to explanatory factors not included in the model, hence its name (in other contexts, it is called the error or disturbance term reflecting a different conceptualisation as the degree to which the model is an inadequate fit to the data). A single level regression model like this makes four key assumptions.

- a) Linearity (there is a linear relation between explanatory variable and outcome variable)
- b) Homoscedasticity (the variance of the outcome variable is constant across different values of explanatory variables)
- c) Independence of residuals (each individual on whom the outcome is measured is completely independent of all other individuals)
- d) That the residuals ( $e_i$ ) are normally distributed with a mean of zero and constant variance ( $\sigma^2_e$ )

The assumption of linearity can be modified within the framework of the generalised linear model (McCullagh 1989) which allows outcomes with other distributions to be analysed. The important assumption here is the third, that individuals (or more correctly, their residuals) are independent of each other. Effectively, the possibility of correlation or clustering of pupils within schools is ignored, and it is assumed that schools have no effect on pupil exam scores at 16.

Violating this assumption at best causes standard errors to be underestimated and therefore increases the risk of a type 1 error (falsely believing an effect to be statistically significant when it is not). At worst, violation may also lead to biased

parameter estimates, although this is only likely if group effects are large. A measure of the correlation of individuals within groups or contexts is the intra-cluster correlation co-efficient (ICC). Table 15 shows what the actual p-value of any statistical test is when applied with an apparent p-value of 0.05 ignoring the effect of clustering for different levels of ICC and number of individuals per group (Barcikowski 1981).

**Table 15: Effective alpha values for different ICCs and group sizes**

Number per group	ICC = 0.01	ICC = 0.05	ICC = 0.20
10	0.06	0.11	0.28
25	0.08	0.19	0.46
50	0.11	0.30	0.59
100	0.17	0.43	0.70

Three features are apparent. Firstly, the larger the ICC (and therefore the greater the clustering) the greater the risk of a type 1 error (falsely assuming that an association is statistically significant when it is in fact due to chance). Secondly, increasing the apparent power of the study by recruiting more individuals per group makes the problem worse. Thirdly, with modest to large group sizes, there are major effects on statistical power even with small degrees of clustering.

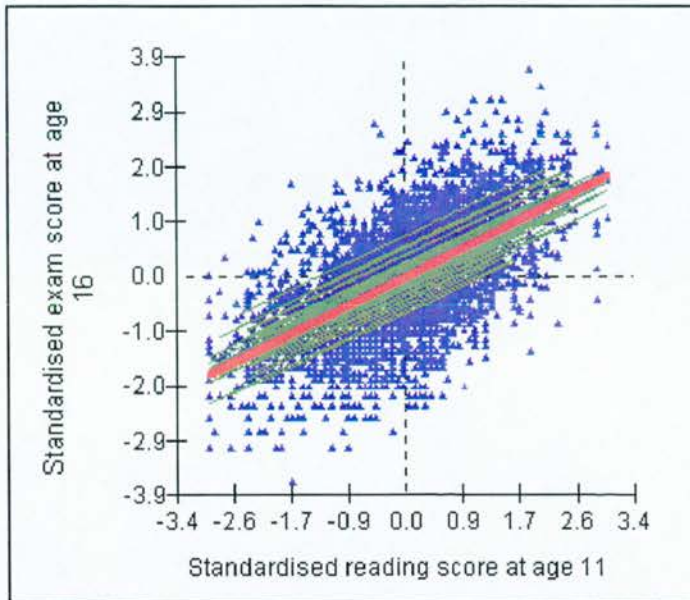
The implications are that if clustering is present, then at a minimum it has to be accounted for to produce appropriately precise estimates. In the examination dataset, the ICC for pupils within schools is 0.169. This can be interpreted as showing that 16.9% of variation in exam score at 16 is due to school factors. Even if analysts are prepared to assume that schools have no effect on individual pupil outcome, this makes the single level model shown above technically untenable.

**A random intercepts multilevel model**

Multilevel models modify the assumption of independence. They do so by making similar assumptions about groups or contexts as single level regression makes about individuals. That is, they assume that groups or contexts are a random sample from a larger population, and include extra random terms for variation due to contextual effects. The simplest extension is to construct a random intercept model where each

school is allowed to have its own intercept, but the slopes for each school are the same. This is graphically illustrated in figure 7.

**Figure 5: Random intercepts for each school**



The statistical model is:

**Equation 25**

$$y_{ij} = B_{0ij} + B_1x_{1ij} + B_2x_{2j}$$

$$B_{0ij} = B_0 + u_{0j} + e_{ij}$$

$$u_{0j} \sim N(0, \Omega_u), \Omega_u = [\sigma^2_{u0}]$$

$$e_{ij} \sim N(0, \Omega_e), \Omega_e = [\sigma^2_e]$$

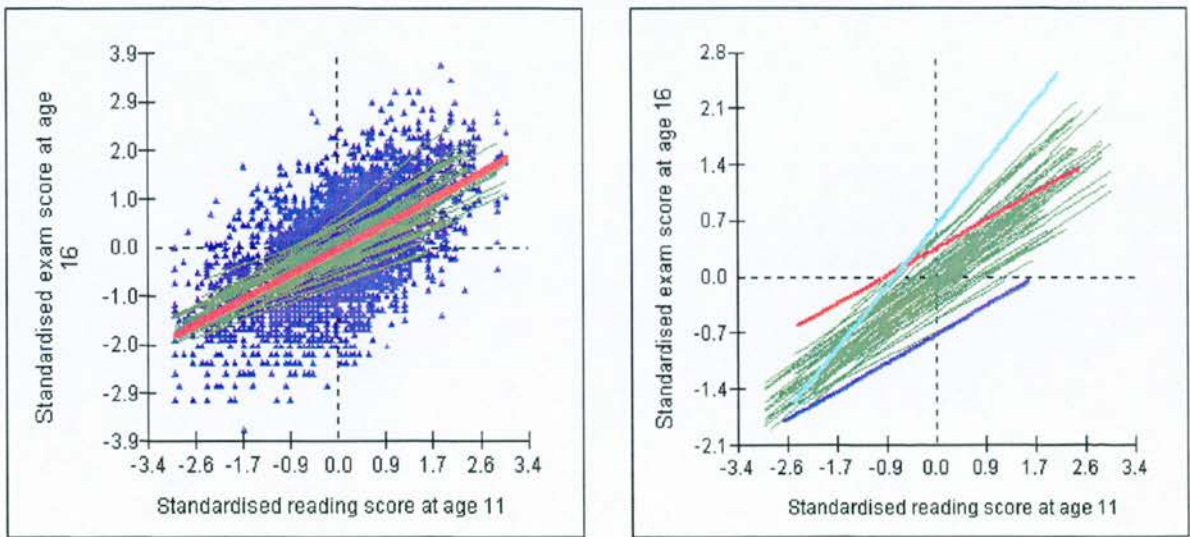
The subscript *i* indicates that a variable is at the individual level, subscript *j* that it is at the group or contextual level. So, in the fixed part of the model,  $x_{1ij}$  is an individual explanatory variable, and  $x_{2j}$  a group level explanatory variable. The key differences from the single level model are the extra random term,  $u_{0j}$ , and the ability to include explanatory variables at the level of contexts ( $x_{2j}$ , which might be size of school for example). As in the single level model, all the random effects ( $e_{ij}$  and  $u_{0j}$ ) are assumed to be normally distributed, with constant variance ( $\sigma^2_e$  and  $\sigma^2_{u0}$ )

respectively) and mean zero. The additional random term  $u_{0j}$  represents variation in a pupil's exam score due to the school attended. The variation in exam score from the overall prediction based on reading score at 11 now has two components, that due to the pupil ( $e_{ij}$ ), and that due to the school they attend ( $u_{0j}$ ). All pupils within a school share the same school effect, but because this is explicitly modelled separately, the pupil level residuals ( $e_{ij}$ ) are no longer correlated within schools.

### The full (random intercepts and slopes) multilevel model

This analysis assumes that schools have different effectiveness in the sense of, on average, 'producing' higher or lower exam scores at 16 for pupils with the same reading score at 11. However, school effects are assumed to be constant for pupils of different abilities – the slopes of each school line are constant. This assumption can be relaxed to create a random slopes and intercepts model illustrated in figure 8.

**Figure 8:** Random intercepts and random slopes for each school



The statistical model is:

**Equation 6**

$$y_{ij} = B_{0ij} + B_{1j}x_{1ij} [+ B_{2j}x_{2j}]$$

$$B_{0ij} = B_0 + u_{0j} + e_{ij}$$

$$B_{1j} = B_1 + u_{1j}$$

$$\begin{bmatrix} u_{0j} \\ u_{1j} \end{bmatrix} \sim N(0, \Omega_u), \Omega_u = \begin{bmatrix} \sigma^2_{u0} & \\ \sigma_{u10} & \sigma^2_{u1} \end{bmatrix}$$

$$e_{ij} \sim N(0, \Omega_e), \Omega_e = [\sigma^2_e]$$

There is one new random term ( $u_{1j}$ ), which represents variation in slopes between schools. In other words, not only do schools differ in terms of their average effect on pupil exam score controlled for reading age at 11, but they may also have differential effects on pupils of different ability. The former is expressed in differences in the intercept (the school effect for the ‘average’ pupil). The latter in differences in the slope (the way that school effects vary for different pupils). The variance of the random intercepts and slopes are estimated ( $\sigma^2_{u0}$  and  $\sigma^2_{u1}$ ), as is their covariance ( $\sigma_{u10}$ ). The kinds of inferences and judgements that can be made are more complex. So for example, the school that is ‘most effective’ for high ability pupils can also be seen to very unequal in its effects since it is worse than average for low ability pupils (the regression line in light blue on the right hand graph in figure 8).

