

**An Investigation of the Barriers Faced by Older People when Accessing
Dental Services in a Rural Community in North East England**

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Abstract

The proportion of older people within the UK population is increasing. This is a diverse group from varying socioeconomic backgrounds and who also exhibit a broad spectrum of dependence. The planning and provision of appropriate oral healthcare should be an important consideration for decision makers for this growing sector of society.

This research was carried out in two phases; the first phase was used to explore the beliefs, values and priorities of older people regarding their oral health and it also examined the barriers faced by older people when accessing dental care services in a rural setting. The second phase investigated how health care professionals involved in providing care for older people viewed local dental services and it looked more closely at how older people use dental services in a rural setting. Using information gathered throughout the study the aim was to develop strategies to improve the oral health of over 65s where necessary.

The research highlighted the importance of oral health related quality of life for older people. Barriers such as cost and difficulties with travelling, particularly within a rural setting, were raised, however, older people often found ways of coping with these. Emotional barriers and the impact of the life course were more difficult to overcome and greatly influenced current dental visiting habits. Older people placed importance on trust, professionalism and building up a relationship with their dentist.

Local health care service providers also highlighted the close relationships built up with patients in these small communities. However, their work was often constrained by current NHS policy; they are bound by rules and regulations which restricted their practice.

Commissioning dental services for older people in a rural setting is challenging. Services should be based on the needs of this group and in order to be effective good linkage between services is necessary.

Dedication

This thesis is dedicated to the memory of the The Boys, my nephews

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Table of Contents

Chapter 1. Introduction and Study Context.....	1
1.1 Introduction.....	1
1.2 Study Context.....	3
1.2.1 Teesdale.....	3
1.2.2 Health Care Services in Teesdale.....	4
1.2.2.1 Oral Health Care Services.....	4
1.2.2.2 Medical Care Services.....	5
1.2.3 Oral Health in the North East of England.....	6
 Chapter 2. Literature Review.....	 10
2.1 Search Strategy.....	10
2.2 Population Ageing.....	10
2.3 Trends in Ageing.....	11
2.4 The Ageing Population.....	12
2.5 Older People in Rural Communities.....	14
2.5.1 Poverty and social exclusion.....	15
2.5.1.1 Environmental Factors.....	17
2.5.2 Social Factors.....	18
2.5.3 Transport.....	19
2.5.4 Access to services in rural areas.....	20
2.5.5 Rural Proofing.....	21
2.6 Older People and Health.....	22
2.6.1 Models of Health and Disability.....	22
2.6.2 Successful Ageing	25
2.6.3 Successful Ageing and Compression of Morbidity In relation to Oral Health.....	27
2.6.4 Health Inequalities and Older People.....	29
2.7 Older People and Disease.....	30
2.7.1 Impacts of older people and disease.....	31
2.8 Older People and Oral Health.....	32
2.9 Older People, Oral Disease and Tooth Loss.....	33
2.9.1 Gingivitis and Periodontal Disease.....	33
2.9.2 Caries.....	34
2.9.3 Xerostomia.....	35
2.9.4 Oral Cancer.....	36
2.9.5 Tooth loss, Dentures and Denture Related Conditions.....	36
2.10 The relationship between Oral Health, General Health And Well Being in Older People.....	37
2.10.1 Dietary Impacts.....	37
2.10.2 Oral Health Related Quality of Life.....	39
2.10.3 Impacts of Oral Health on Quality of Life.....	42
2.11 Delivery of Health Care.....	44
2.11.1 The history of NHS dentistry and the changes it has	

undergone.....	45
2.11.2 Provision of Oral Health Care: General Dental Services.....	48
2.11.3 Provision of Oral Health Care: Salaried Dental Services.....	50
2.11.4 Provision of Health Care and Oral Health Care For Older People.....	52
2.12 Dental Service Utilisation among Older People.....	53
2.12.1 Normative need, Perceived need and Propensity.....	55
2.12.2 Defining Access.....	58
2.13 Barriers faced by older people when Accessing Dental Services.....	59
2.13.1 Transport.....	59
2.13.2 Cost.....	60
2.13.3 Fear.....	60
2.13.4 Reduced mobility.....	61
2.13.5 Attitudes towards health care.....	62
2.13.6 Lack of perceived need.....	63
2.13.7 Lack of social support.....	64
2.13.8 Availability of services.....	65
2.13.9 Lack of information.....	65
2.14 Models for overcoming barriers to Accessing Dental Services.....	67
2.14.1 Multidisciplinary teams.....	67
2.14.2 Mobile dental units.....	69
2.14.3 Domiciliary care.....	70
2.14.4 Travel schemes.....	71
2.15 Other models of oral health care.....	72
2.15.1 Dental services in the USA.....	72
2.15.2 Dental Services in Australia.....	74
2.15.3 Dental services in Canada.....	75
2.16 Conclusion.....	75
Chapter 3. Methods and Methodology.....	78
3.2 Aim and Objectives.....	78
3.2 The Research Process.....	79
3.2.1 Phase 1: Older people's oral health beliefs, values and barriers to accessing dental care.....	79
3.2.1.1 Phase 1 - Criteria for selecting participants aged 65+.....	81
3.2.1.2 Phase 1- Sampling and Recruitment of Participants Aged 65+.....	82
3.2.1.3 Phase 1 – Sampling and Recruitment of local dentists.....	84
3.2.1.4 Phase1 – Data Analysis.....	85
3.2.2 Phase 2: Providing oral health care services for older people in Teesdale.....	86
3.2.2.1 Phase 2 – Recruitment of Health Care Professionals..	88
3.2.2.2 Phase 2 – Recruitment of participants aged 65+.....	89
3.2.2.3 Phase2 – Data Analysis.....	90

3.3 Justification of Approach.....	91
3.3.1 Epistemology and Ontology.....	92
3.3.2 Ethical Issues.....	94
3.3.3 Confidentiality and Anonymity.....	96
3.3.4 Sampling.....	97
3.3.4.1 Sampling Considerations.....	98
3.3.5 Qualitative methods.....	99
3.3.5.1 In depth interviews.....	98
3.3.5.2 Practical considerations for interviewing.....	101
3.3.5.3 Focus group.....	102
3.3.5.4 Practical considerations for focus groups.....	104
3.3.6 Topic guides.....	105
3.3.7 The researcher's role.....	106
3.3.8 Data analysis.....	108
3.3.9 Quality of qualitative research.....	109
3.3.9.1 Validity and Generalisability.....	110
 Chapter 4. Phase 1: The oral health beliefs and priorities of older people in Teesdale and the Barriers they face when Accessing Dental Care: Results.....	 114
4.1 Introduction.....	114
4.2 Oral health history and context.....	116
4.2.1 The historical context.....	116
4.2.2 Oral health behaviours in an historical context.....	117
4.2.3 Dental visiting patterns in an historical context.....	118
4.3 Current oral health priorities for older people.....	119
4.3.1 Attitudes Towards The presence of teeth and dentures.....	119
4.3.2 Attitude towards tooth loss.....	122
4.4 The present day: Oral health and dental services in the context of a rural setting.....	126
4.4.1 Social life, support networks and medical services.....	126
4.4.2 Expectations of a dental service.....	129
4.5 Barriers.....	131
4.5.1 Lack of perceived need.....	132
4.5.2 Cost.....	133
4.5.3 Travel and transport issues: Getting to the dental practice.....	136
4.5.4 Environmental factors.....	138
4.5.4.1 Access and choice.....	140
4.5.5 Emotional factors.....	143
4.5.5.1 The dentist-patient relationship.....	145
4.5.6 The dental system.....	147
4.5.7 Lack of social support.....	150
4.6 Summary.....	150
 Chapter 5. Phase 1: The oral health beliefs and priorities of older people in Teesdale and the Barriers they face when Accessing Dental Care: Discussion.....	 152
5.1 Availability.....	152
5.2 Affordability.....	155
5.3 Accessibility.....	156
5.4 Accommodation.....	158

5.5 Acceptability.....	159
5.6 Additional themes.....	161
5.6.1 <i>The Historical Context</i>	161
5.6.1.1 <i>Dental Visiting in an Historical Context</i>	163
5.6.2 <i>Attitudes towards the presence of teeth and dentures</i>	163
5.6.2.1 <i>Attitude towards tooth loss</i>	164
5.6.3 <i>Lack of Perceived Need</i>	165
5.7 Summary.....	167

Chapter 6. Phase 2: Local dental Services and Providing Care for Older People: Results.....

6.1 Introduction.....	170
Professionals.....	174
6.2.1 <i>The new dental contract</i>	174
6.2.2 <i>Rurality and Access</i>	178
6.2.3 <i>Treating Older Patients</i>	182
6.2.4 <i>The dental skill mix</i>	183
6.2.5 <i>Urgent Care Dental Service Provision</i>	184
6.2.6 <i>The changing NHS</i>	190
6.2.7 <i>Patients presenting to GPs with soft tissue mouth lesions</i>	192
6.2.8 <i>Summary for health care professionals</i>	193
6.3 Phase 2 Round 1 Focus Groups with Older People.....	195
6.3.1 <i>Standards of current dental care provision</i>	195
6.3.2 <i>Explaining dissatisfaction with existing services</i>	197
6.3.2.1 <i>Lack of Choice</i>	197
6.3.2.2 <i>Lack of Continuity of Care</i>	198
6.3.2.3 <i>Rurality</i>	198
6.3.3 <i>Patients' suspicions and dentists' motivations</i>	200
6.3.4 <i>Ageing</i>	202
6.3.5 <i>Dentistry as part of the NHS</i>	202
6.3.6 <i>Reasons for accepting current levels of dental care</i>	203
6.3.7 <i>How the over 65s felt dental services could be improved</i>	204
6.3.8 <i>Summary for the over 65s</i>	206
6.4 Phase 2 Round 2 Focus Groups – Respondent Validation.....	207
6.4.1 <i>Phase 2 Round 2 Focus Group – The over 65s</i>	209
6.4.2 <i>Phase 2 Round 2 Focus Group – The health care Professionals</i>	212
6.5 Summary.....	214

Chapter 7. Phase 2: Local dental Services and Providing Care for Older People: Discussion.....

7.1 Introduction.....	215
7.2 The views of the health care professionals, the service providers.....	215
7.2.1 <i>The changing NHS</i>	215
7.2.2 <i>Treating Older Patients</i>	217
7.2.3 <i>Local Oral Health Care Services</i>	217
7.2.3.1 <i>Urgent care dental services</i>	217
7.2.3.2 <i>The dental skill mix</i>	219
7.3 The views of the over 65s, the service users.....	220
7.3.1 <i>Rurality and Lack of choice</i>	221
7.3.2 <i>Attitudes towards dentists and the dental system</i>	222
7.3.3 <i>Raising concerns and making changes</i>	223

7.4 Summary for Phase 2.....	224
Chapter 8. Overall Discussion.....	225
8.1 Implications for Method.....	225
8.1.1 <i>A Reflexive account of the research process</i>	225
8.1.2 <i>Limitations of method</i>	227
8.1.3 <i>The strengths of this study</i>	228
8.2 Implications for Oral Health of Older People.....	230
8.3 Implications for commissioning or oral health care and other services.....	231
8.3.1 <i>Factors to consider when commissioning appropriate Services</i>	231
8.3.2 <i>The dental market in a rural setting</i>	233
8.4 Summary.....	236
Chapter 9. Conclusions and Recommendations.....	237
9.1 Conclusions.....	237
9.2 Recommendations.....	238
9.3 Further Research and Dissemination.....	243
List of Appendices.....	244
Appendix A – Map of Teesdale.....	245
Appendix B – Favourable Ethical Opinion – Phase 1.....	247
Appendix C – Favourable Ethical Opinion – Phase 2.....	251
Appendix D – R & D Favourable Opinion – Phase 1.....	255
Appendix E – R & D Favourable Opinion – Phase 2.....	258
Appendix F – Phase 1 Topic Guide: Over 65s.....	261
Appendix G – Phase 2 Topic Guide: Focus group with GPs.....	264
Appendix H – Phase 1 Participant information Sheet: Over 65s.....	267
Appendix I – Phase 1 Participant Information Sheet: Dentists.....	273
Appendix J – Phase 1 Consent Form.....	277
Appendix K – Raw Data: Oral Health Metatheme.....	279
Appendix L – Phase 2 Participant Information Sheet: GPs.....	285
Appendix M - Phase 2 Participant Information Sheet: Dentists.....	291
Appendix N – Phase 2 Participant Information Sheet: District Nurses.....	297
Appendix O - Phase 2 Participant Information Sheet: PCT Staff.....	303
Appendix P - Phase 2 Participant Information Sheet: Over 65s.....	309
Appendix Q – Phase 2 Consent Form: 65+.....	317
Appendix R – Phase 2 Consent Form: Health Care Professionals.....	320
References.....	323

List of Maps

Map 1.1 One NHS Dental Contract serving Teesdale.....	6
Map 1.2 All dental practices within County Durham.....	7
Map 1.3 GP practices in County Durham.....	8

List of Figures

Figure 2.1 WHO Conceptual Model of Health.....	40
Figure 2.2 A model of oral health.....	41
Figure 2.3 Priorities for Public investment in oral health.....	50
Figure 2.4 Andersen's Emerging Model of Health Service Use.....	54
Figure 3.1 Sources of data and the research process.....	80
Figure 5.1 How the barriers which emerged fit into Penchansky and Thomas's model of access.....	153

List of Tables

Table 4.1 Table showing key characteristics of participants aged 65+ involved in Phase 1.....	115
Table 6.1 Table showing key characteristics of participants aged 65+ involved in Phase 2.....	172

List of Boxes

Box 6.1 Initial Ideas for Improving Local Oral Health Care Services.....	173
Box 6.2 Final Proposals for Improving Oral Health Care Service Delivery.....	208

Chapter 1. Introduction and Study Context

1.1 Introduction

In 2007 access to dental services for older people living in a rural area of County Durham was perceived as problematic by County Durham and Darlington PCT. As a result funding was made available through a charitable trust to investigate how older people access dental services in Teesdale and the barriers they may face when doing so.

The idea for this project already existed when I started the research; however, the scope of the project was left fairly open. The supervisory team along with a local consultant in Public Health had originally thought that the project would involve developing new models of providing oral health care for older people, possibly working around flexible appointment systems and using a mobile dental unit.

The investigation focused on older people because there is a high percentage of older people in Teesdale. This includes the local population of older people, and Teesdale is also a popular location for people to retire to, with new retirees choosing to live there. Older people may have particular problems accessing dental services for several reasons including lack of mobility, complex medical history and lack of social support.

I decided to concentrate on independent-living older people because there has already been much research regarding the oral health of dependent older people. Services can be provided for older people in residential care differently, for example through screening programmes, therefore this group may not have the same difficulties in accessing care as those who are living independently.

The aim of this study was to explore how older people access dental services within a rural setting and to use the information gathered to develop methods of improving access to dental services for older people in a rural area in the North East of England. We were not given any data from the PCT in evidence of the assumption that older people did have difficulties in accessing dental care. Therefore, the first objective was to discover whether this assumption was

correct. As there was little existing information on how older people access dental care in a rural setting we decided to use exploratory methods in which a qualitative research design was deemed appropriate. The study is divided into 2 phases and the qualitative methods used during the study include in-depth interviews and focus groups. Phase 1 uses in-depth interviews to gather detailed information which helps to set the context for the project. The objectives in Phase 1 were to explore the oral health beliefs and values older people have regarding their oral health and to further explore any barriers which exist to accessing oral health care services. The data from Phase 1 show that barriers do exist around accessing dental care; however, these barriers are often personal and emotional barriers, such as older people's relationship with their dentist and the impact of earlier dental experiences. The problems went beyond simple availability and accessibility of services in a rural area. Therefore, providing an increased level of service may not necessarily result in an increased uptake of services by older people.

At this point the direction of the project changed from the initial idea of increasing services for older people to finding ways of improving local services that really would make a difference to the local older population. This second phase of the study focused on service provision from two perspectives; service providers and service users. Phase 2 uses focus groups to explore service provision and use; this method was useful in generating ideas for how local dental services could be improved. The data from Phase 2 show how older people utilised health care services in this rural setting, for example, the participants felt that people in rural communities rely heavily on their GP and GPs were often used as a first port of call for all problems, including dental problems. Phase 2 also adds detail on how health professionals deliver health care services in a rural setting and highlights the difficulties posed by the geographical location and the systems in which health care professionals operate.

The overall results of this study highlight that for some older people in this rural setting barriers exist to accessing oral health care. These barriers are contextual and are related to their life-history, rural setting and geographical location. The results of the study also highlight some very practical ways in

which service delivery could be improved at various levels and there are implications for commissioning of dental care services and for oral health. For example, the current mobile unit is an oversubscribed service, yet it has no set criteria for its use. An audit of this service and setting criteria for its use may help to alleviate problems with access in the more remote areas of Teesdale. There are also existing resources which are under used, for example, the dental surgery within the local community hospital. Commissioning of services should take this into consideration and utilise all existing resources as well as possible. The following section gives more detail about the area in which this study was conducted.

1.2 Study Context

1.2.1 Teesdale

The area of interest in this study is Teesdale; this is a rural area of County Durham in the North East of England, a third of which lies in the North Pennines. Teesdale describes the area that surrounds the upper part of the River Tees, from its source in the hills west of Darlington to where the river broadens out into the Tees Valley. It is an area of outstanding natural beauty and so is a popular destination for tourists. It has woodland areas, waterfalls, historic market towns and picturesque villages (see Appendix A: Map of Teesdale).

Barnard Castle is the largest town in Teesdale; it is an historic market town and is the main hub. The other population centres are Middleton-in-Teesdale, Staindrop, Cockfield and Evenwood; with the rest of the population spread thinly over many small communities in this rural area. Teesdale is often seen as a relatively prosperous area, however, as in many rural areas, the figures can disguise the deprivation that exists. The majority of people in Teesdale have a good quality of life, however, there are some residents living in pockets of deprivation, these are often too small to register on indices of deprivation which may result in these areas being overlooked when determining need and allocating resources (Working Together for Teesdale - Teesdale Partnership Sustainable Community Strategy 2021, 2007).

The population of Teesdale is 24,457, 5000 (20%) of whom live in Barnard Castle (Office for National Statistics, 2004). 21.1% of the population of Teesdale is aged 65 and over, which is higher than the national average of 16.4% (2011 Census: Population and Household estimates for England and Wales). This area often attracts recent retirees, because of its natural beauty and the lifestyle it can offer. However, young people often move out of the area to continue their education and do not return. As a result of these factors, and also the fact that, in general, mortality and fertility rates have decreased, there is a high proportion of over 65s.

Barnard Castle has many amenities, a small high street with a range of shops, cafes, banks and health care services. Transport links to Barnard Castle from the surrounding parts of Teesdale are very poor. Local travel and transport was investigated by Age Concern in 2007; in their report 'Getting Around' they report that from some of the villages, such as Copley, Woodland and Gainford there is no direct bus to Barnard Castle. People can get a bus to one of the bigger villages, such as Cockfield, and then change onto another bus from there to Barnard Castle, but the services can be very irregular (Ziegler, 2007).

1.2.2 Health Care Services in Teesdale

The following section documents the primary care dental and medical services available locally.

1.2.2.1 Oral Health Care Services

At the beginning of this study there were two NHS dental contracts within Teesdale, these were both located in Barnard Castle. This was reduced to just one NHS dental contract shortly after the project began due to the retirement of one of the local dental practitioners. At the one remaining NHS dental practice serving the whole of Teesdale there are six performers (dentists) and the number of Units of Dental Activity (UDAs) commissioned for the year 2012/13 was 24,521. This practice is not commissioned to provide a domiciliary service. Map 1.1 shows the one NHS dental contract and the area of Teesdale which it serves is highlighted. Also located in Barnard Castle is one private dental

practice serving Teesdale. It is a single surgery practice with one dental practitioner working there.

The County Durham and Darlington Community Dental Service also operate out of the Richardson Hospital in Barnard Castle. There is a single dental surgery at the hospital and here they provide dental care for children and for patients with special or additional needs. Specialist care can be provided for patients with learning difficulties, physical disabilities, mental health problems, complex medical problems, social/emotional/behavioural problems, patients with severe phobias, older people who are housebound, older people in residential care or those requiring domiciliary care. There are no UDA targets specified for this service.

The Primary Care Trust (PCT) Salaried Dental Services provide a mobile dental service which visits the village of Middleton-in-Teesdale one day per week. There is no UDA target for this service. Data for the mobile unit for the year 2010 - 2011 show that 28 clinics were held in Middleton-in-Teesdale, an average of 13 patients were seen per clinic and a total of 365 appointments were completed throughout the year. Although there is no UDA target, the amount of dental treatment carried out during that year was approximately 580 UDAs. In addition to these local services there is also a contract within County Durham which provides domiciliary visits for the entire county, including Teesdale. This service can provide routine treatment for those in residential care and the housebound and is available on an urgent care basis for the housebound.

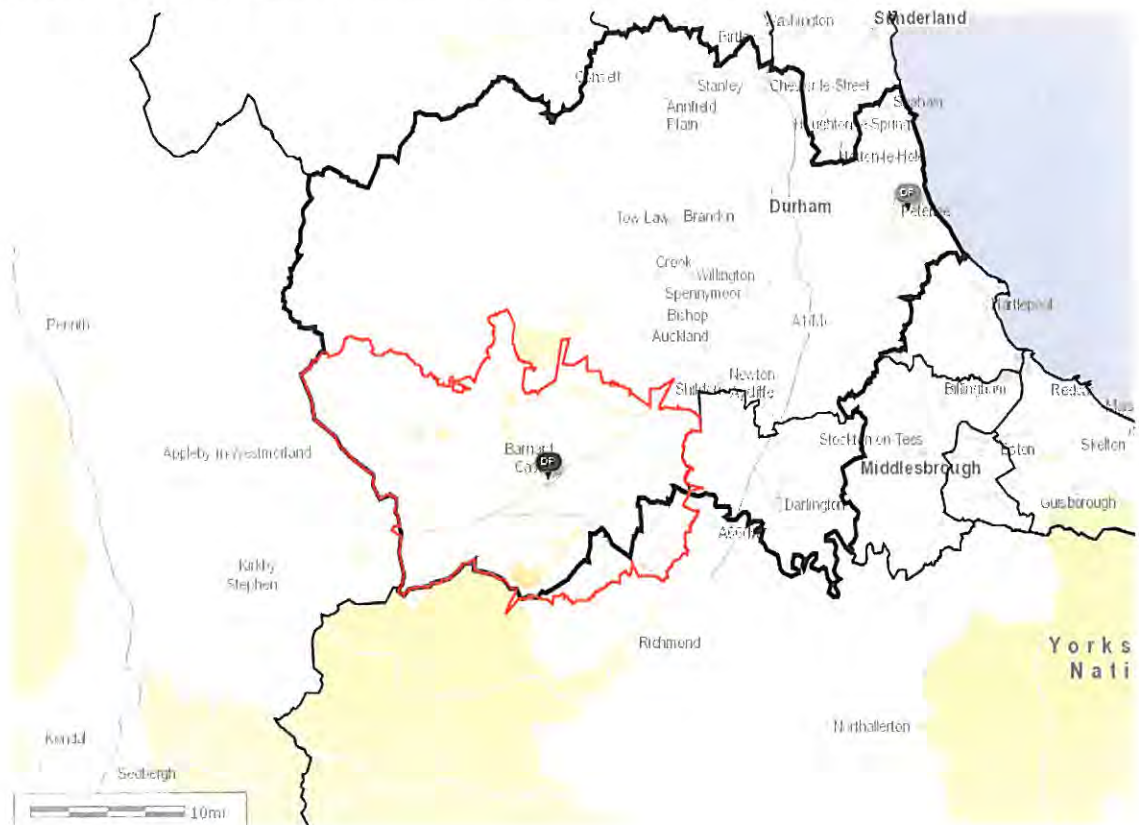
Map 1.2 shows the distribution of all NHS dental practices in County Durham, most of which are some distance away from Teesdale. The nearest of these would be those located in the Wear Valley, where there are nine dental contracts in places such as Bishop Auckland, Crook and Willington.

1.2.2.2 Medical Care Services

There are several GP practices located within Teesdale; the majority of these are in the east of the region. There is a large GP practice in Barnard Castle and other smaller surgeries in some of the villages including Middleton-in-Teesdale,

Butterknowle, Staindrop, Cockfield and Evenwood. Map 1.3 shows the distribution of GP practices for County Durham. Barnard Castle also has a community hospital, the recently built New Richardson Hospital.

Map 1.1 One NHS Dental Contract serving Teesdale (Strategic Health Asset Planning and Evaluation (SHAPE) www.shape.dh.gov.uk)



1.2.3 Oral Health in the North East of England

Data from the Adult Dental Health Survey (ADHS) 2009 showed that the proportion of adults in England who were edentate has fallen; from 28% in 1978 to 6% in 2009. Data from the ADHS 2009 is available for each Strategic Health Authority and they show that in the North East 8% of adults are edentate which is slightly higher than the national average (Fuller *et al.*, 2011). Overall for England, Wales and Northern Ireland the prevalence of caries has decreased from 46% in 1998 to 28% in 2009 and this is reflected across all age groups. In 2009 among the population of England 31% had obvious tooth decay in either the crowns or roots of their teeth and again in the North East this was slightly higher at 34% (White *et al.*, 2011). The proportion of adults in England with

active root decay, which is associated with increased age, was 7% and for the North East this was also 7% (White *et al.*, 2011). The 2009 survey showed that 97% of dentate adults aged 45 to 54 had a filled tooth and between 55% and 59% of adults aged 45 - 74 had crowns (Steele *et al.*, 2011). This restorative work, which may be very complex, will need to be maintained as the population ages.

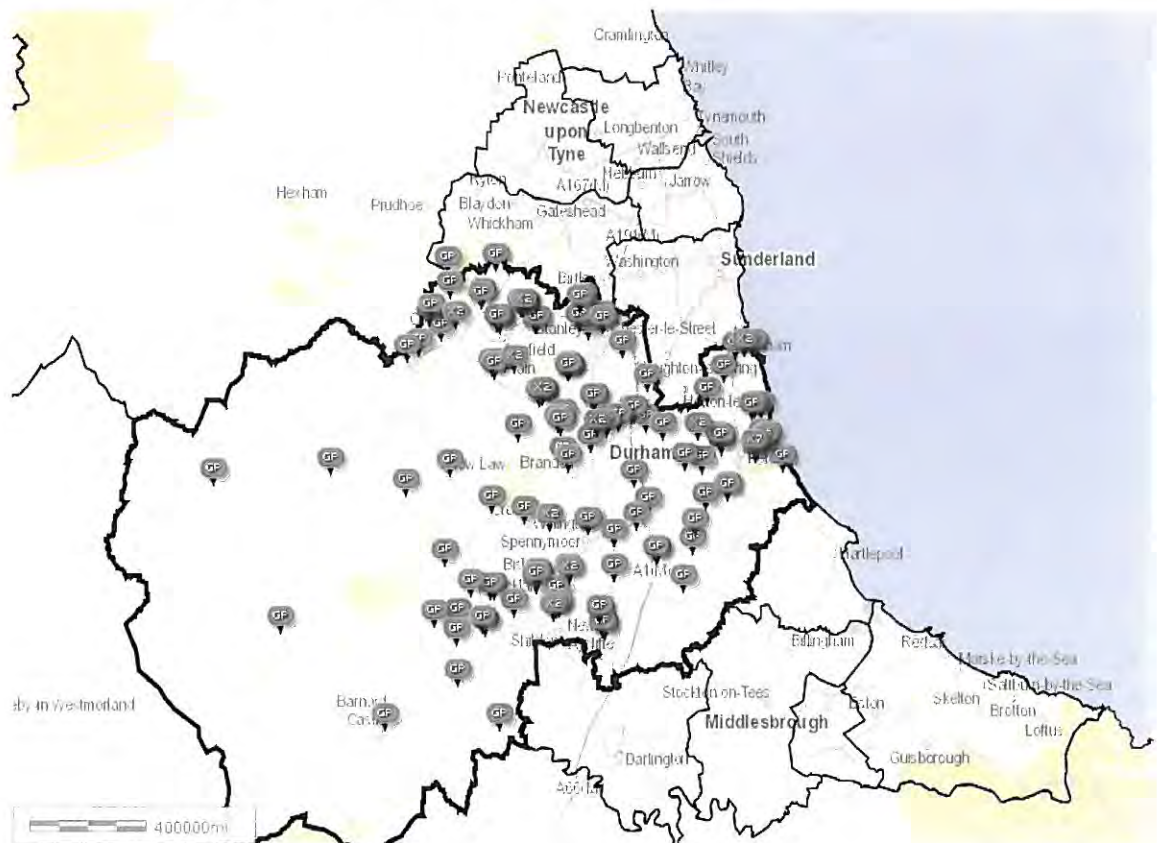
Map 1.2 All dental practices within County Durham (Strategic Health Asset Planning and Evaluation (SHAPE) www.shape.dh.gov.uk)



Regional data from the Adult Dental Health Survey of 2009 show that the North East of England is not very different to the rest of the population. However, within the North East there are some very different geographical regions. Rural areas such as Teesdale account for a large proportion of the area, but a small proportion of the population. Here oral health care services are very dispersed and, therefore, difficulties with accessing services were anticipated. These

circumstances may produce differences in the prevalence of dental diseases and tooth loss. In 1996 Steele *et al* carried out a dental survey of older people in three different English communities. Two urban communities were sampled; one in the north and one in the south and a sample was also drawn from an extensive rural area in the north adjacent to the urban community used in the study.

Map 1.3 GP practices in County Durham (Strategic Health Asset Planning and Evaluation (SHAPE) www.shape.dh.gov.uk)



Steele *et al* (1996a) found that not only did differences exist between the north and the south, but there were also differences between the two northern samples, that is differences between the urban and rural samples. For example, subjects from the rural area had much more relaxed attitudes towards tooth-

brushing compared to subjects from the other areas. Also the proportion of non-attenders was highest in the rural area, and this was found to increase with age. Steele *et al* (1996a) believed the north/south divide and the subtle differences between the urban and the rural areas resulted from cultural variations with geography, gender and social class (Steele *et al.*, 1996a). Teesdale is a very similar rural area to that used in the study carried out by Steele *et al*, who looked at the adjacent dales of Swaledale and Wensleydale. The differences related to culture and social class may still exist and these may be evident in Teesdale.

The following chapter goes on to look at the literature surrounding ageing, the oral health of older people, rurality and barriers to accessing dental care.

Chapter 2. Literature Review

This literature review will report on the changing demography in the UK and the increasing proportion of people aged 65 and over. This chapter will describe the health and oral health of the population aged 65 and over and it will explore the issues surrounding accessing dental services among this group of patients and, in particular, how living in a rural area impacts on this. Finally, methods of delivering oral health care to the increasing numbers of older people will be investigated.

2.1 Search Strategy

The electronic databases Ovid, Embase and Scopus were used to search the literature for this review. Ovid allows searches from 1950 onwards, Embase from 1980 onwards and Scopus from 1960 onwards. Advice and training was received from Newcastle University's Walton library.

Each concept searched is mapped by the database in order to find relevant journal articles. Search terms were compiled for subjects, for example, the subject of older people's health was searched for using the terms 'health', 'well-being' and 'general fitness'. And, when searching for articles related to older people's oral health, the terms 'oral health', 'oral hygiene', 'caries', 'periodontal disease' and 'oral diseases' were used. The resulting sets were then limited to 'people aged 65 and over'; these sets were then limited again to 'rural'.

2.2 Population Ageing

The demography of the UK has changed during the 20th century; the proportion of people aged 65 and over has increased and is likely to increase further (2011 Census - Population and Household Estimates for England and Wales, 2012). Old age is often accompanied by disability and illness, placing demands on health and social care services (Lunenfeld, 2008); this demand is set to increase as the number of older people rises.

It is not only demography which has changed; the dental state of older people is also in a state of flux. The proportion of people aged 65 and over becoming edentulous has decreased and the number of over 65s retaining some natural teeth has increased (Steele *et al.*, 2000). The teeth being retained are often heavily restored (Pine *et al.*, 2001) and maintaining these heavily restored dentitions will be a challenge and the cost of this could have a major impact (Pine *et al.*, 2001).

The proportion of older people in England's rural areas is significantly higher than in urban areas (Delivering For Older People in Rural Areas: a good practice guide, 2005) but accessing services may be particularly difficult in rural areas due to limited public transport and a lack of local amenities such as shops, post offices and health care services (Wood, 2004). There are also groups of older people, for example, the frail, for whom accessing health care services may be difficult due to reduced mobility (Holm-Pedersen *et al.*, 2005). There are many reasons why some older people do not access dental care services such as lack of perceived need or the costs involved (Lester *et al.*, 1998), these barriers along with others will be discussed in more detail later in this review.

2.3 Trends in Ageing

There is no physiological basis for a clear cut definition of old age and so society has tended to adopt the government's pensionable age or retirement age as the cut-off point (Roebuck, 1979). Therefore, in the UK we have tended to use the age of 60 or 65, however, this may change in the future. Recently there has been much interest in the topic of the age of retirement. In a white paper in 2006 the government laid out its plans to raise its state pension age in line with increases in life expectancy (Department for Work and Pensions, 2006).

The UK, like many other developed countries, has a growing proportion of the population who are aged 65 and over. In 2011 the proportion of the population of England and Wales aged 65 and over was 16.4%, the highest seen in any census to date (2011 Census - Population and Household Estimates for

England and Wales, 2012). Population ageing is a worldwide phenomenon and is a result of several factors: a decline in both mortality and fertility rates; successful combating of infectious diseases at young ages and improved treatment of chronic diseases associated with old age resulting in a reduction in old age mortality (Christensen *et al.*, 2009). The combination of decreased mortality rates and decreased fertility rates has resulted in an increasing proportion of people aged 65 and over and a declining proportion of people aged under 16. In fact, it is estimated that by 2050, for the first time in human history, there will be more people in the world aged 65 and over than aged 15 and under (Lunenfeld, 2008). In particular, we are seeing increasing numbers of the 'oldest old'; in 2001 there were 340,000 residents aged 90 and this figure had risen to 430,000 by 2011 (2011 Census - Population and Household Estimates for England and Wales, 2012). Population ageing will continue, as those born during the baby boom following the Second World War and during the 1960s baby boom continue to age and reach 65 years and over. In terms of increases in the number and proportion of older people in the UK population, the percentage of persons aged 65 and over increased from 15% in 1985 to 17% in 2010, an increase of 1.7 million people. By 2035 it is projected that those aged 65 and over will account for 23% of the total population (Office for National Statistics, 2012a).

2.4 The Ageing Population

As individuals age they may change physically, socially and psychologically resulting in differences between younger and older age groups. There are also age differences relating to time. Cohort effects describe variations in characteristics among groups of people who have shared experiences; they reflect the influences of historical time that are specific for a group of people born within a specific time period (Victor *et al.*, 2007). An excellent example is the baby boom generation of the 1940s, these are people born after the Second World War, who grew up during the late 1960s and early 1970s, and are now entering old age. This baby boom generation have much less in common with previous generations; their adult lives were formed during the 1960s, a time of great change and transformation; indeed it has been said that the baby boom

generation broke the mould of the modern lifecourse (Gilleard and Higgs, 2002). This generation have had access to better education than previous generations and have had healthier childhoods with access to free health care, as the National Health Service was introduced in 1948. This large cohort is now reaching 'old age' and retirement, and this creates challenges for society as the balance is shifted between the size of the working age population and the size of the non-working age population. This change in the population poses questions about the provision of care for the increased number of older people: who is going to provide it and who is going to pay for it? (Tinker, 2002).

In Britain concern has already arisen regarding the 'burden' of ageing and the future costs of population ageing (Walker, 1990). Older people are more likely to have diagnosed disease and use more health services. The economic implications of an ageing population relate to its effect on health and welfare spending and also to productivity and economic growth. Economic growth could be slowed down as there will be a decreased workforce, but an increased spending on health care (Harford, 2009). The retirement of the baby boom generation will also increase the pressure on the health care system itself as there is likely to be a decline in the numbers of working age health care professionals, including dentists. In order to curtail the potential problems with economic growth and the provision of health and social care the government have plans to alter the state pension. The issue of state pensions has been widely debated and the government are set to increase the pensionable age, which was 65 for men and 60 for women, to 65 for both men and women by 2020. Then with gradual increases the pensionable age will increase to 68 for both men and women by 2046 (Directgov, 2010).

The ageing population could put pressures on society, and it has been referred to as a burden. However, there is an alternative view, rather than seeing 'old age' as a period of decline; it can be described as the 'third age'. Laslett (1989) defined this as the time following retirement, when people have finished raising a family and are still healthy and can enjoy greater freedom (Laslett, 1989). Older people can make a valuable contribution to society; many retired people often spend a lot of time and money helping their offspring establish and maintain their families. Older people now frequently contribute towards child

care of their grandchildren for working parents; grandparents can provide valuable emotional and financial support to their families (Askham *et al.*, 2007). Taking up volunteer and charity work is another valuable contribution many older people make to society. Gabriel and Bowling (2004) found that taking up volunteer work was a good way for retired people to remain active and involved in society. In their study older participants felt doing voluntary work helped them to feel valued and that they were giving something back to society (Gabriel and Bowling, 2004). With increased longevity people can now spend more years in retirement and future cohorts of retirees may be more active, have better health, be better educated and have more positive attitudes. In the future the nature of employment is likely to change with people working longer, or taking up part-time employment at a higher age than is common today (Kunemund and Kolland, 2007). Even where older people are not in paid employment they may still have family responsibilities in terms of caring for grandchildren, or they may be in unpaid voluntary work positions. Retirement can also be viewed as a well-deserved phase of life, where leisure activities can be enjoyed (Kunemund and Kolland, 2007).

2.5 Older People in Rural Communities

There has been a recent trend in affluent retired people and long distance commuters moving into rural areas (Wood, 2004; Milne *et al.*, 2007). Villages where most people own their own homes are likely to attract those who can afford high house prices and this type of village is likely to attract newly retired couples (Manthorpe *et al.*, 2004). There has also been a loss of younger people (those aged 16-24) from rural areas who are moving to urban areas, often to seek employment or further education (Champion and Shepherd, 2006). These trends have resulted in the growth of the older rural population. The 65 and over age group now represents 18.3% of the rural population, compared with 15.9% of England as a whole (Delivering For Older People in Rural Areas: a good practice guide, 2005). An ageing population has implications both for the size and range of rural health and social care services required by older residents in future years (Wood, 2004).

2.5.1 Poverty and Social Exclusion

Poverty covers many factors, such as lack of education, inadequate housing, unemployment, low income and social exclusion (Haines *et al.*, 2000). Each of these limits choices and opportunities and can threaten health (Haines *et al.*, 2000). The effect of poverty on older people can be significant; the state pension in the UK is insufficient on its own to provide an income above the poverty threshold (Gilbert *et al.*, 2006). Yet around 1 in 10 pensioners in private households in rural areas rely on the state pension and state benefits alone; two thirds of these older person households consist of only a single person and these people are particularly likely to experience poverty (Gilbert *et al.*, 2006).

It has generally been assumed that living in the countryside is good for your health and well-being (Wood, 2004). However, the reality of living in a rural area can be very different. Older people are the largest group experiencing sustained poverty in rural England (Milne *et al.*, 2007). Housing in rural areas can be expensive and the cost of living can be high (Wood, 2004). Rural communities often find the affluent and poor living close by each other. The result can be that rural poverty, social exclusion and levels of ill health among groups such as the elderly are often hidden (Wood, 2004).

The relationship between socio-economic status and oral health is well established (Donaldson *et al.*, 2008). Poverty can affect access to health care, including dental care, as the cost of treatment and the cost of transport, particularly in rural areas, may act as barriers to receiving necessary care (Sisson, 2007). Donaldson *et al.* (2008) suggested that the link between socio-economic status (SES) and the number of sound teeth in adults in the UK is partially explained by the pathway 'SES > barriers to dental attendance > dental attendance > number of sound teeth' (Donaldson *et al.*, 2008). Therefore, rural deprivation may act as a barrier contributing to poor oral health for some older people, just as deprivation anywhere would impact on health.