The random group effects ( $u_{0j}$ ,  $u_{1j}$ ) are latent variables, not statistical parameters and therefore are not directly estimated. Empirical Bayesian methods can be used to calculate posterior means for these variables. These use information about all individuals under the model assumption that the unobserved  $u_{0j}$  and  $u_{1j}$  are randomly distributed with mean zero and variance  $\sigma^2_{u0}$  and  $\sigma^2_e$  (which are directly estimated). They combine this with the information available about individuals in each group  $j$ . Directly measured information about each group is interpreted in the light of the prior knowledge about all individuals in the dataset (which is what makes it an empirical Bayesian estimate).

The main implication of basing estimates of group effects on all information available is that the estimates will be more reliable, but also shrunk towards the overall estimate. More reliable, because for contexts with scanty data, the estimates will ‘borrow strength’ from data from all other contexts. Shrunken towards the overall estimate, because estimates for groups with scanty data or large within group variation will be more influenced by the overall estimates for the whole dataset.

### **Estimation procedures**

Detailed consideration of estimation procedures is beyond the scope of this thesis, but because the choice is important here in terms of possible bias and implications for model building, this is briefly discussed here. MLwin estimates maximum likelihood from iterative estimates of generalised least squares. For generalised linear models, the non-linear link is approximated by a Taylor series expansion, which produces quasi-likelihood estimates. The Taylor series expansion used in MLwin may be first order (using only the first of the series of terms) or second order (using the first two terms) (Hox 2002). Each can be implemented using just the estimates for the fixed part (marginal quasi-likelihood or MQL) or the estimates for both the fixed and random parts (penalised quasi-likelihood PQL) (Snijders 1999, Rasbash 2001, Hox 2002).

There is a trade off between speed of estimation and convergence problems on the one hand, and non-biased estimates and standard errors on the other (Hox 2002). 1<sup>st</sup> order MQL is likely to converge reasonably rapidly, but is prone to error with downwardly biased estimates and too narrow standard errors. 2<sup>nd</sup> order PQL is less prone to error, and in simulation studies is unbiased except in ‘extreme’ datasets where there are few level 1 units per level 2 unit, and/or where higher level variances are large (Rodriguez 1995, Goldstein 1996). In this analysis neither of these conditions held, and although relatively slow, 2<sup>nd</sup> order PQL presented no problems with convergence and was used throughout.

However, a major implication of using quasi-likelihood estimates is that the deviance statistic (-2 times log likelihood) produced is not credible and cannot be used to assess overall model fit. Programs that use different estimation procedures do

produce a credible deviance statistic, but the only one practically available to me (MIXOR) can only model two levels (Hedeker 2002). This limited decisions about statistical significance of changes to a model by entering or deleting a parameter solely to testing the effects of individual parameters, rather than examining overall model fit.

## **Alternatives to multilevel modelling**

The two main alternatives are to ignore hierarchy altogether, or to account for it within a single level analysis. Three methods for doing the latter will be briefly discussed here – fitting dummy variables for each group or context; analysis of covariance (ANCOVA); and marginal or population averaged models using generalised estimating equations.

### ***Ignore hierarchy and clustering***

As outlined above, a conventional ordinary least squares individual level regression is inappropriate if there is significant statistical clustering present. One alternative is to conduct a separate individual level regression for each context or group. The results will be accurate and unbiased, but unless there are adequate numbers of individuals per context, they will not be very precise. It also is not possible to examine why contexts may vary.

An alternative that also ignores hierarchy is to aggregate the individual level data and focus solely on groups. For my data, this would mean using the mean percentage of patients seeing their usual doctor in each practice as the outcome. A regression analysis using practice factors like list size or type of appointment system as explanatory variables could then be done. This may be satisfactory if the only questions being asked are at the level of the practice, and the associations between practice variables and the aggregated outcome. Even then though, it is not possible to account for differences in the composition of practices in terms of the kinds of patients in each. Aggregated patient data like mean age of patients can be, and often is used as explanatory factors to try to allow for composition. However, there is no reason why relationships between aggregated variables at practice level should be the

same as relationships between the original variables at individual level. To assume so is to court the ecological fallacy (Kreft 1998, Snijders 1999).

***Fit dummy variables for each group or context.***

This is analogous to carrying out separate regressions for every context. The model being fitted is

**Equation 7**

$$y_i = B_0 + B_1x_i + D_1\dots D_{n-1} + e_i$$

$$e_i \sim N(0, \Omega_e), \Omega_e = [\sigma^2_e]$$

Compared to equation 4, there are additionally  $n-1$  dummy variables ( $D$ ) fitted in the fixed part of the model (where  $n$  is the number of groups). These will effectively remove group level variation from the individual level residual ( $e_i$ ) and so will produce more accurate standard errors and parameter estimates. However, the dummies have little substantive interpretation, and it does not allow an exploration of which group factors are associated with individual outcome. It is clearly inefficient if there are many groups.

**Analysis of covariance (ANCOVA).**

The model being fitted is

**Equation 8**

$$y_{ij} = B_{0j} + B_1x_{1ij} + e_{ij}$$

$$e_{ij} \sim N(0, \Omega_e), \Omega_e = [\sigma^2_e]$$

Compared to equation 4, the intercept term is now different for each context (shown by the addition of the *j* subscript to the intercept  $B_0$ ), although the slope ( $B_1$  or the effect of explanatory variable  $x_1$ ) is assumed to be the same in all contexts.

Estimating  $B_{0j}$  as a fixed effect gives a measure of the between groups variability and this is the focus of the analysis.

The individual effects are often treated as something to be controlled for, to allow accurate estimation of differences between groups after adjusting for the composition of groups. This reflects ANCOVA’s origins in analysing experimental data where groups are defined in terms of particular interventions. Here the only interest is in whether these interventions are associated with different outcomes, and so with whether the groups are different. ANCOVA is an appropriate method of analysis if the groups are such that each has its own distinct interpretation and it makes no sense to consider them a sample from a larger population (eg a different treatment applied, religious denomination).

There are two important limitations. Firstly, it is not possible to enter group level explanatory variables of differences between groups. It is therefore not possible to examine whether groups differ in outcome in terms of group characteristics. Secondly, because group effects are treated as fixed, it is not possible to make inferences to other groups. ANCOVA is therefore less appropriate when the groups can be considered as a sample of a larger population of groups. In effect, it is possible to ask questions of the data like ‘do contexts differ?’ or ‘what individual level explanatory variables are important given these contexts?’. It is not possible to

ask ‘why do contexts differ?’ or ‘how does the effect of individual level explanatory variables vary across contexts?’. Effectively, each context is treated as unrelated to all other contexts. However where this actually is the case, then multilevel modelling is inappropriate since it assumes that contexts are related, and are a sample of some larger population.

### ***Marginal or population averaged models.***

Generalised estimating equations can be used to construct marginal or population averaged models (Burton 1998). These simultaneously estimate two equations: an individual level regression, and another for the correlations between individuals. The estimates produced for the individual level regression take account of the correlations and are therefore unbiased and have correct standard errors. This is the technique implemented in specialist multistage survey analysis packages like SUDAAN. As with other technical solutions to clustering, it is not possible to explore how group level factors are associated with individual outcomes. The clustering (which can also be thought about as the degree to which group factors influence outcomes) is treated as a nuisance to be controlled for, rather than being of interest in itself. Such methods are therefore only appropriate where there is no substantive interest in group effects on individual outcome (Diez-Roux 2000). A common application is for analysis of complex surveys with two or multi-stage sampling.

### **Summary and discussion**

In essence, multilevel modelling can be seen as a compromise between ignoring hierarchy altogether by carrying out a single individual level regression, and modelling all contexts in separate regressions. The former excludes all information about context. It gives apparently precise estimates, but is likely to be biased. The latter treats each context as unique. It will produce unbiased estimates of individual level effects for each context, but these are likely to be imprecise unless there are large amounts of data for every context. Neither approach allows the exploration of group effects. Unlike techniques that treat clustering as a nuisance to be accounted for, multilevel models offer a way of appropriately handling data that is hierarchical, although the choice of which hierarchy to model is dependent on the topic being

examined. It allows the effects of both individuals and contexts to be explored simultaneously, while dealing with the technical problems of clustering to give good estimates of both parameters and standard errors.

Like all statistical models, the assumptions made have to be plausible, and where possible should be checked. Multilevel models share the other assumptions of the generalised linear model. As with single level regression models, linearity, homoscedasticity and the distributional assumptions for residuals should be checked, although this is more complicated in multilevel modelling and the performance of measures of model fit less well understood.

The key difference from single level regression is in how the assumption of the independence of the residuals is handled. This is modified by allowing both individual and context level residuals. It is not replaced though, since it is now assumed that there is no significant clustering of individuals in any other way (eg by area of residence) or of contexts in any way (eg within local authority or other administrative body). Entering a random term for a group effect requires an additional assumption that the groups or contexts are a sample from a larger population (or more generally, are exchangeable with this larger population of contexts). This cannot be established simply by looking at the model. It has to be based on a substantive or theoretical understanding of the topic or field being studied. If this assumption is not valid, then multilevel modelling is not appropriate and an alternative technique that can account for context should be used to ensure unbiased estimates. The advantage of treating contexts as a sample from a larger population is that it allows inferences to be made about mechanisms and processes in contexts other than those in the study. However,

“Multilevel analysis is just another strategy for finding patterns in data and for glimpsing the truth. Like any other strategy, it may or may not work. ... Reality in all its complexity cannot be modelled in a useful way. Complex models may imitate reality well, but will be equally complex, and thus useless tools. Summarising data in a complex way is not a step forward. Complex statistical models are harder to interpret, and the results may be hard to replicate.”(Kreft 1998 page x)

Multilevel models are a useful extension to the generalised linear model, but their application and interpretation is not simple, and their performance is less well understood than single level regression. This, in combination with the use of a dataset designed for a different purpose, emphasises the exploratory nature of this analysis.

## Appendix G: Recruitment material for the qualitative study

Dear Dr. X,

I am writing to ask if you would be able to help me with a research project. I am carrying out a study of what GPs and patients value about general practice.

The background lies in the past and continuing organisational change in general practice. Most of this has been driven by large scale aims such as the efficiency and effectiveness of the health service as a whole. There appears to have been less consideration of the effect on individuals. This study is intended to collect detailed information about what GPs and patients value about general practice, and how this relates to broader values and organisation.

From your point of view, it would involve two things. Firstly, I would like to interview three of your patients and will need your help in identifying suitable patients. Secondly, I would like to interview you. This interview will last between 30 and 60 minutes and can be at any time and place convenient to you.

I will 'phone you in the next week or so to ask if you would be willing to meet briefly and discuss this in more detail. If you would prefer not to be contacted, then please telephone me on 0131 650 9237 (you can leave a message on the answerphone if I am not in).

Thank you,

Yours sincerely,

Dr. Bruce Guthrie MRCP,  
MRC Training Fellow.  
0131 650 9237 (department)  
01506 852 678 (practice)  
e-mail [b.guthrie@ed.ac.uk](mailto:b.guthrie@ed.ac.uk)

Date

Dear Dr X,

**WHICH ASPECTS OF GENERAL PRACTICE ARE MOST VALUED BY DOCTORS AND PATIENTS?**

Thank you for agreeing to take part in the above research project. There are four sheets attached to this letter. The first describes the design of the study and your role in identifying patients. The second details the criteria for choosing patients for the study. The third and fourth are examples of the introductory letter and information sheet that patients will receive from you before I make any contact. The letter will be printed on your own headed notepaper and be signed by you. When you have identified your patients, please return the sheet to me in the envelope provided.

Please contact me if you have any queries about any aspect of this.

Thanks again for all your help,

Best wishes,

Dr. Bruce Guthrie,  
MRC Training Fellow in Health Services Research  
0131 650 9237  
e-mail [b.guthrie@ed.ac.uk](mailto:b.guthrie@ed.ac.uk)

## **WHAT DOES THE STUDY INVOLVE?**

You identify patients who you consider to be suitable for the study. Detailed instructions are on the next sheet. As you will see, I have asked you to identify more than one person in each group. I will only approach one patient in each group at a time. If this person decides not to take part or has moved, then I will approach the next one in that group.

The initial contact with the patient will be in a letter from you. A copy of this letter and the accompanying information sheet is attached. These can be modified if you wish. In practice, the easiest arrangement is probably for you to give me some of your headed notepaper. I will then print the letters and send them to you for signing and posting on to the patient in a pre addressed stamped envelope.

1. The patient can opt out of any contact by telephoning me. If I don't hear from them, then I will contact the patient directly after about a week. If they agree to be interviewed, then I will arrange a time and a place of their choice.
2. When I have interviewed all three patients, I will contact you to arrange an interview at a time and place convenient for you. In other practice this has usually been 3-4 weeks after I receive the patient list. In your interview, I would like to talk about your work in general, and then specifically discuss aspects of the care of the three patients I have interviewed. The latter will only be done if the patient has consented in writing to me discussing their care with you. If it would be helpful in clearing some time, then I can do a surgery for you on the day of your interview.
3. With the patient's and your permission, I will also look in the patient's notes after I have interviewed you. This is simply to work out their consultation rate and which doctors they have seen. It is not to extract any clinical or other information.
4. Everything that you and the patient say to me will be confidential. Only myself and the other members of the research team will know who was actually interviewed. The data collected will be used to write a report. Any quotes or data from you or your patients will only be used in anonymised form with care being taken that no information is included that would allow anyone to be identified. If you wish, I will send you a summary of the findings when the study is completed. This is likely to be in late 2000/early 2001.

## **CHOOSING PATIENTS FOR THE STUDY**

I wish to interview three of your patients – a diabetic, a hypertensive and someone without a chronic disease. Because some patients will decide not to take part, I would like you to send me the names of more than one in each group. I would like the names of three diabetics, three hypertensives and two people without a chronic disease.

### **GENERAL CRITERIA**

All patients should be

Aged over 18

Have at least 6 consultations in the last 3 years (ie be someone who does come to the doctor. This is only likely to affect the people without chronic disease)

You should exclude patients if:

You consider them too ill (eg terminal illness, severe physical or mental illness)

You consider the interview might be harmful to them (entirely your judgement)

Their understanding of spoken English is inadequate to allow interview

### **HYPERTENSIVES AND DIABETICS**

The general criteria above all apply. Sex isn't that important although ideally I'd prefer women.

I would like you to choose

Three people with diabetes whom you consider you know well.

Three people with hypertension you have some personal knowledge of, but whom you wouldn't say that you know well.

These are slightly vague criteria, but I have deliberately left it to your judgement. Please send me their names, addresses and telephone numbers on the attached sheet.

### **PEOPLE WITH NO CHRONIC DISEASE**

The general criteria above all apply.

The definition of "no chronic disease" is again left to your judgement, but for example, someone with hayfever would be suitable for the study whereas someone with asthma on any form of regular medication would not.

The way that I would suggest you identify this group is to pick a surgery on a convenient day. When you see someone you think is suitable, ask them if they would be willing to take part in principle and give them a patient information sheet (extra copies are attached to the patient list). Tell them that I will contact them in the next week or so to see if they agree to take part. Please check their name, address and telephone number and send it to me on the attached sheet.

**THREE PATIENTS WITH DIABETES WHOM YOU KNOW WELL**

1. Name  
Address  
Telephone number
2. Name  
Address  
Telephone number
3. Name  
Address  
Telephone number

**THREE PATIENTS WITH HYPERTENSION WHOM YOU HAVE SOME PERSONAL KNOWLEDGE OF, BUT WHOM YOU WOULDN'T SAY YOU KNOW WELL**

1. Name  
Address  
Telephone number
2. Name  
Address  
Telephone number
3. Name  
Address  
Telephone number

**TWO PEOPLE WITH NO CHRONIC DISEASE**

1. Name  
Address  
Telephone number
2. Name  
Address  
Telephone number

Date

Dear Patient Y,

**IMPROVING GP CARE - YOUR VIEWS**

I am writing to ask you if you would be willing to help with a research project. The research is being done by a researcher from the Department of General Practice at the University of Edinburgh. The aim of this research is to help improve the care given by GPs to patients. There is an information sheet attached which explains more about the research. If you do decide to take part, then everything that you say will be confidential. The practice will not find out what you say.

The researcher will either telephone you (or call round at your house if you are not on the phone) to find out if you feel able to help with this project. If you are willing to take part, then he will arrange a time and a place to talk to you.

If you do **not** want the researcher to contact you to ask if you are willing to take part in this project then please let us know by returning the tear off slip below or telephoning the research team.

The research team can be contacted on 0131 650 9237 or 0131 650 2680.

Thank you for your help,

Yours sincerely,

Dr. X

---

Name:

I do **NOT** want to take part in this research

# **IMPROVING GP CARE - YOUR VIEWS**

**What do patients and doctors think are the most important aspects of general practice?**

This research is being carried out by researchers from the Department of General Practice at the University of Edinburgh and is funded by the Medical Research Council. We want to find out about different people's experiences of general practice. The aim is to try and improve the quality of general practice care in the future.

**What does it involve?**

We would like to talk to you about your experiences of going to see your doctor. We want to find out what you think and feel are the most important aspects of the care given in general practice. This will take about an hour, but it could be longer or shorter depending on how much time you have and how much you want to say. The discussion will be very informal and there are no right or wrong answers - we are interested in your experiences and what you think. The interview can be arranged at a time convenient for you. It can be in your home or elsewhere if you prefer.

With your permission, we will also be talking to one of your GPs about your care. This is to allow us to find out both what you think and what your GP thinks about your care. Everything you say will be confidential. Your GP will not find out what you say.

**Do I have to take part? What will happen if I don't take part?**

Your doctor has suggested you as someone suitable to take part in the research, but it is up to you whether to take part. You do not have to take part if you do not want to. You can change your mind about taking part at any time. Whatever you decide, your treatment and care will **not** be affected in any way.

**Who will I be talking to?**

The interviewer works as a researcher at the University of Edinburgh. If you agree to take part, everything you say to him will be completely confidential. You will not be identified in any report we write. Only the research team will know what you say. He will not be able to give you any advice about your care or treatment.