Social exclusion has been described as the relationship between 4 components: impoverishment, or exclusion from adequate income or resources; labour market exclusion; service exclusion; and exclusion from social relations (Gordon *et al.*, 2000). In 2007 Levitas *et al.* defined social exclusion as:

A complex and multi-dimensional process. It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole (Levitas *et al.*, 2007).

The concept of social exclusion is useful in exploring disadvantage as it goes beyond traditional measures, such as poverty and deprivation (Scharf *et al.*, 2005). In this study it was important to look beyond poverty because in the rural area of this study pockets of deprivation exist, however, they are often masked by more prosperous surrounding areas. Also, in rural areas limited access to services can be common and looking at social exclusion can highlight these issues which may disadvantage rural residents and could be overlooked when using simple measures of poverty.

However, the concept of social exclusion has been criticised, for example, Silver (1994) argued that because social exclusion is difficult to define and there are many definitions for it, it can mean different things to different people. She also raised concerns about labelling individuals or groups of people as socially excluded; suggesting that targeting social policies towards the socially excluded could lead to stigmatisation by the more privileged (Silver, 1994).

Much of the existing literature on social exclusion of older people in the UK is based on studies of urban populations. Scharf *et al* (2005) observed that older people in disadvantaged urban neighbourhoods are more likely to suffer chronic ill health; they are disadvantaged in terms of their social relations and lack of access to material security (Scharf *et al.*, 2005). They highlighted the use of social exclusion to explore the situation of older people in different environments and found that environmental factors can influence levels of poverty, loneliness and neighbourhood insecurity (Scharf *et al.*, 2005).

2.5.1.1 Environmental Factors

Environmental factors may be of particular significance in a rural setting, and may impact on decision making. Peace *et al* (2011) described the concept of

'Option Recognition' which aims to capture the extent of the influence of environmental factors on decision making. Older people can experience a change in their relationship with place and space and they are also influenced by their life experiences. They may have issues with continuity and change in time and space. However, they may also develop ways of coping with or adapting to any changes that occur (Peace *et al.*, 2011).

When considering the person - environment fit it is possible to see differences between ageing in urban and rural settings. Rural areas are experiencing considerable change; they tend to have a high proportion of older people due to demographic shifts and their social infrastructure is changing with many rural areas having suffered loss of local facilities (Phillipson and Scharf, 2005). Many of the changes to health and social care policy may leave older people in rural areas in a vulnerable position. For example, 'Ageing in Place' may be very difficult for some older frail people, particularly those without family or support networks.

'Ageing in place' has become an important issue in UK health and social care policy in recent years. The basic premise of 'ageing in place' is helping older people to remain living at home with the intention that this will positively contribute to their well-being and result in healthy ageing (Sixsmith and Sixsmith, 2008). There has been a long standing belief that older people do wish to stay in their own homes for as long as possible and that this does benefit health and well-being. However, it could be argued that the ageing in place concept, which has underpinned UK policy for providing care for older people, became popular because of concern over the cost of providing care for increasing numbers of older people (Means, 2007). Essentially little is known about the relationship between the home environment and health or well-being in older people. While Sixsmith and Sixsmith (2008) agree with the general principles of ageing in place, they emphasise the need to consider circumstances and the need to have appropriate housing, housing adaptations and support services. Ageing in place is subjective and living at home for some older people may undermine their quality of life rather than improve it (Sixsmith and Sixsmith, 2008).

Ageing in Place may be more difficult to engender in rural areas. There is little evidence about the extent of rural disadvantage among older people and

therefore it is difficult to establish the circumstances in which older people are living (Scharf and Bartlam, 2006). Deprivation exists in rural areas but is often masked by the more prosperous regions. While exclusion in urban areas tends to become concentrated in particular neighbourhoods, in rural areas it is likely to be spread unevenly and unpredictably across hamlets, villages and small towns (Scharf and Bartlam, 2008). Deprivation and social exclusion could make ageing in place difficult in rural areas, and not necessarily improve quality of life for some older people. However, Scharf and Bartlam (2008) found that, despite the experiencing disadvantage, many older rural people reported having a good quality of life; this may reflect the attitudes and expectations of older rural people and highlights their self-sufficiency (Scharf and Bartlam, 2008).

2.5.2 Social Factors

Many rural communities offer an ideal environment during the third stage of life when an older person is relatively fit, partnered and able to contribute to village life (Milne *et al.*, 2007). In a study of three districts in County Durham many recent retirees were active in contributing to voluntary organisations and running community facilities (Ziegler, 2007). Many rural villages have good community spirit and neighbourliness (Manthorpe *et al.*, 2004) which attracts new retirees. However, there are also many single elderly people in rural areas; this is because the proportions of those who have never married tend to be higher in rural areas (Wenger, 2001) and there are also those who are widowed. As a general trend in the population of older people there are more single or widowed women than men (Ziegler, 2007). For this group of people growing old in a rural setting maybe difficult and they may feel isolated. Isolation may occur for older people who have lived in the same village all their life, if, for example, their children and other relatives have had to move away, perhaps to seek employment (Wenger, 2001). There are also those who retire to the countryside for whom visits from relatives may not be regular or frequent (Wenger, 2001). Social contact for the frail elderly and the housebound may be difficult and there is a risk that they too may feel very isolated. Community networks can provide practical and emotional support for older residents of rural communities. Daily social contact can be important for older people and where

there are no family networks older people may rely on intermittent interactions with neighbours (Walsh *et al.*, 2012). Sometimes these daily contacts can be accessed through person-led services which directly engage with older people in their own home, for example, having the post delivered (Walsh *et al.*, 2012). There is great variety in the communities of rural areas (Manthorpe *et al.*, 2004). The elderly population within these communities will be made up of those who have lived there all their lives and those who have retired there. In Manthorpe's study of the 3 villages in the Midlands, the villages were all close together and yet she found they were all very different in housing tenure and population profiles. How older people feel about living in them depends on their circumstances, for example the differences between the recently retired and active, compared to frail and dependent older people (Manthorpe *et al.*, 2004). Those who take a more active role within their community may feel more socially connected and fulfilled and this may be linked to successful ageing, where active engagement with life is an important contributing factor (Rowe and Kahn, 1997). Successful ageing is discussed in more detail in section 2.6.1. Walsh (2012) found that whether residents from the rural communities in his study were native to the area or newcomers they all recognised the need to make an effort with their rural community, both in terms of socialising with other residents and undertaking some civic responsibility. Participants in the study of rural Ireland and Northern Ireland believed that combating isolation was a mutual process which needed to be led by the community but also required older people to take an active role (Walsh *et al.*, 2012).

2.5.3 Transport

A commonly reported problem in rural areas is lack of transport; public transport may be poor, infrequent, not integrated or non-existent (Wood, 2004). Due to issues surrounding public transport, rural communities are far more reliant on privately owned cars, meaning that the poorest members of society often run their own vehicle, compounding their poverty (Cox, 1999). A recent study of rural older people found that for many the car is an essential expenditure and other areas of spending would be sacrificed before motoring costs (Shergold and Parkhurst, 2012). In her investigation Manthorpe (2004) found that most

rural households owned a car and the majority of those which did not were composed of older women living alone (Manthorpe *et al.*, 2004). This group of elderly single women may feel isolated and socially excluded, and these feelings may prevent them from accessing services, including health care. In a study of people aged 60 and over living in 6 rural areas of the UK it was found that transport to access social activities was not as problematic as transport problems accessing necessary activities. This was usually because social activities were local, involving short distances and much nearer than accessing necessities, such as shops, health services and financial institutions (Shergold and Parkhurst, 2012). Transport problems can assume additional weight when accessing health care services. Accessing primary care can involve expensive taxi fares and for acute care deficient emergency transport is often accepted as part of the reality of rural living (Walsh *et al.*, 2012).

2.5.4 Access to Services in Rural Areas

Rural communities generally have poorer geographical access to services and people living in them often face difficulty in getting to essential services; this is particularly the case for those with decreased mobility (Wood, 2004). Rural areas can suffer from a general lack of service infrastructure: insufficient health and social care services, poor access to inexpensive supermarkets, insufficient banking services and a lack of recreational facilities (Walsh *et al.*, 2012). It is possible that local authorities can assume that if people do not ask for services, they do not need them, and so services are not provided; people do not think they will get anything, and so they do not ask for services, and so on (Wenger, 2001). The 'distance decay' effect which derives from geographical theory could affect use of services in rural areas; this effect refers to the use of services decreasing the further away they are. In rural areas large distances often need to be travelled in order to make use of services, however, distance as a barrier goes beyond purely physical distance. In terms of health care service utilisation the distance between the patient and the service provider is a factor in utilisation behaviour. For example, distance and travelling would be taken into consideration in Andersen's behavioural model of service utilisation

where 'predisposing, enabling and need' factors all play a part in the uptake of services (Andersen, 1995). This model is discussed in more detail later.

Transport and mobility in rural areas of County Durham was investigated on behalf of Age Concern in 2007. The study found that not all the rural villages had access to a GP surgery, and therefore there was a need to travel to a neighbouring village. Relying on public transport was difficult as buses were infrequent. This, in combination with unpredictable waiting times at a surgery, made coordinating appointment times with public transport very challenging and often resulted in further waiting or missed buses (Ziegler, 2007). For those with decreased mobility accessing services in a rural area may be even more problematic.

Access as a concept is discussed in more detail in section 2.12.2

2.5.5 Rural Proofing

The government tries to take into account rural needs and circumstances when developing policies and delivering services, this is known as rural proofing (Commission for Rural Communities, 2007). Therefore, rural proofing should ensure that rural needs are considered during policy making, particularly given the distinctive features of rural areas, with their scattered populations and service issues (Wood, 2004). Policies that should be rural proofed are those concerning levels of service in a rural area, quality of services and access to services. For example, services which should be subject to rural proofing include Post Office services and Local Transport Plans. Proofing should take place at the policy development stage and should involve consultation with those living in the area to obtain their views (Commission for Rural Communities, 2007). Primary Care Trusts (PCTs), which held central primary dental care budgets, should 'rural proof' strategic decisions concerning dental service provision (Commission for Rural Communities, 2007). As commissioning of primary services is set to change in the future, rural proofing should be an important consideration for commissioning boards.

2.6 Older People and Health

When looking at the subject of health we first need to decide what 'health' is. Over the years there have been many definitions of health. In 1948 the World Health Organisation (WHO) defined health as:

'A complete state of physical, mental and social wellbeing and not merely the absence of disease or infirmity'

In 1984 WHO redefined health as:

'The extent to which an individual or group is able, on the one hand to realise aspirations and satisfy needs; and on the other hand, to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not an object of living; it is a positive concept emphasising social and personal resources, as well as physical capacities.'

Health is not only the absence of disease; it is also related to social and psychological wellbeing (Reisine, 1985). This equates well with the modern trend of 'holistic' care and person-centred care in the UK, which has become important, particularly for older people, since the introduction of the National Service Framework (NSF) for older people in 2001 (Department of Health, 2001).

2.6.1 Models of Health and Disability

As the population is ageing increasing concern has developed about the demands this will place on health and social care services. Disability and ill health have previously been considered to be inevitable characteristics of old age, however, this view may no longer be accurate for older people today. In 1980 Fries presented his hypothesis for the 'Compression of Morbidity'. Fries suggested that most illness was chronic and occurred in the later stages of life and that it would be possible to reduce the burden of illness by postponing the onset of the chronic diseases, compressing them into a shorter span at the end of life. However, he emphasised that the length of life is fixed and that death will still occur without disease (Fries 1980).

Life expectancy has increased and a contributing factor has been decline in acute diseases which often led to premature death. For example, diseases such as smallpox, polio, diphtheria and tuberculosis are now well controlled and are no longer major causes of premature death (Fries, 1980). We also have better health education and increased standards of living; these factors, combined with the decrease in infectious diseases, have contributed to the increased proportion of people reaching old age in relatively good health (Allen, 1998c). However, as the acute diseases have declined they have been replaced by chronic diseases such as atherosclerosis, arthritis, diabetes and cancer (Fries, 1980). The onset of these chronic diseases is usually in early life or middle age. These chronic diseases are characterised by sets of risk factors which can be controlled, for example, smoking, diet and exercise. Therefore, it is often possible to prevent or at least postpone the onset of these chronic diseases by reducing the risk factors in the early stages of life. If controlling risk factors was successful then according to Fries it would be possible to compress the period of ill health into a shorter time between the increased age of onset and death and so lengthening the period of healthy life, that is to compress morbidity (Fries, 1980).

The compression of morbidity theory has been criticised on scientific grounds, on political-economic grounds and on ethical grounds. The theory is based on the assumption that life expectancy would slow down and that the average human life span would become fixed. However, we have seen mortality rates decline and in particular we have seen growth in the population of the oldest old (Department of Economic and Social Affairs Population Division, 2002). The theory has also been criticised because of the issues around reducing risk factors. Whilst the management of many chronic diseases has improved, other risk factors have become important, for example we are now seeing a rise in childhood obesity and chronic diseases occurring at earlier ages in developing countries. This suggests that models such as compression of morbidity need to develop and change along with the changing socio-economic status (Kalache *et al.*, 2002). Another problem associated with trying to control risk factors is that it involves people making lifestyle changes and this is not easy to achieve or to measure and subsequently monitor. Also, placing the emphasis on personal

responsibility and behaviour of the individual can lead to 'blaming the victim' (Laditka, 2000).

The health of populations used to be measured using mortality rates, however, now that mortality rates have declined in developed countries, other ways of measuring health are needed. Many diseases which at one time may have been fatal can now be treated; therefore health can no longer easily be measured by mortality rates in developed countries. Instead new methods of measuring health should take into account the effect that illness has on individuals (Locker, 1988). During the 20th century the biomedical model of illness was dominant (Wade and Halligan, 2004). The beliefs involved with this model were that all illness was a result of an underlying abnormality with the body, that all disease gave rise to symptoms, that health was the absence of disease, that the patient was a victim of circumstance with little or no responsibility for the cause of the illness and that the patient was a passive recipient of the treatment prescribed (Wade and Halligan, 2004). In the 'medical model' the solution for an individual's illness is medical treatment and management of the symptoms. The individual is expected to adjust to any resulting disability by altering their behaviour (Bond and Cabrero, 2007).

In contrast, there is also a 'social model' of disability, in which disability is not seen as an attribute of the individual, but as a construction of society, within the context of the political, social and physical environment. Therefore, there are political and societal solutions rather than purely medical ones. For example, the solution may require social action to change the physical environment and to change people's attitudes towards disability (Bond and Cabrero, 2007). From a policy-making perspective disability is a useful concept for summarising the impact of disease and biological ageing on older people (Bond and Cabrero, 2007).

New models of health and illness have now been developed, which do incorporate 'social' factors. In 1980 WHO reported the International Classification of Impairments, Disabilities and Handicaps (ICIDH) as a framework against which to measure health. Using the framework a number of clinical and socio-medical measurements of health were developed, including frameworks for measuring oral health (Locker, 1988). The ICIDH was updated

in 2001 to the International Classification of Functioning Disability and Health (ICF). The ICF emphasises health and functioning rather than disability and it takes into account the interaction between health conditions; that is disease, disorders and injuries, and contextual factors such as social background, behaviour patterns and coping styles (World Health Organisation, 2002). The ICF model proposes that the different components are associated with different needs; those associated with disease requiring medical care, whereas limitations in activities call for rehabilitation and social care. However, the divisions between the components and the type of care they require are not always clear cut, especially in the very old sectors of the population (Parker and Thorslund, 2007). The ICF is the basis for defining and measuring health and it is also important for planning and policy making (World Health Organisation, 2002). The ICF uses qualifiers, these qualifiers represent the degree of impairment or restriction for a given specific function or behavior. Clinicians assess patients and provide a given disability, behaviour or contextual factor with a code. The qualifiers denote the severity of the problem, ranging from no problem, to mild moderate or severe. However, the ICF lacks defining characteristics and so there is a lack of inter rater agreement which makes applying the ICF difficult (Threats, 2010).

How health impacts on quality of life is a complex subject, as illustrated by the many differences in opinion, not only about how quality of life should be defined, but also about how 'health related quality of life' can be measured. In medicine quality of life has become important because 'cures' for many existing medical problems are unlikely, however, it may be possible to improve the quality of life for those suffering with these problems (Gilhooly *et al.*, 2005). And so in the medical field quality of life has become an important framework for evaluating the outcomes and quality of health care (Moons *et al.*, 2006).

2.6.2 Successful Ageing

In 1997 Rowe and Khan defined successful ageing as multidimensional, including three main components: (i) low probability of disease and disease related disability, (ii) high cognitive and physical functional capacity, and (iii) active engagement with life. Rowe and Khan (1997) agree with Fries (1980)

and state that the previously held view that disease and disability are an inevitable result of increased age is inconsistent with the information now available showing that many characteristics of ageing are due to lifestyle and are not caused by ageing itself. This is consistent with the concept of compressed morbidity as again the importance of controlling certain risk factors is emphasised, and in addition the importance of maintaining social relations and remaining active is seen as vital (Rowe and Kahn, 1997). Rowe and Khan's model of successful ageing is the most widely used in the medical world (Bowling and Dieppe, 2005); however, there has been much research on the topic of successful ageing and many models for successful ageing now exist.

The concept of successful ageing has been criticised because it involves a medical model of ageing, concerned with the effects of disease as opposed to natural ageing. There are other problems associated with the idea of successful ageing. The theory itself has been seen as ageist because it relies on the belief that staying young is the key to good health (Liang and Luo, 2012). The theory has also been criticised because it is based on mainstream American values and it neglects the social inequalities which can exist in terms of class, gender, age and ethnicity; therefore, successful ageing terminology often refers to the experiences of privileged groups within society (Dillaway and Byrnes, 2009; Liang and Luo, 2012). This theory also places the emphasis on the individual, on the individual's behaviours and lifestyle choices. The responsibility of ageing successfully is placed on the individual with success as an outcome, rather than a process of ageing (Minkler and Fadem, 2002).

Although the concept of successful ageing is useful, it has been difficult to put it into practice and its public health significance is problematic. There appears to be no agreed-upon standard or underlying theme for measuring successful aging and it is not clear what the concept means in terms of what older people actually do with their lives and how they feel. (Strawbridge *et al.*, 1996). Strawbridge *et al* (2002) felt that the Rowe and Khan model was too restrictive, as to be classed as ageing successfully a person had to meet *all* of the 3 criteria. Strawbridge *et al* (2002) believed that a model for successful ageing should include a self-rated measure, and so in their large scale study they compared a self-rated measure with Rowe and Khan's model. They found large

differences between the two, when rating themselves 50.3% of participants classified themselves as ageing successfully, compared to 18.8% when using Rowe and Khan's criteria. Therefore, a greater proportion of older people defined themselves as aging successfully than is indicated by the most popular definition used by health professionals. Strawbridge *et al* (2002) believed this was because despite having one chronic disease people still felt happy and that they had aged successfully (Strawbridge *et al.*, 2002).

The effects on society of compressed morbidity and successful ageing could be significant. The time period that older people would require medical and social care would be shorter and they would be able to enjoy a healthy and active life for a longer time span. Experts could use health trends amongst the oldest old to make predictions of possible future resource need (Parker and Thorslund, 2007). However, measuring health trends is difficult as many different health indicators can be used, for example, measures of disease, disability, functional impairment and self-reported health, and this can lead to differing and often conflicting results (Parker and Thorslund, 2007).

2.6.3 Successful Ageing and Compression of Morbidity In Relation to Oral Health

The concepts of compression of morbidity and successful ageing could be translated in to dental terms, where the aim would be to maximise the length of time older people retained a functioning natural dentition by controlling risk factors earlier in life. For example, use of preventative treatments, professional oral hygiene advice and promoting 'successful oral ageing'. These strategies could be used to compress the need for increased amounts of treatment, and possibly more complex treatments, into a shorter time span towards the end of life. If oral health could be maintained throughout a person's life, then it would contribute to improving their quality of life and successful ageing (Ghezzi and Ship, 2000).

In dental terms tooth loss is the equivalent of mortality, and rates of edentulousness are declining (Steele *et al.*, 2000). Whilst the edentulous population is decreasing in the UK, following cohorts are likely to have

experienced increased levels of dental care and treatment as dental services and dental practice improved. Later cohorts will have experienced a decline in caries through increased preventive dentistry, however, the extent at which this translates into a compression of morbidity remains to be seen (Harford, 2009). However, if increased numbers of older people retain their natural teeth until late in life and the compression of morbidity theory is applied, this would mean that older people may require more treatment and possibly more complex treatment at increased ages. This could be problematic as there may be further complications to receiving dental treatment such as complex medical histories. Also, and importantly for this study, accessing this type of dental care in a rural area may be particularly difficult.

With 'successful oral ageing', the difficulty lies in defining and measuring it. If this could be achieved the results could be used to target treatment towards those who need it most. Controlling certain risk factors when trying to reduce the risk of the major dental diseases may also be beneficial in controlling other chronic diseases. The main risk factors in caries and periodontal disease are diet, plaque and smoking. These risk factors are also common to a number of other chronic diseases such as heart disease, cancer and strokes. Therefore using a common risk factor approach, and promoting good general health by controlling a small number of risk factors, may result in greater efficiency and effectiveness than disease-specific approaches (Sheiham and Watt, 2000).

Using a common risk factor approach may be useful in trying to prevent dental diseases; however, there are potential problems in using this approach. Not all community members are informed of or are able to benefit from appropriate oral health-promoting measures. There are disparities between countries and within countries; there are social inequalities and under-served populations who may not have access to current oral health promoting messages (Petersen, 2003). This may be relevant when applied to older people, as some older people may have limited access to information, for example the housebound and those living in isolation.

With regard to successful ageing in oral health terms, Atchison and Andersen (2000) suggested indicators of successful oral health ageing would include good oral health status, positive perceived oral health, satisfaction with access

to care and satisfaction with dental services. Their findings suggested that maintenance of teeth has become a mainstream goal of successful ageing (Atchison and Andersen, 2000). MacEntee (2000) investigated the oral health of institutionalised older people and he suggested that by offering accessible diagnosis, treatment and monitoring and by assisting staff in providing mouth care for older people it would be possible to reduce the risk of morbidity and mortality in long term care facilities and contribute to successful aging by improving quality of life (MacEntee, 2000).

In 2002 the World Health Organisation produced its Active Ageing policy framework. It had much in common with the concept of successful ageing and was based on three main pillars: health, social participation and security. Oral health and the impacts of oral diseases on general health and quality of life were emphasised in the document and the importance of oral health promotion for older people was highlighted (World Health Organisation, 2002).

2.6.4 Health Inequalities and Older People

There are inequalities in health between countries, for example there are differences in life expectancy at birth between developed countries and less-developed countries (Marmot, 2005). However, inequalities also exist within countries, including European countries. Health inequalities result from social inequalities (Fair Society, Healthy Lives, 2010). Reducing health inequalities could benefit society in many ways, for example, there would be economic benefits via reducing losses from illness associated with health inequalities. Action on health inequalities requires action across social determinants of health (Fair Society, Healthy Lives, 2010).

Many indicators exist which can be used as measures when looking at health inequalities. Measures of socio-economic status have been used, such as education, income and occupation (Grundy and Holt, 2001). Social determinants can also be used as measures, for example, marital status and social support. Previous literature has supported the view that most health inequalities occur in early childhood and during mid-life (Siegrist and Marmot, 2004). This could be due to the measures that have been used such as

employment, occupation or income, measures which apply mostly during mid-life. Also, this information is easy to collect and is a reliable source of data (Grundy and Holt, 2001). Measuring health inequalities in older people can be more difficult.

More recently there has been an increased amount of research into health inequalities among older people. It has been found that there are variations in the health of older people according to differences in their socio-economic status and socio-demographic or socio-psychological characteristics (Grundy and Sloggett, 2003). This may be of particular relevance in a rural setting where poverty often exists, especially for older people whose only source of income is the state pension. Although, social networks are often strong within rural communities, this may not be the case for all older people; some may lack social connectedness and as a result may feel isolated. These factors may lead to health inequalities for some older rural inhabitants.

2.7 Older People and Disease

There are some changes that occur with increased age that are more or less irrespective of the general health of the individual (Allen, 1998b) and these ageing changes are seen in most organs (Coni *et al.*, 2003c). For example, changes in the lens of the eye can cause problems with vision or changes in the cochlea resulting in hearing difficulties (Allen, 1998b). The prevalence of several diseases increases with age, for example, cerebral arterial disease, myocardial ischaemia, peripheral vascular disease, chronic psychiatric disorders, diabetes and arthritis (Allen, 1998b). Some chronic diseases have complications which can affect several systems and so contribute to ill health, such as diabetes which can produce heart, eye and kidney problems (Coni *et al.*, 2003c). Often there is an accumulation between pathology and the effects of ageing thereby compounding the problems for the patient. Systemic conditions and their treatments can sometimes produce a 'cascade effect of morbidity' which can impair other organs and increase susceptibility to other problems (Ghezzi and Ship, 2000).

2.7.1 Impacts of Older People and Disease

Although the ideas of compressed morbidity and successful ageing suggest that even as the number of older people increases the need for care resources may not increase proportionately, it is important to realise that even the most optimistic prognoses predict an increase in resource need (Parker and Thorslund, 2007). Medical technology has advanced providing a greater range of treatments available for intervention, and older people now have increased expectations of the treatment and care offered to them (Allen, 1998b). Also there are groups of older people, usually aged 75 and over and particularly those aged 85 and over, where frailty and dependency become apparent (Allen, 1998c) and these older people will need medical and social care services.

When providing treatment for older people many factors need to be taken into account, for example, social and ethical problems. Geriatric medicine can sometimes be difficult to practice as there are ethical problems associated with age discrimination. In this context discrimination refers to older people possibly being denied access to high-tech interventions on the basis that they do much less well compared to younger people (Coni *et al.*, 2003b). Also the potential quantity and quality of life are considered when justifying providing some forms of treatment for older people (Coni *et al.*, 2003b).

Social factors also need to be taken into consideration; how medical or physical problems affect a person's social functioning should be assessed. Old age can be a time of loss, in terms of, family, friends and income, therefore practical solutions of how support can be given need to be included in the care of older people (Coni *et al.*, 2003c). Social care is often very valuable to large numbers of older people, many of whom could not survive in their own homes without the help they receive (Allen, 1998a). Many older people prefer to remain in their own home rather than go into a residential home (Coni *et al.*, 2003a), and recently the emphasis has been on providing social care services to support older people in their own homes.

There are some older people who lack the motivation to seek help when they may have a health related problem; quite often they attribute problems to their age and become resigned to them (Walters *et al.*, 2001). Older people can have low expectations of health and health care and often this is linked to the

feelings of resignation they have (Walters *et al.*, 2001). In some cases this can lead to withdrawal resulting in older people avoiding social contact with others (Walters *et al.*, 2001). Providing health care services for this group of older people and for those who are housebound can be very difficult. The ageing population therefore brings an increase in health and social care expenditure, which can become substantial after the age of 65 (Ashton, 2001). Ashton (2001) found that in England and Wales the population aged 65 and over had per capita health expenditures three times higher than those for the population aged 5 - 65 (Ashton, 2001).

2.8 Older People and Oral Health

Oral health was defined by WHO in 1982 as:

‘a standard of the oral and related tissues which enables an individual to eat, speak and socialise without active disease, discomfort or embarrassment and which contributes to general well-being’

This definition has a similar theme to the definition for general health, as oral health is related not only to a lack of oral disease but is also more widely related to the social functioning of an individual. The Department of Health (DH) also used the above definition in An Oral Health Strategy for England (1994), then in 2005 the DH released a white paper titled ‘Choosing Better Oral Health – An Oral Health Plan for England’ which states that oral health is an integral part of general health and well-being and that ‘good oral health enables individuals to communicate effectively, to eat and enjoy a variety of foods, and is important in overall quality of life, self-esteem and social confidence’ (Choosing Better Oral Health, 2005).

Popular measures of oral health status such as the DMFT (Decayed, Missing and Filled Teeth) index are measures of existing or past dental disease; measures such as this are limited as they do not give any information about the functioning of the individual or about any symptoms the individual has suffered. Measures of oral health have been developed which take into account the subjectively perceived symptoms of oral diseases and disorders (Locker, 1988).

Good oral health can have a positive impact on general well-being and quality of life (Meeting the challenges of oral health for older people: a strategic review: Chapter 2. Oral Health Related to General Health in Older People, 2005). In the following section the diseases which can affect oral health are discussed and then the measures of quality of life and the impacts these diseases are explored.

2.9 Older People, Oral Disease and Tooth Loss

In older people age-related changes occur due to accumulated physiological processes. These age-related changes occur not only in teeth, but also in the surrounding structures. Teeth can show signs of wear due to a life time of attrition, abrasion and erosion. Periodontal tissues also show signs of ageing; gingival recession and loss of periodontal attachment are almost universal in older people (De Rossi and Slaughter, 2007). Whether salivary glands show signs of ageing is debatable as there is now evidence to suggest that in the absence of disease production of saliva does not decrease with age (Adams, 1991), but many older people still suffer from dry mouth and this is likely to be due to systemic diseases and medications (De Rossi and Slaughter, 2007). Age changes also occur in the surrounding musculature and bone. Degeneration of the oral muscles can lead to alterations in mastication and swallowing (De Rossi and Slaughter, 2007). Bone mass decreases with age affecting the alveolar bone (Drummond *et al.*, 1994) and so older people may have an increased risk of fracture during extractions (Adams, 1991). There is often an accumulation of age-related changes and acquired oro-dental diseases which can often increase the problems for the patient and make treatment more complicated. The acquired diseases and conditions which can occur are discussed in more detail in the following sections.

2.9.1 Gingivitis and Periodontal disease

Gingivitis is plaque-induced inflammatory disease of the gingiva, the treatment of which is a preventive regime of simple scaling and oral hygiene instruction (Preshaw and Heasman, 2003). Periodontal disease is a bacterially induced

inflammatory disease of the periodontium (Preshaw and Heasman, 2003) and is characterised by apical migration of the junctional epithelium, pocket formation and alveolar bone destruction (Smith and Seymour, 1994). The loss of attachment which occurs is due to the chronic cumulative effect of periodontal damage (Milward and Cooper, 2005) resulting from not only the disease process, but also from oral hygiene habits, episodes of trauma and the ageing process.

There are many variables which can be measured in order to monitor periodontal disease including gingival bleeding, periodontal pocket depth, periodontal loss of attachment, tooth mobility and presence of plaque and calculus. Data from the Adult Dental Health Survey in 2009 showed that 49% of dentate adults aged 65 - 74 had gingival bleeding (White *et al.*, 2011). Overall 45% of dentate adults had evidence of pocketing, indicating some level of current or historical periodontitis (White *et al.*, 2011).

Periodontal disease and gingivitis are largely preventable and good oral hygiene lies at the heart of good oral health for older people (Meeting the challenges of oral health for older people: a strategic review: Chapter 3 Oral Health and Older People, 2005). Treatment for periodontal disease includes ensuring good plaque control, scaling, root planning and sometimes surgical management and the use of antimicrobials (Preshaw and Heasman, 2003). However, older people may have problems with achieving good oral hygiene due to failing eyesight and impaired manual dexterity (Smith and Sheiham, 1979; Merelie and Heyman, 1992) which makes adequate tooth brushing more difficult.

2.9.2 Caries

Worldwide data show that dental caries is a major public health problem in older people, and is closely linked to social and behavioural factors (Petersen and Yamamoto, 2005). Caries is another chronic, cumulative disease and the caries status of an individual develops over time (Broadbent *et al.*, 2008). Of particular concern among the elderly is the increase in the prevalence and incidence of root surface caries. As previously discussed, there are age associated changes in the periodontal tissues which can result in the retained

teeth having vulnerable root surfaces which are exposed to the oral environment and at risk of caries. In 1998 29% of over 65s had root caries, and in fact the prevalence of caries on root surfaces was approaching that for coronal caries in older people (Nunn *et al.*, 2000). Therefore, with an increasing ageing population retaining some natural teeth there is a likelihood that root caries could become a significant problem (Nunn *et al.*, 2000). In 2009 11% of adults aged 55 – 64 and 20% of adults aged 75 – 84 had active root caries (White *et al.*, 2011).

Caries, like periodontal disease is largely preventable and a controlled diet and good oral hygiene along with preventive fluoride regimes are vital in its prevention. Caries occurs at a constant rate across all age ranges and so caries-preventative measures are important at all stages of life (Broadbent *et al.*, 2008). In older people the risk of developing caries can be increased by other compounding factors, for example, the presence of xerostomia. This refers to having a dry mouth resulting from a lack of saliva, it is often seen as a side effect of many medications and caries can develop easily and rapidly when the protective properties of saliva are lost (Scully and Felix, 2005). The damage caused to teeth by caries is irreversible and once caries has been treated by means of placing a restoration, affected teeth become involved in the restorative cycle and as age increases it appears that more teeth become involved in the restorative cycle. The number of filled teeth has increased among older adults, showing that older people's experience of restorative treatment has increased (Nunn *et al.*, 2000), and this means that these restored dentitions will need to be maintained in the future.

2.9.3 Xerostomia

Age is also a significant risk factor in the prevalence of xerostomia (dry mouth) (Field *et al.*, 2001). Chronic dry mouth can affect speech, denture wearing, the enjoyment and ingestion of food and can increase the risk of oral infections and caries (Cassolato and Turnbull, 2003). In a longitudinal study of older South Australians (aged 60 and over) medications were found to be a strong predictor of xerostomia incidence (Thomson *et al.*, 2000). Dry mouth is a side effect of many medications, for example antidepressant drugs such as amitriptyline and

antihypertensive drugs such as clonidine (Baum, 1996). As older people consume a disproportionately high amount of medications, they are more likely to suffer dry mouth as a side effect (Baum, 1996) and so are at risk of suffering from xerostomia and caries.

2.9.4 Oral Cancer

Age-specific rates for cancer of the oral cavity increase progressively with age, most cases occurring in the groups above 60 years (Petersen and Yamamoto, 2005). Data collected from a study of oral and oropharyngeal cancer in the UK between 1990 and 1999 showed incidence rates in older adults have increased significantly (Conway *et al.*, 2006). Oral cancer incidence was considerably higher in older adults compared to younger adults across the UK (Conway *et al.*, 2006).

There seems to be a lack of public awareness of oral cancer in the UK, a study in 1999 found that residents of London and North East England were least aware of oral cancer (50%) but Scots and Welsh had higher awareness (61-62%) compared with other regions (Warnakulasuriya *et al.*, 1999).

2.9.5 Tooth Loss, Dentures and Denture Related Conditions

Rates of edentulousness have declined. The 1998 Adult Dental Health Survey showed that in the preceding 10 years only 96 people out of the 6,204 people interviewed had lost all of their teeth in that time, this represented 1-2% of the sample and most of those were aged 55 or over (Steele *et al.*, 2000). In 1998 13% of adults in the UK were edentate (Steele *et al.*, 2000) and in 2009 the proportion of adults in England who were edentate was 6% (Fuller *et al.*, 2011). Despite this decline there will always be a small number of people who will continue to become edentulous (Steele *et al.*, 2000). How people are finally rendered edentulous has also changed with time. In 1968 it was common to have 12 or more teeth removed in the final clearance, but by 1998 fewer teeth were being removed in the final clearance (Steele *et al.*, 2000). This is probably a reflection of the decreased amounts of oral disease and a greater determination of both dentists and patients to retain teeth for as long as

possible (Steele *et al.*, 2000). Despite the reduction in the overall proportion of edentulous older people, having teeth does not necessarily eliminate complete denture need. If a person has all their remaining teeth in one arch, then a complete single denture will still be needed in the opposing arch. A study in 1996 found that between 16 and 24% of all dentate individuals were dentate in only one arch (almost always the lower) (Steele *et al.*, 1996b).

There are potential problems associated with wearing dentures, such as denture stomatitis, denture hyperplasia and traumatic ulcers. Denture stomatitis is most often caused by colonisation of yeast to the fitting surface and is associated with poor denture hygiene practice. Denture stomatitis was reported in an Australian study to affect 11-67% of complete denture wearers (Jeganathan and Lin, 1992). Denture hyperplasia and traumatic ulcers are commonly found in people with ill-fitting dentures.

2.10 The Relationship between Oral Health, General Health and Well Being in Older People

Oral diseases can impact on individuals; they can result in pain, suffering, impairment of function and reduced quality of life (Petersen, 2003). These impacts are now discussed in more detail.

2.10.1 Dietary Impacts

The presence of natural teeth is associated with chewing ability and therefore can affect the quality of the diet (Nowjack-Raymer and Sheiham, 2007). The National Diet and Nutrition Survey of 1995/96 contained a sub-sample of people aged 65 and over, it found that dental status was associated with perceived difficulties in eating several foods, such as fruit, vegetables and fibre (Sheiham and Steele, 2001). In fact twice as many edentate compared to dentate subjects had difficulties eating oranges, apples and carrots; and the edentate were also twice as likely to eat insufficient vegetables (Sheiham and Steele, 2001). More recently data from the USA showed that intake of nutritious foods and fibre decreased, and lower levels of folate and Vitamin C (found in fruit and vegetables) are found as numbers of teeth decrease (Nowjack-Raymer and Sheiham, 2007).

Problems with eating are more likely to occur among the edentate. In a study of older edentulous adults, where the median age of the sample was 65, 70% reported that they had changed their food choices because of dental problems (Allen, 2005). Eating and chewing ability are closely related to having a balanced diet and adequate nutrition which in turn affects general health, activity levels and well-being (Meeting the challenges of oral health for older people: a strategic review: Chapter 2. Oral Health Related to General Health in Older People, 2005). Krall's study in 1998 of US male veterans showed that an impaired dentition was related to decreased intake of calories, protein, carbohydrate, fibre and numerous vitamins and minerals in middle aged and older males (Krall *et al.*, 1998). Her findings also indicated that the number and location of missing teeth and the presence of removable prostheses are important predictors of nutritional intake (Krall *et al.*, 1998). Similarly Sheiham *et al* (2001) found that ease of eating was associated with the number of teeth present, with chewing becoming easier with a greater number of remaining teeth. They reported that limiting tooth loss to ensure that at least 20 natural teeth remained including 5 pairs of opposing posterior teeth (premolars and molars) can make a substantial impact on the ability to eat a varied diet (Sheiham *et al.*, 2001).

The studies by Sheiham *et al* (2001) and Krall (1998) show that problems with eating are not confined to the edentulous. The actual number of remaining teeth has a specific effect on oral health related quality of life; the more natural teeth remaining, the better the oral health related quality of life (Meeting the challenges of oral health for older people: a strategic review: Chapter 2. Oral Health Related to General Health in Older People, 2005). Chewing is affected by the number of posterior occluding pairs (POPs) of teeth, that is pairs of opposing teeth at the back of the mouth that contact each other when the mouth is closed (Sheiham and Steele, 2001). Therefore, an individual may have some remaining teeth; however, it is the number and distribution of teeth that can affect eating ability (Sheiham and Steele, 2001). If the distribution is unfavourable, and none of the remaining natural teeth form POPs then even a dentate person may have difficulties chewing. Krall (1998) concluded that prevention of tooth loss and prosthodontic replacement of missing teeth could

help people maintain healthy diet and potentially reduce the incidence of diet related chronic diseases (Krall *et al.*, 1998).

2.10.2 Oral Health Related Quality of Life

Over the last 20 years there has been much research into 'Quality of Life' (QoL) and many different definitions exist. The World Health Organisation Quality of Life Group defined quality of life in 1983 as including: an individual's perception of their life in the context of the culture and value systems in which they live and in relation to their goals (Gilhooly *et al.*, 2005). There is no consensus on the definition of quality of life and it is often used as a label to describe a number of physical and psychosocial variables (Moons *et al.*, 2006).

The idea that a person's oral health may impact on their quality of life has been developed, and is often referred to as Oral Health Related Quality of Life (OHRQoL). In response to concerns about using disease-only measures, such as DMFT, to evaluate oral health, Locker (1988) recommended that socio-dental factors need to be taken into consideration, such as measures of psychological, physical and social well-being, social disadvantage and discomfort from a subjective perspective. This would provide an improved way of monitoring individuals and their societal welfare and provide additional measures for use in evaluating dental health care (Locker, 1988). In 1988 Locker adapted the WHO model of health for oral health and this provided a framework for measuring oral health (Figure 2.1) (Locker, 1988).