**Who can I contact for more information?**

The main researcher is Bruce Guthrie. You can telephone him to discuss the study. Sally Wyke is the project supervisor and can give advice if Bruce is not available. They can be contacted on 0131 650 9237 or 0131 650 9463.

Alternatively you can discuss the project with Dr. Bill Paterson who is the independent advisor to the project. He is not directly involved in the research and can give you independent advice about it. He can be contacted on 0131 447 4426

# Appendix H: Topic guides for interviews

## GP interview topic guide

Date

Doctor ID

Sex

Age

Length of time in this practice

Actual number of sessions worked in practice

Other practice experience

List size and ranking

Deprivation score and ranking

Partners' names according to medical list. Ask for sex, full/part time and years here

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

How many nurses including full and part time

Training practice

Appointment system or open surgery arrangements

Out of hours arrangements

## **Introduction**

I'd just like to reiterate that everything you say in the interview is confidential to me and my supervisors. If anything you say is used in a publication then it will be anonymous. The interview itself will be open ended and the questions themselves are usually fairly broad. There aren't any right or wrong answers - I'm simply interested in your experience and your views. The first part of the interview is about your experience of being a GP in general and then later on I'll be asking you about particular patients and their care. Is there anything you'd like to ask me?

## **Biography**

Can you tell me how you came to be a GP?

Can you tell me how you chose this practice?

## **Defining general practice**

What do you think makes general practice what it is?

Why are these areas important? (doctor identified)

What do you think are the most important aspects of what you've identified?

Why have you chosen these ones?

How do you think you have developed your views of what makes general practice what it is?

How have things changed in the time that you've been working in this practice?

How has your personal experience of work changed?

How have your relationships with patients changed?

How have your professional relationships changed?

What's changed for the better?

What's changed for the worse?

How do changes in one area affect another?

What do you see as changing in the next few years?

## **Continuity**

In the general practice context, what do you think is meant by the term "continuity" or "continuity of care"? How would you define continuity in general practice? You mentioned "continuity", can I just check what you mean by that?

Is continuity important?

In the wider scheme of things, what is the place of continuity?

How does continuity relate to these others?  
How important is it in relation to the others?

Is it/its elements important to everyone?

### **Contrast with other settings and professionals**

How do you think being a GP differs from being a hospital doctor?

The role of nurses in primary care has changed and looks likely to keep changing?  
How do you think this affects your work?

How does the work of receptionists impact on what you do?

### **Personal experience**

How well do you think you provide 'continuity of care'? (?several questions)  
When defining continuity earlier, you talked about XXX, but you haven't  
(really) mentioned it here...  
Compared to other doctors, how well do you think you provide it?

Can you give some examples of it in your personal practice?

Can you give some examples of when it's broken down?

What are the mechanisms by which you encourage or discourage it?

What difference does continuity make to your own clinical practice or experience of work?

How well do you think the practice provides 'continuity of care'?

Can you give some examples of it in action in this context?

Can you give some examples of when it's broken down?

What are the mechanisms by which the practice encourages or discourages it?

What difference does it make to the way the practice works?

If we could now move on to the individual cases.

### **Patient 1**

Can we start with.....? Could you tell me about them?

How would you describe your relationship with this person?

Do you think that's fairly typical for you?

How would you describe this person's relationship with the practice?

Do you think that's fairly typical?

Which aspects of their care do you think have been good?

Are there any aspects of their care which you think have been less satisfactory?

When I asked you to find names, I asked that the diabetics/hypertensives be someone that you knew well/you have some personal experience of but whom you wouldn't say that you know well. Can I ask what you mean by 'knowing well'/'not knowing well'?

I'd like to relate what we were talking about earlier in general to this particular patient. We talked about XXXXX and XXXXX.

How do you think those general ideas are reflected in this person's care?

Is there anything you'd like to add to what we've discussed?

**Patient 2 etc**

Shall we move onto .....? Could you tell me about them?

## **Patient interview topic guide**

Date

Identifier

Can I just make sure that I've got some details about you correct?

Can I just check how old you are?

Sex

What would you say your main health problems are?

How long have you been registered with this practice?

How often you go to see your GP?

In the last year say, how often have you been?

Who lives with you?

Are you working at the moment?

What do you do?

Is your partner working at the moment?

What does he/she do?

Do you have family living nearby?

Who?

Where?

Thank you for agreeing to help with this research. The aim of it is to find out what patients and GPs think are the most important aspects of general practice care to try and improve what happens in the future. Everything that you say will be confidential. Your own doctor won't find out anything you say. It's possible that some quotes from this interview might be used in publications, but if that happens then they will be anonymous - they won't identify you or the practice by name. Is there anything you want to ask me about?

The style of the interview will be open ended so you may find some of the questions quite broad or quite difficult. There aren't any right or wrong answers. I'm interested in what you think and feel.

### **Choosing the practice**

How long registered here? How did they choose it? Did you consider any other practices?

### **Using the GP**

Is there anything they go to the GP regularly about? If not now, then what about in the past?

Any particular health problems including things they don't go to the GP about?

### **Particular experiences**

I'd like to talk a bit more about your own experience of seeing doctors and ask you some questions about particular times that you've gone to see your doctor. I'd like you to think about the last time you went to see your GP (or any recent contact if most recent is very focused eg getting a passport application signed).

What made them decide to go then?

What happened when rang to get appointment? Do the receptionists know you and does this help?

Do they describe themselves as being active?

What happened afterwards?

Which doctor did they see? Why this doctor? (Choice, availability, own doctor not available, special expertise)

### **General questions about GPs**

I'd now like to ask you some questions about doctors and general practice. These questions are about things in general rather than about your actual doctors. You may find these questions a bit vague or a bit difficult.

I'm interested in knowing from your own experience what would make a doctor seem good or not so good or bad for you. So just in general, could you describe what you think a good doctor is like or what the ideal doctor for you would be? Do you think it always works like that? Could you be good and not be like that? Have you ever come across doctors like that?

The next question is asking you to look at it the other way. Can you describe what you think a bad doctor is like or what the worst doctor for you would be?

Have you ever come across doctors like that?

Overall, what do you like about general practice? What's it done for you that's been good?

Is there anything about it which you would change if you could? When does it annoy you, or make it difficult for you to get what you want or need?

### **Experience of other settings**

Have they any experience of other practices? How were they different?

Have they any experience of hospitals? How are they different?

Have they seen nurses at all? How is that different from doctors?

### **Choosing doctors**

I think you said that you'd seen Dr. X, so...

When they go to the doctor, do they have a particular doctor or doctor (or doctors) that they try to see? Why? How does this relate to access? What is it about them that makes them want to see them? Can they give examples of when it's been important to see a particular doctor? And not important? If never important, then what is most important when organising the appointment?

Are there any particular GPs that they prefer not to see? Why? What is it about them that makes them not want to see them? Do you ever end up seeing doctors that they'd prefer not to see? Why? Can they give an example of when that's happened?

Does the practice try to make them stick to the same doctor? What do they think about that? Do the doctors ever suggest that they come back to them in particular?

### **My friend John questions**

Some people say that they like to see the same doctor most of the time, others don't mind and others like to see different doctors. What do you think about that?

Some people (doctors/patients) say that it doesn't matter which doctor you see, because they've all got the notes/a written record. What do you think about that?

Some people who don't mind which doctor they see say that this means that they can see a doctor more quickly than waiting for a particular one. What do you think about that? Do you ever wait for a particular doctor or do you usually just want to be seen quickly?

Some people say that what matters is that they see a doctor who knows them. Is that important to you? What do you mean by knowing them? What sort of knowledge?

GPs often say that they think it's important to look after families. Does your GP know your family at all? Do you think that's important for you? Or the family? Or the doctor?

### **What kind of person?**

Some people say that as well as doctors knowing their medical details, it's important that doctors know what sort of person they are as well. Is that something that's important for you?

Does your doctor know what sort of person you are?

Do you think that all the doctors in the practice know that or just some?

How do you let them know that? How do they find things like that out?

### **Atrocity and angel stories**

Are there any visits to your GP that stand out in your mind, perhaps because you were very ill or very worried, or perhaps because things went well or not so well?

Why do you think that was?

What about things you've heard other people talk about, perhaps family or friends describing what's happened to them?

Went well vs went badly

### **Specific health problems**

Could you tell me more about....? (based on health problems they identify)

What happened when it was diagnosed? Do they wish that anything had been done differently? What's happened since then? What would you like to happen in the future?