Following this, researchers developed a number of instruments to measure oral health to try to capture the multidimensional aspects of oral health and the social and psychological effects oral disorders can have on quality of life. The instruments used to measure OHRQoL are questionnaires or structured interviews, sometimes referred to as socio-dental indicators (MacEntee, 2007). The domains generally covered when recording OHRQoL aim to include: impairment, functional limitations and disability (Sheiham and Tsakos, 2007). OHRQoL incorporates aspects such as: survival of the individual (absence of oral cancer, presence of teeth); absence of disease, symptoms or impairment; appropriate physical functioning associated with chewing, swallowing and

absence of pain; and also social and emotional functioning, for example, smiling or any social disadvantage due to oral status (Gift and Atchison, 1995).

Examples of the different measures of the subjective impacts of oral conditions on quality of life include the Geriatric Oral Health Assessment Index, Oral Health Impact Profile (OHIP) and Oral Impacts of Daily Performance. There is no one single measurement that can be used, as different measures are needed depending on the circumstances. However, there is currently real debate about whether OHRQoL measures, really do measure quality of life by the WHO definition.

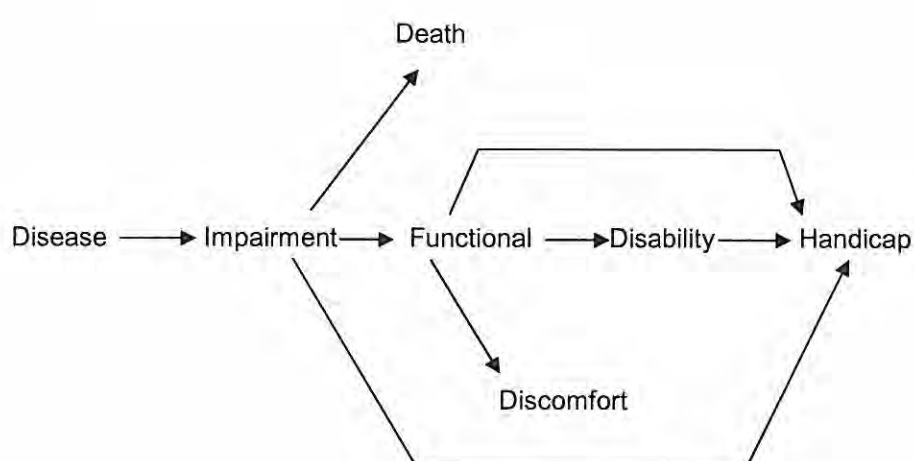


Figure 2.1 WHO Conceptual Model of Health (1980) Adapted by Locker (Locker, 1988)

In 2001 the World Health Organisation introduced the International Classification of Functioning, Disability and Health (ICF), a framework for measuring health and disability at both individual and population levels (World Health Organisation, 2001). Following the introduction of the ICF new models of oral health have been developed. For example, MacEntee (2007) investigated quality of life as an indicator of oral health for older people and he proposed that a new model of oral health would be composed of 4 main themes: comfort, general health, hygiene and diet. This model, shown in Figure 2.2, illustrates the potential older people have to adapt to and cope with impairments (MacEntee, 2007). MacEntee (2007) felt this model offered a

conceptual framework for the development of new questionnaires to explore how people cope with and adapt to oral ill health and maintain a positive perspective on life (MacEntee, 2007).

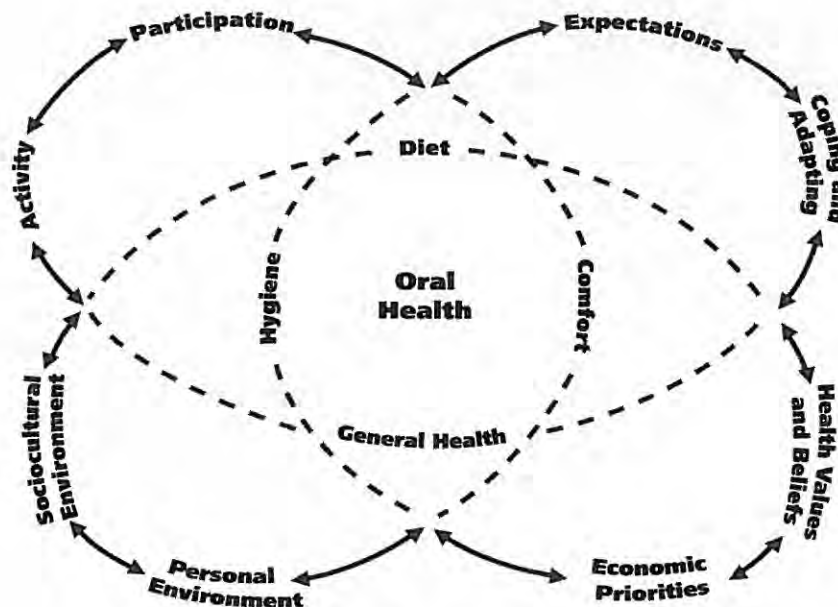


Figure 2.2 A model of oral health (adapted with permission of Blackwell Publishing from Brondani and colleagues) (MacEntee, 2007)

Further research was carried out by Brondani and MacEntee looking at the validity of sociodental indicators used in oral health related quality of life measures; they concluded that further research is needed in order to improve the measures currently used. They highlighted weaknesses in the current measures, for example, the questionnaires usually concentrate on the negative experiences and do not take into account possible positive reactions to disablement. Often the questions are ambiguous and do not fully address the complexities of health measurement. Finally, measures need to be updated

frequently as society and culture are always changing and so sociodental indicators need to reflect this (Brondani and MacEntee, 2007).

The Department of Health document 'Choosing Better Oral Health' recognised that oral health is an integral element of general health and well-being and stated that good oral health enables people to communicate effectively, eat and enjoy a varied diet and is important in overall quality of life, self-esteem and social confidence (Choosing Better Oral Health, 2005). From the studies about QoL it can be seen that factors such as difficulty with chewing, or appearance of teeth/dentures can be indicators of perceived need for care (Heft *et al.*, 2003) and may lead people to seek help. Health related quality of life measures have many uses including: selecting treatments and monitoring patient outcomes in clinical practice; assessing the burden of illness; and tracking levels of health risk factors and use of services in populations (Gift and Atchison, 1995). The following section gives some examples of how OHRQoL measures have been used and the findings of these studies, particularly in relation to OHRQoL in older adults.

2.10.3 Impacts of Oral Health on Quality of Life

Both qualitative and quantitative methods have been used in OHRQoL studies. Qualitative methods are now frequently employed and have become useful in exploring the experiences and feelings that people have about their health and oral health; they help to gain in-depth information relating to the personal effects of oral disorders on an individual. McGrath and Bedi (1999) used open-ended questions in structured interviews to assess the importance of oral health to older people's quality of life. They found that 72% of older people (aged 65 and over) claimed that oral health status was important to their quality of life in one way or another (McGrath and Bedi, 1999). However, this did vary with socio-economic background, with older people from higher socio-economic backgrounds more likely to perceive oral health as contributing towards general life quality than those from lower socio-economic backgrounds.

Gregory (2005) found, in a qualitative study, that problems of access to dental services can affect the way people view their oral health (Gregory *et al.*, 2005). Therefore accessibility may also need to be included in OHRQoL measurements. The same study also found that trust in dentistry and dentists affected what people said about their oral health related quality of life (Gregory *et al.*, 2005). Episodes of pain or discomfort associated with the mouth can also affect an individual's quality of life. Again using qualitative methods MacEntee (1997) found that the impact of pain could be quite severe (MacEntee *et al.*, 1997) and also persistent problems with dentures can be wearing for the sufferer (Smith and Sheiham, 1979; MacEntee *et al.*, 1997). Oral pain has been found to be associated with sleep deprivation and functional limitation (Chavers *et al.*, 2003). Hassel (2006) found a close association between pain status and OHRQoL. He used a version of the OHIP to explore OHRQoL; his sample was 158 subjects from residential care homes, with a mean age of 82.2 years. He found 50% reported high or very high pain and concluded that there was an opportunity here for dentists to improve OHRQoL through dental treatment and regular aftercare, and that this could improve overall QoL for these individuals (Hassel *et al.*, 2006).

The most frequent impact of oral health is on the ability to eat. In a quantitative study by Smith and Sheiham in 1979 30% of over 65s found chewing difficult, and 12% had changed the composition of their meals or the way they cooked them in order to be able to chew their food more easily. This study also found that speaking, emotional stability, sleeping and smiling were also affected by oral impacts, but less frequently than eating. It was found that 41% took a long time to complete a meal and that this was a source of embarrassment for some and deterred them from eating with others (Smith and Sheiham, 1979). In 2001 Sheiham *et al.* assessed the prevalence of oral health related impacts on the quality of daily life among free-living and institutionalised older adults in the UK. They found that 15% of the free-living group and 18% of those in institutions reported one or more oral health related impact in the previous 6 months (Sheiham *et al.*, 2001). Many of their sample already had other disabilities, and so the oral health impacts they suffered were a further handicap (Sheiham *et al.*, 2001).

When quantitative methods are applied in OHRQoL studies it allows the findings to be related to populations and for comparisons to be drawn between populations. For example, Steele *et al* (2004) compared the impacts of age and tooth loss on quality of life between UK and Australian populations (Steele *et al*, 2004). The findings showed that age and tooth loss are closely associated, but have independent effects on OHRQoL; increased tooth loss is associated with more negative impacts on OHRQoL, while increased age alone results in fewer negative impacts (Steele *et al*, 2004). They also found that place of birth and culture were important influences on OHRQoL (Steele *et al*, 2004).

2.11 Delivery of Health Care

This literature review has looked at aging, population trends and physiological aspects of ageing. It has covered the theory related to oral health and quality of life and the impacts of dental diseases. It now goes on to look at how oral health care services are provided in the UK.

The majority of health care in the UK is provided through the NHS. In 2008 the NHS was 60 years old and at that time Lord Darzi led a review of the NHS. The review, titled 'High Quality Care For All', emphasised high quality care for patients and focused on prevention, improved quality and innovation within the NHS to ensure cost effectiveness (Darzi, 2008). As a result of the review the NHS Constitution was published, which brings together the values and principles of the NHS along with a number of rights and responsibilities for staff and patients. Several key principles guide the NHS, they include: (i) providing a comprehensive service without discrimination, access should be based on clinical need and not ability to pay; (ii) high standards of excellence and professionalism should exist; (iii) the NHS should work across organisational boundaries in the interest of patients and local communities; (iv) the service should be cost effective and (iv) the NHS is accountable to the public, communities and patients it serves (The NHS Constitution, 2010). These principles should also apply to NHS dental services, however, since the introduction of the NHS there have been many changes to the way NHS dental services operate.

The NHS has recently undergone major change; the Health and Social Care Act 2012 proposed radical changes to the NHS and extensive reorganisation. It proposed to abolish Primary Care Trusts (PCTs) and Strategic Health Authorities (SHAs). Commissioning will be transferred from the abolished PCTs to several hundred 'clinical commissioning groups', partly run by general practitioners (GPs) in England. A new executive agency of the Department of Health, Public Health England is now in place whose mission is to protect and improve the nation's health and to address inequalities. This will also affect commissioning of dental services in the future.

2.11.1 The History of NHS Dentistry and the Changes it has Undergone

Oral health care services in the UK are now delivered through either the public or private sector. The public sector consists of two branches of primary care: the General Dental Service and the Community Dental Service, also referred to as the Salaried Services. There is also secondary care in the Hospital Dental Service (Daly *et al.*, 2002b). The public sector provides treatment through the NHS, in which people not receiving any form of government benefit need to pay subsidised fees for their dental treatment. The systems for delivering NHS dentistry via the general dental service have changed over the years, and these changes have impacted on how people access NHS dentistry.

The NHS was launched in July 1948 and publicity had been planned nationally with every household in Great Britain receiving a leaflet describing the new dental service. All dental treatment was free and the dentists were paid on a fee-per-item basis from the government. The demand for treatment was huge and immediately resulted in a huge increase in attendance. In particular the demand for dentures was massive and in the first nine months NHS dentists provided over 33 million artificial dentures (King, 1998). The government was in a difficult situation, more people were receiving dental treatment than ever before, which was their objective, but, they had hugely underestimated its cost. Within a year of its introduction the government reduced the fees it paid to dentists, this was to be the first of several cuts and by 1950 the government introduced patient fees for treatment, although these were subsidised (King, 1998). The early years of the NHS was a turbulent period for both the dental

profession and the government, however, by 1955 dentists' earnings were improving as a 10% cut was restored and patients became willing to accept the charges for treatment. There then followed a quiet period for NHS dentistry with very few changes until the 1970s. During the 1970s and 1980s there were reforms to NHS dentistry and complex structures based on consensus management were introduced (Daly *et al.*, 2002a). Concepts such as planning health services and cost effectiveness had become important, as it had been realised that there were health inequalities and that financially the system needed controlling.

Large reforms were imposed in 1990 with the introduction of a new dental contract. This saw the introduction of patient registration, whereby a patient would register with a dentist for a period of 15 months, and if this time lapsed without the person attending their dentist to re-new their registration they could be automatically de-registered. Dentists were paid a capitation fee for each registered patient on their list and treatment they carried out was still paid on a fee-per-item basis. The patient paid 80% of the fee and the remainder was subsidised by the NHS. Fees were paid to dentists via the Dental Practice Board and there was little local commissioning. However, the government underestimated how many people would actually register. This resulted in an overspend of the budget for its first year, so the following year there was a 7% cut in the fees paid to dentists which led to resentment among dentists.

Dentists were finding it increasingly difficult to maintain their income and felt they were on a 'treadmill', with very little time to spend with NHS patients. As this continued, dentists gradually became more disillusioned with NHS dentistry and began to spend more time doing private work, or turning their whole practices into private ones (Jacobs, 2007). This created problems of access for those people wanting NHS treatment, as people found it increasingly difficult to find a dentist who would register them for NHS treatment. The 1990 contract was criticised for other reasons as well as the problems it created with access. It was also criticised for encouraging over-treatment, as dentists were paid fee-per-item. Also it did not encourage preventive treatments, as there was no fee for spending time with patients, giving advice on how to maintain good oral health.

Due to these historical problems dentistry has not always been seen as part of mainstream NHS and until 2006 primary care dentists were independent practitioners, who were able to provide the services they wanted to provide in an area of their choice. This eventually led to further difficulties with access to dental care in various parts of the country and this was reported widely in the media. In order to address these problems further NHS reforms to dental services were introduced. 'Options for Change' in 2002 brought about major reforms to NHS dentistry (Department of Health, 2002). It stated that the introduction of a new contract would enable NHS dentistry to be brought in line with mainstream NHS.

Following the introduction of the new dental contract in 2006, dental services were to be commissioned locally by PCTs (Primary Care Trusts). Previously there had been little commissioning of general dental services, in the majority of cases this was based on historical provision of services by independent dentists rather than on true commissioning of services (Jones and Rooney, 2009). At the introduction of the new contract PCTs faced commissioning primary care dental services for the first time and it is possible that the unique nature of dental commissioning and the amount of work involved in it were underestimated (Department of Health, 2009).

Other changes which occurred in 2006 involved the introduction of a target for dentists. Dental treatment was broken into Units of Dental Activity (UDAs) with each dentist having a contractual agreement to provide a certain number of UDAs. At this time a new patient fees structure was also introduced.

A House of Commons Health Committee report of 2007/8 criticised the contract of 2006 reporting that it had not alleviated problems with access (The House of Commons Health Committee, 2008). It also highlighted problems with the patient charging system, the UDA target system and the lack of experience in dental commissioning in some areas. This report led to further changes and a review of dental services in England. The Next Stage Review in 2008 proposed to bring all dental practices within the scope of a new regulatory body known as the Care Quality Commission (The House of Commons Health Committee, 2009). This body, set up in April 2009, is responsible for regulating services

across health and social care, whether these services are provided by the NHS, local authorities, private companies or voluntary organisations.

In response to the Health Committee report of 2008 an Independent Review into NHS dental services in England was carried out in 2009 (Department of Health, 2009). It identified three key areas for improvement: patients' experience of poor communication and lack of information about available NHS services and the costs involved; PCT's experience of the rushed implementation of the contract of 2006; and dentists' frustrations with the 2006 contract. The document outlines the responsibilities of all parties involved in an NHS dental care system and identifies all the components of a dental service, by focusing on these points it aims to provide an improved NHS dental service and recommends this is done by staging NHS dentistry around a pathway of care, shown in Figure 2.3 (Department of Health, 2009). The review recommended reforms regarding funding, communication with patients, and contractual and remuneration arrangements for dentists.

2.11.2 Provision of Oral Health Care: General Dental Services

The supply of dental services in the UK has been influenced by political and administrative pressures, but also by the preferences of individual practitioners with regard to their practice location (Gibbons *et al.*, 2000). General Dental Practitioners (GDPs) were free to choose the location of their practice and this has led to an uneven distribution of General Dental Services in the UK (Gibbons *et al.*, 2000).

The large reforms of NHS dentistry which took place in 2006 were said to be the biggest changes to NHS dentistry since it began in 1948. This New Contract for General Dental Services made Primary Care Trusts responsible, for the first time, for the commissioning of dental services locally. The PCTs had contracts with GDPs for provision of services. PCTs would procure health care services to meet the needs of their local population. Therefore, firstly, the needs must be identified; secondly existing contracts should be evaluated and finally, different procurement options should be investigated before a contract is agreed (Jones

and Rooney, 2009). Under the new contract GPs were no longer paid on a fee-per-item basis, as they were previously; instead they were paid per course of treatment provided. Their activity is measured by Units of Dental Activity and they have a target to meet in order to fulfil their contract with the PCT, and so receive their agreed funding from them. Also the complicated fee structure which went along with the fee-per-item system (where each treatment had an individual price) was replaced with more simple charge bands. When the system was introduced in 2006 there were only three bands, each with a separate price, which meant a patient only ever pays one of three prices.

This new system was supposed to address issues around access, it was also supposed to combat the 'treadmill' feeling that dentists complained about and improve working lives of dentists and increase the quality of clinical care. However, the introduction of the New Contract was controversial and had problems. Milsom *et al* (2008) found that dentists had been happy with previous contractual arrangements and had no reasons for requiring a new contract. They found that there was widespread mistrust of the government and the actual reasons for introducing the contract and also there was a feeling among dentists that the new contractual arrangements had not been adequately tested (Milsom *et al.*, 2008). One year on from the reforms it appeared that access to services had not improved and this has been widely reported in the media. In fact, the number of patients who had been seen by an NHS dentist had decreased, the total number of patients seen by an NHS dentist between December 2005 and December 2007 had fallen by 900,000 compared with the two years up to March 2006. Although in some places access to dentistry has improved since 2006, it remains uneven across the country and in some areas severe problems remain (House of Commons Health Committee, 2008). This suggests that the introduction of the new system had not increased access as it was intended to.

The review of NHS dental services in 2009 addressed the problems which had occurred since 2006 and laid out both immediate priorities and long term aims for NHS dentistry, with emphasis on providing patient pathways of continuing care, including preventive measures and evidence based practice, as shown in Figure 2.3 (Department of Health, 2009). In the future further change is

anticipated as NHS dentistry moves into a new phase where commissioning services through procurement is likely to become commonplace.

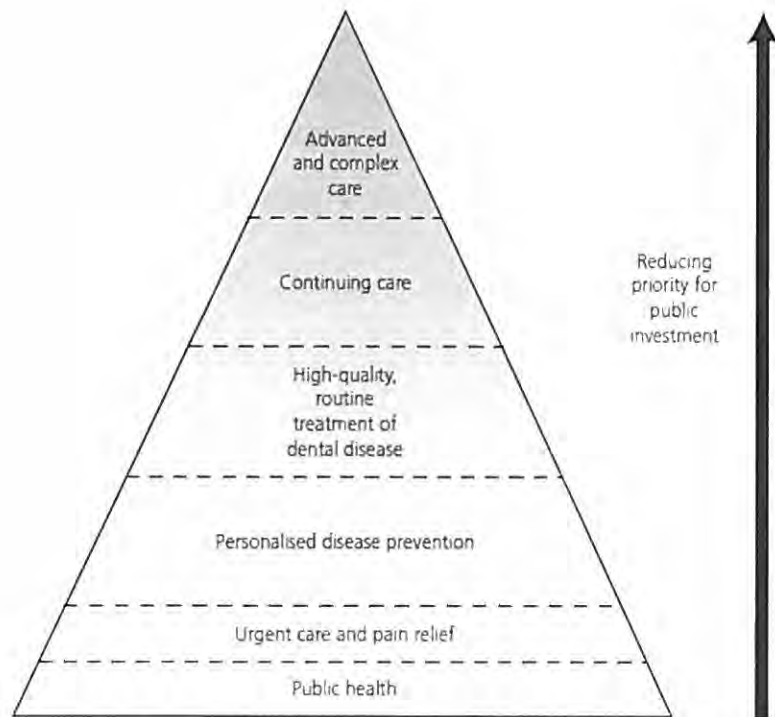


Figure 2.3 Priorities for public investment in oral health (Department of Health, 2009)

2.11.3 Provision of Oral Health Care: Salaried Dental Services

The Community Dental Service (CDS), now also known as the Salaried Dental Service developed from the school service. As it developed it began to provide care for special needs patients and the elderly. Once the role of the school service had expanded to include other groups of patients, it became known as the CDS and was transferred to the NHS in 1974 (Gelbier, 2005). Salaried Dental Services are now no longer seen as a service only for children, as it

once was, it has a highly qualified workforce which can provide specialist services complementary to general dental services (Blinkhorn *et al.*, 2001). However, the remit of the Salaried Dental Service is not always clear, even within the dental profession and so there is potential for inappropriate referrals resulting in patients being bounced between providers (Department of Health, 2009).

The Salaried Services have two aspects: treatment of patients and dental public health. The treatment it provides is mainly for those who are unable to obtain dentistry via the GDS, and patients may be referred for treatment by their General Dental Practitioner, such as, special needs patients and anxious children. It also acts as a safety net and provides emergency services via dental access clinics for those with dental problems who do not have their own GDP. The dental public health role is concerned with assessing dental needs and demands of the population, evaluating the dental services available and promoting oral health (Palmer, 1993). The Salaried Services are involved with screening to identify where there are dental needs, including screening for oral cancer in older populations in residential homes or hospitals (Palmer, 1993). At present the Salaried Services are run by Primary Care Trusts and services can be commissioned locally. The dentists are employed on a salaried basis; UDA targets are not common within the Salaried Dental Services. The New Contract of 2006, as it is at the moment, does not take into account the complexity of care delivered by the Salaried Services, the types of patients being treated or the amount of time this can take (Dougall and Fiske, 2008). Often the patients treated within the Salaried Services have management problems and can be very demanding of time, for example, those with physical or mental impairments, dental phobias and frail older people who may require domiciliary care (Palmer, 1993). These patients may require a lot of time spent with them; therefore, output in terms of treatment delivered may be small in comparison to the time taken to administer that treatment. Previously the Salaried Service has been able to provide a different type of service for its patients compared to the general dental service. It was a service that enabled dentists to spend more time with patients, allowing them to build a relationship with the patient, which can be highly beneficial when treating many special needs patients. Without the pressure of time constraints and being salaried, rather than being paid fee-

per-item or having a target to meet, dentists could provide a very personalised service for certain groups of patients. However, this way of working has cost implications.

2.11.4 Provision of Health Care and Oral Health Care for Older People

Particular guidance in relation to the care of older people has been issued from the Department of Health. In 2001 the National Service Framework (NSF) for Older People outlined standards for improving health and social care for older people. The priorities of the NSF were that treatment be based on clinical need rather than age, it called for more health professionals with specialised training in caring for older people and it highlighted the need for preventive health measures (Department of Health, 2001). This document along with several others that have been released by the Department of Health, such as 'Better Health in Old Age' (Department of Health, 2004) and 'A New Ambition for Old Age' (Department of Health, 2006) all help to guide NHS health professionals in the care they provide for older people.

There is little specific guidance available on providing oral health care for older people. In 2005 a strategic review commissioned by the Department of Health was published. 'Meeting the Challenges of Oral Health for Older People' was issued to provide guidance for PCTs at the beginning of their role in dental service commissioning. The review gave many recommendations for improving oral health for older people, including some recommendations for PCTs. These recommendations emphasised aspects such as identifying the needs of the local older population and involving older people in the development of services; the benefits of involving other health care workers, such as district nurses, in oral health promotion; including oral health care needs in the single assessment process and developing a network of specialist advice for delivery of oral health care to older people, for example, involving dentists with special interests (Meeting the challenges of oral health for older people: a strategic review: Chapter 8. Recommendations, 2005).

The majority of older people can be provided with routine oral health care via the conventional general dental service. However, for some older people other factors may impact on their treatment, such as complex medical history and these patients may require special care dentistry, which is usually provided by

the Salaried Dental Service (Department of Health, 2009). 'Valuing People's Oral Health' provides guidance on providing special care dentistry to those who need it, the document acknowledges the increasing number of older people, and states this group of people are likely to develop disabilities coincidental or consequent to their age which may affect the provision of dental services to this group (Valuing People's Oral Health, 2007). There are also other barriers which may prevent older people accessing the dental care; these are discussed in more detail later in section 2.3.

2.12 Dental Service Utilisation among Older People

Several models of health care exist which can be used as frameworks to investigate the influences on health service utilisation, the most well-known of these are the behavioural models developed by Andersen (Andersen, 1995). The original behavioural model developed in the 1960s suggested that people's use of health care services was related to their predisposition to use services, to factors which impede or enable service use and their need for care. Later this model was refined as other factors were identified as being significant in service utilisation. Influences such as health beliefs, health outcomes, and social relationships were included. Health beliefs are attitudes and values which people hold about health and health services and which may influence their perceptions of need and of service use. Access is clearly important to service use, however, Andersen (1995) realised that access alone was not enough as a measure, enabling and impeding factors also played a role. Andersen (1995) concluded that health service utilisation models are dynamic and changing, especially when health status outcomes are included. Models should include feedback loops showing that outcomes affect predisposing factors and perceived need for care as well as health behaviours (Andersen, 1995). Andersen's final model is included here in Figure 2.4. He called it an emerging model as he was aware that it would evolve over time as the nature of health care changed. Andersen's model has been applied to dental service use. For example a recent study which used the model found that perceived difficulty accessing a dentist and perceived treatment need were key predictors of oral health outcomes irrespective of age or gender (Marshman *et al.*, 2012).

Other studies have investigated dental service use in different settings. Steele *et al* (1996a) looked at three English communities: an urban community in the north, a rural community in the north and an urban community in the south. From the findings it was apparent that there were geographical variations in rates of attendance and non-attendance. However, there seemed to be a north/south divide rather than an urban/rural divide, in that there were more dental non-attenders in the north. Over a quarter of the sample only attended the dentist when forced to by pain or symptoms. The main reason given for non-attendance was a perception that there was no need to seek regular dental checks and a large proportion also reported that they 'could not be bothered' (Steele *et al.*, 1996a).

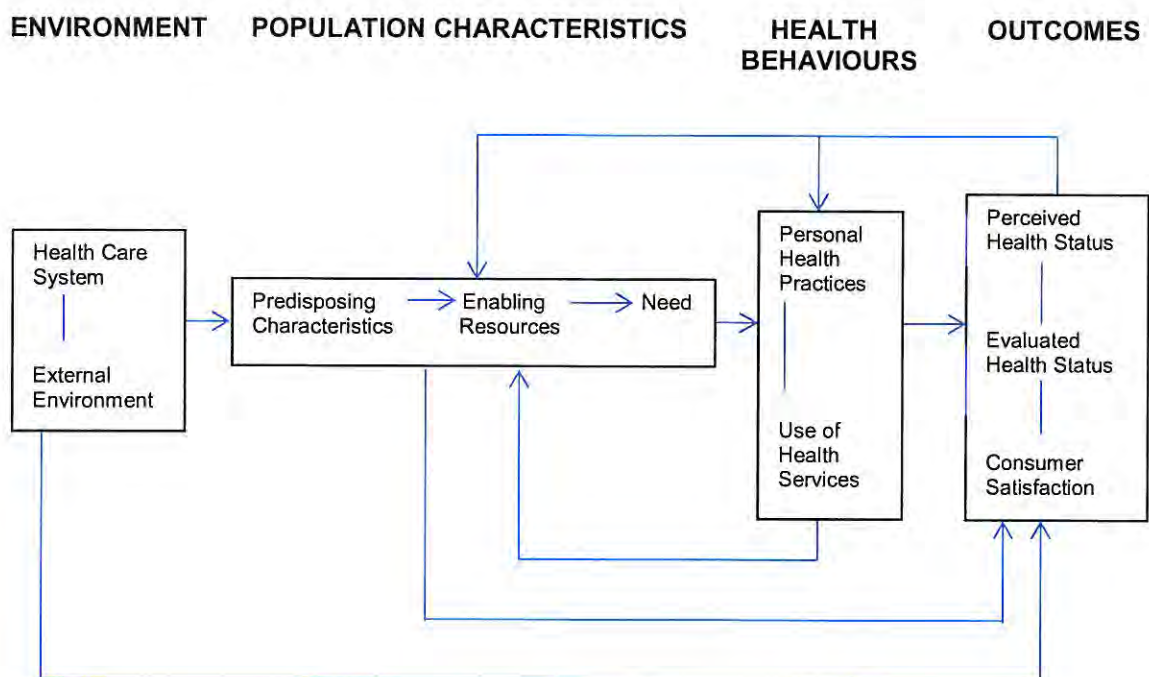


Figure 2.4 Andersen's Emerging Model of Health Service Use (Andersen, 1995)

Socio-economic factors can also influence dental service use, Ettinger (1992) found that oral health and patterns of dental service utilisation were affected by many variables including age, level of education, ability to pay, number of remaining teeth and expectations of family. He found that patterns of dental service utilisation varied between the 'old old' (aged 85 and over), who had an attitude of acceptance and stoicism and saw dental care as more of a luxury

than part of the health service, compared to the 'young old' (aged 65 and over) who were the baby boomers (those born after World War II) who had experienced more dental contacts and were more likely to seek preventive health care (Ettinger, 1992).

In a national study of people aged 60 and over McGrath (1999) found that one of the most important factors in determining dental service utilisation was the edentulous state, those with no remaining natural teeth were less likely to be 'regular attenders' compared to those with some remaining teeth and he highlighted the importance of targeting oral health promotion among older full denture wearers to increase regular attendance (McGrath *et al.*, 1999). There is further evidence in the literature showing differences in the utilisation of dental services between fully or partially dentate and edentate older people, Nitschke (2001) found that the latter group tend not to have seen a dentist as recently as the dentate group (Nitschke *et al.*, 2001). Nitschke's study in Germany of people aged 70 and over showed that six monthly or annual use of dental check-ups were not widespread among the very old and she concluded that strategies to improve the use of dental services among this group need to be developed (Nitschke *et al.*, 2001).

Utilisation of dental services by older people is multifactorial and varies depending on whether people are dentate or not, along with other enabling and impeding factors. There may be geographic variations in the uptake of dental services between the north and south, between urban and rural areas, as well as between rich and poor.

2.12.1 Normative Need, Perceived Need and Propensity

Since health is now defined at the level of the individual, then planning of health care should also be aimed at the individual, and therefore, should be based on the 'needs' of that individual. However, the need for health care is seen differently by different groups of people, for example, differences between the way the patient views their need for health care compared to the view of the health care professional.

There are different types of need and these have been defined by Bradshaw (cited in Sheiham and Tsakos, 2007) as:

- Normative need: that which is defined by a professional in any given situation, disease may be identified, but without considering the feelings of the patient
- Perceived need: the individual's own assessment of their requirements for health care
- Expressed need: this is perceived need turned into action by seeking help, or demand for health care

The types of needs assessments usually differ and normative need is typically much larger than perceived need (Schou, 1995). However, in planning health care on which needs assessment should the treatment be based? Schou (1995) felt that to improve needs assessment for older adults, the factors influencing perceived need must be understood better, and a more realistic professional assessment must be achieved (Schou, 1995).

Normative need is usually based on the biomedical model of disease which influences how dental professionals examine, measure and interpret oral health and this can often exaggerate the need for treatment (MacEntee, 2007). It does not take into account patients' perceptions of treatment need or the benefits to the patient of the treatment being provided.

Maizels *et al* (1993) looked at the concept of propensity in relation to oral health; this refers to the likelihood of individuals to adopt appropriate oral health behaviours. In their study this was related to both self-care and the use of dental services amongst adults in the North West of England and London (Maizels *et al.*, 1993). Maizels *et al* (1993) reported higher levels of propensity in individuals with high levels of dental satisfaction, less fear of dentists and positive health beliefs; whereas those with low propensity are less satisfied, have increased fear and are less likely to have appropriate health beliefs (Maizels *et al.*, 1993). Combining social aspects of dental disease and social motivational factors would give a more realistic assessment of needs (Sheiham *et al.*, 1982). Combining measures of propensity, with perceived need of the

individual and the clinical status of that individual should provide a more complete assessment of treatment needs and therefore improve treatment planning (Sheiham *et al.*, 1982; Maizels *et al.*, 1993). For example, older people may be more likely to accept treatments which benefit their self-image and social interaction rather than those which improve their physical function (Fiske *et al.*, 1998). Therefore, when assessing treatment needs and outcomes for older patients considering their quality of life is very important (MacEntee, 2007).

Measures of propensity are not widely used in dentistry at the moment. The following two studies give examples of using measures of propensity, but they also highlight some of the difficulties in using these measures. Some research has been carried out within the field of orthodontics, Gherunpong *et al* (2006) developed a theoretical framework and model of socio-dental orthodontic treatment needs assessment from their study in Thailand. The model included: Normative Need (NN), assessed by a clinician; Impact Related Need (IRN), assessed by integrating NN with OHRQoL; and Propensity Related Need (PRN), assessed by integrating NN with OHRQoL, behavioural propensity and evidence based treatment guidelines. They found that estimates of orthodontic need varied markedly between normatively assessed need and socio-dentally assessed need. If orthodontic treatment should only be provided for children who had been assessed as having high or medium levels of propensity, then they found that the estimate of treatment need decreased by 80% compared to that of NN. However, there was an issue of changing concern with appearance over time, at different ages young people may feel very differently about the impact of their dental appearance and therefore this could affect their likelihood to seek treatment (Gherunpong *et al.*, 2006).

Srisilapanan and Sheiham (2001) also tried to incorporate 'propensity related treatment need' into their method of assessing prosthodontic treatment need in dentate older people. This study, again carried out in Thailand, showed that when using sociodental estimations rather than normative estimations of treatment need, the levels of estimated treatment need are much lower. Again, the problems they highlighted with incorporating measures of propensity into sociodental estimations of treatment need included the fact that behaviours

change over time and so measuring 'propensity related treatment need' is difficult as it is not static and also the dynamics of propensity for health behaviours depends on the type of dental treatment being provided (Srisilapanan and Sheiham, 2001).

2.12.2 Defining Access

Access to health care is concerned with the relationship between need, provision and utilisation of health services (Penchansky and Thomas, 1981). The notion of access involves different aspects of the relationship between the service providers and clients, which determine patterns of service use (Gulliford *et al.*, 2002). Aday and Andersen (1974) suggest that the term 'access' is commonly used in two ways: firstly, having 'access' denotes the theoretical potential to make use of a service, if required. The second way in which the term 'access' is used relates to the actual procedure of gaining admission into the process of utilising a service

Access is itself a multi-faceted concept, which has resulted in it lacking a universal definition. Access has been defined as a concept representing the degree of 'fit' between the client and the system (Penchansky and Thomas, 1981). Penchansky and Thomas (1981) proposed that access was made up of five components:

Availability: the relationship between the volume and type of services compared with the consumers' volume and type of need.

Accessibility: the relationship between the location of the supply of services and the location of the consumer, considering issues such as transportation, distance and cost of travel.

Accommodation: the relationship between the organisation of the services, in terms of factors such as opening hours, and the clients' ability to relate to these factors.

Affordability: the relationship of the cost of services to consumers' ability to pay these costs.

Acceptability: the mutual perception that both providers and consumers have of each other, in terms of attributes such as age, gender or personal characteristics.

Access is a complex variable to measure, especially since many people who have the potential to access available services may for a number of reasons choose not to do so. Different aspects of access can be assessed in terms of health service availability, health service utilisation or health service outcomes, however, no one dimension is sufficient in its own right (Gulliford *et al.*, 2002). Some research has gone on to highlight the possibility of using other indicators, in addition to those highlighted by Penchansky and Thomas (1981), when measuring access, such as quality, costs and information in addition to availability (Goddard and Smith, 2001). However, there is no universally accepted definition of access and the components of access defined by Penchansky and Thomas (1981) are still widely used today.

The following section goes on to look at some of the factors which may impact upon whether older people access a service or not.

2.13 Barriers Faced by Older People when Accessing Dental Services

It is possible to see that many factors can impact on an individual's oral health and whether or not people decide to seek dental care. This section describes in more detail barriers that older people can face when trying to access oral health care services, and highlights the impact of a rural setting.

2.13.1 Transport

An important barrier to accessing services for the elderly is that of transport, especially for frail and dependent older people. Lester (1998) investigated dental attendance and perceived barriers to care in a study of frail and functionally dependent older adults aged 60 and over, he found that 52% preferred to have treatment at home (Lester *et al.*, 1998). In the same study the carers of the dependent older people also cited transport as a major difficulty (Lester *et al.*, 1998). Therefore, having treatment in their own home relieves the problems of transport to the surgery, for which dependent people would be

reliant on someone else. Transport may be a particular problem in rural areas, where public transport is often poor and people are more reliant on car ownership which can be expensive (Wood, 2004; Shergold *et al.*, 2012).

Transport was also discussed earlier in section 2.5.3.

2.13.2 Cost

Cost of treatment has often been given as one of the major barriers to accessing dental services (Borreani *et al.*, 2008; Slack-Smith *et al.*, 2010).

Apart from the direct cost of dental treatment there are also indirect costs, for example, travel costs. People weigh these costs against the benefits of receiving dental treatment in deciding whether it would be worthwhile for them (Daly *et al.*, 2002c).

Older people who rely completely on their state pension may find themselves living in poverty. In fact pensioner poverty affects 2.2 million older people in the UK and about half of these individuals live in deep poverty, well below the official poverty line (Help The Aged, 2007). Therefore the charges involved in NHS dentistry may act as a particular barrier to accessing dental services. In the 1980s Smith and Sheiham found that cost deterred many older people from demanding dental treatment, over a third of their sample thought the cost of dental treatment was too high and they suggested that charges could be reduced for pensioners (Smith and Sheiham, 1980). Oral health care is one of the few areas within general health care provision in the UK where there is any charge for those of a pensionable age (Walls and Steele, 2001). Ogden (1991) also commented that edentulous patients are less likely to seek regular checks of their mouths by a dentist and that this could be related to the examination fee involved. He pointed out that a patient could obtain a free mouth inspection from their doctor but not from their dentist (Ogden *et al.*, 1991). Cost is still cited as a barrier to accessing dental care for older people today, and many older people still feel that dental examinations should be free of charge for those over the pensionable age (Borreani *et al.*, 2010).

2.13.3 Fear

A commonly given barrier to accessing dental care for any individual is that of dental anxiety and fear. There are conflicting views within the literature regarding older people and anxiety. Some studies of older people show fear does not appear to act as a barrier to dental care as much as other factors such as transport and cost. For example, in a study looking at age and gender differences in attitude to dental pain, it was found that older subjects feared pain less and were not so concerned about avoiding it (Liddell and Locker, 1997). However, in more recent studies fear and anxiety was reported as a major barrier for older people and traumatic childhood experiences were shown to still impact on older people's dental visiting habits (Borreani *et al.*, 2008).

A different type of anxiety is the feeling of vulnerability that some older people have, for example the fear of being attacked or robbed (Ziegler, 2007). Reported crime is lower in rural than in urban areas and older people are less likely to suffer from crime than other age groups. However, older people especially those who are isolated, in poor health or in other ways vulnerable, may fear and worry about crime safety. Fear of violence may make some older people apprehensive of strangers and therefore restrict good communication with oral health care providers (Petersen and Yamamoto, 2005).

2.13.4 Reduced Mobility

Reduced mobility can act as a barrier to accessing services for some older people. For frail and functionally dependant older people transport and a lack of escort can be barriers to accessing dental care (Lester *et al.*, 1998). It is not just getting to the dental surgery that may be problematic for those with impaired mobility, but even within dental surgeries there may be problems, for example some dental surgeries are upstairs and lack of adequate ramps and handrails are further obstacles to overcome (Edwards *et al.*, 2002). Tobias and Smith (1987) found in their study of the over 60s that poor mobility was found in 50% of the subjects, this prevented 30% from being able to climb stairs and 38% from using public transport (Tobias and Smith, 1987). For those in wheelchairs common barriers include a lack of widened doorways, curb cuts, ramps and rooms large enough to manoeuvre the wheelchair (O'Day *et al.*,

2002). Following the Disability Discrimination Act of 1995 service providers, including dental practices, have been expected to make reasonable adjustments to their surgeries and practices to make them more accessible to disabled people (Merry and Edwards, 2002). This may include installing hand rails or stair lifts, or providing home visits for simple procedures as an alternative to attending the surgery and having an arrangement with a more accessible practice for procedures that could not be carried out on a domiciliary basis (Merry and Edwards, 2002).

2.13.5 Attitudes towards Health Care

The attitude of the individual towards oral health can act as a barrier to accessing services. Self-concept has been found to be an important predictor of behaviour across the life span (Kiyak and Reichmuth, 2005). If an elderly person has a high self-concept, then they may be more likely to maintain their oral health and dental appearance (Kiyak and Reichmuth, 2005). Attitudes can be affected by many variables such as economics, education and society. Once established, attitudes may be difficult to change, especially for older people (Ettinger, 1992). Those with a more negative attitude towards dental care, may not seek access to dental services, particularly preventive services, and only attend when symptoms occur. Other variables involved in the formation of attitudes are level of education and income. These can act as barriers to accessing services; those with lower levels of education and income are less likely to access dental services. (Ettinger, 1992; Kiyak and Reichmuth, 2005).

For older people who are dependent on others, it is not just their own attitude towards oral health and dental care, but the attitudes of their caregivers as well. The perception held by carers of the benefits for their clients to be derived from dental care can be dependent upon their age, their own dental experience and whether they are in a paid position as a carer or not (Lester *et al.*, 1998). Also involved are the attitudes and beliefs of the dentists themselves. Professional barriers include a lack of understanding of the importance of oral health for older people, lack of resources and manpower, lack of training and inappropriate distribution of dental services (Meeting the challenges of oral health for older people: a strategic review: Chapter 4. Dental Services Access

and Provision, 2005). Dentists who believe that older adults are uninterested in maintaining their teeth or that they cannot afford dental care may drive away potential patients, whereas dentists who feel that retirees have more time and money, may expect them to be available for extensive and costly dental visits (Kiyak and Reichmuth, 2005). The dentist-patient relationship can be very important especially to older people; Slack-Smith (2010) found trust was a crucial part of older people's relationship with their dentist. Trust was considered vital because of the anxiety that can be associated with dental treatment and worries about the financial costs of dental treatment can be alleviated where the patient trusts their dentist (Slack-Smith *et al.*, 2010).

Borreani (2010) described the 'oral health life course', which refers to the cumulative effect of experiences and contacts with dental care providers. Generalised negative attitudes towards dentistry and dental personnel were linked to poor childhood experiences resulting in fear and anxiety concerning dental treatment. When seeking oral health care older people can be weighed down by the accumulated baggage of these previous experiences and for some it prevents them from seeking dental care altogether (Borreani *et al.*, 2010).

2.13.6 Lack of Perceived Need

Of the many studies that have looked at the barriers faced by elderly people often the most important factor appears to be perceived need. Kiyak in 1989 found that the importance attributed to oral health behaviours and perceived need for dental care were the two best predictors for utilisation of services among dentate elderly (Kiyak, 1989). Perceived need as discussed earlier is the individual's view of their own health needs and in the case of oral health needs it appears to be related to whether or not there are any remaining teeth, levels of deprivation and age. Increased age has also been reported as a factor in perceived need in other studies. In 1980 Smith and Sheiham found that some of the respondents in their study would have liked to have received dental treatment, so they had a perceived need, but they did not convert this into demand for treatment because they felt they were 'too old' (Smith and Sheiham, 1980).

Tickle and Worthington (1997) found that dentate individuals were six times more likely to perceive a need for dental treatment than edentulous individuals. Also, edentulous older adults are less likely to attend a dentist regularly and are less likely to perceive a need for treatment or advice (Tickle and Worthington, 1997). Perceived need for treatment was closely associated to deprivation and previous dental visiting patterns, the results from the study showed that older people in an affluent area were more likely to attend the dentist on a regular basis compared to those in a more deprived area; and those who attend regularly are more likely to have a perceived need for treatment (Tickle and Worthington, 1997).

Dentition status has now become a major factor in determining the use of dental services rather than old age (Holm-Pedersen *et al.*, 2005). For example, in 1999 Freeman asked participants in her study about dental attendance, and an 80 year old edentulous lady commented that because she had no teeth there was no need for her to attend the dentist, whereas a 70 year old dentate lady felt that dental care was an important part of her overall health care regime, and commented that she would attend the dentist to make sure her teeth were kept functional (Freeman, 1999).

2.13.7 Lack of Social Support

The social support received by older people can impact on their oral health status and oral health behaviour; it can affect when older people seek dental care and the type of treatments that they seek (McGrath and Bedi, 2002). In McGrath' and Bedi's study of this topic in 2002 social support was defined as living with another family member. They found that those aged 65 and over who lived alone were more likely to cite pain or a dental emergency as the reason for their last dental visit compared to those who lived with a family member (McGrath and Bedi, 2002).

In the literature there is also evidence for 'social connectedness', meaning that older people with strong inter-personal ties maintain their oral health better than those who are isolated (Kiyak and Reichmuth, 2005). 'Social connectedness' is measured in terms of marital status and living arrangements (Kiyak and

Reichmuth, 2005). This concept is closely linked to successful ageing where active engagement with life is an important factor (Rowe and Kahn, 1997).

2.13.8 Availability of Services

McGrath found that 1 in 5 adults in Britain in 1999 claimed they were having difficulties in finding a dentist who would provide NHS treatment (McGrath *et al.*, 2001). This may have been due to the recent trend for dentists to opt out of the NHS and instead provide care privately (McGrath *et al.*, 2001). Since McGrath's study there have been further reforms of NHS dentistry following the introduction of the new NHS contract for dentists in 2006. The House of Commons Health Committee report on Dental Services for 2007-2008 concluded that the Department's goal of improving access to dental services had not been realised. The number of dentists working for the NHS, the number of NHS courses of treatment being provided and the number of patients being seen have all fallen since 2006. The report also highlights the fact that fewer complex treatments were being provided for patients, however, more extractions were being carried out, and it calls for research into how this recent trend could impact on oral health (Dental Services Fifth Report of session 2007-8, 2008).

A survey of rural dentists carried out by the British Dental Association (BDA) for the Commission for Rural Communities (CRC) in September 2007 found that there was a shortage of NHS dentists and that rural dentists found it harder than their urban counterparts to recruit and retain dentists (Commission for Rural Communities, 2007). The survey concluded that the absence of new generation dentists willing to work in rural areas could lead to further shortages of dentists in these areas, and that many existing rural practices might close as retiring practice owners are not able to sell their practices on to younger practitioners (Commission for Rural Communities, 2007). This is where commissioning of dental services would be important.

2.13.9 Lack of Information

Health information content for older people should not be dissimilar to that for the adult population as a whole, however, how that information is distributed may be different (Cawthra, 1999). Methods that can be used to inform older people of health care services available to them and to give health information include leaflets, posters and the use of television and radio. It is important that information is displayed in the right places where older people will be able to access it, for example, in daycentres, GP surgeries and libraries (Cawthra, 1999). Many older people say that leaflets can sometimes be difficult to read because of poor layout, use of a font size which is too small or because they are full of jargon (Cawthra, 1999). Visual impairment is increasing, which may be due to the increase in life expectancy of the population and it can impact on access to dental care (Mahoney *et al.*, 2008). Visually impaired people may need large print or alternatively the information given on audiotape instead (Cawthra, 1999).

Fiske (2000) suggested that an alternative way of informing people would be through the use of information technology to bring information directly in to the homes of at least some older people (Fiske, 2000). In the USA, 1 in 12 people aged 65 or over has online access from home and in the UK figures from June 1997 showed that 6% of people aged 55 or over were using the internet (Cawthra, 1999). Dentists could use web sites to promote oral health and enable access to dental services for older people by using the web page for providing information on disease prevention, recognising signs of early disease, for asking the dentist questions and for making appointments (Bonnin and Bui, 1996).

There are limitations of using information technology to inform older people, as along with those who prefer not to use computers, there are also older people who may not have access to a computer at all. For example, a study carried out in the west of England and south Wales in 2002, a similar time to when this research was conducted, used household survey data and looked at older adults' use of information and communications technology in everyday life and found that only 15% of its sample of older people had used the internet in the past 12 months (Selwyn *et al.*, 2003). When considering use of web based

material it is important to remember that not all older people will have access to the internet, and in rural areas internet access may not even be possible. Therefore, information needs to be made available to older people in a range of formats including large print materials available at appropriate settings (such as community groups and GP surgeries), use of TV and radio and use of the internet (Issrani *et al.*, 2012).

A study exploring help seeking behaviour in people aged 75 and over with unmet health needs found that respondents reported that they did not know where to seek help from or what services were available (Walters *et al.*, 2001). Similar findings have been reported in the literature for some time, Smith and Sheiham (1980) found that clearer information was needed to be made available not only to older people but also to other health professionals who might advise their older patients. Particularly lacking was information about cost, 32% of people aged 65 and over did not know how much they would need to pay and there was also confusion about whether treatment would be free of charge because of their age, also many did not know that NHS treatment would be free of charge if they were receiving supplementary benefits (Smith and Sheiham, 1980). Similar barriers regarding lack of information on costs and availability of services are still being reported today (Borreani *et al.*, 2008).

2.14 Models for Overcoming Barriers to Accessing Dental Services

Many possible barriers to accessing dental care have been discussed. This section now looks at models of service delivery which can be used to help overcome these barriers.

2.14.1 Multidisciplinary Teams

In order to help overcome the problems with accessing dental services and the lack of manpower, the role of Dental Care Professionals has been expanded, and the number of training places for these roles increased (McGlashan *et al.*, 2004). Dental Care Professionals (DCPs) include dental nurses, hygienists, therapists and technicians. Dental hygienists have worked alongside dentists for some time now, their role has been expanded and we have also seen the introduction of dental therapists. Dental therapists can now provide a range of

treatments under the prescription of a dentist; they can provide simple routine restorations for children and adults under local anaesthetic.

In the UK the idea of a team approach to the provision of dental care has become more widely accepted (Daly *et al.*, 2002b). Tasks can be divided amongst the team depending on their skills and expertise, the idea being to allow dentists to concentrate on more complicated treatments which only they are qualified to do, and the simpler work can be carried out by other members of the team (Baltutis and Morgan, 1998; Daly *et al.*, 2002b). Previously in this country the majority of dental therapists have worked in the Community Dental Service (Gibbons *et al.*, 2000) and not as many were found working in the General Dental Services. This could possibly be due to a lack of understanding about how therapists could be used in general dental services, and there is little information about the cost effectiveness of employing dental therapists, some GPs perceiving it to be too expensive (Jones *et al.*, 2007). The literature about the work activities of therapists indicates that usually a lot of their time is spent treating children (Harris and Burnside, 2004; Kruger *et al.*, 2006) especially within the CDS and particularly providing preventive treatments (Jones *et al.*, 2008). The use of dental therapists within the skill mix could be a useful way of increasing services in rural areas. In Scotland the number of training places for dental therapists has been increased recently as part of the solution to the workforce shortage there. A vocational training scheme was introduced for therapists and two of the first trainees were placed in remote and rural areas (Forgie, 2006).

There is little research about the possibilities of using therapists to provide treatment for older people, and little information exists about the cost effectiveness of therapists, especially for the provision of NHS treatment. In 2010 Gallagher carried out a modelling exercise to explore the required skill mix of the dental team to meet future need and demand of older people. The model suggested that there will be a shortage of dentists and that the potential for DCPs should be increased. The study showed that DCPs could play a major role in providing dental care services for older people in the future; however, this model would have significant implications for health policy, professional bodies and dental team working (Gallagher *et al.*, 2010). A recent investigation

into the dentistry market in the UK recommended increasing the use of DCPs and making access to them easier for patients (Dentistry: An OFT market study, 2012).

It is not only members of the dental team who may be involved in providing oral health care advice for older people. Older people may consult a pharmacist, doctor or nurse before seeing a dentist. It is therefore important that these health care professionals have the correct information to give to people. Studies have shown that care workers do not always see oral health as being important and there is a lack of training for health professionals in oral health (Frenkel *et al.*, 2002; Andersson *et al.*, 2007). Andersson's study of district nurses in Sweden showed that the district nurses felt that oral health was part of dentistry and not their profession as such, and that talking about oral health with their elderly clients maybe bothersome for the patients (Andersson *et al.*, 2007). Health care professionals such as district nurses may be the first point of contact for older frail adults, especially those who are housebound, and therefore it is important that they are equipped with the correct knowledge about oral health and also that collaboration between health care professionals is encouraged in order to improve the oral health and quality of life of older people (Andersson *et al.*, 2007).

The Single Assessment Process (SAP) was introduced as part of the National Service Framework (NSF) for older people in 2001. The aim of this was to provide equality in access to multi-agency services and so would involve information sharing between health and social services. The NSF stated that the assessment should cover a number of areas, one of which was personal care and oral health was mentioned under this heading. This would mean that oral health would be part of the assessment carried out by social care workers and health care professionals for elderly people. Following an assessment an individual care plan is drawn up, and the patient then referred to the appropriate services. Dental practitioners could be involved in the process either by referring a patient they thought had an unmet health and/or social care need for an assessment or if the practitioner has a special interest in care for older people they may be able to become involved in providing specialist dental assessments as part of the comprehensive assessment within SAP, and then

possibly provide the treatment that is deemed necessary (Lane and Gallagher, 2006).

2.14.2 Mobile Dental Units

The use of mobile dental vans is another method of delivering dental care to communities where accessing a conventional dental practice is difficult. In the literature the majority of studies looking at the use of mobile dental vans comes from the USA. Studies are usually focused on the treatment of children in school based programmes (Bagramian, 1982; Douglass, 2005). While the use of mobile dental units has the advantage of being able to bring dental services to those who may not otherwise access them, there are numerous disadvantages and considerations to be made. The units can be expensive to set up, and there are maintenance costs, cost of fuel and costs involved in processing the waste (Douglass, 2005). Also, appropriate parking must be ensured in a place that will offer an adequate patient base (Douglass, 2005). Taking this into account, when used for the treatment of older people mobile units are more likely to visit institutions or day centres, as this minimises difficulties with parking and accessing a power supply, whilst maximising the number of patients treated (Fiske, 2000). However, the units often have steps to get onto the vehicle, and so a lift may be needed in order to help older frail people onto the unit (Mulligan, 1987).

2.14.3 Domiciliary Care

For those who cannot gain access to transport of any means and/or are housebound the provision of domiciliary dental care is an option. There are many issues surrounding the provision of domiciliary treatment, these include: the expensive equipment required; limitations to the complexity of treatment that can be provided; increased time away for staff from the surgery and there is little financial incentive for GPs to provide the service (Fiske and Lewis, 1999; Fiske, 2000).

In the UK the problems with remuneration for domiciliary visits has led to some debate over who should provide this service, whether the responsibility lies with GPs or the Salaried Services/Community Dental Service and who should pay for the service, the government, the local authority or the individual? (Fiske and

Lewis, 1999). There are no easily available statistics for domiciliary dental care visits made by independent/private practitioners or community dental staff (Fiske and Lewis, 1999). Domiciliary care is now commissioned and will be part of a contractual agreement with some dental providers.

When looking at the reasons for referral of elderly patients to the CDS in rural England it was found that the most common reason for referral was perceived difficulties posed by the medical history, in particular, dementia, severe stroke, severe cardiac problems and decreased mobility (Fenwick *et al.*, 1998). In the same study two thirds of the sample was provided with treatment at home by the CDS following referral, usually from a GDP or sometimes from another health care professional (Fenwick *et al.*, 1998).

Domiciliary care must be well planned to prevent problems and maximise use of time and resources (Fiske and Lewis, 1999). Fiske and Lewis (1999) suggest a 'mix and match' approach may provide a good solution for some elderly patients, where risky procedures, for example due to a complex medical history, are delayed until a visit to a fixed surgery can be organised and more simple treatments are provided in the patient's home in a minimum number of visits (Fiske and Lewis, 1999).

Domiciliary care in rural areas is particularly difficult; low population density increases the cost of domiciliary services, as larger areas need to be covered (Wenger, 2001).

2.14.4 Travel Schemes

Many rural communities have turned to self-help transport schemes, operated and organised by volunteer drivers, as a means of overcoming problems for those who do not have a car and where public transport is limited (Sherwood and Lewis, 2000). For those without access to transport, getting to a local surgery may be difficult, especially in a rural area where public transport may be poor. In a study looking at accessing health care in the rural midlands of England, Sherwood and Lewis (2000) found that voluntary schemes often received finance and support from local authorities, charities and the government. He also found that many of the volunteer drivers were older

people themselves, having spare time due to retirement and therefore schemes such as these may be unpredictable in the future (Sherwood and Lewis, 2000).

For services such as geriatric outpatient appointments, ambulance schemes have been used to pick up and drop off patients for their appointments, however journey and waiting times can be long (Donald and Berman, 1989). These type of schemes whether through voluntary organisations or through local health authorities could be very useful for older people living in rural communities.

2.15 Other Models of Oral Health Care

This section looks at the ways in which other countries have tried to address the problem of accessing dental services in rural communities.

2.15.1 Dental Services in the USA

In America 75% of US counties are rural and these include 20% of the total population. These rural areas have lower access to both dental and other specialist health care services. A large percentage of the residents of these rural communities are aged 65 and over (Glasser *et al.*, 2003). This is similar to many rural communities in the UK, and they also share similar problems such as poor public transport and the affordability of owning and running a car (Harrison *et al.*, 2007).

In the USA the traditional model for providing dental care is through private practice. Mertz and O'Neil (2002) believe that there is a poorly developed 'safety net' for those who cannot gain access to private oral health care (Mertz and O'Neil, 2002). This model of service delivery leaves unmet oral health care needs in rural communities (Harrison *et al.*, 2007). In 2003 Glasser *et al.* reviewed several initiatives involving interdisciplinary partnerships used to improve health care delivery and outcomes in rural America. They found the most successful models for improving health care were: (i) the use of 'mini-grants' and (ii) Community Oriented Primary Care (CPOC) projects, which in this case involved the use of medical students (Glasser *et al.*, 2003). The 'mini-grant' program awarded small grants from the Rural Health Outreach Initiative (RHOI) to a variety of health and social service organisations, bringing together

the disciplines of public health, nursing, medicine, medical education, health service research, community development and sociology. Projects that were set up included smoking cessation, drug intervention and oral health education programmes. These projects were found to be effective because they addressed locally identified needs and gaps in health service delivery and promoted collaboration between the various disciplines involved. The CPOC projects involving the use of medical students were particularly useful in meeting the needs of older adults in rural communities. The students spent a 16 week period, built into their undergraduate course, in a rural community where they worked on projects related to: screening (for example, for osteoporosis and geriatric depression); access issues (for example looking at home health services); and education and intervention, such as exercise programmes (Glasser *et al.*, 2003).

In 2007 Harrison gave several options for improving access to dental services in rural America, similar to those already given by Glasser *et al* (2003). These included making the career of dentistry more appealing to students, the use of mobile vans and raising the perceived value of dental services in rural populations through patient education. Harrison (2007) pointed out that in order to meet rural dental care needs new and innovative practice models would be needed and this would involve partnerships between dental providers, health care organisations and the government (Harrison *et al.*, 2007).

In the USA mobile dental vans have mainly been used for the treatment of children in school-based programmes. Douglass (2005) looked at three mobile programmes in Connecticut. One mobile unit that visited 40 dispersed rural sites had lower productivity compared to the two that visited a limited number of schools in only one city. The mobile unit going to rural areas was also eligible for federal subsidisation which resulted in higher revenues than the others even though fewer procedures were completed. The other 2 mobiles, used in urban settings, billed Medicaid for the treatment they had provided, this scheme reimburses the 1st to 6th percentile of the fees incurred. However, none of the mobile programmes produced enough revenue to cover the salaries and on-going costs of the units (Douglass, 2005). There are other factors which also need to be considered such as the set-up costs and the complexities of running

the units which were discussed earlier. Douglass (2005) concluded that it is unlikely that mobile dental clinics serving low income populations can be self-sustaining without subsidy (Douglass, 2005).

2.15.2 Dental Services in Australia

Mobile dental units have also been used in the Northern Territories in Australia, and again the criteria for whether the settlement received a visit from the mobile dentist was whether it has a school or not. The visits occur during the dry season; however, the terrain still poses problems with physical access of driving the unit to where it needs to be. The sessions were long, with early starts to see the adults of the settlement and then providing treatment for school children during the day and the afternoons and evenings for treatment of returning adult workers (Plummer, 1992).

Australia has also developed a flying doctor service, the Royal Flying Doctor Service (RFDS) which is a non-profit charity and receives some government funding. It provides aeromedical emergency and primary health care services to remote parts of Australia. The service also includes two flying dentists who provide services at some remote clinics. The service has been running since 1928 and has improved access to basic health care for some of the most isolated people in the world (O'Connor, 2001).

Initiatives involving placements for senior dental students into remote and rural areas have also been adopted in Australia as part of a strategy to address the shortage of rural dental practitioners. Bazen *et al* (2007) reported on the Rural, Remote and Indigenous Placement (RRIP) offered at the University of Western Australia. The aim of the RRIP was to encourage more students to rural practice after graduation by providing positive rural experiences. Although feedback from the students who took part in the programme was positive, Bazen *et al* concluded that the model cannot yet claim to be successful for the recruitment and retention of dentists into rural areas and that more follow-up of graduate participation in rural practice is needed (Bazen *et al.*, 2007). The cost of providing schemes such as these has also been investigated. The costs associated with these placements include the cost of travel for students and supervising staff, salary costs of supervising dentists and the costs of dental

assistants to support the students. Richards *et al* (2002) found that these associated costs are relatively modest, and that students can make a significant contribution to the provision of services in rural communities, particularly where publicly funded services are not available. The cost of services provided by students compares favourably with the cost of similar treatment provided by private practitioners (Richards *et al.*, 2002).

Also in Australia the government introduced Aboriginal Health Workers (AHW). The AHWs have a special status within their community because of the knowledge and responsibilities they have. The duties of these workers include screening and assessing patients, referring patients to medical officers and passing on medical information to the patient. An oral health training programme for AHWs has been piloted and it is hoped that once this is established AHWs will be able to provide long term preventive measures at a local level to improve oral health (Pacza *et al.*, 2001).

2.15.3 Dental Services in Canada

Similar problems in terms of recruitment of dentists have been found in the Northwest Territories of Canada limiting access to dental services in this rural area (McDermott *et al.*, 1991). One approach to this problem has been to train indigenous people to provide primary health care to their own people. In Canada a dental therapy training programme was introduced to overcome manpower shortages and improve access to services. In Canada dental therapists have been used for many years to provide treatment in remote areas, for native Indian and Inuit populations and in the Northern Territories, where there are insufficient dentists. Most therapists work for the federal government and for provincial and territorial governments. The majority of therapists can examine, diagnose, develop or modify treatment plans except in some regions where the initial examination is carried out by a dentist. The therapists are able to provide care for communities that would otherwise not have access to dental services, the therapists work in satellite clinics in small rural areas and provide care on a fee-per-service basis and many are located in or near schools to provide treatment for children (Nash *et al.*, 2008).

2.16 Conclusion

The population of older people is increasing, both globally and in the UK. Population ageing presents challenges over how we will provide medical and social care for the increasing numbers of older people. Planning services and workforce for an ageing population is difficult and becomes even more challenging in a rural setting, where fewer services exist and there are difficulties in recruiting health care professionals.

Older people are now retaining more natural teeth and their dentitions are often heavily restored. The challenge to the dental profession is how we maintain these dentitions in older people and how this is done in a rural setting presents further challenges. Those in the population who are now reaching the age of 65 and over have had different experiences than previous generations. They have had access to better health care following the introduction of the NHS and this may have changed their attitudes and expectations regarding their oral health care. However, there is diversity within old age. The young old may have different attitudes, values and expectations compared to previous generations, but this does not apply to all older people. Some rural older people might experience social exclusion; including limited material resources and a lack of access to services. Also, changes within rural communities, for example, loss of local infrastructure and amenities, can interact to reduce well-being.

In this chapter access to health care was discussed and the complex relationship between need, service provision and service use involved in access was highlighted. Therefore, access is multifactorial and has been described as being made up of 5 components: Availability, Accessibility, Affordability, Acceptability and Accommodation. Barriers to accessing health care can occur around any of these components. Cost is a commonly cited barrier, not just for older people; however, for those older people reliant on a state pension only this can be very difficult.

There was strong evidence in the literature for subjective barriers among older people, such as lack of perceived need, which prevented them from accessing oral health care services. These are important considerations when looking at how people convert their perceived need for treatment into actual service

utilisation. In rural areas there are almost inevitable barriers surrounding availability of services. Also barriers associated with accessibility, for example, problems such as public transport, can be particularly difficult in rural areas especially for older people with limited mobility.

This project aims to investigate the barriers that exist to accessing dental care for an older rural population in County Durham. It will look at how and why older people in this setting make use of dental services and, where possible, will aim to find ways of improving access to oral health care for this sector of the community. The study aims to reflect the diversity found among older people, in terms of age, attitudes, socio-economic and social circumstances. There is very little in the literature about older rural people's use of oral health care services and this investigation hopes to highlight this area and the issues surrounding it.

Chapter 3. Methods and Methodology

3.1 Aim and Objectives

Project Aim:

To explore how older people access dental services within a rural setting and to use the information gathered to develop strategies to improve access and to inform the redesigning of dental services for older people in a rural area in the North East of England.

Objectives:

1. To document oral health care services that are already available in the area
2. To explore the oral health priorities of older people and their perceived barriers to obtaining dental care and to establish whether the local community is aware of services available in their area
3. To explore the views of members of the professions involved in provision of these services, including GDPs, Salaried Service Dentists, GPs and District Nurses
4. To use the information gained to develop new and innovative ways of delivering oral health care to the local population

3.2 The Research Process

This study was conducted in two phases, which are described in the following sections. Figure 3.1 shows the overall research process and the sources of data used.

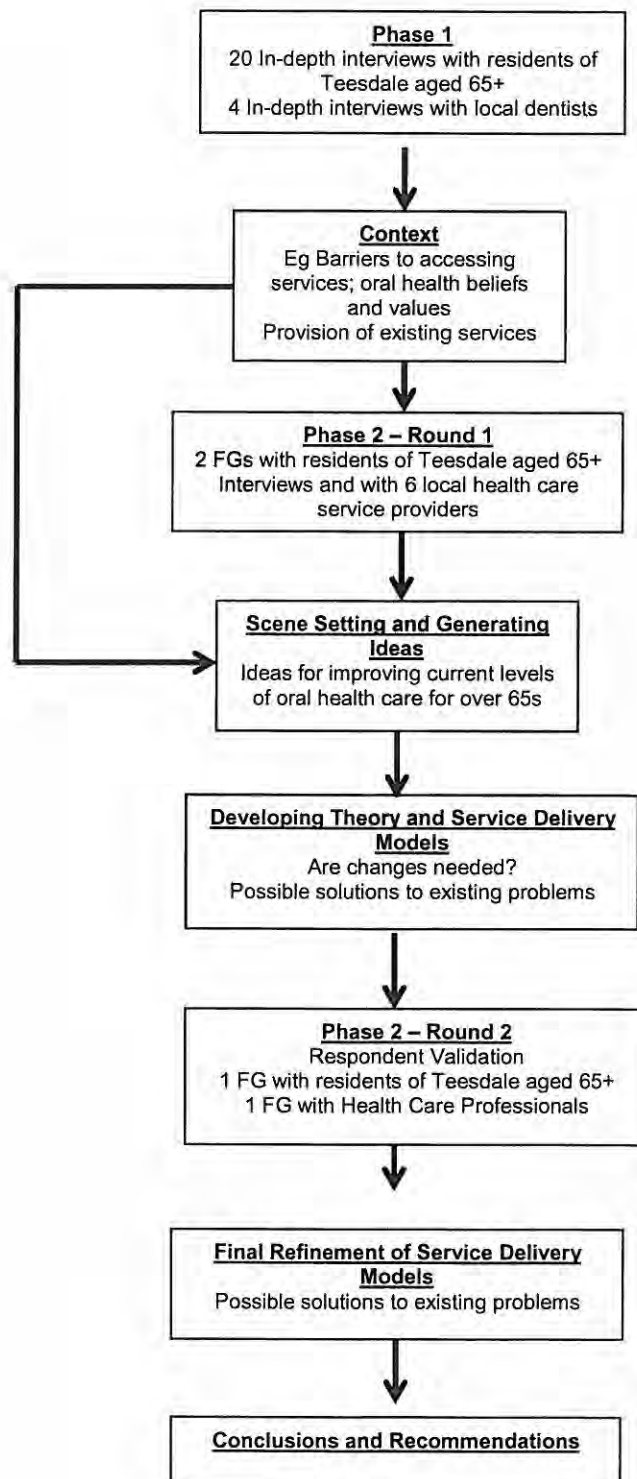
3.2.1 Phase 1: Older People's Oral Health Beliefs, Values and Barriers to Accessing Dental Care

An initial plan for this project was already in place; County Durham and Darlington PCT believed access to dental services was a problem for older people in Teesdale. I was not given any data from the PCT to support this perception. The original design for the project was to have 2 phases. The first was to investigate the barriers faced by older people when accessing dental care and the second would be to pilot some kind of older people's dental service, most likely this would be based around flexible appointment times and using the Salaried Dental Service. The exact detail of Phase 2 was dependent on the findings from Phase 1.

After discussing the research design with my supervisory team, we decided that the purpose of the first part of the study should be to investigate whether the perceptions of the PCT regarding poor access to dental services for older people in Teesdale were accurate. Therefore, Phase 1 of this project aimed to explore the oral health values and beliefs of adults aged 65 and over in Teesdale and aimed to discover the barriers faced by older people when accessing dental services in a rural area. The study focuses on independent-living older people because the investigation was about accessing services and the impact of rurality, therefore, it was decided that the views of free-living older people would help answer the research question more appropriately. Also, research looking at the oral health of older people in residential care is widely covered in the literature (Fitzpatrick, 2000; Frenkel *et al.*, 2000; Simons *et al.* 2001; Adam and Preston, 2006) and oral health care within residential settings for older people can be provided using different models than would be available to community living older people, for example, screening programmes. Barriers may still exist for those within residential care; however, as this project concentrated on the impact of rurality on older people we felt that that

independent older people would give more relevant information on accessing services. The experiences of older people living in nursing homes may be worthy of separate future research.

Figure 3.1 Sources of data and the research process



There is very little in the literature about older people's oral health priorities in a rural setting or about how older people in rural areas access oral health care services. I also had little existing information from the local PCT as a basis for the research. Therefore, due to the exploratory nature of the investigation qualitative methods were appropriate. In-depth interviews were chosen as the method of data collection for this phase because they are generative processes, new knowledge or thoughts are likely to be generated at some stage (Legard *et al.*, 2003). Unlike clinical history taking, which narrows down peoples' responses, in-depth qualitative interviews open up responses and no prior assumptions are made about the categories into which responses fit (Green and Thorogood, 2004b). In-depth interviews are flexible and allow data to be collected within the context of personal history and experience (Lewis, 2003). Therefore, this method was useful to explore the impact of rurality and ageing on older people's oral health. (Further theory of in-depth interviews can be found in Section 3.3.5.1). Using in-depth interviewing allowed me to collect detailed data that would help understand some of the decision making processes that occur when older people try to access oral health care services and the health beliefs and attitudes which underpin rural older people's use of dental care.

Interviews were held with local residents and with local dentists. The dentists were included here to set the scene in terms of current local dental services.

3.2.1.1 Phase 1 - Criteria for Selecting Participants Aged 65+

For this group the inclusion criteria were that participants must be resident in Teesdale, that they were aged 65 or over and were living independently.

In the literature the term 'older people' is not always well defined, that is many different ages are used to represent older people. Some studies choose 60 and over, whereas others choose 65 and over; for this investigation people aged 65 and over were chosen because at the time 65 was still the pensionable age used by the government and an age which was generally acceptable in society to be classed as 'older'. The age for retirement is no longer set by the government at 65; it has now increased and is different for men and women. However, in the dental literature 65 was the age most commonly used to define

older people and so I also used this age. However, chronological age represents only one form of old age. The aim was to capture the diversity found among older people, and particularly for this study, heterogeneity in terms of the place of residence whether semi-rural or rural, whether they lived in a deprived area or not and whether they were dentate or edentate.

The only exclusion criteria were those who did not have the mental capacity to give consent and non-English speaking residents.

3.2.1.2 Phase 1- Sampling and Recruitment of Participants Aged 65+

Purposive sampling was used to select the participants aged 65 and over; the aim was to recruit older people who were more likely not to be accessing services including dental services, as it would be expected that these participants would be able to highlight the barriers preventing them from accessing dental services. Accessing those who do not regularly use dental services was difficult; NHS dental lists and NHS GP lists were not used for recruitment purposes as this may have produced a sample where the majority of participants may have been more proactive and did make regular use of health services. Therefore, the 65 and over participants were recruited through voluntary organisations and I had hoped that within these groups there would be some people who did not routinely use dental services and information from these potential participants would be useful in answering the research question.

In Teesdale there are several voluntary groups providing social events for those aged 65 and over, such as Age Concern and Teesdale Day Clubs, these groups provided an opportunity for sampling. However, gaining access to the events run by these organisations was extremely difficult in some cases. Gatekeepers have been described as the sponsors, officials or significant persons who have the power to grant or deny access to and within a setting (Walsh, 2004). Gatekeepers were present in the voluntary organisations targeted for recruitment in this study. At first the gatekeepers were very reluctant to allow access to events that may have been useful for recruitment. It was necessary to spend a lot of time building relationships with these key individuals, ensuring that they fully understood the research project that was to be carried out and what it would entail for participants. For me this was time

consuming and involved travelling to meet with voluntary organisation workers on multiple occasions. Those acting as gatekeepers were protecting the best interests of potential participants and therefore needed to know that the research would be conducted ethically and sensitively and so I provided constant reassurance regarding the conduct of the research and evidence of ethical approval for the project.

The ethical approval and reassurance satisfied the gatekeepers, they accepted the research to be carried out, and allowed me to visit local events to inform residents of the study and distribute information packs. These packs contained a participant information sheet (PIS) (Appendix H), reply slip and stamped addressed envelope (SAE). The numbers attending many of these events in villages across the area of study were often small. Those who were interested could take the information away, they then had time to think about it and if they wished to take part in the study they could contact the principle investigator after the visit. The events were revisited after 2 weeks to check whether there was any further interest. The groups were not contacted again after the follow-up visit.

In order to achieve a balanced sample the aim was to include a variation of male and female participants, a range of ages and a mix of participants from affluent and deprived areas within Teesdale. Teesdale covers a large rural area; therefore, at the beginning of recruitment 3 different locations were targeted. Barnard Castle was chosen as one of them, as it is the main town within Teesdale. A further 2 villages were chosen in order to give a contrast between rural village communities and the more semi-rural nature of Barnard Castle. The 2 villages were chosen using Index of Multiple Deprivation scores (Reilly and Eynon, 2003) and advice was also taken from Teesdale District Council. The Index of Multiple Deprivation included 6 domains: income, employment, health and disability, education, skills and training, housing and geographical access to services. The geographical area is divided into its wards and each ward is given an Index of Multiple Deprivation (IMD) national rank.

Cotherstone, a relatively affluent village was chosen and the other was Evenwood a more deprived village. Evenwood was ranked in the 10% most deprived wards in England for the domains of employment and health. The only

domain that Cotherstone was ranked in the 10% most deprived wards for was access to services.

However, recruitment proved to be very difficult. Many of the villages were small hamlets with extremely small populations. Once access was granted to local voluntary groups barriers were still encountered. The personal perceptions of potential participants sometimes acted as a barrier, for example, many of the edentulous expressed the belief that there was no need for them to attend the dentist and therefore there was no need for them to participate in any research about dental services; Borreani *et al* (2010) also reported this as a barrier to recruitment (Borreani *et al.*, 2010). On some occasions potential participants were suspicious of the research and the researcher, at the time other research into ageing and transport had been carried out in the area and many felt fatigued with research and with researchers using them as a means of attaining a qualification. Due to these problems the criteria for recruitment were widened and many more villages and locations were visited. The mobile library service was also used to take information packs to some of the more remote locations. After some time and a lot of effort enough participants were enrolled to the study. The sampling and recruitment in practice were different to how they were planned. However, the final sample contained older people with a good variation of: age ranges; semi-rural and rural places of residence; dentate and edentate.

3.2.1.3 Phase 1 – Sampling and Recruitment of Local Dentists

Local dentists were also invited to take part in order to start building a picture of the existing local oral health care services. All dental practices within Teesdale were visited, this included NHS, private and Salaried Service dentists.

Participant Information Sheets were distributed (Appendix I) at all these practices. Dentists then had time to consider the information and contact me if they wanted to participate. Follow-up calls were made to practices after 2 weeks, if there was still no response they were not contacted again.

3.2.1.4 Phase 1 – Data Analysis

Informed consent was taken from all participants, both dentists and the over 65s (Appendix J). Participants aged 65 and over were then visited in their own homes for the interview and dentists preferred to be interviewed at their place of work, usually during their lunch break. All interviews were audio recorded and transcribed verbatim, all written data such as transcripts and consent forms were anonymised, participants were assigned a unique identifying code for use throughout the study and for the purposes of writing this thesis participants aged 65 and over have been given pseudonyms.

Thematic analysis was carried out of all transcripts, following the guidelines provided by Braun and Clarke (Braun and Clarke, 2006). Themes emerged from the data and codes were developed. I decided to mark codes directly onto the transcripts at first, rather than using a computer programme, as I felt this helped me to familiarise myself with the data. As each interview was carried out, the transcript was analysed and codes were applied to it, when a new theme emerged this was checked back against all existing data to ensure it had not been missed before, so continually checking new data against previously collected data. The process of data collection and analysis went on until no new themes emerged and saturation was reached. The codes identified and the themes developed were strongly linked to the data, in an inductive or data-driven way (Boyatzis, 1998). As patterns emerged from the data, categories and themes were developed. For example, the meta-theme of 'Oral Health' contained all occurrences where participants talked about their oral health behaviours, that is, how they looked after their teeth, both in the past and present. It also contained the categories 'dental attendance', 'attitudes towards tooth loss' and 'the importance of health' as all these topics help build a picture of oral health in context.

Some coding and the development of themes was also carried out by my supervisors, ensuring that more than one person checked the coding and interpretation acted as a form of triangulation. Triangulation assumes that the use of different sources of information, or in this case different analysts, will help to solidify and confirm research findings (Lewis and Ritchie, 2003). Tables were produced for metathemes, which are the larger overarching themes and the

smaller themes are categories within these. An example is given in the appendices (Appendix K).

3.2.2 Phase 2: Providing Oral Health Care Services for Older People in Teesdale

Phase 1 took around 18 months to complete. It provided data about oral health beliefs of older people and the barriers they often face when accessing dental care. Data from local dentists helped to set the scene and informed on current levels of dental service provision in the area. The findings from Phase 1 then altered the course of the original research design. It was originally thought that Phase 2 would involve piloting a new service for older people. At the beginning of the project we felt that providing additional services aimed at older people would help alleviate some of the perceived problems with accessing oral health care services.

However, the findings from Phase 1 showed that the problem went beyond simple availability and accessibility. There appeared to be many other factors involved when older people chose to make use of dental services. Putting additional services in place may not necessarily result in an increased use of those services by older people. Therefore, the supervisory team and I decided that Phase 2 would look in more detail at local oral health care service delivery and try to establish any ways of improving already existing oral health care services that would be of real benefit to local residents and give consideration to the attitudinal barriers which existed. The aim was to develop improved models of service delivery which would be acceptable to both service providers and service users.