## Appendix I: Characteristics of qualitative study participants

Table 16: Practice characteristics

Practice name	Listsize	Deprivation (in quartiles)	Number of partners	Training or not	Out of hours arrangements	Type of appointment system
Practice of patients in initial phase	Smallish (list size 5000 - 6000)	Deprived	5	Training	In OOH co-op	Full appointment
Practice Dr Patrick	Large (list size 8000 – 9000)	Deprivedish	5	Training	In OOH co-op	NK
Practice Dr Purcell	Large (list size 8000 – 9000)	Affluentish	5	Training	In OOH co-op	NK
Practice Dr Pallister	Not known	Not known	Not known	Training	In OOH co-op	NK
Practice Dr Patton	Large (list size 11000 – 12000)	Affluent	Not known	Non training	In OOH co-op	NK
Practice Dr Potter	Large (list size 10000 – 11000)	Deprived	7	Training	In OOH co-op	NK
Practice Dr Perry	Largish (list size 6000 – 7000)	Deprived	4	Training	In OOH co-op	NK
Practice B	Small (list size 3000 – 4000)	Deprivedish	2	Non training	In OOH co-op	Mixed appt and open
Practice C	Large (list size 10000 - 11000)	Affluent	6	Training	In OOH co-op	Full appointment
Practice E	Large (list size 8000 – 9000)	Deprivedish	6	Non training	In OOH co-op	Mixed appt and open
Practice G	Large (list size 9000 – 10000)	Deprived	7	Training	In OOH co-op	Mixed appt and open
Practice H	Small (list size 2000 – 3000)	Affluent	2	Non training	In OOH co-op	Mixed appt and open
Practice L	Small (list size 1000 – 2000)	Deprivedish	1	Non training	In OOH co-op	All open surgeries
Practice M	Large (list size 9000 – 10000)	Affluent	6	Non training	In OOH co-op	Mixed appt and open
Practice N	Largish (list size 8000 - 9000)	Deprived	8	Non training	In OOH co-op	Mixed appt and open
Practice T	Large (list size 9000 – 10000)	Deprivedish	7	Training	In OOH co-op	Full appointment
Practice W	Small (list size 1000 – 2000)	Affluentish	1	Non training	In OOH co-op	All open

**Table 17: Doctor characteristics**

Name	Age	Sex	Full or part time	How long in this practice?
Dr Patrick	~40	Male	Full time	13 years
Dr Purcell	75	Male	Retired full time	35 years
Dr Pallister	62	Male	Retired full time	40 years
Dr Patton	late 30s	Female	Full time	10 years
Dr Potter	late 30s	Female	Part time	8 years
Dr Perry	Early 50s	Male	Full time	20 years
Dr Brian	38	Female	Full time	7 years
Dr Comrie	46	Male	Full time	18 years
Dr Elliot	37	Female	Part time	9 years
Dr Green	49	Male	Full time	20 years
Dr Hunter	43	Male	Full time	12 years
Dr Lawson	45	Female	Full time	3 years
Dr McLaren	37	Male	Full time	8 years
Dr Norris	39	Female	Full time	4 years
Dr Tulloch	43	Female	Part time	13 years
Dr West	44	Male	Full time	11 years

**Table 18: Patient characteristics**

Name	Age	Sex	Employment	Time registered	Self identified health problems	No of consultations in last year (patient estimate)
Mrs Percie	71	F	Retired clerk	8 years	Rheumatoid arthritis, dyspepsia	Don't know
Ms Peter	33	F	Not working	~15 years	None	Don't know
Ms Pawson	29	F	Call centre worker	7 years	None	Don't know
Mr Pugh	63	M	Shopworker	>5 years	Hypertension, diabetes, arthritis, waterworks	Don't know
Mr Ball	31	M	Shopworker	2 years	None	7
Mr Buchanan	45	M	Appliance repairman	7 years	High blood pressure	5
Ms Bannister	50	F	Librarian	9 years	Diabetes	2 + 1 with child
Mr Coulter	80	M	Retired accountant	25 years	Angina	4
Mr Currie	69	M	Retired engineer	20 years	High blood pressure, prostate problems	12
Mr Callaghan	58	M	Payroll manager	15 years	Diabetes	2
Mrs Emslie	51	F	Home help	15 years	None	6
Mr Emslie	56	M	Retired bus driver	15 years	Heart disease	2
Mr Ellison	57	M	Retired fitter	47 years	High blood pressure, arthritis	8
Mr Ethan	52	M	Legal services manager	12 years	Diabetes, back problems	7
Mr Gillies	38	M	Refuse collector	5 years	None	11
Mrs Gilheany	72	F	Retired shopworker	56 years	High blood pressure	2
Mrs Gavin	64	F	Retired clerk	50 years	Diabetes, overweight	5
Mrs Hollis	34	F	Nurse	8 years	None	1 + ~8 antenatal
Mr Henderson	54	M	Database administrator	2.5 years	High blood pressure, heartburn	5
Mr Harris	72	M	Retired shopowner	30 years	Diabetes, worry about wife	<5

**Table 18 (continued)**

Name	Age	Sex	Employment	Time registered	Self identified health problems	No of consultations in last year (patient estimate)
Ms Lewis	46	F	Not working	40 years	Alcoholic, back pain	6
Mr Leslie	59	M	Cleaner in factory	1 year	High blood pressure	3
Mrs Letham	72	F	Retired shopworker	50 years	Diabetes, rheumatoid arthritis	>20
Mrs Manderson	37	F	Nurse	13 years	Asthma, kids with asthma, resp things, allergy	0 (but 30 with children)
Mr McDonald	70	M	Retired miner	70 years	High blood pressure	3
Mrs Murray	67	F	Retired shopworker	30 years	Diabetes	7
Mrs Nathan	58	F	Not working	30 years	Diabetes	4
Mrs Nelson	74	F	Retired home help	39 years	High blood pressure, mastectomy	6
Mrs Terry	28	F	Call centre worker	28 years	None	1
Mrs Taylor	74	F	Retired market researcher	20 years	High blood pressure, heart valve, sinuses	6
Mr Todd	82	M	Retired printer	10 years	Diabetes	1-2
Ms Wallace	34	F	Journalist	5 years	None	5 + 5 with daughter
Mr Williams	29	M	Fireman	8 years	Diabetes	1

## **Appendix J: Published papers based on research done for this thesis**

All publications were with the consent of my supervisors.

Guthrie B. Continuity in UK general practice: a multilevel model of patient, doctor and practice factors associated with patients seeing their usual doctor. *Family Practice* 2002; 19(5): 496-499

Adam R, Guthrie B. The death of the personal doctor. *Journal of Health Services Research and Policy* 2001; 6 (3): 129-130

Guthrie B, Wyke S. Does continuity in general practice really matter? *BMJ* 2000; 321: 734-736

# Continuity in UK general practice: a multilevel model of patient, doctor and practice factors associated with patients seeing their usual doctor

Bruce Guthrie

Guthrie B. Continuity in UK general practice: a multilevel model of patient, doctor and practice factors associated with patients seeing their usual doctor. *Family Practice* 2002; **19**: 496–499.

**Background.** Personal continuity is a 'core value' for UK general practice, but often appears ignored by organizational change.

**Objectives.** The aim of the present study was to examine practice, GP and patient factors associated with personal continuity of care.

**Methods.** A cross-sectional survey was carried out of 25 994 people aged >15 consulting over a 2-week period in 53 general practices in four regions of the UK. The outcome measure was whether or not the patient was seeing their usual or regular doctor.

**Results.** Compared with the smallest quintile of practices, the odds ratios [95% confidence interval (CI)] for patients seeing their usual doctor for the two largest quintiles of list size (6337–11 036 and >11 037) were 0.24 (0.12–0.46) and 0.19 (0.10–0.37). Patients in the five practices with personal list systems were more likely to be seeing their usual doctor (odds ratio 3.27, 95% CI 1.87–5.70). Older patients were considerably more likely to be seeing their usual doctor. Young men were less likely, but by middle age there were no differences between men and women. Compared with patients who only wished to discuss a new or urgent physical problem, those wishing to discuss psychological (odds ratio 2.28, 95% CI 2.01–2.58) or longstanding physical problems (odds ratio 1.92, 95% CI 1.78–2.08) were more likely to be seeing their usual doctor.

**Conclusions.** In this study, list sizes over ~6000–6500 were associated with marked reductions in personal continuity. If GPs are serious about the importance of personal continuity, then the size of the primary care team needs to be examined. There may be potential in separating the administrative functions of the practice from the clinical functions of the primary care team.

**Keywords.** Continuity of patient care, family practice, professional–patient relationships, quality of health care, UK.

## Introduction

Continuity of care is a central feature of all UK and most international definitions of general medical practice.<sup>1</sup> Usually, 'continuity' is taken to mean personal continuity in the sense of an ongoing relationship between a patient and a doctor. There is good evidence that seeing the same doctor is associated with greater patient satisfaction, and some evidence that it leads to better medical outcomes.<sup>2,3</sup> Major National Health Service (NHS) organizational changes including the growth in size of practices and the creation of general practice out-of-hours

co-operatives have largely ignored potential effects on personal continuity, perhaps because policymakers have focused more on other kinds of continuity such as the consistency and co-ordination of care. Seeing the same doctor is one way to achieve these, but policy has emphasized others such as guidelines and communication between professionals.<sup>4</sup>

Published studies of who gets personal continuity in the UK have been small, and in particular have not examined the relationship between practice structure and personal continuity.<sup>5,6</sup> The aim of this study is to investigate the association of practice, GP and patient factors with personal continuity.

Received 27 July 2001; Revised 22 January 2002; Accepted 13 May 2002.