Phase 2 took just over a year to complete. Qualitative methods, in this case focus groups, were appropriate as this was another exploratory piece of work. The method of data collection used in Phase 2 was focus groups. Focus groups are good for generating ideas and this was the aim here. In-depth interviews allow detailed information to be gathered from participants whereas focus groups offer the opportunity to gather a breadth of information. They are of great value where the interaction between participants informs the research issue, and this interaction can also be useful where creative thinking or

solutions to problems are required (Lewis, 2003). The focus group method is a group process which can help people explore and clarify their views in ways that would be less easily accessible in a one to one interview (Kitzinger, 1995). Focus groups are valuable tools in understanding decision-making and are effective in studying professional practices (Barbour, 2014). Therefore, they were particularly useful to look at how older people access dental services and how these services are provided by the health care professional involved.

It was hoped that the group dynamic would help to generate ideas around oral health care service delivery which reflected the different backgrounds of health care professionals or older people involved. I hoped to capture different points of view that would help develop ways of improving local dental services that would be acceptable to both older people and service providers. Focus groups were used here rather than in-depth interviews because we wanted to collect a breadth of information, reflecting people's backgrounds, about all the services available and used by local residents. Service design and producing new ideas about service delivery can be a difficult topic to discuss for lay people, therefore, it was hoped that the group dynamics would help to generate debate and concepts for service delivery in the focus groups held with older people (Bryman, 2012a). Focus groups allowed ideas about oral health service delivery to be discussed and refined within the group. (Further theory of focus groups can be found in Section 3.3.5.3).

In order to do this, local health care service providers from various different backgrounds were invited to take part. This included any professionals who could be involved in providing care for older people, for example, GPs, district nurses, dentists and local commissioners. Separate focus groups were also held with local residents aged 65 and over. In this phase I wanted to concentrate on their use of dental services and discuss how dental services could be improved for their age group.

The initial aim was to have 2 rounds of focus groups; the first round being used to gather information about the current services available to them and how they could be improved. The second round was used to validate the proposals of oral health care service delivery that were developed. Taking the research

evidence back to the participants is known as respondent validation and is a method of verifying qualitative data (Lewis and Ritchie, 2003).

Oral health care service delivery is a topic which may be unfamiliar to participants, therefore, in order to promote discussion and give some ideas of the types of models being considered to improve local dental services a table containing 9 concepts for improving local oral health care services was given to the participants (see Box 6.1). This acted as a focus group exercise and helped to start the debate. Following the first round of focus groups these concepts were refined and developed further, resulting in a final 5 proposals (see Box 6.2). The second round of focus groups was used to establish whether the final concepts developed would be acceptable to the participants, that is to both service providers and service users. Feedback and any new information was used to refine the concepts further and contributed towards the final recommendations.

3.2.2.1 Phase 2 - Recruitment of Health Care Professionals

Health professionals involved in the care of older people were invited to take part in the focus groups. This included medical practitioners, dentists, community practice nurses and representatives from the PCT. Letters of invitation were sent out as part of an information pack. Sampling was purposive, but, because of the very limited numbers of health care professionals working in Teesdale information packs were sent to all dental practices, as listed on the GDC register as being located in Teesdale and to all GP practices in the area and to those involved in local decision making for dental services at the Primary Care Trust (PCT). The information packs contained a PIS, reply slip and SAE; there were several slightly different versions of the PIS, depending on who it was aimed at; one for GPs, dentists, district nurses/community nurses and PCT staff (Appendices L - O), and each version reflected the potential participant's professional background. GP practices and dental practices in Teesdale were visited and phone calls were made to those at the PCT. Potential participants were given time to consider taking part, if no response was received they were contacted again after 2 weeks via a follow-up phone call. If at this point

potential participants expressed that they did not want to take part they were not contacted again.

Due to the busy schedules of the health care providers it was difficult to arrange a suitable time for them all to meet together, therefore the first round of information gathering from professionals was conducted as interviews and small group discussions rather than a focus group as originally planned. The health professionals included local dental practitioners from different backgrounds including NHS practice, private practice and the Salaried Services. Therefore, the data presented reflects the diversity of NHS dental services. I also held interviews with a district nurse, a PCT representative, and a small group discussion with local GPs.

I did manage to organise a focus group for the second round, that is the respondent validation, which most of the health professionals involved in the first round of interviews could attend.

3.2.2.2 Phase 2 - Recruitment of Participants Aged 65+

As recruitment of the participants aged 65 and over had been difficult and extremely time consuming during the earlier phase of the study, Voice North was used in this phase to recruit participants on my behalf. Voice North was developed by the Institute of Health and Ageing at Newcastle University and can be used to engage members of the public in research. Voice North represents an opportunity for a large representative group of people across the region to share their views and life experience to make a positive difference to the lives of older people in the North East (Voice North, 2014). It enables researchers to engage with a wide, representative range of people and their communities and to consult with them on key issues around ageing and demographic change. It facilitates identifying public concerns and provides real opportunities for lay people to become involved and to help shape future research and policy-making.

Voice North sent out information packs on my behalf to the people living in Teesdale that were registered on their database. The information pack contained a PIS which I provided (Appendix P). Participants who were interested in taking part confirmed this with Voice North, who then passed me

the details (names and telephone numbers) of potential participants. I telephoned those who were interested and following a brief conversation selected the best cases for the project, that is, those that fit the criteria of the project: aged 65 or over; and living independently in Teesdale. Once recruitment was complete 2 focus groups were held with older residents of Teesdale. The focus groups were to be used to explore the types of services older people would like available to them and again to gather their opinions to aid in developing models for service delivery. The focus groups were to be repeated, again to act as a form of respondent validation; however, the initial 2 focus groups were reconvened as 1 group due to the loss of some participants from the study.

This is a different group of participants aged 65 and over to the group which participated in Phase 1. It was felt that by the supervisory team that we had already asked enough of those who took part in Phase 1. This view was also held by the organisers of the voluntary groups, such as Teesdale Day Clubs and Age Concern. The organisers of these groups informed me that another project looking at transport for older people in Teesdale had also just been carried out and they felt the members of the voluntary groups had contributed a great deal towards research at that time. Also, a pragmatic view was taken towards recruitment, in terms of constraints of time and cost; therefore, allowing Voice North to aid in recruitment was of great benefit. This group of participants had to fit the same criteria as those for Phase 1, that is, live in Teesdale and be aged 65 or over. Again I aimed for a varied sample in terms of rural or semi-rural residence, age and dental status and Table 6.1 shows the key characteristics for this group. There is no reason to believe that this group of participants would have views of dental services which were not broadly representative of their peers in Teesdale.

3.2.2.3 Phase 2 – Data Analysis

Informed consent was taken from all participants prior to any interviews or focus groups (Appendices Q and R). There were 2 slightly different versions of the consent form, one for the over 65s who only participated in focus groups for this phase of the study and the other for the health professionals which reflected the

fact that some took part in interviews and small group discussions as well as focus groups. Data was anonymised and analysed in the same way as it had been in Phase 1, using thematic analysis.

During the focus groups with the over 65s participants talked again about their previous dental experiences and barriers to accessing services; topics which were included in Phase 1 of this study. Because the analysis was thematic, this data is reported on in the first results chapter titled 'Phase 1: The Oral Health Beliefs and Priorities of Older People in Teesdale: Results', any new information regarding dental services is presented in the subsequent results chapters.

3.3 Justification of Approach

The aims of this study were to explore the oral health priorities of older people, to investigate how older people access and use dental services and to explore the views of the health professionals who provide local health care services. Because of the exploratory nature of the investigation qualitative methods were considered appropriate. The following section goes on to highlight some of the literature which supports the use of qualitative methods for this project.

Qualitative research is concerned with interpreting social phenomena and exploring the meanings people attach to their experiences and how they make sense of their social world (Pope and Mays, 1996). Unlike quantitative research, qualitative research generally seeks to answer questions about the 'what', 'why' and 'how' of a phenomenon, rather than questions of 'how many' or 'how much' (Pope and Mays, 1996; Green and Thorogood, 2004d). The use of qualitative methods makes it possible to study how people understand concepts, what sorts of 'trade-offs' people might make when weighing up information and deciding whether or not to take it on board (Barbour, 2008). Within health services research the use of qualitative methods has increased (Pope and Mays, 1996). They are often used as preliminary research methods because they can be particularly useful where no valid or reliable quantitative measures exist (Ritchie, 2003). Qualitative research methods have been used to explore the decision making process, for example, in relation to taking medications which have been prescribed or in following health promotion messages. Qualitative research is good at illuminating the process underpinning decision

making because it is contextual, it focuses on what exists in people's everyday lives (Barbour, 2008). It is also explanatory, it allows the investigator to examine the reasons behind the decisions made by people, and it can look for associations and patterns in behaviour. Furthermore, it can be used to evaluate or appraise the effectiveness of what already exists within people's lives, such as health care services; and therefore it can aid in generating theories and developing strategies and actions (Ritchie, 2003). For these reasons qualitative methods were appropriate for this study which investigated a topic about which relatively little is known.

There are recent examples of the use of qualitative methods used in oral health service research, for example, Borreani *et al* (2008) investigated the views of older people in the UK regarding their oral health and how they access dental services (Borreani *et al.*, 2008). Also, in New Zealand Gregory *et al* (2012) examined older people's experiences and perceptions of oral health and oral health care (Gregory *et al.*, 2012). There is still little in the literature regarding the oral health priorities of older people, the effect of the life-course and the impact this has on oral health and dental attendance, especially within a rural setting; and so qualitative methods were used to explore these topics.

3.3.1 Epistemology and Ontology

In qualitative research the nature of the study and the analysis of the data are influenced by the researcher's epistemological and ontological standpoints. These views underpin the choice of method used in qualitative studies.

Ontology concerns the beliefs about what there is to know about the world, about whether social reality exists and whether or not social behaviour is governed by 'laws' that are universal (Snape and Spencer, 2003). Again there is much debate around ontological issues and in broad terms there are three distinct positions. Firstly, 'realism' claims that there is an external reality which exists independently of people's beliefs or understanding about it and there is a distinction between the real world and the interpretations and meanings individuals hold about it. Secondly there is 'materialism' which claims that there is a real world but only material features such as physical attributes or economic

relations hold reality. Lastly 'idealism' claims that reality is only knowable through socially constructed meanings and through human interpretations of these (Snape and Spencer, 2003). These positions have been widely debated and have also been modified, for example Hammersley (1992) describes 'subtle realism', in which social phenomena are believed to exist independently, however, these are only accessible to researchers through people's interpretations and accounts (Hammersley, 1992). This is the standpoint which has been adopted in this study, participants accounts of their values and beliefs regarding oral health and their descriptions of the barriers they face when accessing dental services have been used to attempt to unpick any problems surrounding the issues of dental attendance among the over 65s.

Epistemology refers to the theory of knowledge, that is, how we know what we know, how we come to know the world and our ideas about the nature of evidence and knowledge (Barbour, 2008). Again there is much debate within social research concerning the ways of knowing and learning about the social world. One of the main issues is the relationship between the researcher and the researched. Here there are two opposing schools of thought: positivism and interpretivism. The positive tradition suggests that society can be explained scientifically (O'Brian, 1993); a positivist philosophy is one which assumes that phenomena exist, whatever they may be, for example, diseases, bacteria or health. Positivists believe that only observable phenomena can be studied, scientific methods are favoured and there is an assumption that knowledge derived from proper scientific inquiry is not bound by emotional or subjective viewpoints, it remains 'true' for all times and places (Green and Thorogood, 2004d). This model is considered inappropriate for social research, where human behaviour is being investigated; qualitative social science research is usually rooted in different epistemological traditions.

Interpretivism places emphasis on the human interpretative aspects of knowing about the social world (Snape and Spencer, 2003). It acknowledges that the researcher and the social world do impact on each other making it impossible to be completely objective. Qualitative research has generally been associated with the interpretative paradigm. However between the two extreme viewpoints of interpretivism and positivism there is a more neutral ground which recognises

that social research cannot be completely objective, however, transparency of the researcher is encouraged through reflexive practices regarding data collection and analysis (Snape and Spencer, 2003). This is a more pragmatic view; it acknowledges that the researcher can impact on both data collection and analysis; however the researcher should aim to be transparent in their explanation of their methods and reflexive in their research practices.

Reflexivity has been defined as the self-aware analysis of the dynamics between the researcher and participants, being explicit about the position assumed by the researcher and about the possible ways the researcher could impact on the research process (Gobo, 2011).

As the principal investigator (PI) in this study I am both a clinician and a researcher, therefore, I took a practical standpoint throughout conducting this investigation. My approach acknowledges that the social world exists, and that although researchers may aim for objectivity and neutrality, they will still have some impact. From an ontological perspective I followed Hammersley's subtle realism (Hammersley, 1992), acknowledging that social phenomena exist but they are only accessible through people's accounts of them. Epistemologically I took an interpretive view and was interested in people's interpretations of their world. I also recognise that the researcher can impact upon the research and so during the research process it has been important to make clear how data was collected and interpreted and to be reflexive.

3.3.2 Ethical Issues

There are a number of issues involved with qualitative research which should be considered with regard to good ethical practice. There will most likely always be issues surrounding the confidentiality of data, and there are legal requirements which need to be adhered to. Within the field of health care research activity is governed by a professional code of ethics, and research projects may require a formal review by an ethics committee (Green and Thorogood, 2004a). The British Sociological Association also has ethical guidelines for social research, however, these are advisory, not mandatory (Green and Thorogood, 2004a). This research project received a favourable ethical opinion from County Durham and Tees Valley Research Ethics

Committee (Appendices B and C). The study was also granted Research and Development approval from County Durham and Tees Valley Primary Care Trusts (Appendices D and E).

An important ethical consideration is that of consent, the type of consent required from participants is that of informed consent. This means that participants should be given sufficient information about the purpose of the study. This includes: what participation will be required from them, who the research team are and how the data will be used and they also need to be made aware of whether they will be identified or not (Lewis, 2003). For informed consent to be valid the participant must have been given all the relevant information, they must have the capacity to process this information and come to a decision and informed consent must be given voluntarily. Obtaining informed consent is not compulsory for all research; however, it was obtained from all participants in this study.

Qualitative research involving interviews with participants often involves the researcher building trust and creating a rapport between themselves and the respondent in order to encourage them to tell their story. This may appear to be a false relationship where the researcher is exploiting the respondent in order to collect data. The investigator needs to ensure that they carry out the research in an ethically sensitive way, showing respect for the respondent as an individual and not just as a source of data (Green and Thorogood, 2004a). Whilst qualitative research does not usually involve any interventions that may directly impact on the lives of the participants, some research areas may provoke an emotional response, for example, talking about experiences of ill health (Green and Thorogood, 2004a). Where respondents have built a good relationship with the researcher they may feel comfortable talking about some distressing topics. But if a participant does become upset during an interview, the researcher must be prepared to handle the situation sympathetically and professionally. Participants should already understand the nature of the subject being investigated prior to the interview, but it is important that the researcher responds to any sign that the participant may be feeling uncomfortable during the interview (Lewis, 2003). For any study, potential harm to participants needs to be considered; where participants are taking part in interviews the risk of

harm is very small. However, when sensitive subjects are being discussed the participant may find the experience difficult and distressing, and so the researcher needs to have prepared their response to this situation before the interview takes place. The researcher's role should not be confused with that of an advisor or counsellor, or if the researcher is a doctor or dentist, they are there in their role as researcher, and not to provide any form of treatment. The researcher should be equipped with information about relevant services which they can leave with those participants who express a need for support or treatment during an interview (Lewis, 2003). In this study I did not anticipate that any respondent would become very distressed. However, I did always have the contact details for County Durham and Darlington Community Dental Service with me in case a participant did become upset and felt they wanted to talk to someone else.

Potential harm to the researcher also needs to be considered and risks should be assessed prior to going out to conduct fieldwork (Social Research Association - Ethical Guidelines 2002, 2002). It is usually useful for the researcher to inform others about where they are going, how they are travelling (Lewis, 2003) and then letting them know that they have returned safely. When I was conducting interviews or focus groups I always left the locations and times of my appointments with the administrative staff at Newcastle Dental School along with my mobile telephone number.

3.3.3 Confidentiality and Anonymity

Usually the identities of participants are confidential. Participants should be informed that their identity will not be known outside of the research team and that their name will not appear in any publications or reports. The information given by participants should not be discussed in any other setting other than within the research team. Participants in this study were given a unique identifying code which I and my supervisory team used to ensure that the identities of respondents always remained confidential. It also means that attributing comments to identified participants in reports and presentations resulting from the research will be avoided (Lewis, 2003; Green and Thorogood, 2004a). When writing up the research the older participants were each given a

pseudonym; their ages, gender, mobility level and dental status are given in Table 4.1. I do not provide equivalent details for the health care professionals because there were so few of them working in the area that including details of even ages and genders would significantly compromise their anonymity.

Data storage is also relevant here. Recordings of interviews and transcripts should be labelled in such a way that the identity of the participant is not compromised; the solution to any identifying codes which have been used should be stored separately to the data (Lewis, 2003). Data generated should be stored in an appropriate way and which adheres to data protection laws. All data collected during this investigation is stored in accordance to Data Protection laws and Newcastle University guidelines.

3.3.4 Sampling

The first distinction to be made here is between probability and non-probability sampling. Usually in quantitative studies probability sampling is used, as it is thought to be the most rigorous approach to sampling for statistical research (Ritchie *et al.*, 2003). Probability sampling is not appropriate for qualitative studies because the sample is not chosen on the basis that it is statistically representative of the population being studied. For qualitative studies non-probability sampling is used where units are deliberately chosen as they reflect particular features that are being investigated (Ritchie *et al.*, 2003). Qualitative studies typically focus in-depth on a relatively small sample, which is selected purposefully, identifying and selecting information-rich cases for the study. This method of purposive sampling selects the cases from which most can be learned in attempting to answer the research question (Patton, 1990a). The sample size in qualitative studies is usually small and Ritchie *et al* (2003) give several reasons for this: first, the data collected from each participant is usually rich in detail, and it can take a long time to analyse each unit. This leads to the second reason, that there are often constraints of time and resources and it would be unmanageable to conduct and analyse hundreds of interviews. Thirdly, the aim is not to be statistically representative of a population and so there is no need to have large numbers involved, phenomena only need to appear once to be recorded and so there comes a point when increasing the

sample size no longer contributes new evidence (Ritchie *et al.*, 2003). Similar reasons for small sample sizes are also given by Patton (1990a) and he points out that in-depth information from a small number of people can be very valuable, especially from the study of information-rich cases (Patton, 1990a).

3.3.4.1 Sampling considerations

Identifying the study population is guided by several factors, including the literature review, where previous research identifies characteristics that are known to have an impact on the subject being investigated. Also, the study population will need to contain certain variables in order to achieve a balanced sample. There may be subgroups that need to be included as they contain subjects about which very little is known (Patton, 1990a). In this study there were two main groups of participants: older people aged 65 and over and health professionals.

Older people are not a homogenous group. There are those just entering old age, who may have completed their career in paid employment or child rearing. There are those in the transitional phase between healthy, active life and frailty. And finally, there are frail older people. Often frailty is experienced late in old age when people can be vulnerable as a result of various factors including health problems such as stroke or dementia, social care needs or a combination of both (Department of Health, 2001). Alongside the differing levels of health and well-being and different age groups there are also people from different backgrounds and different socio-economic groups; for example there are the wealthy baby boomers and those living in more socially and economically deprived circumstances (Borreani *et al.*, 2010). The result is a diverse group of people in later life who have varied experiences, beliefs and attitudes, and in this study I aimed to recruit participants who would reflect this diversity.

This study also included health care professionals from different disciplines, however, the number practicing within the rural setting of this project was very limited and so all those working within the geographical area were targeted during recruitment.

Sampling for all groups of participants in this study is discussed in more detail earlier in section 3.2 'The Research Process'.

3.3.5 Qualitative Methods

Qualitative research usually deals with words and talk, rather than numbers (Pope and Mays, 1996) and there are particular methods of data collection that it is associated with, for example, direct observation, interviews, focus groups and analysis of written documents. These methods allow investigation of phenomena in their natural setting (Ritchie, 2003). In this study a number of qualitative methods were employed for data collection including observation of existing dental services, in-depth interviews and focus groups.

3.3.5.1 In-depth Interviews

In-depth interviews, also known as unstructured interviews are one of the main methods of data collection in qualitative research (Legard *et al.*, 2003; Green and Thorogood, 2004b). This type of interview may only cover one or two issues, but in great detail (Britten, 1999). In-depth interviews are flexible; they allow the researcher to be responsive to issues that the interviewee may raise (Legard *et al.*, 2003). Patton (1990) described the types of questions which should be used in qualitative interviews; he advises that questions should be open-ended, neutral, singular and clear (Patton, 1990c). Open-ended questions allow the participants to respond in their own terms, the aim being to minimise the imposition of predetermined responses (Patton, 1990c). The questions should be designed to yield a full answer, but they should not influence the answer itself, so leading questions should be avoided (Legard *et al.*, 2003). The interviewer is able to explore the responses from participants and there is no standardised wording allowing the researcher to use the participant's own vocabulary to frame the question (Britten, 1999), which may help to put the participant at ease and help to develop rapport. Questions, prompts and probes allow the researcher to gain a fuller understanding of the participant's meaning and allow them to fully explore the feelings, views, beliefs and opinions of the participant (Legard *et al.*, 2003).

The interview is an interactive process and is largely dependent on the personal and professional qualities of the interviewer (Legard *et al.*, 2003). The

interviewer must establish a good rapport with the interviewee, they should build a sense of trust by appearing non-judgemental and interested (Green and Thorogood, 2004b), which puts the participant at ease and encourages them to talk freely. It is important that the body language used by the researcher shows that they are interested and listening, for example, sitting forward in their seat, maintaining eye contact and nodding (Legard *et al.*, 2003; Green and Thorogood, 2004b). The interaction and dynamic between interviewer and interviewee can affect the data gained during the interview. The researcher is considered to be in a position of power and this imbalance can affect the data collected, even when the researcher tries to establish a non-hierarchical relationship with participants (Hammersley and Atkinson, 1995a). This power imbalance may become more evident where the interviewer is a medical professional (Richards and Emslie, 2000).

In-depth interviews are good to use when asking about people's experiences and behaviours, opinions, values and feelings (Patton, 1990c). It is usually best to begin with a fairly neutral topic and ask questions that the respondent can easily answer (Britten, 1999). This encourages the respondent to talk openly and indicates to the interviewee their role as respondent, which is to give full and detailed answers (Legard *et al.*, 2003). Interviews have become a popular method in qualitative studies within health service research because they are useful in allowing practicing clinicians to investigate a research question that has specific relevance to their everyday work, which would otherwise be difficult to investigate (Britten, 1999).

A shortcoming of in-depth interviews is that the data they provide consists of accounts of the world, not direct representations of that world (Green and Thorogood, 2004b). In other words they provide accounts of what people say they do, which may not necessarily be what they actually do. Participants may give different types of accounts of their oral health and also of themselves and their experiences in different situations. What people say and how they say it may vary according to who they are talking to and the circumstances they are in. Cornwell (1984) used the terms 'public' and 'private accounts'. Public accounts are sets of meanings that are common and accepted throughout society, therefore whatever is being discussed, if a person adheres to the public account

they know that what they are saying will be acceptable to others. Private accounts on the other hand are derived directly from personal experience and from the associated thoughts and feelings (Cornwell, 1984). Whether a person gives a public or private account during an interview may vary depending on the relationship between the interviewer and the respondent and the balance of power between the two (Cornwell, 1984). This does not mean that interview data is invalid where a public account is given or where what a participant says and what they actually do are different; interview data is valuable as long as it is treated as a contextual account (Green and Thorogood, 2004b).

During this study I found that participants did give very detailed accounts, however, this occurred as my interviewing technique improved and because I reflected on the topic guide and made alterations to it as the interview process went on. Cornwell (1984) refers to these more detailed accounts as 'private accounts' which may be revealed over a period of time when participants become more comfortable with the interviewer. In the first couple of interviews these private accounts (Cornwell, 1984) were not revealed; I realised that in the interviews where rich detail about some traumatic dental experiences was given I had started the interview with a neutral question about life and growing up in a rural community. This had helped put participants at ease, so that when we moved to the topic of dentistry they felt more comfortable giving detailed accounts. Therefore, the topic guide was altered slightly so that neutral questions were at the beginning, rather than opening questions on oral health. Although multiple interviews with each participant were not within the scope of this project; as my technique improved I became more confident and was more able to put participants at ease and in this way I feel Cornwell's private accounts were revealed. Another example of when the topic guides were updated was when details of interesting historical dentistry arose; I then started to probe more around this area to gain full descriptions of early childhood experiences.

3.3.5.2 *Practical Considerations for Interviewing*

There are a number of elements which need to be taken into account, firstly, the scheduling of the interview. A convenient time should be decided on. Usually interviews require at least an hour and it is important to remember the degree of

mental concentration required from both interviewer and respondent; for some older people this may be particularly relevant as they may tire easily. A face-to-face interview can be intimidating and consideration should be shown to the interviewee to make them feel as comfortable as possible (Green and Thorogood, 2004a). For this reason in-depth interviews are usually conducted at the participant's home (Legard *et al.*, 2003), as this is where respondents are most likely to feel at ease. Interviews can take place at other venues, such as the workplace, or some participants may prefer to be away from their personal surroundings. Wherever it is, the environment needs to be comfortable, private and quiet (Legard *et al.*, 2003). There may be times when other people are present at the interview, for example, the participant may request that a family member or carer be present, or two or more people may be interviewed at one time. If this is the case then consent must be taken from all interviewees and all must understand the project they are involved with. Group interviews may make the interview situation less strange for those taking part and so encourage them to be more forthcoming (Hammersley and Atkinson, 1995b).

I visited many of the participants aged 65 and over in their own homes. Quite often participants requested that a friend be present during the interview and so consent was always taken from all who were present.

It is preferable to audiotape interviews; this allows the researcher to devote their full attention to listening to the respondent and probing in-depth (Legard *et al.*, 2003). It is rare for participants to refuse to be taped, as long as the researcher has fully explained its value and how the data will be stored and used, and reassured the participant of their confidentiality (Legard *et al.*, 2003). It is important to use good quality equipment that has been tested before hand and that the interviewer is familiar with operating it (Britten, 1999). Audio-recording interviews has become acceptable, it allows data to be captured in real time and in an unobtrusive manner (Lee, 2004). In wider culture recording equipment and other entertainment media are now seen as acceptable, recording devices are not automatically significant and imposing, and very few social groups are adverse to being recorded (Speer and Hutchby, 2003; Lee, 2004). All interviews and focus groups in this study were audio recorded with consent from the participants.

3.3.5.3 Focus Groups

Focus groups were used in the second phase of the study where the aim was to develop new and modified methods of delivering dental services for older people. A number of different health care professionals, including doctors, dentists, district nurses and dental therapists may be involved in providing health care services for older people; therefore the intention in the second phase of this study was to hold focus groups with representatives of all local health care professionals and with older people in order to verify that any proposed service delivery models service models would be acceptable to both service users and to those delivering them. Focus groups were considered appropriate because the group process and interaction between participants is useful in creative thinking and in the developing of solutions and strategies (Lewis, 2003). Participants share their own views and experiences, and hear those of others; often they reflect on what is said and consider their own standpoint further (Finch and Lewis, 2003). Therefore, the group process is not only about consensus and expressing shared beliefs and experiences; differences between participants are equally important. Conflict between individuals can be used to clarify participants' own beliefs and can help to uncover factors which may influence them to change their minds (Kitzinger, 1994). The group process enables the participants to explore their own views on a subject in ways that would be less accessible using an in-depth interview (Kitzinger, 1995).

Typically focus groups contain 6-8 participants, with larger groups it may be difficult for everyone to have their say, and smaller groups can lose some of the qualities of being a group (Finch and Lewis, 2003). The group could be homogenous, for example all participants aged 65 or over from a particular region; this would capitalise on people's shared experiences. Or the group could be heterogeneous, bringing together a more diverse group, for example participants from a range of professions. Here it is important to be aware of how hierarchy within the group may affect the data, for example, a district nurse may feel intimidated by the presence of a doctor (Kitzinger, 1995). In phase 2 of this investigation focus groups were used to generate ideas about improving

local dental service delivery. Separate focus groups were held for older people and for health care professionals.

The researcher is present to facilitate the group discussion, to encourage open and interactive discussion and to control the group by ensuring everyone has the opportunity to contribute and prevent dominance. The researcher is also responsible for guiding the discussion and keeping it to relevant subjects, for this a topic guide can be used. The researcher's role is critical to the success of the group discussion, and this role can be challenging. It involves being able to put people at ease, listen and follow the conversation which develops, and it then it may be necessary to question and probe in order to obtain full answers. Many of the required skills are the same as those required for in-depth interviewing, however, the researcher also needs a combination of assertiveness and tact in order to control and steer the discussion in the right direction preventing dominant participants from taking over the group and giving quieter members an opportunity to voice their opinions. (Finch and Lewis, 2003). In a focus group the researcher's role is more peripheral than in an in-depth interview, it is the dynamics between the participants that are important not the relationship between the researcher and the participants (Parker and Tritter, 2006). The researcher needs to be alert to the whole group noticing body language indicating that a participant has something to contribute, remembering points that arise that need to be expanded upon, and keeping the discussion on track (Finch and Lewis, 2003). It is often helpful to have a second researcher present to take field notes and gather data relating to context, participants' gestures and posture (Parker and Tritter, 2006).

Group exercises can be used to involve participants and encourage them to concentrate on each other and not on the researcher. These group tasks can provide valuable data but they also act as an 'ice breaker' encouraging participants to engage with each other (Kitzinger, 1994). In this study a form of group exercise was used: several ideas for modifying services were presented at the focus groups and these acted as a good way of starting the discussion. During the final focus groups participants were asked to rank these options in order of their importance to providing dental services for older people in the locality.

3.3.5.4 *Practical Considerations for Focus Groups*

The time and venue of the focus group needs to be planned well in advance, and although it is not always possible to suit everyone in the group it should be convenient for the majority of participants. The venue itself should be appropriate, in terms of comfort, privacy and accessibility for participants, but also giving consideration to audio-recording the group, the venue will need to be quiet and have good acoustics. The set-up of the room should also aim to encourage discussion, the chairs should be positioned so that all members of the group can see each other and can be seen by the researcher. A round table can act as a base for the recording equipment and allows the chairs to be set around it. Refreshments can be provided and this is something that could be done by the second researcher as the participants arrive which may help to put people at ease (Finch and Lewis, 2003).

In this study focus groups with older people were held at local venues which were easily accessible by public transport and by car. The rooms used were fairly small with a round table which easily accommodated the participants. For the health professionals involved in the study, I visited participants at their place of work as this was most convenient for them. The local GP practice which took part in the study allowed the use of one of their meeting rooms for the focus group with health professionals. This was fortunate as it was well located within easy reach of all those taking part.

3.3.6 *Topic Guides*

A topic guide provides documentation of subjects to be covered during an interview or focus group, it ensures that all topics are covered, but still allows for flexibility. They are developed prior to carrying out interviews or focus groups and they act as an aide-mémoire which guides the researcher and ensures some consistency in the fieldwork. Including a copy of the topic guide in the study report shows the approach the researcher has taken, making it transparent (Arthur and Nazroo, 2003).

For in-depth interviews the topic guide needs to be flexible as responsive questioning is needed. Topic guides can vary, depending on the preferences of the researcher; some like to have more detail of question wording, whereas others prefer just bullet points. The subjects included on the topic guide will be determined by the research question and by the literature review. The initial interviews can act as a way of piloting the topic guide and it can be adjusted if these initial interviews are not producing enough scope or depth of data. However, the 'pilot' interviews can still be included in the data set unless a very radical change of direction or coverage occurs (Arthur and Nazroo, 2003). An example of one of the topic guides used in this study during interviews with older people is included (Appendix F). The topic guide used for the interviews with older people was based on the literature review and aimed to cover topics such as oral health behaviours, dental visiting patterns, rural life and barriers to accessing dental care. The topic guide used for health care professionals was based on the findings from the interviews with older people and on the literature review. The topic guide was reflected upon and altered slightly between interviews, as described in Section 3.3.5.1. As I became more confident in my interviewing technique the topic guides reflected this as they became more like lists of topics to be covered.

Topic guides for focus groups are designed in much the same way as for in-depth interviews; however, for a group discussion the guide is often shorter than that for an in-depth interview. Fewer topics are included as there is less scope for identifying areas to be explored beforehand because this will depend on the subjects raised by the participants and how the discussion then flows in response (Arthur and Nazroo, 2003). A topic guide from this study, used during a focus group with local GPs is included (Appendix G).

3.3.7 The Researcher's Role

Contextual details such as the interview setting and the interaction between the interviewer and the respondent may influence the data collected (Cornwell, 1984; Richards and Emslie, 2000). During qualitative interviews there is an inevitable power imbalance (Hammersley and Atkinson, 1995a); this imbalance may be confounded by the researcher's professional background. Richards

and Emslie (2000) looked particularly at the impact of the professional background on interview dynamics. Richards is a GP and Emslie is a sociologist; they both acted as interviewers in their study about heart disease. They found that qualitative interviews were perceived as therapeutic by the respondents regardless of the professional background of the interviewer (Richards and Emslie, 2000). However, some differences were also discovered. It appeared that doctors had a more clearly defined role and a higher social status than sociologists, and so the doctor observed a higher degree of deference among working class respondents and greater social alignment amongst middle class respondents (Richards and Emslie, 2000). The professional identity of the doctor overshadowed her own personal characteristics and respondents tended to ask her a lot of health related questions. Whereas, for the sociologist it seemed to be her age and gender that identified her as 'the girl from the university' and respondents talked more broadly and included more non-health related topics (Richards and Emslie, 2000). In conclusion Richards felt that GP researchers need to decide whether or not they will make it clear that they are medically qualified, and if they do declare their medical background they should be aware of respondents' possible preconceptions and emphasise their current role as a researcher (Richards and Emslie, 2000).

There are other social differences between interviewer and interviewee that may impact on the data produced, for example, age, gender, ethnicity, class and socio-economic status (Green and Thorogood, 2004b). The researcher should always attempt to remain objective and neutral in order to minimise the extent to which they themselves may affect the fullness and credibility of the accounts given by the respondent (Lewis, 2003). However, many socio-demographic criteria cannot be controlled by the researcher, such as their own age and gender. There has been some debate within academia about whether the researcher and participant should be 'matched' for particular socio-demographic criteria. For example, feminist researchers may argue that there is a cultural affinity between women, and that close relationships can be formed when women interview women which results in better data being obtained (Lewis, 2003). Sharing of some aspects of background, either cultural or

professional may enable the researcher to have a better understanding of participants' accounts and the language they use (Lewis, 2003).

Richards and Emslie's study in 2000 highlights the possibility that data generated could be influenced by the professional background of the researcher being known to participants; this is particularly significant to this study where I am both a dentist and a researcher. Usually when approaching potential participants aged 65 and over I did not state my profession as a dentist and instead emphasised my research role. The aim when speaking to the over 65s was to allow them to talk freely about their oral health and barriers to accessing dental services. I felt that if the older people involved in the study had been made aware of my background as a dentist they may not have been so open. When speaking to dentists and other healthcare professionals I did state my profession as a dentist, as this conveyed to other health care professionals a basic understanding of the system in which we work and the ability to empathise with their position. I felt this enabled me to access this powerful professional group and it afforded me a way in.

3.3.8 Data Analysis

Despite sample numbers usually being relatively small, qualitative research can produce vast amounts of data, for example, the transcript of a qualitative interview can contain between 20 and 40 pages of single-spaced text (Pope *et al.*, 1996). Most approaches to analysing qualitative data attempt to draw meaning out of the data, which is not obvious from simply reading it (Green and Thorogood, 2004c).

In this study data was analysed with a 'thematic' approach. Thematic analysis is a method for identifying, analysing, and reporting patterns or themes within data (Braun and Clarke, 2006). Thematic analysis is frequently used in qualitative research, however, until recently it has lacked academic definition. In 2006 Braun and Clarke provided guidelines for conducting thematic analysis and a checklist for conducting good thematic analysis; the guidelines have been followed in this study and are listed below (Braun and Clarke, 2006):

1. Familiarisation with the data: the researcher reads the data and begins to form ideas, look for meanings and patterns.
2. Generate initial codes: coding interesting features in systematic way
3. Developing themes: searching for relationships between codes so that they can be organised into themes.
4. Reviewing the themes: the themes are finalised, some maybe merged others may be removed if there is not enough data to support them.
5. Defining and naming themes: refining the specifics of each theme and the overall story that the analysis tells.
6. Producing the report: contains extracts of data, the analysis and is supported by literature.

This method involves coding the data, looking for themes and categorising them. A code is a feature within the data which is important to the researcher and the research question; it is seeing something of interest or a pattern within in the data (Boyatzis, 1998). The development of theory using this technique is inductive, that is theory is built up from the raw data, rather than being deductive whereby theories are tested against the data (Green and Thorogood, 2004c).

3.3.9 Quality of Qualitative Research

There has been much debate in the literature about the differences between qualitative and quantitative research. Each have their own strengths and weaknesses and it is acknowledged within Health Service Research that the method needs to be appropriate for answering the research question that has been set (Bryman, 1988c). Philosophical issues are interwoven into the debate about the two types of research. Quantitative research is associated with positivism, with an emphasis on scientific enquiry, the measurement of objects, generalisability and replicability (Bryman, 1988a). Qualitative research is contextual, it is committed to seeing through the eyes of the people being studied (Bryman, 1988b). It aims to discover the rationality of issues that we may know little about, this requires detailed explanation of people's experiences and perceptions (Hammersley, 2013a). Qualitative research is often criticised

and aspects of qualitative research are often misunderstood, for example, some people believe that qualitative research is 'easy' and requires few skills and little training; however, the data produced in qualitative studies is often copious and difficult to analyse, requiring a high degree of interpretive skill (Mays and Pope, 1996). Common criticisms of qualitative research are that it is often said to be anecdotal, strongly subject to researcher bias and lacks reproducibility and generalisability (Mays and Pope, 1995). Qualitative studies are often also criticised for their small sample sizes, however, their aim is not to be statistically representative (Mays and Pope, 1996).

3.3.9.1 Validity and Generalisability

Reliability generally refers to the replicability of the research findings (Lewis and Ritchie, 2003). However, there are differing views on this; positivists believe that there is a single social reality or truth that is independent of the researcher and research process (Mays and Pope, 1996) and therefore this can be studied, reported on and replicated. However, Lincoln and Guba (1985) offer a different view, they believed that the phenomena being studied can be so complex that it would be naive to think that it could be replicated (cited in Lewis and Ritchie, 2003). There is also the relativist view, that there is no basis for consensus and that all research perspectives are unique and each is valid in its own terms (Mays and Pope, 1996). There are concerns whether the concepts of reliability and validity can be judged using the same measurements for both quantitative and qualitative research; for example, tests for reliability and validity used in the mathematical sciences would be completely unsuitable for a qualitative study (Lewis and Ritchie, 2003).

The basic strategy to ensure rigour in qualitative research incorporates systematic research design, data collection, interpretation and communication (Mays and Pope, 1995). Mays and Pope (1995) stated two goals to aim for in order to ensure rigour and quality, they were to create an account of method and data which can stand independently, so that another researcher could analyse the data in the same way and come to the same conclusions; and to give a credible and comprehensible explanation of the phenomenon being studied (Mays and Pope, 1995).

The 'scientific' nature of qualitative research in comparison to quantitative studies has been heavily debated within the literature (Bryman, 1988c; Snape and Spencer, 2003; Hammersley, 2013a). Reflexivity involves conducting research and writing it up in explicitly self-aware and self-critical ways, striving for objectivity and neutrality (Snape and Spencer, 2003). Seale (1999) believes that giving as much detail as possible of the procedures that have led the researcher to their conclusions is good practice in relation to reliability and replicability (Seale, 1999). This form of reflexive writing should include: explanations of how data was produced and analysed, and any alternatives that were not pursued; discussion of the theoretical starting points and the ways in which they shaped the study; an awareness of how social settings may have affected the study, for example, interactions between the researcher and respondents during interviews; and finally an awareness of the wider social context (Green and Thorogood, 2004c). Including this information gives a clear and honest account of the research process and transparency of the methods used (Green and Thorogood, 2004c).

The analysis of qualitative data has a highly creative component, depending on the intuition of the analyst, however, there is also a technical side to it which should be systematic and rigorous (Patton, 1990b). Various methods of validating qualitative data have been suggested, they fall into two categories: internal validation and external validation. Internal validation includes deviant case analysis, where deviant cases are not forced into certain categories, nor are they ignored, instead they are used as an important resource to develop understanding and theory (Lewis and Ritchie, 2003).

There is also external validation, for example using different analysts to compare data collection and interpretation between them (Lewis and Ritchie, 2003). During this study transcripts were coded shortly after each interview; coding was constantly checked by comparing new data to previous data collected and ensuring no themes were missed. Also, I and members of my supervisory team all contributed towards the coding process, as a form of external validation.

Generalisability refers to the degree to which findings from a study can be applied to a wider population or to different contexts. Quantitative research is

associated with a scientific approach, with hypothesis testing, use of numerical data, measuring of objects and controlling variables; these techniques allow findings to be generalised to larger populations (Hammersley, 2013b).

Qualitative research has been criticised because the scope of its findings are restricted (Bryman, 2012). However, qualitative research does not aim to be statistically representative, and therefore the aim is not to be generalisable to a wider population; this is reflected by the type of sampling used (Barbour, 2008). In qualitative research generalisation usually refers to the application of the findings beyond the particular sample of the study; this has also been described as 'transferability' (Lewis and Ritchie, 2003). Lincoln and Guba (1985) describe transferability as the 'data base' provided by the researcher that makes transferability judgements possible. For example, transferability can be enhanced by including full descriptions of the research context and the assumptions that were central to the research (Lincoln and Guba, 1985). To aid transferability it is also important that qualitative research should exhibit rigour, for example, by being transparent about the processes of sampling and data analysis (Barbour, 2008). The person wishing to 'transfer' the results to a different context is then able to make the judgement of how sensible the transfer is.

Transferability is one of the criteria Lincoln and Guba (1985) define in establishing trustworthiness of qualitative research. The other criteria are credibility, dependability and confirmability. Credibility refers to activities such as persistent observation and triangulation, used to increase the probability of producing credible findings. In a traditional quantitative view reliability is based on the assumption that the research is reproducible and that the same results would be achieved if the research was carried out twice. This is not possible in qualitative research and dependability emphasizes the need for the researcher to account for the ever changing context within which research occurs, that is describing any changes which occur and how that might affect the way research is approached. Confirmability refers to the degree to which results could be confirmed by others; for example, documenting the process for checking and re-checking data. Data audit would then possible and help to make judgements about sources of bias. These four factors can be used to judge the soundness of qualitative research (Lincoln and Guba, 1985).

The inference that can be drawn from qualitative studies is that concerning the nature of the phenomenon being studied, not its prevalence or statistical distribution (Lewis and Ritchie, 2003). However, qualitative studies may generate new concepts that are 'good to think with' and therefore have a use beyond their research setting, and so the findings can 'sensitise' other researchers and readers to these new ideas and concepts (Green and Thorogood, 2004c).

The following chapters report the findings of this study. Chapters 4 and 5 relate to Phase 1 and chapters 6 and 7 relate to Phase 2. The following chapter draws on data from older residents of Teesdale collected during Phase 1 and gives context to their oral health beliefs and priorities and looks at the barriers they face when accessing dental care.

Chapter 4. Phase 1: The Oral Health Beliefs and Priorities of Older People in Teesdale and the Barriers they Face when Accessing Dental Care: Results

4.1 Introduction

This chapter reports on data from in-depth interviews held with 20 older people aged 65 and over living in Teesdale. The aims were to explore their oral health priorities and to discover whether residents are aware of dental services available to them within their community. The themes which emerged from the data are presented in this chapter; they highlight the oral health beliefs and values of this group of older people, how they access services and barriers which exist when accessing these services.

Table 4.1 shows the key characteristics for this group of participants. The table shows the sample contained older people spread across the age ranges between age 65 and 90 years. They were from locations across the area of study, 9 being based at the main market town of Barnard Castle and the remainder spread across the surrounding villages and hamlets. As well as the geographical variation this gives, it also represents variation in socio-economic background based on Index of Multiple Deprivation measures (Reilly and Eynon, 2003). The number of dentate and edentate participants was equal; therefore the oral health values, needs and demands of both these groups are represented. There were only 4 males in the sample; however, the small number of men reflects the sex ratio in old age resulting from shorter life expectancy in males (Office for National Statistics, 2012b).

Some data from focus groups held in phase 2 of the study are also presented here as they relate to the themes discussed in this chapter, in particular, information concerning barriers to accessing services.

Table 4.1 Table showing the key characteristics of participants aged 65+ involved in Phase 1

Name	Age	Place of residence: Semi-rural (SR)* or Rural (R)**	Mobility: Mobile (M); Reduced mobility (RM); or Uses Wheelchair (WC)	Dental Status: Edentate (E) or Dentate (D)
Theresa	68	R	M	D
Barbara	71	R	M	D
Robert	72	R	M	D
June	80	R	M	E
Betty	78	SR	M	E
Ronald	66	SR	M	D
Martha	78	SR	M	E
Peggy	84	SR	RM	D
Rosemary	78	SR	M	E
Alice	83	SR	RM	E
Mary	79	SR	RM	E
Edith	84	SR	WC	E
Marjorie	86	SR	RM	E
Phyllis	90	R	M	E
Stella	79	R	M	D
Harold	65	R	WC	D
Bernice	70	R	M	D
Beatrice	79	R	M	E
Cecil	85	SR	RM	D
Nancy	80	SR	RM	D

* Semi – Rural = Resident of Barnard Castle

** Rural = Resident of a village or hamlet in Teesdale

4.2 Oral Health History and Context

4.2.1 The Historical Context

Participants often began talking about their oral health by talking about their previous experiences, in particular early childhood experiences of dental treatment. Without exception all comments made about dental care at that time were negative. Participants talked about the sparse surroundings and using 'ordinary' chairs:

'You know when you went to somebody's house...there was nothing. You'd just, they'd just have a chair there...An enamelled bucket and you would sit there. And the dentist would come...No you were just like going in and sitting on a chair... and then he did it, and butchered ya.' (Phyllis, aged 90)

'You just sat on an ordinary chair...There was nothing to sort of cling to... And an enamel bucket... I mean he didn't even wear a white coat... Just his suit... And that meant nothing. No cover at all.' (Stella, aged 79)

'They had the room...And he just sat you down in a chair and you went back until you couldn't get back any further and then he started work...It was cruelty.' (Cecil, aged 85)

These comments reflect the medical and dental systems of their time. It was prior to the introduction of the NHS and so patients had to pay for their dental visits and often attended the dentist only when necessary, usually when complaining of toothache. Few could afford restorative care, and so often had their teeth extracted. Similarly, visiting the doctor, or having the doctor visit your home was also a very different experience during their childhood compared with health care services of today:

'... he had his surgery down here and it was a little lean to...well you went through the passage...and he did everything, and he made his own medicine up.' (Phyllis, aged 90)

'And you went and you stood in this passageway...and there was a candle on a little shelf...and you stood in there until you went in to see Doctor... No really primitive...During the 1947 storm he went round on horseback. Yes to his patients. And he'd just come from London, the year previous.' (Stella, aged 79)

4.2.2 Oral Health Behaviours in an Historical Context

Oral health behaviours such as oral hygiene are not new. The importance placed on oral health can be demonstrated by an individual's oral health behaviours, for example, how people look after their teeth, both in the past and in the present day. The data show oral health to be of varying importance to participants and support the notion that oral health is given different levels of priority at different stages in people's lives:

'...but when we were young, we didn't have toothpaste and what not...I mean our families were all hard up... so I didn't start cleaning my teeth till I was thirteen and fortunately with the War, we weren't ruined with sweets or anything like that.' (Martha, aged 78)

'...well me Mother hadn't the money for toothpaste, my dad died at forty-five year old...and she was left a widow with four of us. So there definitely wasn't money for toothpaste. Or toothbrushes... in fact I can't remember ever seeing a toothbrush.' (Rosemary, aged 78)

'Well you used to use salt or soot [to clean teeth]... It makes your gums bleed.' (Alice, aged 83)

'...my grandmother looked after us and there was no sort of oral hygiene 60 years ago, you know, not like there is now' (Harold, aged 65)

The above quotes refer to oral health practices during the participants' early lives. In later life oral health had become more important and oral health behaviours had changed:

'I clean me teeth twice a day...in the morning...and then again at night' (Stella, aged 79)

'But I clean them all the time just with denture cream...I just take them out and clean them. On a morning or if I'm going anywhere or if I thought me breath was a bit smelly, and that's all' (Rosemary, aged 78)

This shows there has been a change in the priority the participants gave to oral health. It may also reflect oral health care messages becoming more widespread and being acted upon.

4.2.3 Dental Visiting Patterns in an Historical Context

Within the sample there were those who attended infrequently, usually symptom related; regularly, every 6 months to 2 years and those who did not visit the dentist at all, that is some had not attended within the last 20 years. Previous dental visiting patterns had impacted on current ones, one participant emphasised the fact that historically visiting the dentist on a regular basis had never been usual practice and this had continued to the time of interview:

'Well there wasn't any, I've never had a check-up all of my life. Never.' (Phyllis, aged 90)

'I never went regularly to any dentist. Only when I wanted a tooth out or...a filling or something like that.' (Beatrice, aged 79)

The data suggest a pattern among several of the participants of only seeking dental treatment when in pain; this behaviour was particularly evident amongst the oldest in the group for example Phyllis and Stella said:

'And I used to go until I couldn't go any longer, I could bash me head against a wall. And then I would think 'Well it canny be any worse than this'... If you had a bad tooth. If you had toothache.' (Phyllis, aged 90)

'I was working and I had this violent toothache and I went to Mr [name of dentist] in Barnard Castle, like [name of friend] I wouldn't just go, it had to be gas, right.' (Stella, aged 79)

Some of the participants could recall the introduction of the NHS in 1948. This meant that, for the first time, people could visit the dentist and receive free treatment. During this period many of the edentulous participants had been rendered edentulous and been provided with their first set of complete dentures and often there was a long period of time between removal of the teeth and the provision of dentures:

'Yes I had mine out when I was only twenty...I had no teeth at twenty-one. I had to go without... They took them out and I had to leave them for months.' (Mary, aged 79)

'I had them out in '49, just after the National Health started. There was such a lot of people waiting for new dentures, I had to wait twelve months.' (Edith, aged 84)

In a more contemporary context age was also found to be a further contributing factor towards irregular dental attendance; Martha and Rosemary expressed the view that they may be too old for dental treatment:

'I was nervous about going thinking they'd say 'Oh no, we don't want you...' but you know, once you're older they maybe can't be bothered...you know they maybe think 'Oh for Heaven's sake, she'll be hopping her twig in a year or two' you know.' (Martha, aged 78)

'Well they are closing [referring to NHS dental lists]... I won't get on now, I'll not bother now, I'm too old. Well if I cannot get on the... I cannot register and get on the list it doesn't matter does it.' (Rosemary, aged 78)

4.3 Current Oral Health Priorities for Older People

For oral health care professionals oral health is obviously a major priority, however, it may not be given the same level of priority by the general public. In this study the way the participants felt about oral health was reflected in the way they talked about particular aspects of their mouths and care of their mouths, for example, the importance of having teeth relating to their appearance, as well as current oral hygiene practices. These are discussed below under the themes of attitudes towards teeth or dentures and attitudes towards tooth loss.

4.3.1 Attitudes Towards the Presence of Teeth and Dentures

The data show that the importance placed on having teeth varied at different stages during life. One participant remembered a period of time when she was completely without teeth, whilst waiting to be provided with complete dentures following the removal of her natural teeth. At this point in her life she had other priorities, she had a job and a young family to raise, and so she felt no embarrassment about having to go to work without any teeth:

'No I wasn't bothered, you know I thought 'Well I've no teeth and that's it' and I couldn't take a month off...just cause I'd no teeth in.' (Phyllis, aged 90)

However, recently the same participant had taken her dentures to the dentist to be cleaned before her ninetieth birthday party. Whilst her dentures were being cleaned she was again without teeth but for a very short period, however, on this occasion she did express some embarrassment about meeting people when she was without her dentures:

'I mean I had no teeth in, I couldn't...I didn't want to trail around the town even to meet people.' (Phyllis, aged 90)

This illustrates how her feelings about being toothless have changed over time; on this occasion having no teeth had a negative impact on her self-confidence. Another example of how wearing dentures was found to affect self-confidence was given by one partially dentate participant:

'...it was important that I felt comfortable with them, because I did a lot of speaking. I mean I was a vicar, and preaching and teaching and all sorts of things, and I have to use my mouth a lot, so, if they don't fit, or if you get a bit excited in the pulpit and your teeth fly out, it's not too good.' (Robert, aged 72)

For the edentulous the importance they now placed on wearing dentures was often expressed in terms of how they would feel if they were without them:

'The only time they've been out was when I broke them eating this apple, just the top and I went back then, I stopped in the house and I didn't go out. God with being young I didn't wanna look like Nanny Nee Teeth.' (Rosemary, aged 78)

Participants were concerned about how they would cope in the event of their dentures fracturing and needing repair, as this would mean that they would be without their dentures for a period of time:

'I'll just have to hibernate in there [her home]. They wouldn't see us.' (Rosemary, aged 78)

'I think I'd just be panic stricken. Doesn't bear thinking about does it?' (Nancy, aged 80)

This implies that a lack of teeth, whether natural or prosthetic, adversely affects appearance, has an ageing effect and impacts very significantly on daily life. Another example of the embarrassment felt by having no dentures was given by Martha and this illustrates how it impacted on her usual activities and prevented her from attending social events:

'I go to the Friday afternoon dancing and I was on the bus...and two friends of mine used to get it as well and when we got on the bus they said to me 'Martha, you going to dancing this afternoon?' and I said 'No, no, I'm not' [gesturing putting a hand over her mouth]. Mary said 'You're not, you're not... you love your dancing'. 'Yeah' I said 'but I've come out without my bottom set of teeth.' (Martha, aged 78)

Not only was the presence of teeth important for the edentulous in terms of their appearance, but dentures also needed to be comfortable and it appeared that participants did feel that their dentures were an integral part of them:

'I never have mine out, you know, I take them out to clean them, they go straight back in, I go to bed in them and I forget all about having them, you know.' (Betty, aged 78)

'Well I can't speak without them...I can't speak properly...because I'm that, just used to them. So when I take them out and clean them, I can't speak. I just hope nobody rings us when I'm cleaning them... [laughs]' (Rosemary, aged 78)

'But I never take them out on a night. I never have done. And when I first got them I mean they're not easy to get used to when you're...when you like get top and bottom together, you know and that...but I persevered and that and I never leave them out...and I sleep in mine and everything.' (Phyllis, aged 90)

Problems with denture wearing also impacted on a person's quality of life by affecting their food choices:

'I miss the odd bacon sandwich you know. Erm and I can't eat lettuce, and I can't eat apples or anything like that they're just too hard...But erm apart from that I eat all my veg and meat, I know what... I mean sometimes you can go out for a meal and the meat's tough so you just don't eat it.' (Martha, aged 78)

Other people reported that they overcame problems by adapting the way that they ate, for example, Rosemary and Edith said:

'I can't bite into one [an apple]. I use a knife and cut them.' (Edith, aged 84)

'I still eat apples but I peel them...I get the knife... very thinly and go very gently.' (Rosemary, aged 78)

4.3.2 Attitude towards Tooth Loss

When looking at how people prioritise their oral health, it became apparent that attitudes towards tooth loss were a factor. Loss of natural teeth at a young age was common for this age group and most of the edentulous respondents had worn complete dentures for many years. Some of these participants were pleased to have had their natural teeth removed at the time and various reasons for this emerged, for example, for some it was because they had suffered repeated episodes of pain associated with their teeth:

'I was having bother and I went and I said 'Well I'm not. No way, I've bits here, bits there' and I'd just had me front 'uns here. I said 'They can all come out...either all or nothing.' (Phyllis, aged 90)

In this situation pain had been the trigger for seeking dental treatment, as was often the case at that time. Other factors also influenced whether people chose to seek dental treatment, for example their dental appearance. For some it was because they were unhappy with the appearance of their own natural teeth and having their own natural teeth removed and replaced with dentures was a way of improving their appearance. For example, one participant who was rendered edentulous about 40-50 years ago was asked if she had felt upset when her teeth were removed, she answered:

'I thought it was lovely because my teeth weren't good, they weren't nice... you know how you get nice teeth, I never thought of mine as being nice at all. They didn't do anything for me.' (Betty, aged 78)

Another participant made a similar comment:

'They were crooked...And erm, so in a way I thought well it'll be lovely to have a straight smile you know.' (Martha, aged 78)

Beatrice, who electively chose to have her remaining natural teeth extracted and dentures fitted said that it was her pride which supported her:

'I think it was pride. That they were looking long in the tooth.'
(Beatrice, aged 79)

Some participants had lost their teeth gradually, having them replaced at first with partial dentures, which over time were converted to full dentures as and when more natural teeth were removed. One participant who was attending her dentist for the removal of some posterior teeth requested that her front two teeth were also removed, these teeth were asymptomatic at the time, but there was a large space between them which she did not like. Therefore, in order to close the gap between these teeth and improve her appearance the participant requested to have these teeth extracted and replaced with a denture:

'I had two teeth at the front there when I was having I think one or two taken out maybe at the back. And I said while you're there can you take those...because he was having to put like a plate in for these two I was having out. I said could you take those two out at the front and make them closer together?...I hated it for years, even when I was at school I hated it...And er and he did it there and it was very good.' (Nancy, aged 80)

In this study only one participant expressed some regret over the loss of her natural teeth:

'If I'd have had my time over the way I've thought since I would have done it different...I'd have waited and had it properly examined maybe, but then again if your gums are growing you can't... you have to give in haven't you in the end. Cause I don't like people with all these teeth hanging down, they're horrible.' (Beatrice, aged 79)

However, Beatrice does suggest that she was unhappy with the appearance of her own natural teeth, she may have felt that having her natural teeth removed and replaced with dentures was the only way of improving her appearance; she added:

'Well I was happy about them [dentures]...it was alright. I'd made my mind up and it was done...that's me. And that was it and that was the end of it.' (Beatrice, aged 79)

Several participants had to wait long periods of time before receiving their dentures following removal of their teeth, whereas others had full dental clearances in one visit and were fitted with immediate dentures. A participant who received immediate dentures said:

'...you don't feel as though you've actually been, you don't miss them at all.' (Nancy, aged 80)

'I was quite happy to think I had some teeth cause working in a factory I wasn't gonna go without any.' (Beatrice, aged 79)

This implies that the impact of the tooth loss may be reduced when replacement teeth are fitted immediately compared to having to live with no teeth at all for a period of time.

Frequently the edentulous participants indicated that the reason for the removal of all their natural teeth was periodontal disease or 'pyorrhea' as it was often referred to. When discussing this, participants often seemed to separate the health of their teeth from that of the surrounding periodontal tissues:

'I was frightened in case it would bother me having had my daughter and I got them out like. But they weren't bad or anything. I've had good teeth...But there must have been something wrong with my gums like when they took them out like.' (Marjorie, aged 86)

The way many participants talked about periodontal disease they had suffered was as if their gums were somehow separate from their teeth. They talked about periodontal disease and the resulting loss of teeth as if it had been unavoidable, not related to their oral health behaviours and oral hygiene practices and they also showed that they had not been given any other option:

'I went and asked the dentist and erm and he said that me gums were bad and I needed to have me teeth out.' (Martha, aged 78)

'They were good teeth, but it was me gums must have been... gingivitis and oh it was terrible, that was a catastrophe for me...I didn't want false teeth, but the dentist told us he says 'Well, you're gonna have trouble all the time, bleeding, you know with this bleeding and everything.' (Rosemary, aged 78)

There were 10 participants who still retained some natural teeth, only one respondent from this group said that he would not mind at all if he had to lose his remaining teeth, he commented:

'It might be awkward eating something that's a bit on the hard side, you know. Or solids like you know, but er...in the long run it wouldn't worry me.' (Ronald, aged 66)

The other dentate or partially dentate participants said they would not like to lose their remaining teeth, often this was because they wanted to avoid wearing dentures:

'I probably wouldn't like it um, my mother has to wear a plate because she has very few teeth left now which means that she's got, you know, a few of her own teeth still at the front here, but um, she finds that its er inconvenient in terms of things getting stuck under the palate or plate or whatever it is, crumbs, and certain types of food and so forth, so she doesn't like it and from what I've heard other people say about dentures, they're not always er, satisfactory in terms of you know, how they keep in place, what you can eat when you've got them, um, the way you've got to keep them clean and all the rest of it, you know, it's a whole new...I think it's a whole new procedure that you've got to get used to, looking after dentures when you've been used to having your own teeth, um, and you know, it's something that you might in fact find a bit of a bore um, and a bit of a pain in some ways, so I don't think I would look forward to having them.' (Theresa, aged 68)

Most of the dentate participants were regular dental attenders, however, one had not seen a dentist for 6 years, and despite this she still expected to retain her natural teeth, when asked how she would feel if she had to lose any of her natural teeth she replied:

'I wouldn't be very happy really but I am in my 70s now...So...you know, I think I'll probably hang onto them [laughs]...For the rest of my life [laughs].' (Barbara, aged 71)

Although the participant would like to keep her remaining natural teeth, this was not a motivation for attending the dentist; this may also highlight a lack of understanding regarding preventive treatments as opposed to seeking care only when symptoms occur, at which point treatment often involves more complex procedures and risks the possibility of needing tooth extraction. Many of the

dentate participants wanted to retain their natural teeth for as long as possible and they would be upset if they had to lose any of their remaining natural teeth. There did not appear to be any link between the desire to retain natural teeth and age, as the dentate participants were spread across all age groups. Therefore this attitude could have developed over time, as people have become more aware of oral health and oral health messages.

4.4 The Present Day: Oral Health and Dental Services in the Context of a Rural Setting

Participants gave detailed accounts of previous dental experiences from their early life; they talked about how they felt about their oral health in the past and gave examples illustrating how their expectations of their own oral health have changed throughout their lives. This section presents data relating to the present situation for this group of over 65s; their social activities, life in a rural community, the services they use, how they access them, and their expectations of a dental service.

4.4.1 Social Life, Support Networks and Medical Services

Older people in this rural setting had a range of support networks which were useful for recruitment and which could be of potential use when altering the way services are provided. Quite often people were members of more than one group or organisation, these included Lunch Clubs run by Teesdale District Council, Women's' Institute, Durham Dales Carers and groups organised by Age Concern Durham such as tea dances and craft groups. Participants gave examples of groups and clubs they were members of:

'I have Luncheon Club, Mothers Union... and the Badminton on Monday.' (Phyllis, aged 90)

'...we belong to the U3A...and there's quite a lot of things going on there. We've got to go to Cotherstone for it, but it's good, there's quite a lot of interesting activities for us there. And we belong to the church of course, there's quite a lot of social things going on there as well, so we're not too badly off.' (Robert, aged 72)

Often participants, especially those living alone, found that attending these groups was a good way of socialising, meeting new people and of building networks of people they can rely on if necessary:

'And you socialise and you meet other people and it's good for ya.' (Martha, aged 78)

'And you meet the people that you can have a chat to and you know them and you see them week from week to week.' (Peggy, aged 84)

The majority of participants visited their doctor on a regular basis and they were all pleased with the service they were receiving from their local GP, for example participants said:

'...we have a lovely doctor...oh yeah we couldn't be better... they've a nice manner, they look after you.' (Stella, aged 79)

'...we use our doctor yes, oh yes, at the moment yes... And they are very good.' (Bernice, aged 70)

'I have a good doctor's. Really good it is down there.' (Beatrice, aged 79)

None of the participants had any complaints about the medical services they had made use of, including GP and hospital services, one participant who had suffered serious illnesses commented:

'I cannot fault them from the tea lady to the surgeon.' (Martha, aged 78)

The majority of participants used their GP service regularly, however, there were a few participants who were irregular users of medical services, for example, one participant who was on medication said that she had received reminders from her medical practice telling her that her annual review was well overdue. However, she had not visited the doctor, she said:

'I'm very bad at visiting the doctor as well...I haven't been for a whole year...But I keep getting...I do have medication, I keep getting 'review overdue' [laughs]. (Barbara, aged 71)

Other participants said:

'...my trips to the doctors are few and far between like, you know.'
(Ronald, aged 66)

'I just go when I have to go.' (Stella, aged 79)

'I keep thinking, well, if there's nothing wrong with me why waste their time?' (Barbara, aged 71)

The comments above suggest that in this study participants did not always perceive a great need for health care services, demand for them was sometimes low and often participants would only seek help when necessary, rather than visit their doctor on a regular basis for reviews or check-ups. Barbara also highlighted another reason for not visiting the doctor, she felt that she would be wasting the time of a busy doctor, this gives an insight into how older people in this rural setting may view health care professionals; this is discussed later.

Some participants did talk about problems accessing medical services, for example problems with public transport and it would be easy to assume that these participants also experienced similar barriers to accessing dental services. However, in order to visit their GP some participants did overcome barriers such as using public transport, even if this meant travelling to a neighbouring village:

'Well I have to get a taxi. I can't walk.' (Alice, aged 83)

'And I just go to see him, make an appointment. And they put me one for a bus time...so that, why she knows when I ring that she has to get me... well I'm not bothered about it, if I get there I'll get back, you needn't worry. But I... if she puts me on the hour, I know I can get a bus. And then I just take pot luck at coming back, but I always get back.' (Phyllis, aged 90)

Participants who had overcome the travelling barriers in order to visit the doctor had not always made the same effort to visit the dentist. For example, in the last quote Phyllis described how she manages to co-ordinate bus times with appointment times however, Phyllis had not visited the dentist for 20 years. Visiting the doctor maybe a higher priority than visiting the dentist, especially for

those on medications who will require monitoring and prescriptions; therefore, some may express more need for regular visits to their doctor, but they may not perceive the same need for regular dental examinations. There could be other barriers preventing people from visiting the dentist, such as cost, which is not an issue when visiting the doctor.

Only one participant expressed some disappointment in the medical care provided, this was Harold, a stroke survivor. He and his wife expressed some reservations about a particular doctor involved with his care. In contrast, many of the participants had spoken about poor relationships with previous dentists and disappointment in the dental system. None of the participants complained about a lack of available medical services, even those who did not use them regularly knew where they would go if they did have a problem and none said that obtaining access to medical services was a problem. This differed to when some participants talked about the availability of dental services as several had the perception that NHS dental services would not be available to them because of a lack of NHS dentists or because dentists were no longer accepting NHS patients.

4.4.2 Expectations of a Dental Service

Not all the participants discussed what they would expect from a dental service and they did not appear to have a high demand for dental services. Some participants expressed general expectations of simply having an NHS service available rather than having to make use of private dental services. The poor availability of NHS dentistry was raised several times:

'...because there's a problem with NHS dentists, you know. Because when [name] had problems with her teeth, if she had done it through, if she'd gone private, it would have cost her an arm and a leg, like, you know. So she had to go through to Darlington to get her teeth, you know, both top and bottom.' (Ronald, aged 66)

'I think the National Health lists are closing now.' (Edith, aged 84)

One participant said she would feel aggrieved if she had to pay for private dentistry, she expressed a sense of entitlement, after contributing towards NHS

services by means of taxation throughout her working life, she felt she deserved access to NHS care:

'It seems a bit hard when we've paid our NHS all our lives, paid the stamp. But I suppose if you have to do it, you have to do it, but I'd rather not obviously.' (Barbara, aged 71)

There were other expectations of dental services and of dental treatments, for example Barbara talked about the prospect of losing her remaining natural teeth, however, she felt this could be avoided because of the types of treatments she thought would be available to her:

'I wouldn't be very happy really but...But I think really now the dentists are very good at handling them, keeping the...keeping them going aren't they?' (Barbara, aged 71)

Firstly, there was the expectation that she would keep her natural teeth; this view was also expressed by other dentate participants. Secondly, there was an expectation that dental treatment would enable her to retain her teeth, despite the fact that she was an irregular attender and had not visited a dentist for the last 6 years.

Amongst the regular dental attenders there was an expectation that in the event of an emergency they would be seen quickly:

'Well I think that the teeth are the thing which give us the most trouble if anything goes wrong with them. I think earache and toothache are two of the worst aches that anybody can have, so in order to avoid, you know, being in a situation where I'm going to be in pain, then I would rather have six monthly checks and make sure that everything is okay, and if it isn't then I'm happy when I've got a dentist where I can be seen reasonably quickly if something does go wrong, um, because I don't like having to take painkillers, you know, for days and days on end because I don't think that's good for one's health anyway, I'd rather go to the dentist and have the problem seen to.' (Theresa, aged 68)

'Well I go regularly to the dentist. I was a bit upset really when he wouldn't come out to see the broken tooth.' (Peggy, aged 84)

Other more specific expectations were raised, for example, Nancy felt there should be a dedicated older people's dental service, this related mostly to being able to provide check-ups and emergency care for those with broken dentures:

'That's why I think you know for older people, a special one [service] for older people, erm, that place in the hospital would be ideal.' (Nancy, aged 80)

One participant had specific expectations pertaining to being a stroke survivor, Harold and his wife lived on a farm in one of the most remote parts of Teesdale. Harold's wife was his main carer and took Harold to all his appointments by car. Harold had very limited mobility and used a wheelchair, he had little speech but his wife was able to understand and communicate with him. The couple were about to move from their farmhouse, where they had managed to remain for four years since Harold's stroke, and they were intending to move to Barnard Castle for easier access to GP surgeries and hospitals for all Harold's appointments. Harold and his wife had faced many barriers in accessing dental care for him, and here they talk about not having enough time with the dentist at their appointment, Harold's wife said:

'And they've only got those 15 minute appointment slots, you see, so it's all quite rushed and you can't rush Harold you've seen it in the wheelchair.' (Harold's wife, aged 65)

Harold's wife felt a service tailored to those who have had strokes would be beneficial:

'But they could make it a bit easier. Or if they did a dedicated service for stroke people.' (Harold's wife, aged 65)

Making services easy to use and accessible is particularly important for frail older people and those with limited mobility. It may be difficult to provide very specific services, however, there are some notable considerations here for those responsible for commissioning services.

4.5 Barriers

This section covers the reasons that emerged for infrequent dental attendance or that made regular attendance difficult. Some participants also made suggestions for overcoming particular barriers and these have also been included where they occurred.

4.5.1 Lack of Perceived Need

The most commonly reported reason for infrequent dental attendance was that participants felt there was no need to attend. This lack of need for dental care proved problematic during the recruitment phase, particularly among the edentulous people, who often felt that because they were edentate there was no need for any type of dental care and no need to be involved in a study about dental care. The majority of the edentulous participants in this study were infrequent dental attenders, in fact only one edentate participant received regular dental examinations and this was because she had just started to receive home visits, which made regular care possible. The main reason this group gave for their irregular attendance was the fact that they were edentulous, because they had no natural teeth they felt no need to visit the dentist regularly, and some found it difficult to understand why I would even ask them whether they saw a dentist regularly, knowing that they were edentulous. Rosemary has been edentulous for over 40 years and stated that since receiving her first set of complete dentures she had never visited a dentist:

'I've never been [to the dentist] because I... well I haven't needed to go.' (Rosemary, aged 78)

Other similar comments were made:

'But I mean what would you go back for with false teeth?' (Betty, aged 78)

'Well I've never felt the need for it you know. Must admit that they've been a good set of teeth that they furnished me with.' (Nancy, aged 80)

'Well if your teeth are comfortable you don't go looking for more...If your teeth are comfortable you just use them.' (Alice, aged 83)

In this sample there were some dentate irregular dental attenders and the reasons they gave for this were very similar to those given by the edentulous participants, principally a lack of need to attend, particularly if they did not have any dental/oral problems. However, at the same time they also expressed the feeling that they should visit more regularly:

'...we moved here about six years ago, since when I haven't registered with a dentist I'm afraid. I kept intending to but time went on, and time went on and I didn't need it so I didn't actually get round to it.' (Barbara, aged 71)

'No I don't, I should. But I've nothing the matter with me teeth. No problems with them.' (Stella, aged 79)

The above quotes suggest that participants were aware of oral health messages regarding regular dental examinations, the participants realise they should be visiting a dentist on a regular basis, but they are not. It is possible that other factors are involved in the lack of attendance.

4.5.2 Cost

Most participants involved in this study were NHS patients and paid NHS dental charges. Old age does not exempt people from paying NHS dental charges for examinations or treatment in England; however, in Wales and Scotland dental examinations are free of charge for those aged 60 and over. Participants queried the need for NHS dental charges and cost was given as a reason for irregular dental attendance :

'I find it inconsistent, I mean compared to the doctors and we get free prescriptions because of our age and condition and so forth, and yet with the dentistry you have to pay quite a lot towards it, and it's all part of the same National Health Service, I can't understand it really. Why is there one rule for one and not for the other?' (Robert, aged 72)

'...the last visit to the dentist...was so expensive, although it was National Health that I said 'oh I'm not going until I need it in future' but I didn't expect to wait this long.' (Barbara, aged 71)

'I think two hundred quid to get some teeth I'll hang on to these.' (Beatrice, aged 79)

In this respect dentistry is distinct from NHS primary medical care services which are still free at the point of delivery. In particular many highlighted the cost of a routine examination as being expensive, especially because the time

taken to carry out this procedure was very short and offered poor value for money:

'I thought well I'm having to pay for that check-up and I've waited longer than I have been in with the dentist, you know, not very good.' (Nancy, aged 80)

'I think er charges for um six months check-ups are quite expensive considering how long it takes, and especially if there's nothing wrong.' (Theresa, aged 68)

'And the last time [name of husband] was there he had a check-up and I can't remember now how much it was but he wasn't in five minutes I'd say...and it was a lot of money.' (Stella, aged 79)

This theme was recurrent in the focus groups:

'I went in, sat...he didn't even have my notes. He just...I didn't take my coat off. He just looked in my mouth and I put my coat on. I went straight out and I paid £15 or whatever it was. And it was literally...I wasn't...I thought it was like you, about 15 seconds.' (Maud, aged 78 (FG1))

'A 14 to, let's say a 14 to 30 second check-up, you pay your £15 or whatever it is, and out you go.' (Albert, aged 65 (FG1))

To overcome barriers associated with costs it was suggested that dental examinations should be available at reduced rates or free of charge:

'I think er charges for um six months check-ups are quite expensive considering how long it takes, and especially if there's nothing wrong... You know, if there was something wrong then I think perhaps they ought to include the check-up fee with whatever you have to have done... And if there isn't a great deal wrong then I think perhaps a smaller sum should be paid for a check-up, you know, that's just 'yes, everything's alright'.' (Theresa, aged 68)

'...if you charge for check-ups, then you are preventing people having the very basics and they don't know what, what they need doing. They may have ... nothing to do at all ... or they may have loads to do ...But if you're going to charge them just to tell them they've got nothing to do, it seems quite wrong.' (Stan, aged 84 (FG1))

Costs were not always found to be a major barrier, particularly in relation to dental treatment as opposed to check-ups. In fact some participants expressed they were quite happy with the amount they had paid for their last visit, or would be expecting to pay for their next course of treatment. For example, one participant was hoping to be provided with a new set of dentures and commented:

'So I think I might have to pay about two hundred... so I'm happy with that.' (Martha, aged 78)

Others were aware of the need to pay and were also satisfied with the NHS charges:

'We expect to pay, you can't expect to get it all free.' (Beatrice, aged 79)

'They're [NHS charges] not too bad...I mean it might worry some, but I don't think it's that bad, I don't pay more than about £25 you know.' (Beatrice, aged 79)

Very few of the participants were aware of the new fees for NHS dental treatment introduced in 2006, however, some had the perception that costs would be expensive from stories they had heard from friends and relatives:

'My son's a regular well his wife and the children are to Mr [name of dentist] and I forget how much just for a check-up it is to pay, and he was gonna have something done and it was going to be about seventy odd pound for something.' (Alice, aged 83)

'I don't know whether it was our Steve or our Alan was three hundred pound just for one...One tooth, getting it out or something like that, I'm not sure but it was three hundred whatever it was' (Rosemary, aged 78)

A minority of participants were private patients and they also felt the cost of dental treatment was too high, some were not private patients themselves but once again had the perception that private treatment would be expensive:

'Well that [the cost] hurts you more than having your teeth done.' (Peggy, aged 84)

'But I'm frightened in case they say 'Oh we're private and it'll cost you a heck of a lot more'. That's what I'm frightened of really... Well private [fees] are horrendous.' (Beatrice, aged 79)

Ronald highlighted the financial worries older people may have in relation to the state pension:

'It's a bad situation to be in like, you know, with my wife being a pensioner as well as me, when you've got to fork out x amount of pounds for your teeth.' (Ronald, aged 66)

There were also other indirect costs associated with utilising health care service including dental care, for example, the additional costs of fuel and running a car, often relied upon for travelling in rural areas; these are discussed in more detail in the following section.

4.5.3 Travel and Transport Issues: Getting to the Dental Practice

In this study there were few car owners, however, those who did own cars reported less problems with accessing services, apart from the cost of fuel being a current problem:

'I mean we're alright we've got a car, but price of fuel costs is a concern now.' (Robert, aged 72)

Those who did not own a car and relied on public transport described some of the problems associated with this, for example, timing appointments to fit with bus times when travelling from surrounding villages into the main town of Barnard Castle, waiting times and changing buses:

'...but they're only every two hours, and the last one back again is ten past two in the afternoon...so if you had an appointment after that you can't get back.' (Barbara, aged 71)

'There's a circular bus goes from here to Cockfield every hour...and then you're supposed to get off at Cockfield and change to wherever you want to go, to Durham, Darlington or Bishop or whatever you know.' (Robert, aged 72)

'And I tend to use them, the bus as well, as much as I can, but you often have quite a long wait. I mean to go to Barnard Castle its only

once every two hours and there's only about three in the day sort of thing.' (Robert, aged 72)

Some participants relied on friends and family to give them a lift or they would get a taxi, and one participant implied that she no longer feels confident to use public transport since getting older:

'I mean I would have to catch a bus because there isn't always a car at my...I can't drive but there isn't always somebody here that would take me up and down so I would have to catch a bus. But I mean I used to do it before but as you get older you think about these things don't you?' (Nancy, aged 80)

Theresa expressed the view that older people may no longer want to drive long distances and she also raises a possible solution to the problem:

'...the fact that as you get older you don't feel like driving long distances, and you've got to rely on village driving groups.' (Theresa, aged 68)

Although many participants talked about problems with public transport, this did not always prevent them from accessing the services they required; instead it appeared that they would make the effort to overcome difficulties that arose, for example, requesting appointment times that fit with bus times:

'Well I would just make an appointment for the bus...you know the time.' (Phyllis, aged 90)

Others talked about using a volunteer driver scheme as a good way of overcoming problems with transport:

'But we have a system here where by it only goes as far as Darlington... I think, if its Middlesbrough you've gotta get an ambulance...put your name down for an ambulance. But to Darlington, or I think even Bishop you can hire a car to have a voluntary service... Now it used to be five pounds...Five pounds return...to be taken by car and they'll wait for ya, and if it's an hour or so then they'll pick you up and bring you back...But it's gone up in price, they've had to put the prices up and it's gone up quite a bit. So I don't know what it is...But if you were stuck, it's worth every penny.' (Martha, aged 78)

'There are groups of people in villages that very often um volunteer, you know, to drive elderly people to hospital appointments and dental appointments and so forth, and as you get older you probably have to rely on a group of people like that being able to take you.' (Theresa, aged 68)

However, there was some confusion as to whether the local voluntary driving service was still available and June's comment highlights a possible lack of information:

'A car service, you know, but I just don't quite know what's happened, he's [the organiser] not answering the phone much.' (June, aged 80)

June felt that difficulties with accessing services was an integral part of living in a rural area, when June was asked if there was anything she could think of that may improve access to services for her she said:

'Oh well I don't really know what you could do really. Just where we are isn't it, we'll just have to accept what there is really.' (June, aged 80)

4.5.4 Environmental Factors

Physical barriers were a problem for those who experienced decreased mobility, or whose partners had decreased mobility. The main issues were difficulties caused by steps and stairs, and also access for wheelchairs was very limited:

'Now the problem in Barnard Castle is I can't get to any of the dentists...Because they've all got steps up to them. Or they're even upstairs.' (Harold, aged 65)

'Well I go through the back through the kitchen when I go to see my dentist but it's still pretty bad around there.' (Peggy, aged 84)

'Oh the stairs up at...this...erm...place where I went are real steep stairs they were... was worn out by the time I'd got up to the top.' (Nancy, aged 80)

The participants who used wheelchairs had particular problems with gaining access not only to dental services, but also to many other services, Harold

relied on his spouse to take him everywhere, she describes the effort her and her family make to check the access first before taking her husband anywhere:

'Well we've all learnt now. My sister's having her birthday jig and she's been and sussed the whole place out and said right, can I see the loo and disabled loo and everything. Where will we be? Where will you sit us? And she said I think they thought I was mad. But she said I was, I've made really sure it was right and I said okay, that's alright, we'll come. Or else I won't go anywhere now unless I go and suss it.' (Harold's wife, aged 65)

Harold used the mobile unit for his dental treatment because it has wheelchair access, but this still requires travelling to it and it takes time and effort to get the wheelchair on board, as his wife explained:

'...they've got the thing that comes down and they put him on and it goes up. If it's raining you get very wet because this is all very slow. I have to say we were doing this in the rain, the poor girl on the van, and I went in and said to her I wish I had a big umbrella, erm, because you have to then slowly and I mean it doesn't go up, it just goes slowly. And then you get him in and then we have to close it all up and then we can clamber back up the steps you see.' (Harold's wife, aged 65)

Harold and his wife were moving to Barnard Castle but were planning to travel back to Middleton in order to use the mobile service, simply because this provided the easiest physical access for Harold and his wheelchair.