Department of Community Health Sciences-General Practice, MacKenzie Medical Centre, 20 West Richmond Street, Edinburgh EH8 9DX, UK; E-mail: b.guthrie@ed.ac.uk

## Methods

The analysis uses data from a cross-sectional study of patients aged >15 consulting their GP in the surgery

in 53 general practices in four UK regions over a 2-week period in early 1998. A pre- and post-consultation questionnaire was completed by both patients and GPs. Further information about GPs and practices was collected subsequently by a separate questionnaire.<sup>7</sup>

Because of the hierarchical nature of the data, multi-level regression analysis was used, and a three-level model constructed (patients clustered within GP seen, clustered within practices). The analysis assumes that patients exert preferences for seeing particular doctors within the context of the practice they are registered with. The problems the patient wants to discuss and patient demography are being used as proxies for these preferences. The outcome variable was whether or not the patient was seeing their usual or regular doctor, and a logistic regression model for binary response was therefore used. Analysis was carried out in MLwin using restricted iterative generalized least squares estimation of second order penalized quasi-likelihood.<sup>8</sup> Model assumptions of binomial variance, and the residuals being normally distributed with constant variance were checked and found to be plausible.

## Results

Overall, 61.6% of patients were seeing their usual or regular doctor. Within practices, the percentage varied from 39 to 98%. The full model is shown in Table 1. The intracluster correlation co-efficient for patients within GP seen was 28.4%, and for patients within practices 34.7%. One interpretation is that 65.3% of variation in the outcome is due to differences between patients; 28.4 and 6.3% is due to differences between GPs and practices, respectively. Overall, this model explains 26.1% of the variation in outcome. Almost all of the variation attributable to practice factors is explained by the two practice factors included.

At practice level, patients in the largest 40% of practices have only one-fifth the odds of seeing their usual doctor compared with those in the smallest 20%. Patients in practices with personal lists are three times more likely to be seeing their usual doctor than patients in practices where they can see any doctor. At patient level, older patients of both sexes are progressively more likely to be seeing their usual doctor. There is an interaction between patient age and sex. Younger men are less likely to be seeing their usual doctor than younger women, but this reverses in older age groups. Patients wanting to discuss emotional or longstanding physical problems have about twice the odds of seeing their usual doctor. Patients being fitted into a fully booked surgery as extras are less likely to be seeing their usual doctor, and patients who had been asked to attend by a doctor more likely.

## Discussion

The results confirm much of what is generally believed about who gets personal continuity, although a limitation is that actual patient preferences for personal continuity or access have not been measured directly. There are implications for the organization of general practice.

In this study, increasing age is strongly associated with seeing the usual doctor. Recent policy appears to assume that this is a cohort effect, i.e. older people have higher expectations and preferences for personal continuity as a result of their past experiences of general practice. The assumption appears to be that as the population ages, the desire for personal continuity will decline 'naturally'. From this perspective, prioritizing access and ignoring effects on personal continuity makes sense. Two obvious examples are the creation of centralized telephone advice services such as NHS Direct, and primary care walk-in centres.<sup>4</sup>

An alternative perspective is that it is a life cycle effect. As people age, they are increasingly likely to develop chronic, often multiple problems. Their preferences then change as their circumstances change. From this perspective, health services must be responsive to changing needs. Improving access is important, but so is promoting personal continuity for those who want it. It is not possible quantitatively to disentangle cohort and life cycle effects with cross-sectional data such as these, but the changing effect of patient sex with age seen here suggests that life cycle is important. Patients are likely to prioritize access and personal continuity according to their individual circumstances, and services should strive to meet different needs appropriately.

Several authors have called for a return to personal lists to promote personal continuity,<sup>2</sup> but these are increasingly uncommon, possibly because GPs are less willing to be available continuously.<sup>9</sup> One option might be to operate personal lists for those with chronic disease where care is more plannable, while still sharing care across a practice for acute (and generally less serious) problems. Arguably, this model is of the kind promoted by health service developments such as NHS Direct and walk-in centres. Others have argued that continuity with a team is what really matters, although there has been little discussion of how large such teams should be. Given these results, it seems likely that care will also be more fragmented in larger teams.

Currently, UK primary health care teams usually consist of a single general practice plus attached professionals including district nurses and health visitors. From these data, in terms of personal continuity, a team of GPs, nurses, health visitors and other staff caring for up to ~6000 patients would offer reasonable levels of personal continuity with the GP, and a reasonably sized core primary health care team (<10-12 professionals). In larger practices, one option would be to create two or more clinical teams.<sup>10</sup> This would allow

TABLE 1 *Multilevel model of associations between whether patients were seeing their usual or regular doctor, and practice, GP and patient explanatory factors*

Practice level fixed effects	No. (%) of practices ( <i>n</i> = 51)	Odds ratio (95% CI)
<b>Practice list size (quintiles)</b>		
1425–3048	9 (17.6)	1
3048–4593	11 (21.6)	0.50 (0.24–1.03)
4594–6336	10 (19.6)	0.54 (0.27–1.09)
6337–11 036	11 (21.6)	0.24 (0.12–0.46)
11 037–16 379	10 (19.6)	0.19 (0.10–0.37)
<b>Practice type of list system</b>		
Can see any GP	32 (62.7)	1
Encouraged to see same GP	14 (27.5)	1.37 (0.99–1.90)
Can normally only see registered GP	5 (9.8)	3.27 (1.87–5.70)
<b>GP level fixed effects</b>		
No. (%) of GPs ( <i>n</i> = 189)		
GP is female	72 (38.1)	0.66 (0.50–0.87)
<b>GP age (quartiles)</b>		
GP age ≥51	50 (26.5)	1
GP age >43–<51	43 (22.8)	0.93 (0.62–1.40)
GP age 38–43	51 (27.0)	0.83 (0.57–1.22)
GP age <38 years	45 (23.8)	0.33 (0.22–0.49)
<b>Patient level fixed effects</b>		
No. (%) of patients ( <i>n</i> = 19 913)		
<b>Female patient aged</b>		
<25	2236 (11.2)	1
25–34	2960 (14.9)	1.70 (1.49–1.94)
35–44	2238 (11.2)	1.88 (1.64–2.16)
45–54	1972 (9.9)	2.26 (1.95–2.62)
55–64	1436 (7.2)	3.32 (2.81–3.93)
65–74	1214 (6.1)	3.79 (3.15–4.56)
>74	783 (3.9)	4.51 (3.60–5.67)
<b>Male patient aged</b>		
<25	1071 (5.4)	0.86 (0.72–1.02)
25–34	1266 (6.4)	1.07 (0.91–1.25)
35–44	1166 (5.9)	1.70 (1.44–2.02)
45–54	1157 (5.8)	2.18 (1.83–2.60)
55–64	1030 (5.2)	3.68 (3.03–4.48)
65–74	897 (4.5)	4.15 (3.36–5.13)
>74	487 (2.4)	6.33 (4.69–8.54)
<b>Patient wishes to discuss:</b>		
New or urgent physical problem only	7013 (35.2)	1
Longstanding physical problem	7227 (36.3)	1.92 (1.78–2.08)
Emotional/psychological problem	1985 (10.0)	2.28 (2.01–2.58)
Social problem	545 (2.7)	1.46 (1.16–1.82)
Administrative problem	955 (4.8)	1.17 (0.99–1.37)
Action or advice to keep healthy	2174 (10.9)	1.34 (1.19–1.50)
Did not indicate problem	1847 (9.3)	1.36 (1.20–1.54)
Patient is an extra in a fully booked surgery	1182 (5.9)	0.43 (0.36–0.50)
Patient has been asked to attend by a doctor	5061 (25.4)	2.06 (1.89–2.26)
<b>Random effects variance</b>		
Empty model variance (SE)		
Full model variance (SE)		
Practice level—intercept	0.315 (0.143)	0.033 (0.052)
GP level—intercept	1.434 (0.165)	0.764 (0.098)
Patient level	1 (0) <sup>a</sup>	1 (0)

<sup>a</sup>The variance at patient level is constrained to a binomial distribution with an assumed variance of  $\pi^2/3 = 3.29$ .

the administrative advantages of size for the practice, without reducing the clinical advantages of personal continuity for the patient.

Truly evidence-based planning of services to match needs will require longitudinal research into how patients' preferences and use of services change over time. However, this study shows that larger practices are much less likely to provide personal continuity to all groups of patients. If GPs are serious about their stated core values, then they need to ensure that general practice organization continues to promote personal continuity for those patients who want, and benefit from it.

### Acknowledgements

The paper was written using data from a study originally designed and carried out by John Howie, David Heaney, Margaret Maxwell, George Freeman, Jeremy Walker and Harbinder Rai. Sally Wyke and John Forbes read and commented on previous drafts of this paper. At the time of analysis, BG was employed as an MRC Health Services Research Training Fellow.

### References

- <sup>1</sup> McWhinney IR. Primary care: core values. Core values in a changing world. *Br Med J* 1998; **316**: 1807-1809.
- <sup>2</sup> Baker R, Streatfield J. What type of general practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *Br J Gen Pract* 1995; **45**: 654-659.
- <sup>3</sup> Wasson JH, Sauvigne AE, Mogielnicki RP *et al*. Continuity of outpatient medical care in elderly men. A randomized trial. *J Am Med Assoc* 1984; **252**: 2413-2417.
- <sup>4</sup> Department of Health. *The NHS Plan: A Plan for Investment, a Plan for Reform*. London: HMSO, 2001.
- <sup>5</sup> Freeman GK, Richards SC. How much personal care in four group practices? *Br Med J* 1990; **301**: 1028-1030.
- <sup>6</sup> Sweeney KG, Gray DP. Patients who do not receive continuity of care from their general practitioner—are they a vulnerable group? *Br J Gen Pract* 1995; **45**: 133-135.
- <sup>7</sup> Howie JG, Heaney DJ, Maxwell M, Walker JJ, Freeman GK, Rai H. Quality at general practice consultations: cross sectional survey. *Br Med J* 1999; **319**: 738-743.
- <sup>8</sup> Rasbash J, Browne W, Goldstein H *et al*. A user's guide to MLwin. London: Multilevel models project, Institute of Education, 2001.
- <sup>9</sup> Freeman G, Hjortdahl P. What future for continuity of care in general practice? *Br Med J* 1997; **314**: 1870-1873.
- <sup>10</sup> Waine C. The primary care team. *Br J Gen Pract* 1992; **42**: 498-499.