In contrast, the experiences of another wheelchair-bound participant were quite different; she received home visits for many services, which was much more convenient:

'So I have house calls they come to me...Well they came to me November, she said 'Oh we'll see you in twelve months' cause they just come and check your mouth... Yes I'm all house calls and the optician.' (Edith, aged 84)

Suggestions were offered from some participants of ways to make access easier for those with decreased mobility:

'They should have ramps though now shouldn't they?' (Rosemary, aged 78)

One participant was a member of a WI group and she had discussed this with the other members, she commented:

'the other problem that came up with regard to people after 65 is um, mobility, and the fact that some dentists have stairs and steps you know, you've got to climb stairs and you've got to climb steps and many people with you know, problems like arthritis um, knee joints and so forth find it difficult climbing stairs and um, they felt that some thought perhaps should be given um to making it easier for people to get into the dentist and to you know use, get inside the dentist and then be seen on the ground floor rather than having to go up a couple of flights of stairs' Theresa, aged 68

4.5.4.1 Access and Choice

In this sample 8 participants lived in rural village communities and 12 participants lived in the main town of Barnard Castle, where it would be assumed that accessing local services and amenities would be easier. Many of the participants both residents of Barnard Castle and of the surrounding villages perceived there to be a lack of NHS dentists in the area. Very few had actually experienced this personally, however, their opinions were based on the experiences of other friends and relatives:

'Well I have spoken to one or two people who have said 'oh you can't get on the lists round here', there's West Auckland and Barnard Castle they're full, they're not taking any more NHS patients.' (Barbara, aged 71)

'I mean the president of my WI she has to travel to Richmond because she couldn't get um a dental, she couldn't get NHS dentist in Barnard Castle and some other people go to Bishop Auckland.' (Theresa, aged 68)

A couple of participants had moved to Barnard Castle from one of the surrounding villages, they had always visited a dentist in Barnard Castle, however, they experienced problems accessing their usual NHS dentist after moving. The couple missed one of their examination appointments and were told that they would no longer be able to be seen on the NHS as it was over a year since they had been seen. They were offered private treatment, but the participants felt they would prefer to have an NHS dentist and so they started to

travel from Barnard Castle out to Middleton-in-Teesdale to use the mobile dental unit:

'I thought it was time I had a check-up and the girl said 'Well you're not on... you're not registered with us, but you can private straight away if you want'. So I just said 'Well I would think about it'. And we went to the mobile one at Middleton. And we got in there.' (Cecil, aged 85)

For this participant travelling to Middleton involved using the bus service, which for himself and his wife, could be difficult at times as they both have health problems. Cecil is registered partially blind and his wife has reduced mobility, but they managed to overcome these difficulties in order to travel to the mobile unit.

Access to urgent dental care was also a concern. As reported earlier some of the edentulous participants expressed their concerns about breaking their dentures, especially because there is not an efficient repair service available to them and the rural setting was seen as a barrier to having a denture repaired quickly:

'...you've got to have your dentures sent to Darlington apparently, and you're waiting until it's you know, been looked after or looked at, and dealt with. So, it would be useful so people say, if there were dental technicians perhaps attached to practices in the area, rather than having to send things elsewhere.' (Theresa, aged 68)

'And of course to get it repaired here I would have to be without for three days. So I rang round and luckily my son happened to be off duty and he took me down to a dentist at West Auckland and he did it straight away.' (Alice, aged 83)

Alice was fortunate she had a family member to rely on, but this may not always be the case. One edentulous respondent who was an irregular attender was so concerned about the possibility of fracturing her denture, that when asked if there was anything that would encourage her to visit the dentist more often, she answered:

'Yes I would if I knew that I would get service if my teeth broke.' (Nancy, aged 80)

Access to specialist care was difficult, this was highlighted by Harold. Rurality had impacted on Harold's care following his stroke, his wife explained that Harold had some specific needs in terms of health and social care, including his oral health care, she said:

'But you need that level of, of intensity and care. And I don't think, I don't think I'm going to get it on the NHS, this is the problem. And yet he should and he should have it. And I can see his teeth need it.' (Harold's wife, aged 65)

The problems they encountered trying to access local NHS dental services included physical barriers such as stairs and steps, NHS dentists not wanting to travel to their remote home to provide domiciliary care and they also felt dentists often had a lack of time available to spend with him during his appointments. Harold has needs that are specifically related to his medical condition and the need for a dedicated dental service for stroke patients was raised:

'Life's a lot of effort. But they could make it a bit easier. Or if they did a dedicated service for stroke people.' (Harold's wife, aged 65)

Following his stroke this participant was unable to visit his previous dentist, firstly because his dental practice has steps, and secondly it was too far for the dentist to travel for domiciliary care and so he now uses the mobile dental unit. Harold's case highlights many barriers to accessing local services related to his condition following his stroke, however, these barriers are not restricted to stroke survivors, and many older people may be faced with similar problems.

Other participants also talked about the unfair access to dental services across Teesdale due to a lack of availability. Some thought that having a dental practice in another part of Teesdale, other than Barnard Castle may be a good idea:

'...the other thing perhaps would be to check on where the dentists are in a particular area, um, and make sure, because Teesdale is quite a large...spread, you know, far flung, sort of area, so you know the people in the remotest parts of Teesdale obviously have a long way to travel even to get to Barnard Castle to visit a dentist, so perhaps you know, if somebody did a survey of um the population of Teesdale and tried to see where it would be good to locate dental practices in order to give you know, everybody fair access to

them...because as I say I know we have dentists in Barnard Castle but can everybody get to Barnard Castle?’ (Theresa, aged 68)

The use of the mobile unit was often discussed, this service seemed to have a good reputation and participants were keen to see its services expanded:

‘To my way of thinking, I think they should get out up the Dales, and you know, have a certain day, albeit once or two or three months, whatever it may be, but they should get out into the Dales and...and stop you know, and...be an amenity for the people who live there so they don’t have all these difficult bus journeys and timings to cope with. It’s not convenient the way it is.’ (Robert, aged 72)

‘...it would be nice if we had funding for more than one day a week.’ (Bernice, aged 79)

When asked how improvements could be made to local dental services Ronald simply commented:

‘By getting NHS dentists into the town’ Ronald, aged 66

Another possible way of increasing access locally was to use the new community hospital recently opened in Barnard Castle. Harold had used the hospital already, his wife said:

‘We’ve got a brand new community hospital up the road and I really think, they promised, and I think they should be offering many more services anyway and I don’t see why when I take him to physio there I can’t just walk across the other side and have the dentistry looked at as well.’ (Harold’s wife, aged 65)

Similar comments about the hospital were made by another participant:

‘...they’re very good for physio, got a very good physio department but it’s under used as a hospital.’ (Bernice, aged 70)

4.5.5 Emotional Factors

The results of this study show that the majority of participants did express feelings of anxiety related to dental care and the reasons for this were varied.

Some participants stated that they were anxious, but felt that this was normal and they believed that many others would agree. Although anxiousness was sometimes expressed, it was not always severe enough to have resulted in complete avoidance of dental attendance:

'I don't think anybody's very happy about going to the dentist really, but, it's necessary isn't it? You know, we all sort of quake a bit, but we've always gone.' (Barbara, aged 71)

And, when talking about visiting the dentist Martha commented:

'Oh who enjoys it, who does?' (Martha, aged 78)

For many participants anxiety was related to a previous bad experience. This could refer to generalised bad experiences or to a specific incident:

'And it was them [name of previous dentist] that frightened me in them days..' (Phyllis, aged 90)

'And I said I wanted gas and I wasn't out and he started to drill me teeth...and the screams from me must have been terrific.' (Stella, aged 79)

For one participant, anxiety was specifically related to extraction of teeth and to the anticipation of finding out whether extractions were necessary or not. In Nancy's case, once all her teeth had been removed visiting the dentist was no longer a cause for concern:

'Well it wasn't once I had all my teeth out and er I had the full set in, it was never any bother after that.' (Nancy, aged 80)

Other factors that caused participants to be anxious about visiting the dentist included worries about the system, for example, uncertainty over whether participants would still be able to make an appointment at their dental practice after a period of not attending:

'I'm a bit embarrassed to go back to where I had registered and then stopped..., so , I think I might have blotted my copy book there.' (Robert, aged 66)

Conversely a couple of participants gave anxiety and fear of dental treatment as reasons for dental attendance rather than avoiding it:

'Well I'm fortunate I have got all my own teeth...because I don't like pain, so I go to the dentist regularly.' (Bernice, aged 79)

'Cause I'm scared of the dentist, so I've always gone.' (Peggy, aged 84)

For Bernice and Peggy the anxiety related to having dental treatment was greater than that for an examination only and so they practiced a preventive regime rather than waiting for symptoms or pain to arise.

4.5.5.1 The Dentist-Patient Relationship

Participants talked about dentists they had visited in the past, they often talked about the character attributes of the dentist, their manner and the care they received from them:

'He was a nice man at Barnard Castle, they're all nice dentists, they were all alright. But I think that one I went to, it was in [name of place] in Darlington and I don't think he was alright really. He didn't help a lot, you know he didn't make it... any after care or anything like that, he didn't... he just did it and I went and that was the lot, thank you.' (Beatrice, aged 79)

'...then my dentist left...so I had to get another dentist, and I wasn't very keen on the one who took over... it was as though he couldn't be bothered.' (Martha, aged 78)

Communication skills were considered important, one participant would have liked clear explanations of treatment and better communication from his dentist:

'Because I mean if you walk into my dental surgery, you will walk in, sit down ...You get a barrage of comments about nothing...I can run you through a conversation. The conversation went like this. I said to my dentist, 'Can I have my teeth cleaned?', you know, 'They're stained. Can I have them cleaned?' His instant response, 'No. Err well yes, but it will hurt.' Now I jest not. That was his precise conversation.' (Albert, aged 65 (FG1))

Finding the right dentist was important, as one participant illustrated, she had been very anxious about visiting a new dentist after a previous bad experience:

'I heard of Mr [name of dentist]...and I went to him and I... honestly speaking I could have sat all day and let him attend my teeth.' (Stella, aged 79)

Dentists are professional people and the public have certain expectations of them, one participant was particularly impressed by her previous dentist and had appreciated all the treatment he had provided for her, she said:

'But he was excellent.....I mean he was a surgeon, and erm he put... these teeth I've got now he did... Yeah but he was a surgeon...and he was brilliant.' (Martha, aged 78)

The participant clearly had high regard for this dentist and had attributed his good treatment to the fact that he was a surgeon and that this was somehow better than an ordinary dentist. However, in the UK the dental degree is the BDS (Bachelor of Dental Surgery) and therefore all dentists could be referred to as dental surgeons, but Martha felt that the word 'surgeon' carried with it extra importance and was an indicator of a more highly qualified professional, perhaps inferring a more medical qualification.

The personal characteristics of dentists clearly have an impact on whether people choose to visit the dentist or not; and the relationship with the dentist influenced dental attendance:

'We went to a dentist in Barnard Castle and unfortunately the dentist we were quite happy with, she left the practice and somebody else came in and we didn't like whoever it was took their place.' (Bernice, aged 70)

Participants had expectations of how a dentist should behave, this covered attributes of the dentist, not only their technical ability:

'Dentists need to know ...Surely dentists know what expectations are placed upon them, for example good manners, good organisation; beyond dental skill.' (Elsie, aged 68 (FG1))

Professionalism was clearly very important, however, some participants felt that professionalism is not as prominent as it once was and not only in dentistry:

'But the ethos of professionalism has gone, because... the dentist was a revered person.' (Elsie, aged 68 (FG1))

'There's no pride in ... in anybody's work anymore.' (Maud , aged 78 (FG1))

As the interpersonal skills and professionalism of dentists are so important to patients, it is easy to see that people may base their entire views of their dental care experiences on individual dentists. In fact in this study there was the opinion that the provider of the service, that is individual dentists, were the most important factor in determining whether an overall service will be good or not:

'But obviously everything depends on the practitioner, doesn't it?...It's not the service, it's the...who's operating it.' (Stan, aged 84 (FG1))

Some of the experiences which were discussed showed that the attitudes, behaviour and professionalism of all members of staff are important, not only the dentist:

'I wasn't even told. I said I, you know, they keep changing the one I go to and I went about last December and when I got there I said, 'Oh, I've got an appointment with this person,' and they said, 'Oh no, you'll have to see Mr So-and-so today,' and so I said, 'Well, what happened to the new one?' 'Oh well, she didn't start.' And they hadn't told me that erm there wasn't anybody there for me to see, which is why I was in and out ... like a flash, where he hadn't got my notes. He hadn't even got a surgery. He had to walk round trying to find somewhere, a chair where I could sit down. But I still paid ...' (Maud, aged 78 (FG1))

4.5.6 The Dental System

Participants were unclear about local dental services available to them. Two of the participants had been given some information about dental practices in the area, these participants had been attending a cardiac rehabilitation clinic organised through their GP. At these sessions there would often be a speaker giving information on different topics, one of these had been about dental care

and the participants said this had been very useful. This demonstrates the scope and potential for services to work together in order to inform their patients on health care and health care services. It is important that correct and up-to-date information is shared by all those involved. In this case participants had been given a list of telephone numbers for dental practices, however, the information was sparse and the practices listed appeared to be out of the local area, so unfortunately not that helpful:

'The numbers were all 0191 and there were no addresses at all, just phone numbers... No names or addresses just...phone numbers...I hadn't a clue who I was speaking to.' (Barbara, aged 71)

Part of the dental system which participants were unhappy with was the lack of receiving reminders from their dental practice to let them know when their routine examination is due:

'...they do send reminders and then all of a sudden they stopped. And I think that was when I stopped going after that.' (Nancy, aged 80)

The lack of receiving a reminder or being able to book a check-up appointment in advance was particularly inconvenient for some participants, for example for Harold (a stroke survivor) and his wife:

'...but why can't they just put him on a rolling six months programme?'... And it is my fault now because what happened was I tried to ring and make an appointment for six months ahead and they can't do it... If I could have made the appointment for six months ahead it would have been done. Instead of that, what have I done but let it go a year... So it's down to me that...he really does need some work done.' (Harold's wife, aged 65)

Others also preferred to receive a reminder:

'Well yes I need that reminder when to do it yes.' (Robert, aged 72)

Not receiving reminders for check-up appointments was a problem that both edentate and dentate irregular dental attenders spoke about and sometimes resulted in them ceasing to visit the dentist altogether. There also seemed to be confusion over the registration system at dental surgeries, many respondents believed that if they had not visited their dentist for a certain

amount of time, usually one year, then it would not be possible for them to return there:

'I don't know why but I just suspected that if you didn't go for sort of a year I mean that was you wiped out.' (Nancy, aged 80)

'...he normally sent you a re-registration thing. And that's what I was worried about. Cause I hadn't had one. And I didn't think I'd still be on the erm...books you see.' (Martha, aged 78)

'But somebody else was telling us that if you haven't re-visited your dentist for six months they take you off the books, so is that right?' (Barbara, aged 71)

'But seemingly you can't get into a dentist now unless you've already registered.' (Rosemary, aged 78)

Prior to the introduction of the new dental contract in 2006 patients were registered with their dental practice and so reminders were sent to patients to make sure they attended for an examination at least every 15 months and this encouraged long-term continuing care. However, the new contract no longer required patients to be registered with an NHS dentist in this way, and so many practices stopped sending out prompts for their patients to attend for regular check-ups.

Some participants would also have liked more detailed information on actual treatments available:

'This is why I say ... If people don't know really ... know what to expect, or what they can ask for ... or what treatment is available, I mean in some sort of detail.' (Albert, aged 65 (FG1))

Access to urgent dental care was also a concern, particularly for those who had not visited a dentist for a long time. Several participants said that they would not know what to do or who to contact if their dentures needed repairing. One of the dental practices in Barnard Castle does offer a repair service, but none of the participants seemed aware of this. When Nancy was asked what she would do if her denture ever broke, she answered;

'...where would I go to? Because I've never been to him for about six months. I mean they won't take you now will they? Or will they?' (Nancy, aged 80)

The data show there is confusion over the dental system and there was little awareness of how the current system works.

4.5.7 Lack of Social Support

For a minority of participants a lack of social support had acted as a barrier when accessing dental care, Rosemary and Nancy described the impact of a lack of social support:

'I mean I would have loved to have gone and got a new set years ago but I've got a handicapped daughter you see . Well all me time's on her.' (Rosemary, aged 78)

'And then with my husband being ill as well and you're sort of at home looking after them you don't get the time to be going on these appointments.' (Nancy, aged 80)

Some participants were able to rely on family and friends to take them to dental appointments:

'Well if I put it about... the last appointment, I can maybe get receptionist...she could run me back.' (Stella, aged 79)

If this support had not been available the participant may have had to overcome more barriers to access services or they may not have used the services at all.

4.6 Summary

For some older people from a rural area in the North of England oral health care was a problem. The participants clearly valued their teeth, however, several significant barriers exist to accessing dental care. Barriers were based around the practicalities of accessing care in a rural setting, including problems with public transport and a lack of available services. Other barriers were more personal, such as fear, anxiety and the relationship people have with their dentist. The impact of the life course on this group of older people was very influential and affected how and why people choose to seek care. The older

participants, aged 75 and over, had been particularly affected by childhood experiences which still impacted on their feelings towards dentistry today.

These data help to build a picture of how older people in this rural area feel about their oral health and how they might access oral health care services. I found that many of themes which emerged fit into the model of access described by Penchansky and Thomas (1981), previously discussed in Section 2.12.2. This model of access reflects the fit between characteristics and expectations of the service providers and the service users. Although others have gone on to add to and develop this model of access (Goddard and Smith, 2001; Gulliford *et al* 2002), its 5 major components: Availability, Affordability, Accommodation Acceptability and Accessibility remain the principles of defining access to health care. Participants gave examples which fit into these components, for example, they talked about a lack of available services in their rural location and the problems of accessing the services which do exist, in terms of difficulties traveling to them, and they also highlighted barriers around the cost or affordability of dental treatment. The results which have been presented in this chapter are now discussed in more detail in the following chapter using Penchansky and Thomas's model of access as a conceptual framework.

Chapter 5. Phase 1: The Oral Health Beliefs and Priorities of Older People in Teesdale and the Barriers they Face when Accessing Dental Care: Discussion

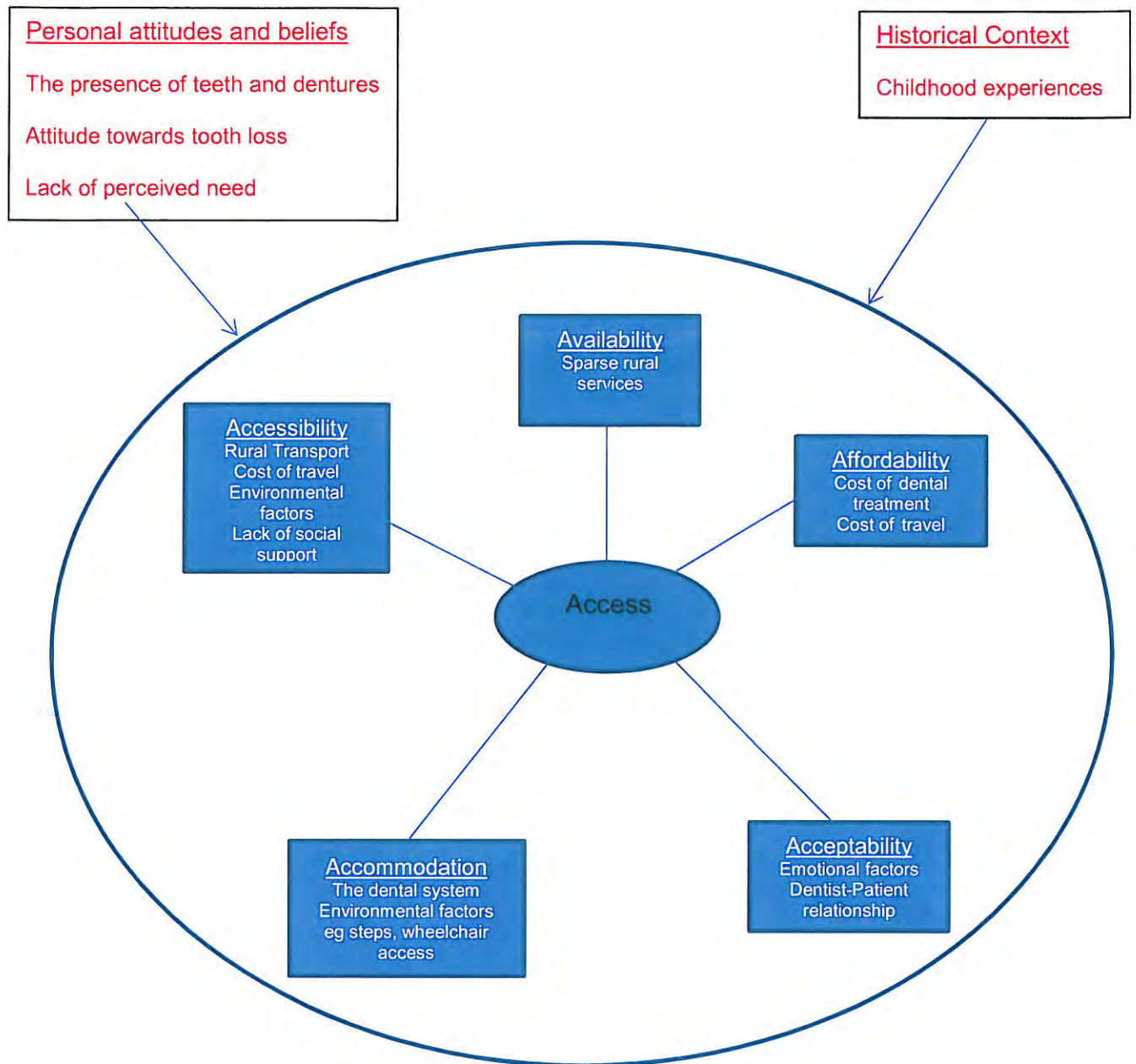
Barriers to accessing oral health care services were identified and presented in the previous chapter. These barriers included: a lack of available services; physical barriers, including difficulty in travelling to appointments; a lack of knowledge and information regarding the dental system itself; emotional barriers, frequently linked to previous (often negative) dental experiences; and, personal barriers, particularly the relationship people had with their dentist. This was an inductive approach to investigating the barriers faced by older people when accessing oral health care services in a rural area. However, a large proportion of the barriers which emerged fit within the model of access proposed by Penchansky and Thomas (1981). This model of access has been used to provide a conceptual framework which has aided the analysis and discussion of the data. Figure 5.1 demonstrates how the barriers which emerged fit into Penchansky and Thomas's model of access and it highlights the themes which do not fit neatly into this model (shown in red).

Each of the themes is now discussed in more detail, under the headings of the 5 components of access. However, there were other themes, in particular those relating to personal attitudes, beliefs, the historical context and the impact of the life-course, which do not fit neatly into this model. These additional themes are highlighted and discussed later in this chapter.

5.1 Availability

In rural areas services are often limited. Firstly, the definition of 'rural' needs to be considered, however, it is very difficult to find one usable definition. In England and Wales the definition of rural has been based on population density (Commission for Rural Communities, 2004). In 2004 the Rural and Urban definition was introduced which can distinguish between the different types of rural settlement. Census Output Areas forming settlements with a population of over 10,000 are classed as urban; the remainder are defined as one of three rural types: town and fringe, village or hamlet and dispersed or isolated

Figure 5.1 How the barriers which emerged fit into Penchansky and Thomas's model of access



dwellings. Teesdale is classed as a Rural 80 area, meaning 80% of the population live in rural settlements. Teesdale is composed of some 'town and fringe' areas such as the main market town Barnard Castle, and some of the other larger villages including Eggleston and Cockfield. However, the majority of the region consists of 'villages, hamlets and isolated dwellings' (Office for National Statistics, 2005). Part of Teesdale lies within the North Pennines, which was one of only a few areas to be classified as sparse, most of England falls into the less sparse category (Commission for Rural Communities, 2004).

Rurality impacted on service use by older people in this study either because they felt their location resulted in a lack of available services or because it caused other indirect problems, such as travelling; this finding is supported by the literature (Wenger, 2001; Wood, 2004). Chapter 1 detailed the services available within Teesdale and the sparse health care services were documented. Only 1 NHS dental practice now exists, located in Barnard Castle and the mobile dental unit visits one village once a week. The mobile service was highly regarded in terms of access and made a difference to the rural community it served, which can be a challenging setting for those commissioning services. The main GP practices are also located in Barnard Castle and there are branch surgeries in some of the surrounding villages.

Better information is required for older people regarding the services available to them, not only health care services but other travel information and support available to older people. It would be useful if priorities were more clearly set about who is entitled to use specific services, in this case the mobile unit, which was extremely busy.

There were particular problems with the out-of-hours dental service and there was concern about a denture repair service. The impact of the rural setting meant these services were not available locally and to access them would involve travelling large distances. Adequate dental emergency care provision needs to be considered when commissioning services in rural areas, taking into consideration the distances involved.

There were also few specialist care services available and this was highlighted by one participant who was a stroke survivor. He and his wife always had to

travel large distances to attend hospital appointments, however, they could access dental care via the mobile dental unit.

Participants often relied on information gathered from friends and family regarding local services and often their decisions about using a particular service were based on the experiences of others and this finding is supported in the literature (Borreani *et al.*, 2008). This is an important consideration for services to be aware of in this type of community where word-of-mouth information is highly regarded. In rural areas, where populations are sparse there are inevitably fewer services and local residents need to be able to access up-to-date information on the services which exist around them.

5.2 Affordability

The data show that cost was a barrier to accessing dental care; however, it was not only the actual cost, but also the lack of information regarding costs of dental treatment. In the literature, financial cost of dental treatment is a commonly cited barrier to accessing dental care (Lester *et al.*, 1998; Borreani *et al.*, 2008). Cost could act as a barrier for anyone seeking dental care, not only older people. However, cost may be a real concern for some older people whose only income is the state pension as this group can often find themselves below the poverty threshold (Gilbert *et al.*, 2006).

Participants highlighted the inconsistency in NHS care, whereby patients have to pay for dental treatment but not medical care. Participants were unhappy about the cost of a dental check-up, as it represented poor value for money. These findings are similar to those from the Independent Review of NHS dental services in England in 2009, in which patients also expressed concerns over the short time taken to perform a dental examination. People may feel that unless they are actively having some sort of treatment carried out, then they are not getting value for money (Department of Health, 2009). The time spent with the dentist could also impact upon the dentist-patient relationship and Borreani *et al.* (2008) found that a hasty manner could act as a barrier to dental care (Borreani *et al.*, 2008). For older people whose income may be limited the cost of dental treatment could be very significant. The participants in this study queried the

fee for a dental check-up and suggested that an examination should be free of charge. This suggestion is reflected in the literature, for example, in a qualitative study in 2008 Borreani *et al* found that cost was a barrier to accessing dental care for older people and in order to minimise this barrier participants also suggested that check-ups should be free for the over 65s (Borreani *et al.*, 2008). A policy document published by the BDA recommended free NHS examinations for the over 65s in the UK (Oral Healthcare for Older People 2020 Vision, 2003). This would involve change to national policy and currently there is no evidence to suggest that this is likely to happen (Borreani *et al.*, 2008). However, the feeling of entitlement and also of value is perhaps important to understand when managing and designing a service that is acceptable to older people. This group of people pre-date the NHS and their attachment to its principles is often strong. The conduct of the “business” of dentistry sometimes does not seem to fit with their vision of the service and this can be compounded by fear and misinformation. The data show a clear need for information regarding the cost of dental treatment.

There are other indirect costs associated with visiting the dentist, such as the cost of travel, which in a rural setting can be significant. Public transport should be free of charge to those aged 65 and over, however, some participants were car owners and there are the costs of running a car, or the cost of taxi services for those who felt they could not use public transport, either because they felt physically unable to or because the services were so poor they were not feasible to use.

5.3 Accessibility

The sparse locations of health care services in this rural setting have already been described. This inevitably results in difficulties with accessibility. Rural areas often lack good transport links and this is frequently reported in the literature as being problematic (Wood, 2004). It has been well documented that rural communities have poorer access to services (Wenger, 2001; Wood, 2004); as this study was undertaken in a rural area it would be easy to assume that the distance decay effect would be apparent, that is dental attendance would be related to place of residence, with those living in the most rural and

remote locations being more likely to be infrequent attenders compared to those living in close proximity to the dental services available in the semi-rural market town of Barnard Castle. However, infrequent attendance was found throughout the area, including the rural village communities and Barnard Castle, implying that other factors are involved in determining whether or not a person attends the dentist regularly. For example, barriers to accessing dental services, including cost, lack of perceived need and lack of available services may have an impact and these are discussed later.

Participants in this study described how they need appointment times that fit with bus service times, however, bus services were so infrequent this was often difficult to do. Bus journeys were made harder because of having to change buses and the connections often involved long periods of waiting. Due to poor public transport in rural areas people are often more reliant on privately owned cars, which may be expensive to own and run (Cox, 1999). A couple of participants were car owners and although this may mean that travelling was easier, and therefore accessing services may be easier, there were still costs involved.

Physical access, in terms of steps and wheelchair access, was highlighted as a problem, particularly for those with reduced mobility. Disability is multidimensional and different models have been used to try to help explain it. The 'medical model of disability' argues that disability is a personal issue caused by a health problem or trauma. The solution to the individual's problem is seen as medical management of the symptoms and adjustment to the individual's behaviour in order to adapt to the situation (Bond and Cabrero, 2007).

In the 'social model of disability' the disability is not attributed to the individual but to society, including the political, social and physical environment. Therefore, the solutions in this case are not only medical ones; instead they require social action to change the physical environment and to change attitudes towards people with disabilities (Bond and Cabrero, 2007). For example, dental practices should now comply with the Disability Discrimination Act (1995) and make 'reasonable' alterations to their practices to overcome barriers to accessing the premises (Merry and Edwards, 2002). However, the

local dental practices were often converted houses, with steps up to their front door. Wheelchair access was offered, but it was not always ideal, for example, it sometimes meant wheelchair users had to come in through a different entrance, which drew attention to them.

Oral health care services were inaccessible to some participants because they were currently or had been acting as a full time carer for their spouse or other relative. They simply did not have the time for their own dental appointments. Acting as the main care giver for someone else can be time consuming, and caregivers often report feelings of burden (Poulshock and Deimling, 1984).

These environmental barriers did not affect all participants, but they are important where they occur. Domiciliary services had been well received where they were delivered, however, not everyone who could have benefitted from them did actually benefit.

5.4 Accommodation

This component of access includes a number of topics regarding the dental system. The first related to a lack of information running through the whole process of using dental services, including a lack of information about existing services, the dental system, the cost of treatment and emergency care. Those participants who did not have a regular dentist were not equipped the necessary information to help them find a dentist. Those who did have a regular dentist were still confused about the out-of-hours service and how to use it. Williams and Calnan (1991) found three variables were key predictors of overall satisfaction with dental care and one of these was the giving of information by the dentist (Williams and Calnan, 1991); other studies confirm this finding (Lahti *et al.*, 1996; Borreani *et al.*, 2008).

Following recent changes to the NHS dental contract several large changes to the NHS dental system have occurred; however; the participants in this study were often not aware of the new costs that would be involved or how the process of patient registration worked. This highlights another problem with the dental system; some participants commented on how they used to receive a reminder for their dental check-up, but now no longer do so. Many dental

practices stopped issuing these reminders following the changes to the dental contract in 2006 which altered the patient registration system, meaning patients were only registered for short periods of time as opposed to the previous system whereby they would be registered for periods of 15 months at a time. Not receiving reminders for check-up appointments was a problem that both edentate and dentate irregular dental attenders spoke about and sometimes resulted in them ceasing to visit the dentist altogether; this finding is consistent with those of another recent study (McKenzie-Green *et al.*, 2009).

Accommodation also refers to the relationship between factors such as opening hours and the service users. In this rural area there was a problem when using public transport in trying to fit appointment times with travel times. This may be difficult to address, however, the problem does exist. However, once again there is a need for information detailing the services available to local residents, including opening times. Information on how to access these services would also be useful, for example, details of travelling options.

5.5 Acceptability

This refers to the mutual perception service providers and service users have of each other. The data from this study show that the personal characteristics of the dentist as an individual were very important to older people as service users. The personal characteristics of the dentist affect the relationship that existed between the dentist and the older person. Participants emphasised the need for good communication skills and professionalism.

In a study assessing consumer satisfaction across general medical practice, dental and hospital care, Williams and Calnan (1991) found that along with professional competence the quality of the dentist-patient relationship was also an important factor in overall satisfaction with service provision (Williams and Calnan, 1991). When a dentist's behaviour falls below a level that is acceptable to the patient then they begin to feel dissatisfied and in many cases this is due to what patients perceive as a lack of communication skills (Newsome and Wright, 2000).

This study has highlighted the importance of emotional factors; participants expressed a need for a good relationship with their dentists. This view is supported in the literature, for example, in a qualitative study investigating oral health and access to dental care among older people Slack-Smith *et al* (2010) concluded that there is a strong emotional component to people's perceptions, attitudes and experiences of dental care. Older people wanted to establish a long-term relationship with their dentist based on trust, honesty and the ability to communicate effectively (Slack-Smith *et al.*, 2010). The dentist-patient relationship and the way a dentist is viewed as an individual is very important in determining how participants in this study perceived the dental service as a whole. Newsome and Wright (2000) stated that interpersonal relationships between dentists and their patients lie at the very heart of how a patient evaluates their dental care (Newsome and Wright, 2000). In 2008 Borreani *et al* also found that the characteristics of the dentist can act as a barrier to accessing dental services. They reported that older people preferred a mature professional approach, combining good technical skills and good communication, including a professional manner, friendliness and politeness, which were all important to older people (Borreani *et al.*, 2008). Personal attributes of the dentist have been established as important factors in patient satisfaction in several other studies (Holt and McHugh, 1997; Newsome and Wright, 2000).

Newsome and Wright (2000) showed that it is important that the whole dental team, including front-line reception staff, dental nurses, therapists and dentists, should all have a professional manner as they all contribute towards the overall impression given to the patient of their dental surgery (Newsome and Wright, 2000).

Many participants in this study felt anxious about visiting the dentist and this was often related to previous bad experiences. Other qualitative studies also found that anxiety was often associated with previous traumatic dental experiences and could be a reason for non-attendance (Borreani *et al.*, 2008; McKenzie-Green *et al.*, 2009). Anxiety was also attributed to the uncertainty participants felt about the dental system with regard to registration system and the possible costs involved. In the literature anxiety has been widely reported

as a barrier to receiving dental care and appears to affect a large proportion of the UK population. The Adult Dental Health Survey of 1998 found that 32% of adults always felt anxious about going to the dentist (Nuttall *et al.*, 2001). In the Adult Dental Health Survey of 2009, adults with extreme dental anxiety were more likely to attend only when they had trouble with their teeth (22%) than for a regular check-up (Hill *et al.*, 2013).

This study highlighted two major factors in the acceptability of a dental service. The first is the dental practitioner as an individual and the relationship that is developed between them and the patient. The second factor is the dental system itself. In order to overcome these barriers dentists need to be aware of the importance of the relationship they establish with patients and the system in which they work needs to be easy to use. Again, there is a need for information here regarding how the NHS dental system operates.

5.6 Additional themes

The data from Phase 1 also include some themes which do not fit neatly into any of the 5 components of Penchansky and Thomas's model of access. These themes relate to personal attitudes and beliefs of individuals which are often a result of childhood experiences, both in terms of dental experiences and general life experiences. These factors often acted as barriers and prevented participants from seeking care. In Figure 4.1 the themes from Phase 1 which do not fit into Penchansky and Thomas's model of access are shown in red. Each is discussed in the following section.

5.6.1 The Historical Context

For the participants in this study dentistry in their younger years was very different from services that are provided today. Dental care during the 1920s and 1930s could be viewed as primitive compared with present day services. Prior to 1921 dental treatment could still be provided by unqualified practitioners. At this time dental equipment included hydraulic pump chairs and treadles,

whilst local anaesthetic was not widely available (Bettles, 1998). Quite often, but not always, the practitioners were highly skilled, though not qualified having learned their trade through apprenticeship. Then in 1921 the Dentists Act restricted dental practice to those who were fully qualified (BDA, 2008).

In the first half of the 20th century oral disease was prevalent, dental treatment was delivered privately and it was expensive. Few people were covered by insurance schemes, therefore dental care was an 'extra' when it could be afforded and so many failed to seek treatment (Gelbier, 1998). Many participants recalled their experiences when visiting the dentist at a young age, the memories were vivid and the stories were easily told with a great amount of detail, particularly from those aged 80 and over.

Rurality appeared to be a problem even then, and to overcome this a dentist from a neighbouring town would hire the use of a room in a house belonging to one of the residents and people from that village would visit the dentist there. The majority of dental care provided at this time involved tooth extraction and therefore this type of service was easy to provide outside of a normal surgery setting as little equipment was required. This type of dental treatment was primitive, and usually a traumatic experience.

Participants also talked about early oral health behaviours. As children there was little encouragement from their families to clean their teeth and many did not have a toothbrush. However, as they grew older they had started to care for their teeth by cleaning them. The data support the convention that basic oral health messages have become ingrained within society and today a greater importance is placed on oral health and teeth than in the past. Bradnock *et al* (2001) give an example of this; the phrase 'if you don't look after your teeth, you will lose them' is now well known (Bradnock *et al.*, 2001). The Adult Dental Health Survey takes places every 10 years, the first was in 1968 when 37% of the population of England and Wales were edentate, 40 years later this figure had fallen to 12%. The dramatic changes which have taken place in oral health are partly due to changes in attitude towards self-care and to dental treatment (Bradnock *et al.*, 2001).

5.6.1.1 Dental Visiting Patterns in an Historical Context

Over a decade ago Kiyak *et al* (1998) found that although dental practice has changed throughout the 20th century the oldest old still have little experience of preventive dentistry. Their visits to the dentist were usually in response to dental pain and often resulted in tooth extraction (Kiyak *et al.*, 1998). Many of the edentate participants in this study aged 75 and over had grown up in a time when regular dental check-ups were not routine and therefore regular dental visits had not been part of their lives. Many have continued to only seek help when needed. Tickle and Worthington (1997) found that an important predictor of self-perceived need for dental treatment was previous dental visiting patterns; therefore those who have not been used to visiting the dentist regularly throughout their life are less likely to perceive a need for treatment (Tickle and Worthington, 1997).