# The death of the personal doctor

The personal doctor is thought to be dying.<sup>1,2</sup> Doctors argue that organisational change increasingly prevents the development of close, ongoing doctor-patient relationships. The result is said to be health care systems that increasingly fail to recognise the importance of the individual or acknowledge the importance of humanity in health care. There is an assumption in these laments that patients value personal doctoring. If they do, then this sits uneasily with a stated aim of health policy to be responsive to patients' concerns and identification of their own needs. So are personal doctors a dying breed and do patients care if they are?

In the USA, the domination of health care by specialists has led to a recurrent concern about fragmentation. Recent changes driven by purchasers of care are said to further threaten personal continuity. Health maintenance organisations promise a relationship with a particular primary care provider but enforced discontinuity can result from frequent contract changes.<sup>3</sup> Additionally, the creation of hospitalists separates patients from their community physicians when they are at their most vulnerable.<sup>4</sup>

Unlike previous versions, proposed new European definitions of the general practitioner (GP) omit any mention of relationships between individual patients and individual professionals over time.<sup>5</sup> Instead, the focus is on first contact care, generalism and taking a biopsychosocial approach. The rationale for this is that in many countries health care structure militates against personal relationships and so to make them central to definitions of good general practice makes no sense.

In the UK, a changing division of labour in primary care has led to the creation of multidisciplinary teams. General practices grow ever larger and increasingly work together in district-wide organisations providing care for populations of up to 200 000. Government policy is promoting new services in the form of nationally organised telephone services (NHS Direct) and walk-in centres. These promise convenient care from expert strangers and are said to threaten personal relationships between patients and doctors.<sup>6</sup>

In the professional press and for policy commentators, the picture appears clear: the personal doctor is increasingly marginalised by health service reorganisation. These organisational changes often appear to be justified by an assumption that patients no longer value personal care and are more concerned with other aspects of care such as rapid access or cost. So what does the evidence tell us of patients' views?

There is much evidence that patients want a 'personal' service. In the UK, patients give highest priority to primary care services that provide a doctor who listens and who sorts out their problems.<sup>7,8</sup> In a large European study in eight countries, four of the top five priorities for

general practice related to having a doctor who was easy to talk to, who listened, who explained and who kept information confidential. Patients also value other aspects of care. Other highly rated items were getting rapid access in emergencies and doctors keeping up to date medically.<sup>9</sup> It could be argued that this kind of service can be provided by ensuring that all doctors are well trained in communication and consultation skills and that continuity of information can be achieved by good record-keeping and communication between providers. But there is also evidence that many patients additionally value longer-term relationships with particular providers, as well as being treated with respect and dignity in single consultations.

Patient satisfaction is higher in UK general practices that are smaller or that have personal list systems where patients normally only see one doctor.<sup>10</sup> In Norway, patients in primary care are also more satisfied when they have seen the same doctor over time.<sup>11</sup> Cross-sectional studies such as these cannot easily tease out the causality of these associations but randomised controlled trials in paediatric and medical clinics in the USA and antenatal clinics in the UK and Australia also show that satisfaction is higher when there is greater personal continuity.<sup>12-14</sup> There is also some evidence from the randomised controlled trials that medical outcomes are better if patients see the same doctor or other professional over time.<sup>12-14</sup>

This is consistent with qualitative studies of the process of care. One ethnographic study of patients with human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) in Lothian (Scotland) found that people wanted to see the same general practitioner and that the GP-patient relationship was valued for being familiar and ongoing. The importance of seeing the same GP for these patients was linked to the fact that such care was provided outside the hospital-based system, which focused on multidisciplinary team working and sharing of information to promote the coherence and coordination of care. However, this was perceived by patients as controlling and as constructing them in a way with which they did not feel comfortable. In contrast, this was not an issue in their relationship with GPs. Being seen by a known doctor gave patients a sense of control over their care that was lacking when the focus of their interaction was with a large team.<sup>15</sup>

As with patients with HIV/AIDS, different aspects of care are likely to be important to people depending on the problem they need to deal with and the context of their life circumstances. The parent of a child having a fit in the middle of the night is likely to place higher value on ease and speed of access than on seeing a doctor they know. That same parent wishing to discuss ongoing management or the effect of their child's epilepsy on

shopping may prefer to see a known doctor who has previously dealt with this particular problem and with whom a relationship has already been established.

Patients are not passive users of health care. They discriminate between different services available to them and make active choices about which to use. We need to examine how patients make these choices and when they prioritise speed of access to any health care professional over seeing their own personal doctor. This would help us understand the circumstances for which personal care is most needed and, thus, to develop services that are flexible enough to attend to the complexity of patients' wants and needs.

We suggest that what patients want and when they want it is a rather complex story. Seeking health care can be an emotionally charged experience. Simple comparisons with banking or shopping ignore this. Consulting a doctor about a worrying, embarrassing or potentially life-threatening problem can be eased by seeing a known and trusted doctor. This is not to deny the importance of rapid or convenient access, or the need to examine the opportunity costs of different ways of organising services, but a system that does not offer the option of the personal doctor denies the human context of the illness experience.

Policy-makers who are truly committed to responding to patients' wants and needs cannot ignore the value placed by many patients on long-term personal relationships with professionals. Provided that services allow the possibility of such relationships, then personal care will survive for as long as patients value it and therefore choose to get it. In a health care system offering such a choice, the personal doctor will only disappear if personal care ceases to matter to patients. If the personal doctor is to die, then it should be the patient who wields the axe.

**Rachel Adam**

Research Student

**Bruce Guthrie**

Research Fellow

Department of Community Health Sciences

General Practice

University of Edinburgh, Edinburgh EH8 9DX, UK

## References

1. McCormick J. Death of the personal doctor. *Lancet* 1996; 348: 667-668
2. Taylor MB. Compassion, its neglect and importance. *British Journal of General Practice* 1997; 47: 521-523
3. Flocke SA, Stange KC, Zynanski SJ. The impact of different payment systems and forced discontinuity on the delivery of primary care. *Journal of Family Practice* 1997; 45: 129-135
4. Pantilat SZ, Alpers A, Wachter RM. A new doctor in the house: ethical issues in hospitalist systems. *JAMA* 2000; 283: 336-337
5. Olesen F, Dickinson J, Hjortdahl P. General practice - time for a new definition. *BMJ* 2000; 320: 354-357
6. Guthrie B, Wyke S. Does continuity in general practice really matter? *BMJ* 2000; 321: 734-736
7. Smith CH, Armstrong D. Comparison of criteria derived by government and patients for evaluating general practitioner services. *BMJ* 1989; 299: 494-496
8. Calnan M. Lay evaluation of medicine. *International Journal of Health Services* 1988; 18: 311-322
9. Grol R, Wensing M, Maines J, Ferreira P, Hernshaw H, Hjortdahl P et al. Patients' priorities with respect to general practice care: an international comparison. *Family Practice* 1999; 16: 4-11
10. Baker R, Streatfield J. What type of general practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *British Journal of General Practice* 1995; 45: 654-659
11. Hjortdahl P, Laerum E. Continuity of care in general practice: effect on patient satisfaction. *BMJ* 1992; 304: 1287-1290
12. Becker MH, Drachman RH, Kirscht JP. A field experiment to evaluate various outcomes of continuity of care. *American Journal of Public Health* 1974; 64: 1062-1070
13. Wasson JH, Sauvigne AE, Mogielnicki RP, Frey WG, Sox HC, Gaudette C et al. Continuity of outpatient medical care in elderly men: a randomised trial. *JAMA* 1984; 252: 2413-2417
14. Hodnett ED. Continuity of caregivers for care during pregnancy and childbirth (Cochrane Review). *The Cochrane Library*, Issue 1. Oxford: Update Software, 2001
15. Huby G, Porter M, Bury J. A matter of methods: perspectives on the role of the British general practitioner in the care of people with HIV/AIDS. *Aids Care* 1998; 10 (suppl 1): S82-S88

## Public accountability: one rule for practitioners, one for scientists?

In most countries, practitioners are currently facing organisational changes to make them more accountable before government, their colleagues, patients and the public. In the UK, a series of recent cases, often with

high-profile media exposure, has called into question the degree to which health care professionals can be trusted. These cases involve individual practitioners, such as the two Bristol surgeons found guilty of

# General practice

## Controversy in primary care

### Does continuity in general practice really matter?

Bruce Guthrie, Sally Wyke

Department of  
Community Health  
Sciences, Division of  
General Practice,  
University of  
Edinburgh,  
Edinburgh  
EH8 9DX

Bruce Guthrie  
Medical Research  
Council training  
fellow

Scottish School of  
Primary Care, Royal  
College of General  
Practitioners,  
Edinburgh  
EH2 1JX  
Sally Wyke  
foundation director

Correspondence to:  
B Guthrie  
Bruce.Guthrie@ed.  
ac.uk

BMJ 2000;321:734-6

Continuity is an official core value of general practice in the United Kingdom,<sup>1</sup> but there are at least two potentially conflicting definitions of it. Both definitions are powerfully expressed in a recent report from the BMA, entitled *Shaping Tomorrow*.<sup>2</sup>

For general practitioners, continuity of care has traditionally meant that a patient visits the same doctor.<sup>3,4</sup> What matters is personal continuity, in which an ongoing doctor-patient relationship ensures that care takes account of the patient's personal and social context. By contrast, recent statements from the NHS Executive emphasise the importance of consistency and coordination of care.<sup>5</sup> From this perspective, continuity can be enhanced by appropriate organisation, guidelines, and electronic medical records, irrespective of which doctor is seen.

#### Does seeing the same doctor matter?

Most research about the impact of continuity of care has been conducted in antenatal care or in specialist care settings in the United States.<sup>6-10</sup> Generalising these results to general practice in the United Kingdom is possible but problematic. Research shows that a patient's enablement and satisfaction with a consultation is strongly associated with visiting the same doctor.<sup>11-15</sup> Patient satisfaction is also higher in practices that are small, non-training, or have personal lists.<sup>13,14</sup> Smaller studies in the United Kingdom have had more inconsistent results, some showing no effect on quality of care and others showing that when doctors know patients well, compliance and the accuracy of diagnosis are increased.<sup>15-17</sup>



Dr Finlay's Casebook: the traditional view of personal continuity

#### Summary points

Continuity, in the sense of visiting the same doctor, is a core value of general practice in the United Kingdom

It is increasingly presented as "old fashioned" and in opposition to the development and modernisation of primary care

The implicit choice between personal continuity and modern care is false; what evidence there is suggests that patients prefer services providing personal continuity, and this may also reduce the use of investigations and admissions to hospital

If general practitioners really believe that it matters that a patient visits the same doctor, they need to ensure that this is taken into account in the development of primary care

Overall, there is a reasonably strong and consistent association between continuity and patient and doctor satisfaction. The evidence of associations with better medical outcomes such as compliance, uptake of preventive care, and use of resources, including admission to hospital, is less strong and often based on research in other countries and settings. It seems likely that there will be patients and problems where personal continuity really matters and others where personal continuity is irrelevant or even harmful, but this has not been researched in detail.

#### Personal continuity and development of general practice

All major NHS reorganisations intended to promote the development of general practice seem likely to have reduced personal continuity. Examples include the growth of group practice, the decline of personal lists, sharing of out of hours care, and the provision of drop-in clinics. Some of these changes have undoubtedly brought benefits for patients as well as for doctors.

So is there really a conflict between the core value of personal continuity and the development of modern general practice? There are competing images

invoked. Traditional personal continuity is often dismissed as irrelevant and outdated, to be consigned to history in the name of progress. The inevitable image is that of Dr Findlay, loved by his patients but with gently decaying premises, skills, knowledge, and effectiveness.<sup>2</sup> By contrast, the image of progress and development is the modern group practice, similar to a small hospital with its large multidisciplinary team, specialist clinics, and guidelines.<sup>2</sup> That patients are less satisfied with the care provided by such a practice often seems irrelevant to its proponents.<sup>2 13 14</sup>

These images seem not to allow compromise. The real organisational choice, however, is not necessarily between singlehanded practice and the "polyclinic" or between the personal and the technical—it is more often between small teams and large teams. Is it really necessary to lose the personal advantages of a small team to gain the organisational advantages of a large one?

### What is to be done?

Organisational change offers opportunities as well as threats. In the past, the development of general practice has meant that clinical units have become larger and personal continuity has declined. Little alternative exists when the practice is the basic clinical and administrative unit. Primary care groups and local healthcare cooperatives may also promote larger clinical units in the name of efficiency, cost, and clinical governance.<sup>18</sup> They also offer, however, the opportunity to separate administrative and clinical functions that work best on different scales.

Out of hours cooperatives have probably made it easier to sustain small practices by removing the grind of on-call rotas. Similarly, primary care groups may offer practices the advantages of administrative size without requiring that clinical units get bigger. The ideal clinical unit may be two to four doctors working in a team with nurses, health visitors, and other professionals.<sup>14</sup> Such clinical units could share administrative, computing, prescribing, audit, and educational support with each other within primary care groups but would offer a more personal and individual service. The evidence is that patients prefer this kind of organisation and would probably have better medical outcomes from it.

If general practitioners are serious about personal continuity then they need to ensure that organisational change promotes it. In an increasingly evidence based

world, research into exactly when and for whom personal continuity really matters is needed to support the development of services that balance the differing perspectives of patients, doctors, and policymakers. If general practitioners are not serious enough about personal continuity to organise themselves and to provide it, then perhaps we should stop pretending that it matters and get on with creating the brave new world of polyclinics, walk in centres, and daytime cooperatives.

Contributors: BG and SW jointly wrote the paper. The paper is based on published literature and research by BG, which was supervised by SW. BG will act as guarantor for the paper.

Funding: BG is funded by a Medical Research Council special training fellowship in health services research. SW is funded by the Scottish Executive Health Department and the Scottish Council for Postgraduate Medical and Dental Education.

Competing interests: None declared.

- 1 Royal College of General Practitioners. *The future general practitioner*. London: RCGP, 1972.
- 2 BMA General Practitioners Committee. *Shaping tomorrow: issues facing general practice in the new millennium*. London: BMA, 2000.
- 3 Freeman G. Priority given by doctors to continuity of care. *J R Coll Gen Pract* 1985;35:423-6.
- 4 Freeman G, Hjortdahl P. What future for continuity of care in general practice? *BMJ* 1997;314:1870-3.
- 5 NHS Executive. Primary and community care. [www.doh.gov.uk/pricare/pctr.htm](http://www.doh.gov.uk/pricare/pctr.htm) (Accessed 6 March 2000).
- 6 Wasson JH, Sauvigne AE, Mogielnicki RP, Frey WC, Sox HC, Gaudette C, et al. Continuity of outpatient medical care in elderly men: a randomised trial. *JAMA* 1984;252:2413-7.
- 7 Becker MH, Drachman RH, Kirscht JP. A field experiment to evaluate various outcomes of continuity of physician care. *Am J Public Health* 1974;64:1062-70.
- 8 Gordis L, Markowitz M. Evaluation of the effectiveness of comprehensive and continuous pediatric care. *Pediatrics* 1971;48:766-76.
- 9 Flint C, Poulengeris P, Grant A. The 'know your midwife' scheme—a randomised trial of continuity of care by a team of midwives. *Midwifery* 1989;5:11-16.
- 10 Rowley MJ, Hensley MJ, Brinsmead MW, Włodarczyk JH. Continuity of care by a midwife team versus routine care during pregnancy and birth: a randomised trial. *Med J Aust* 1995;163:289-93.
- 11 Howie JGRH, Heaney DJ, Maxwell M, Walker JJ, Freeman GK, Rai H. Quality at general practice consultations: cross sectional survey. *BMJ* 1999;319:738-43.
- 12 Hjortdahl P, Laerum E. Continuity of care in general practice: effect on patient satisfaction. *BMJ* 1992;304:1287-90.
- 13 Baker R. Characteristics of practices, general practitioners and patients related to levels of patients' satisfaction with consultations. *Br J Gen Pract* 1996;46:601-5.
- 14 Baker R, Streatfield J. What type of practices do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *Br J Gen Pract* 1995;45:654-9.
- 15 Freeman GK, Richards SC. Personal continuity and the care of patients with epilepsy in general practice. *Br J Gen Pract* 1994;44:395-9.
- 16 Ettlinger PR, Freeman GK. General practice compliance study: is it worth being a personal doctor? *BMJ* 1981;282:1192-4.
- 17 Nazareth I, King M. Decision making by general practitioners in diagnosis and management of lower urinary tract symptoms in women. *BMJ* 1993;306:1103-6.
- 18 BMA General Practitioners Committee. *Primary care trusts: implications for general practice*. BMA: London, 2000. (Accepted 5 July 2000)

## Commentary: A patient's perspective of continuity

Sally Brampton

From a patient's perspective, I cannot emphasise too strongly the importance of personal continuity. I attend a large practice, which has five general practitioners and a high turnover of doctors. Recently, I had reason to question the notion of personal continuity.

Briefly, in late 1988 I began to have debilitating joint and muscle pains. I felt tired, depressed, bloated (I had put on more than a stone in weight that I could not shift), and constantly cold. I was so cold that I frequently sat in hot baths for up to an hour to increase my body temperature. I decided to see my doctor. As

the waiting time for an appointment with my own doctor was about a week, I decided I would visit the doctor with the earliest appointment. A blood test was conducted. I had a high white cell count, and it was assumed that I had an infection. Antibiotics were prescribed. At the time it was mentioned that my thyroid was marginally underactive and that it should be checked after six months.

The antibiotics had no effect. The symptoms continued, including the joint and muscular pains. At times the pains were so severe that I took painkillers

139 Randolph Avenue, London W9 1DN  
Sally Brampton patient.  
salb@globalnet.co.uk