It has been widely reported that older people are less likely to make use of dental services (Meeting the challenges of oral health for older people: a strategic review: Chapter 4. Dental Services Access and Provision, 2005) and age itself has also been reported as a barrier to accessing dental care (Smith and Sheiham, 1980). Since then other factors, in combination with the age of an individual, have been found to influence dental attendance, such as social class, level of education attained, area of residency (McGrath *et al.*, 1999) and very importantly the dental status of the individual, which has become the major factor in determining older people's use of dental services (Tickle and Worthington, 1997). However, it is important for the dental profession to acknowledge that older people bring with them a life time of dental experiences, some of which may have been very traumatic, and that these experiences can still impact on how older people access dental services and receive dental care today.

5.6.2 Attitudes Towards the Presence of Teeth and Dentures

The social importance of dental appearance has been reported in the literature for several decades. For example in 1966 Linn reported on the value of dental appearance and its effect on social situations. He found that visibly missing teeth had a great effect on how self-conscious individuals can feel (Linn, 1966).

Society places demands on people to be concerned with physical appearance and attractiveness and although previous studies have shown older people to be less concerned with their appearance than younger age groups, this relationship may change as the population ages (Hayes and Ross, 1987). In fact, a more recent study found that good dental appearance and attractiveness are not only desired by the young, but also by older people, and in the future older people may have different opinions about aesthetics and attractiveness compared to previous generations (Hassel *et al.*, 2006). McKenzie-Green *et al.* (2001) found that the mouth and teeth are an intrinsic part of who people are and that they have a profound effect on people's self-esteem (McKenzie-Green *et al.*, 2009).

The data show that the presence of teeth was seen as important to participants across the age ranges and to both the edentate and dentate, because it influenced how they felt about their appearance to others, their self-confidence and their ability to eat and chew and enjoy a meal. These findings are consistent with others in the literature (Strauss and Hunt, 1993; Sheiham and Steele, 2001). The participants' attitudes to the presence of teeth appeared to have changed over their life time, and reflected their life situation at the time. During their early adulthood and when raising a family the presence of teeth was not as essential as it was at the time of the interviews in most cases. Usually this was because other factors were more important, such as the need to go out to work, despite the appearance of their teeth or lack of teeth. Dental appearance was important to this group of participants today and this is likely to continue for older people in the future.

5.6.2.1 Attitude towards Tooth Loss

Some participants reported that having dentures fitted during their early adulthood benefitted them in terms of their dental appearance and they appreciated the improvement this provided. At this time treatment options available to dentists were limited by today's standards, however, most were skilled in removing teeth and in making dentures, therefore this option was often provided for their patients (Steele *et al.*, 1996b). People using dentures to improve appearance and possibly increase their self-confidence in this study is

different from findings of previous studies, for example, Fiske *et al* (1998) looked at the emotional effects of tooth loss in older people, where the mean age of participants was 69.9 years. She found that tooth loss and wearing complete dentures negatively affected people's self-confidence, self-image and how they felt about their appearance (Fiske *et al.*, 1998). Also in a qualitative study of older people aged 65 and over, McKenzie-Green reported that participants mourned the loss of their teeth (McKenzie-Green *et al.*, 2009). Previous literature describes how older people mourn the loss of their natural teeth when they are removed and replaced with dentures. However, some participants in this study were happy and relieved to have their own teeth removed, this was usually because they felt their own natural teeth were not aesthetically pleasing and the replacement teeth actually improved their appearance; therefore they did not mourn their loss.

In today's society the retention of natural teeth is promoted whereas previously having extractions and dentures was more acceptable and these findings are similar to those reported in the literature (Steele *et al.*, 2000; McKenzie-Green *et al.*, 2009). It could be that older people today feel pressure from society and modern day culture to look a certain way, a way which is perceived to be acceptable. Older people may have adopted the attitudes of the young concerning their appearance and this is often reflected in the media.

The attitudes older people have towards their teeth, whether artificial or natural, and the beliefs they hold about their own oral health will affect older people's decisions about how they use dental services. Some may feel that they do not need to make regular use of dental services. This is discussed in the following section.

5.6.3 Lack of Perceived Need

Lack of perceived need was apparent among the participants across all age ranges and occurred in both the dentate and edentate. Among the oldest age groups edentulousness was still common and their needs and demands for care were low. Those just entering old age were different, many were dentate and their oral health beliefs and attitudes towards dental care may be different to

previous generations. However, lack of perceived need was still expressed by some of this group of participants.

It has been widely reported in the literature over the last 30 years that denture wearers visit the dentist less frequently as they perceive less need to do so (Kiyak, 1989; Tickle and Worthington, 1997). There is an assumption that dentures require little or no attention (MacEntee, 1985) and the edentulous participants in this study had similar attitudes to those reported in previous work. NICE guidelines for dental visiting state that for adults the recommended interval between examinations should be between 3 and 24 months, depending on the history of the patient (Dental Recall: recall interval between routine dental examinations, 2004). However, many of the edentulous irregular attenders in this sample had not visited the dentist for much longer periods than 2 years. The majority of edentulous infrequent and non-attenders did not have any complaints and their quality of life did not appear to have been adversely affected by not visiting the dentist. This raises a legitimate question about whether resources should be spent in trying to get this group of edentulous patients to see a dentist regularly, even though they may not be demanding it and are not complaining of any oral health related problems affecting their quality of life, when resources could be allocated more usefully elsewhere.

A very important predictor of dental attendance is the dental state, Tickle and Worthington (1997) found that dentate individuals were six times more likely to perceive a need for treatment and therefore visit the dentist than edentulous individuals (Tickle and Worthington, 1997). The number of retained natural teeth is now regarded as a major determinant of dental attendance among older people (Holm-Pedersen *et al.*, 2005). However, in this study some dentate participants did express a lack of perceived need and not all the dentate participants in this study were regular dental attenders. Lack of need was a commonly reported reason for non-attendance in a study of dentate older people by Steele *et al* (Steele *et al.*, 1996a) and similar findings were reported from the Adult Dental Health Survey 1998 (Nuttall *et al.*, 2001). Gilbert *et al* (1994) found that there are certain oral signs and symptoms which are strongly associated with perceived need for dental care, such as pain that interfered with daily activities (Gilbert *et al.*, 1994). However, for irregular dental attenders,

seeking dental care only in response to a problem may be challenging, as they find it difficult to enter into the dental system when they need to.

In the future more older people are likely to be retaining their natural dentition. These dentitions may well be heavily restored after years of dental treatment and their dentitions will need maintaining. This group of older people may have increased levels of need for oral health care and they may show increased demand for it compared to the oldest old. It is important that these older people receive the correct oral health messages and that they are encouraged and advised to visit their dentist on a regular basis for monitoring and preventive treatment. This is preferable to attending only in an emergency, in response to pain or a dental problem, as often treatment at this stage is more complicated and tooth loss is an increased risk. This group of older people have been affected by their history, which has influenced their perceived need for treatment and their use of dental care. However, in terms of planning for the future, we know we will have more dentate older people, but their needs and demand for treatment may change and we should plan appropriate management for this group.

5.7 Summary

Phase 1 was used to investigate the oral health beliefs and priorities of older people in a rural setting and was used to identify barriers which may exist. Several barriers were identified each of which related to the 5 components of access described by Penchansky and Thomas. For example, participants highlighted the affordability of dental care. Participants talked about problems with accessibility such as relying on public transport. Accommodation of the dental system itself was also discussed and a lack of information regarding the dental system. The acceptability of the service was very important to participants, particularly the characteristics of individual dentists and the relationship participants had with their dentist.

However, these barriers did not always prevent the participants from accessing all health care services. Most participants would visit their GP on a regular basis and use other services regularly, such as social groups. Participants

talked about fitting bus times around GP appointment times and asking family and friends for a lift to take them to social events. However, often they had not made the same effort to visit the dentist. When thinking about accessing oral health care services other factors were involved. Often these were the emotional factors which include people's anxiety about visiting the dentist and their beliefs about their own oral health and the value they place on it and on dental care.

The historical context often affected whether participants chose to seek dental care and they were greatly influenced by their personal attitudes and beliefs. These themes, however, do not fit exactly into any of the components of access as described by Penchansky and Thomas. Their model of access does not acknowledge the historical, social and cultural contexts which influence people's decision in seeking dental care. The older age groups, of 75 and over, had experienced traumatic dental treatment during their childhood and this was still affecting the way they felt about dentistry now. The emotional factors and the effect of the life-course are barriers that are much more difficult to overcome as they involve large personal change, not simply altering the practicalities of visiting the dentist. The effect of the life-course was very important and given the historical and rural context, this group of older people have a unique set of needs and demands, therefore, providing dental services for this group is challenging for commissioners. Models of access may to recognise that access can be affected by people's beliefs and values associated with health care and these factors along with the historical context, can act as barriers and greatly influence uptake of dental care.

The younger old in this study tended to be dentate; the dental status of an individual has become one of the most recognised factors in dental service utilisation, more so than age. However, not all the dentate participants were regular dental attenders and this could be sign of a lack of understanding of preventive dentistry among this group. It could also be related to people's beliefs and values regarding their oral health.

The original plan for the research was to implement some sort of new and additional oral health care service for older people following on from Phase 1. The supervisory team and I discussed putting additional services into place;

however, we concluded that even if more services were made available it may not result in a significant uptake in services. The older people in Phase 1 highlighted that personal barriers may still prevent them from using dental services and this had been demonstrated by their efforts to overcome barriers to make use of other services, but not dental services. The findings regarding older people's beliefs and attitudes towards dental care, the great importance of emotional factors, the effect of the life-course and the widely expressed lack of perceived need altered the original plan. The poor uptake of services among this group of older people in this rural area was not simply a result of lack of available services, other factors were involved. Therefore, we decided that the aim for Phase 2 would be to find ways of improving local oral health care for older people that would really benefit local older residents and at the same time would be acceptable to service providers. The following chapter goes on to describe how Phase 2 was approached and presents Phase 2 data.

Chapter 6. Phase 2: Local Dental Services and Providing Care for Older People: Results

6.1 Introduction

This chapter reports findings relating to local dental service provision from different perspectives. The views of older people as service users are investigated, this builds upon findings presented in the previous chapters about oral health priorities and barriers. The focus here is on older people's opinions of current dental services, how they use them and how they might be improved in order for local older people to benefit from them more.

Providers of local health care services also give their opinions, including representatives of decision-makers from the PCT, dentists, doctors and other health care professionals, such as district nurses all of whom may be involved in providing care for older people. Data from previous interviews with local dentists carried out during Phase 1 is also included here as this data helps build a picture of current oral health care service provision.

In Phase 2 the aim was to have 2 rounds of focus groups; with older people and with health professionals. The first round (Round 1) of focus groups was used to generate ideas and the second round (Round 2), with the same participants, was used to validate the findings. There were separate focus groups for older people and for health professionals because it was possible that the older people may have felt intimidated by the professionals and not participated fully in the discussion. Table 6.1 shows the key characteristics of the older people involved in the Phase 2 focus groups. Unfortunately, similar information about the health professionals cannot be included because there were so few of them practising in Teesdale that the information would make them identifiable. Due to difficulties in arranging a convenient time for all health professionals to meet for a group discussion, the first round of data collection for them was in the form of interviews as described in section 3.2.2.1

The aim for this phase was to gather information which would aid in developing models of dental service delivery which could be used locally to improve or build

upon existing services where necessary. It was anticipated that participants may have little prior knowledge about methods of dental service delivery, particularly the service users. Therefore, a focus group exercise was used to help with this discussion. Using all the information gathered during Phase 1 of this study several ideas for improving dental services for the over 65s in Teesdale were developed. For example, Phase 1 highlighted a lack of information regarding local services, the dental system and local travel and transport, and therefore, providing information leaflets was included as an idea. Phase 1 also showed that many older people, particularly the edentate did not regularly attend a dentist, and therefore, ideas to promote dental attendance, such as offering free mouth checks or an appointment for a mouth check, were also included. The ideas were given to participants at the beginning of the Round 1 focus groups and were a useful way of beginning the discussion. Opinions were given on these concepts and during the debate more ideas were generated. The set of preliminary ideas presented to participants in the first round of focus groups is shown in Box 6.1

Table 6.1 Table showing the key characteristics of participants aged 65+ involved in Phase 2

Name	Age	Place of residence: Semi-rural (SR)* or Rural (R)**	Mobility: Mobile (M); Reduced mobility (RM); or Uses Wheelchair (WC)
Elsie	68	SR	M
Maud	78	R	M
Doris	80	SR	M
Albert	65	SR	M
Muriel	72	SR	M
Stan	84	SR	RM
Muriel	72	SR	M
Anne	75	R	M
Frank	74	R	M
Norma	72	R	RM
Patricia	65	R	M

* Semi – Rural = resident of Barnard Castle

** Rural = Resident of a village or hamlet in Teesdale

Box 6.1. Initial Ideas for Improving Local Oral Health Care Services

1. Information leaflets
The leaflets were to contain oral health information for older people, information about the NHS dental system and the local services available. These leaflets were to be made available at the most relevant places for the over 65s such as in GP surgeries, Village Halls, libraries, luncheon clubs and if possible made available online as well.
2. Free mouth checks
For those aged 65 and over who had not seen a dentist in the last year This was to be an advertised voucher scheme with the mouth check being provided most likely through the Salaried Service.
3. Oral Health Component of Preventive Health Checks at GPs
For the over 75s organised via the GP as part of the Preventive Health Checks for the over 75s. Patients who attended for this health check would be asked if they had seen dentist in the last year and if not they would be offered an appointment with the Salaried Service or local general dental practitioner where extra units of dental activity may need to be made available.
4. Dental practices to issue reminders for routine check-ups.
5. A well-organised and well-advertised volunteer driver scheme.
6. A convenient denture repair scheme
Some people had expressed concern that to have their denture repaired meant travelling to nearest dentist for them and the denture then had to be sent away so they were without a denture for around 3 days.
The idea here was to have more convenient drop-off points for broken dentures, such as at local GP surgeries, pharmacies, the mobile library or with the district nurse. A postal service could also be considered.
7. Training for GPs
Additional training for examining mouths for doctors, nurses or any other health care workers involved in caring for the over 65s. This would be basic training for health care professionals to get to know when a referral is needed. The idea also included training in taking photographs of oral lesions which could then be emailed to a local dentist or dental hospital.
8. Increasing the use of the dental department at the local hospital
9. Improving the out-of-hours dental service
Providing an easier system for patients to use and providing feedback to the dentists whose patients use the service.

6.2 Phase 2 Round 1 Focus Groups and Interviews with Health Professionals

This section reports findings from interviews and small group discussions with local health care professionals. They include dentists from various backgrounds including the private sector, NHS general dental services and Salaried Dental Services. There are also representatives for GPs, district nurses and PCT staff, that is those responsible for decision making on local dental services.

6.2.1 The New Dental Contract

These interviews were conducted during a time of great change within NHS dentistry. The dental contract had changed radically in 2006, the new dental contract which had been introduced at that time had greatly affected the way in which dentists work. The new dental contract was viewed negatively:

'...well I can certainly say that I instantly didn't like the contract, even when it was proposed um, I didn't like the whole idea of units of dental activity and there basically being a target that dentists have to achieve.' (Private dentist)

'I think the new contracts have taken out quite a lot of the pleasure of dentistry. You're constantly watching your targets.' (NHS dentist)

The main complaint about the new contract was the introduction of UDAs (Units of Dental Activity), the way in which these were introduced and the resultant target-driven ways of working:

'I think we were really badly let down by the government on that because they promised all sorts of things in the build up for this contract and then they...they came out with this system right at the last minute which wasn't piloted or tested or anything and I knew instantly that it was just gonna be another treadmill, probably even worse than the one we had before and that it would be detrimental to patient care and I think that that's exactly how it's proving.' (Private dentist)

'This UDA hasn't exactly helped the dentists. They're being driven by, you know, targets. It's sad for them, really, because I know they have to run a business.' (Salaried Service dentist)

The current NHS dental system has a banding structure: Band 1 includes simple treatments such as examinations, radiographs and scaling and polishing. Provision of Band 1 dental care provides the dentist with 1 UDA. Band 2 treatments include providing restorations, however, whether one restoration is placed or several the dentist will always receive 3 UDAs. Band 3 treatments are more complex and often require laboratory work, for example, dentures and crown and bridge work. Band 3 courses of treatment provide 12 UDAs for the dentist. Sympathy was shown for those dentists having to work towards UDA targets:

'Why would a dentist want to see somebody that needed ten fillings as opposed to one who wanted one?' (Salaried Service dental nurse/manager)

Dentists in this study said:

'My concern perhaps is that um, I just wonder if they're getting the treatment that they should get, the treatment that they need' (Private dentist)

'...each day you're looking to see what you've done, erm, you're perhaps to a certain extent being guided by the target system, you would never really consider unless you're cornered into to do it, two bridges on one patient whereas beforehand you would have done that. You're not doing it now, and that's on one, hopefully just one crown, not more than one. Things like that which really...you have to sometimes stop and think is it ethical or, or, you know, are you being selfish or because you've got to reach your targets at the end of the day.' (NHS dentist)

Dentists also complained about the amount of paperwork which has been introduced. For example, dental practices are now governed by a new regulatory regime under the watch of the Care Quality Commission (CQC). The introduction of this has produced large amounts of paperwork for dentists, a representative from the PCT said:

'...the single-handed practitioners have struggled with the CQC registration. It's big, you know, there's a lot of work to do around that and there's other stuff coming in. And of course it's all web-based and it's, erm, quite demanding and some of these single-handed practices don't have admin support.' (PCT representative)

Dentists were in agreement with this, when talking about the introduction of CQC simply stating that it is:

'A huge amount of work.' (NHS dentist)

The new contract also saw the introduction of new patient charges which could possibly be seen as a barrier to patients when accessing dental care, in particular for older people, because the cost of having dentures has increased significantly:

'...especially if they're having dentures because that's gone up by a huge amount.' (NHS dentist)

'...particularly older people who are maybe on a fixed budget and things like that um, and it's...it's things like dentures um, that...that have become relatively expensive, I mean the cost of, I can't quite think what the cost of a set of full dentures was when the old contract finished but off the top of my head, I think it was about £110 possibly, something of that sort. Um, and that suddenly shot up to about £180 when it came in, £190 odd now.' (Private dentist)

The previous chapter reported on the concerns the over 65s had about the cost of dental treatment, and particularly the belief that a dental examination did not represent good value for money. The dentists agreed with this, for example one said:

'...particularly if they're only coming in and spending two minutes in the chair and getting a quick check-up and then being charged £16 something for it at the reception desk, they're gonna think well that wasn't very good value for money.' (Private dentist)

NHS dental services in England have recently been subject to an independent review which also found that dentists were unhappy with the current system. They felt it often prevented them from providing the best treatments for their patients and that in many areas the contract was unclear. The general bad feeling about the current system is likely to result in possible further changes in the future. However, dentists felt they had only just come to terms with the latest set of changes, and, although they would like aspects of it to be improved, they did not want a whole new contract to deal with:

'It should have some changes in it, definitely but to have another contract thrown at us and to have to work out what, how to make it work, that's quite time-consuming and at the minute, I suppose a lot of people have now worked out how to use this new contract, so if they completely changed it again it's gonna waste an awful lot of time while we all work out how to work this new contract. Erm, so if they made little changes that would be quite nice but I don't think it'll be little changes will it, it'll be something completely different again to work with.' (NHS dentist)

'...but I can only think that the new contract can only be better than the existing one... a lot of it's quality-based and that can only be good... It's gotta be good, because at the moment, you know, the practices have these UDA targets and then, you know, they're driven to achieve those targets.' (PCT representative)

Dentists also talked about the relationships they have with their patients and how constraints of the current system could affect their relationships with patients. The over 65s in the study placed great importance on the relationship they had with their dentist, as discussed in the previous chapter. Working towards a target was seen as detrimental to the dentist-patient relationship because it decreased the amount of time available to spend with patients. Dentists who did not have a target to meet, those working privately or in the Salaried Services, felt they could provide a much more personalised service:

'...the public don't understand that we are salaried and it doesn't matter how much work we do on the van, you know, our wages aren't altered by that. And I think that's the difference in the treatment they get because the dentists that do come on the van with me are very personalised and they do spend an awful lot of time talking to the patients. And I think that does help in the end.' (Salaried Service dental nurse/manager)

'The dentists that work on here are not driven by that [UDA target]. Because whatever we do, we get paid, you know, erm and I mean our UDAs are quite low, but not when you look at the work we do, because, as I say, we very rarely get people that just come and have one filling, but they're three UDAs.' (Salaried Service dentist)

'...whereas before we were trying to get patients through every five or err, every five or ten minutes, now a basic appointment's 20 minutes and, you know, if I have something to do, I can allow myself more time and the...I just don't feel under pressure anymore.' (Private dentist)

From these comments it would appear that dentists who are not bound by targets are able to spend more time with their patients compared to those NHS dentists with a target to meet, who may feel pressure to work more quickly to ensure they reach it.

6.2.2 Rurality and Access

Dentists talked about working within a rural community and the effect this had on their practice. Dentists believed that access to dental care for older people was not a problem in their area. Dentists tended to see access purely in terms of whether they thought it would be possible for people to make an appointment with a dentist when they needed one. They did not consider the impact the rural setting might have on their patients for example in terms of available transport:

'I don't really think there's a great deal of difficulty with patients getting access to dental care um, we have basically five dentists working down the road on the NHS ... Um, occasionally, we hear that they're not taking on new patients for a while and then they do or they'll start a waiting list and err, so I don't think there's any great deal of difficulty err, for patients getting...getting access to treatment.' (Private dentist)

They did acknowledge that working in a rural location did have effects on their working lives and the relationships they had with patients and working in their rural location was viewed positively:

'...you get to know your patients on a much more personal level, you get to know the family, you get to know the name of the horse and all that sort of stuff, you know, and um, yes you do, you become more...more involved. I mean when...when we've finished here, I'll probably go down into town and have a couple of calls to make and I'll probably speak to nearly every other person that we pass, you know, and say hello and err, and you just wouldn't do that in Newcastle or Darlington I wouldn't imagine.' (Private dentist)

All dentists had patients attending from a large geographical area:

'...well now we're quite a large practice, erm, we cover a huge area. Erm, we go quite a way into Cumbria, we get Cumbrian patients, we get Darlington patients, we get Richmond patients and obviously County Durham patients. And actually we still get patients who've

moved out of the area who still come back to us because it is difficult to find an NHS dentist.' (NHS dentist)

The mobile dental service provides NHS treatment only and is very busy. The Salaried Service dentist showed a difference in opinion regarding access compared to the NHS and private dentists:

'Well, I know other local dental professionals believe there is no access problem. But we don't agree with that.' (Salaried Service dentist)

Patients travel from a wide area and from Barnard Castle itself to receive treatment on the mobile unit. There is no specific boundary defining which patients would be entitled to use the mobile service, however, the providers of the service do try to limit its use to people from County Durham:

'I wouldn't say we've ever had anybody beyond County Durham.' (Salaried Service dentist)

'I mean if we get people from out of our area, I do try to put them off. Whether that's correct or not, but I think we've got enough people to look after.' (Salaried Service dental nurse/manager)

Teesdale does have a high percentage of over 65s and many people choose it as a location to retire to. Therefore, there are new patients aged 65 and over moving into the area putting additional pressures onto already stretched services:

'...a lot of them are newcomers coming into the area, you know, they're retiring from down South and coming up.' (Salaried Service dental nurse/manager)

In fact the staff working on the mobile unit were so busy that they felt increasing the number of sessions in Teesdale would be beneficial:

'... we have been very, very busy ... we're still getting busier, especially within Middleton-in-Teesdale, which I would like to run out to two days a week, simply because we've lost a dentist in Barnard Castle, which is putting on a bit more pressure on to us and also there's a lot of older people retiring to Middleton-in-Teesdale that

we're aware of and that surrounding area' (Salaried Service dental nurse/manager)

The fixed NHS dental practice in Barnard Castle is a large practice with a number of dentists working there:

'...we are now the only NHS practice, it hasn't really changed. I mean we are busy, but as we've got busier we've been able to expand the practice and put another surgery in and take on another dentist.' (NHS dentist)

Rurality has affected the staffing of this NHS practice, which seemed to have experienced a high turnover of dentists, with a number of dentists joining the practice but never staying that long:

'... there was a period where there was quite a lot of turnaround of dentists, and there's nothing you can do about it.' (NHS dentist)

It is possible that this is a reflection of the difficulty in recruiting staff to work in rural settings:

'... it's quite difficult to recruit dentists here because of where we are.' (NHS dentist)

However, the GP surgery and the mobile dental unit had not experienced problems with the turnover of staff, with the majority of staff having been there for long periods of time. So this could be due to the fact that the main NHS dental practice is a training practice, where there is only provision for a trainee dentist to stay to complete one year of Vocational Training (VT):

'... the trainees can't stay on, unless somebody leaves at the right point in time, and that's not gonna happen this time either, so there's always, erm, discontinuity with the VT.' (NHS dentist)

'... the way the contract is set up now, in the past trainees often stayed on as associates and would be there for a couple of years, but, you know, the money isn't there in the contract anymore now for that to happen. So trainees usually move on after their year, and that's had an impact on all the training practices really, and I'm sure on the patients who are, you know, who have got used to that

particular person for that year and where they would have stayed on, they don't do that anymore.' (PCT representative)

The dentists acknowledged that in this rural location access may be difficult, especially for those living outside Barnard Castle and that patients have very little choice in available services:

'...it's more difficult for them to access because they've got to come into town, but there's not really anything we could do about that.' (NHS dentist)

'... they don't have any choice as far as I can see.' (Salaried Service dentist)

The GPs also talked about practicing within a rural setting. They had many older patients spread over a large rural area:

'25% of our patients are over 65... it is heavily weighted into over 70s, 80s, etc.' (GP1)

Often the doctors had worked in the same area for many years and had developed good relationships with patients and with the communities they work in. One doctor had worked in the practice for over 20 years; another doctor who had worked in the same practice for about 8 years commented on the differences between rural and urban practice:

'I think the surgery as a whole is different. I think people are much more likely to come to us as a first port of call, whatever they're dealing with. Erm so we probably deal with more acute things that might go to A&E or a walk-in centre than they do in in-town practices. Erm we also, I think because we try to be very patient centred, tend to have quite high expectations from our patients as well which I think are probably higher compared to some of the town centre practices I've worked in as well.' (GP2)

The GPs acknowledged that the rural setting could impact on dental care service provision, especially domiciliary care:

'...trying to get your dentists to travel all the way out here it takes them a certain amount of time if you're trying to get extra support and for the patients to visit the dentist.' (GP1)

This was correct, dentists can now only provide domiciliary care if it is part of their contract and they have been commissioned to do so. One dentist commented:

'We don't really do domiciliaries anymore because that has become not cost effective within the new system.' (NHS dentist)

At the time of interview the district nurses (DNs) or community staff nurses (CSNs) were linked to local primary care medical practices. However, this system was about to change and in the future they would be based at the local community hospital. The DNs cover a large rural area visiting patients suffering serious illnesses, those recovering from operations and the housebound, including older people who make up the majority of their case load.

The DNs perceived the main effects of rurality on patients to be increased travelling to appointments and poor access to services, for example, the district nurse not being able to visit them in the winter. However, there was the belief that patients in the area were used to a certain way of life which results from their rural location:

'They live in the middle of nowhere, they're, they're used to bad winters and they're used to people not being able to get through. So they are pretty good.' (District nurse)

Despite acknowledging that accessing dental services in this rural setting may be difficult, one health care professional did comment that:

'Some of them will do their shopping in Darlington. When it comes to dental treatment, they want it on their doorstep, like their doctors, you know, they want it to be nearby.' (Salaried Service dentist)

The health professionals believed that enough health care services were available to support the area. However, the services were concentrated in certain locations and travelling and lack of choice were highlighted as potential barriers to accessing them.

6.2.3 Treating Older Patients

Dentists did not perceive treating older people as different to treating anyone else. One dentist commented:

'It's just...just part of the job, yeah part of general practice, you know, from err one minute I might be...have a five year old in the chair and next patient might be 85 but it's, you know, it's just part of general practice to me.' (Private dentist)

Older patients may have more complex medical histories and be taking medication; however, this did not cause too many problems, especially where concerns can be checked with a patient's doctor:

'I like to take a full medical history ... but there's getting a lot of new drugs now, their blood pressure, but I do think they're well monitored from what I can see, the ones that take medication, they are very well monitored.' (Salaried Service dentist)

'...because there is only one Doctor's surgery we have got a very good rapport with them, and I can ring up if we're not sure about something.' (Salaried Service dental nurse/manager)

The dentists commented on the fact that they now see an increased number of older people with retained natural teeth and highlighted some of the problems that can occur:

'I mean a lot of the patients in this area do keep their teeth and then you've got the problem of root caries which is difficult to treat because a lot of the patients here, at this practice, are quite dentally aware of what's in their mouth and they don't want to have extractions and they don't want to have dentures.' (NHS dentist)

'...a lot of them [the over 65s] have got their own teeth obviously, whereas others have had umpteenth sets of false teeth but they do want to renew them and I am delighted that they are not putting up with them.' (Salaried Service dentist)

The GPs and DNs reported no problems with treating older patients, in fact, the over 65s accounted for the majority of their regular patients.

6.2.4 The Dental Skill Mix

This refers to the use of Dental Care Professionals (DCPs), such as dental hygienists and dental therapists, who can make up part of the dental workforce.

Barriers exist to the use of DCPs within the general dental services and data from this survey suggests that dentists feel that the Salaried Services would be the preferred setting for DCPs:

'I think they mainly fit in to the community service really, yeah, that's where they...that's where they have the most value I think.' (Private dentist)

A Salaried Service dentist pointed out that DCPs could provide a useful service from the mobile dental unit:

'Therapists could use the van, oh definitely. We need therapy in the community service, need more therapy for oral health, for fluoride applications and things.' (Salaried Service dentist)

However, one dentist had experienced difficulties with recruiting this type of dental professional:

'I think it's quite a good idea. When the community dentists were working here they actually had a therapist in the building and that was quite good, she had quite a good service. Erm, we found it very difficult to recruit things like that here, and we used to have a hygienist and she left because she wanted to go to Newcastle and I advertised for quite a number of weeks erm and advertised with the university, Newcastle and Leeds, and didn't get any response whatsoever.' (NHS dentist)

6.2.5 Urgent Care Dental Service Provision

The dentists explained how NHS dental patients with urgent dental problems are dealt with in their practices during working hours:

'If a patient needs an acute appointment they will ring us up and they will be offered an appointment on that day. If it's not at a time that they can come, then they will be offered a different appointment on another day, but we can't, obviously, offer them appointments that aren't available. So they would definitely be given an appointment within 24 hours. If the practice is shut then we are, erm, involved with Dencall from County Durham.' (NHS dentist)

The mobile unit has difficulties in providing an urgent care system for its patients during working hours because it is in different locations every day, therefore patients would need to travel to wherever it is:

'... because that has been the one big problem on here, sorting out our emergency patients. Erm I mean on the, you know, the first four days - Monday, Tuesday, Wednesday, Thursday - as long as I've got a dentist, then we, we do our best, but it's when it comes in on a Friday...' (Salaried Service dental nurse/manager)

There is an out-of-hours dental emergency service operating in the region, however, the locations it is based at are quite some distance from Teesdale itself:

'Out-of-hours ... operates out of the two bases, and it's also quite strictly managed. Erm, night times through the week I think there would be only four criteria that are seen, which would be, I think it's pain in children but not pain in adults, and it's swelling potentially causing breathing problems, bleeding and trauma. So that's all that's seen through the week.' (PCT representative)

The dentists were not completely satisfied with the out-of-hours urgent care provision for their patients, for example, some thought the system could be difficult for patients to use. Comments about the out-of-hours system included:

'...we still have an out-of-hours service, but we are not too impressed by it.' (Salaried Service dentist)

'...because we're on the border, it becomes very complicated because now the out-of-hours systems are post coded. So if you have, erm, a North Yorkshire postcode you have to use the North Yorkshire out-of-hours system and if you have a Cumbrian postcode you have to use the Cumbrian out-of-hours system. Now we have put on our answer phone message those details of those telephone numbers, which then obviously makes the telephone answering service quite long, because someone's got to listen and understand what's being said, because there's three numbers on there. So it depends how, how intelligent you are when you call.' (NHS dentist)

'...it's their [patients'] postcode and where they are, and that's nothing to do with us, it's to do with whoever has caused this postcode lottery.' (NHS dentist)

Dental practitioners whose patients had used the out-of-hours service were usually unaware that they had done so:

'I don't know how many of mine are seen out of hours because we don't actually get feedback. We could do with feedback from any that are seen out of hours to the dentist.' (Salaried Service dentist)

Despite patients having urgent dental care services available to them, either through local dental practices during the day or the out-of-hours service during evenings and weekends, local doctors were still very used to patients presenting with oral or dental problems:

'...a lot of patients develop problems...talk to NHS Direct or whatever, erm and end up on our doorstep with tooth pain, abscesses, infections, so you get quite good at doing a little bit of simple dentistry.' (GP1)

Patients presenting to the GP with dental pain are usually treated in the same way:

'I will give them antibiotics and painkillers here because a dentist doesn't consider an abscess an emergency.' (GP1)

'I tend to do the same thing. I have to say my understanding is actually most of the time if a dentist saw you first off he'd give you pain relief and antibiotics anyway and then do more definitive treatment later.' (GP2)

Following this treatment patients are advised to see their own dentist or to register with a dentist if they are not already registered:

'You treat them and then send them to – tell them to make contact again with their dentist and make the dental appointment because I'm not a dentist.' (GP1)

The doctors felt that there were a number of reasons why patients with dental problems present to them instead of seeking dental care. Firstly, a lack of available dental services was seen as a major factor:

'I was going to say there's very little NHS dentistry locally.' (GP1)

'...the patients I have dealt with, they say it's a nightmare. The reason is it's not at all easy to get an appointment ... registration is a nightmare. That's what the patients – in my experience patients say

getting registration is very difficult, getting an appointment is a nightmare, if you've got an emergency no way.' (GP3)

'I had somebody the other day telling me that they couldn't get registered at Barny and they're now with a dentist in Bishop Auckland.' (GP2)

Secondly, the high number of patients attending the surgery with dental problems could be due to the way dentists classify 'emergency', resulting in patients not being offered an urgent dental appointment and therefore the patients contact their doctor instead:

'But if they ring their dentist down at Barnard Castle they'll be told it's not an emergency and they won't see them today, erm they'll see you a week on Tuesday or whatever it is ... the attitude with regard to pain and I mean if you've got a dental abscess from the patient's point of view that is urgent and needs to be seen and if they ring up and they're being told that it can wait a few days or it's not urgent and it doesn't need to be seen today erm then we couldn't get away with telling our patients if they've got acute pains and something throbbing and they want to be seen, they would expect to be seen that day.' (GP1)

'I mean some of the dentists, including my own, have upset me in the past with other – about other patients who they've refused to see because they've said it's not a – not urgent erm even though they are open and they could be seen that afternoon or whatever, if someone comes in in the morning and has rung their dentist and they say no, they're not prepared to see them because they're booked and yes, the fact they're in pain, so they come to see us in our open surgeries.' (GP1)

Thirdly, the cost of dental treatment was perceived as a barrier to accessing dental services, patients using GP services could be seen easily and without any financial costs:

'There's also the charge element that they – they don't always want to pay to see the dentist and the cost does put them off which is understandable.' (GP2)

Finally, there is the convenience of being able to see a doctor easily. Patients may not have to travel as far and open clinics are available, making GP services far more accessible:

'...because we have an open surgery every morning. So anyone can turn up with any problem.' (GP1)

The GPs felt that patients may often present to them because they were possibly more approachable than dentists and because their service is more easily accessible.

The doctors also looked at the problem from a personal point of view to help explain how patients might feel about seeing the dentist for urgent care:

'I have to say if I've got a dental abscess and it's – I mean normally they've left it over the weekend or something, I don't think it's unreasonable to expect to be seen and get some sort of treatment that day. And so I could see that...you don't need many of those experiences to feel well, you know, the dentist, I mean it may be the dentist's receptionist or the system but it's not – doesn't give the impression of being sort of someone who's caring, who's interested in how the patients are feeling and things like that ... But there's actually no reason why they should be left in pain overnight. Erm well over the weekend or whatever.' (GP1)

One GP tried to explain why patients may be upset if they are not offered an appointment with a dentist for urgent dental care when they feel they need one, particularly when they are complaining that they are in pain. Pain on its own in adults, with no other signs or symptoms, does not fit the criteria used by the out-of-hours scheme for issuing appointments:

'...it's probably patients' understanding of why that decision's being made because they're in pain and that's – that's what they care about.' (GP2)

On the whole GPs did not have many complaints about seeing patients with dental/oral problems, however, comments were made such as:

'I'm not annoyed at seeing the patient for coming in, that's fair enough, it's annoying that there isn't a supply of NHS dentists erm who can do the work. Erm and that's not necessarily the – the erm I guess the dentist's fault, it's the system isn't it?' (GP1)

The dentists showed awareness about the fact that patients may be using GP services for emergency dental treatment and acknowledged that GPs need a referral pathway for the patients they are seeing with dental complaints:

'It depends if they go to a GP or if it's a dentist. A lot of them are going to their GPs out of hours ... I would like a referral pathway. I think the GP should be aware that dental health is so important for all the other systems in the body. I just can't believe that they can just leave the patient to go and find...they should be able to refer to us.' (Salaried Service dentist)

The housebound are a group of patients for whom providing dental care can be difficult, especially urgent dental care. The residential homes for older people in Teesdale are located in Barnard Castle, where access to dental services may be easier than for those housebound patients living in their own homes in more remote areas. Housebound patients may rely more heavily on family, friends and health and social care providers. The GPs stated that urgent dental care for this group of patients was rarely needed:

'I think I've dealt with one... Yeah, and I've spoken to – because they really struggle to get out and about, I actually spoke to dental services over the phone... we managed things conservatively with guidance from the dental services.' (GP2)

It is possible that district nurses may be the only point of contact for some housebound people and they may encounter housebound patients with dental problems. Housebound patients were not routinely asked by district nurses whether they had any problems with their mouths and patients very rarely reported any complaints to the nurses. The reason for this was felt to be patients' perceptions of healthcare professionals, that patients would assume that professional boundaries would exist:

'I think when people see you as a nurse they don't tell you, if they are having problems with their teeth they probably wouldn't tell me about it ... I honestly don't think many people say to me about erm 'Oh my teeth hurt' or because I, I think it's two separate things. Dentists and doctors are two separate things and they maybe would, unless they had a mouth ulcer or there was something sore and they thought they could get a medicine or a mouthwash or something to cure it, I don't think they would actually say 'Oh I've got a loose tooth, how am I gonna get it out.' (District nurse)

The professionals themselves may have boundaries and have their own beliefs about whether oral health fits within their own remit. An example of this was given by a nurse who said:

'If I'm, if I'm perfectly honest, I would think a mouth is more of a dentist thing, than a nurse or a doctor.' (District nurse)

On the rare occasion that a housebound patient did have a dental complaint the nurse would ask a family member to contact their dentist on behalf of the patient. If the patient did not have a regular dentist then the nurse would try to ring one to make an appointment, but if that particular dentist does not provide a domiciliary service, then it is the responsibility of the family to organise getting the patient to the dental surgery:

'... you would just advise them where, where to go and get their families to ring and see whether they could physically get them there.' (District nurse)

There is no specific referral pathway for housebound patients with dental problems, if it was something that the nurse felt unable to deal with or the patient did not have their own dentist then the GP would be informed:

'... What I would do, would probably have a word with the GP and if they needed to go to, you know, if it was surgery that they needed more than anything, they would, I would, we would have to go through a GP referral.' (District nurse)

The evidence showed the urgent care dental service was not operating successfully in this rural setting, and this could be an area for improvement. It is likely that the housebound would have particular difficulties in accessing urgent dental care.

6.2.6 The Changing NHS

The scale of the change is huge and this concern was expressed by the GPs:

'It's such an astronomical shift and how things are going to be run that I think nobody knows and I think we have the best of intentions, you just have to hope that we're not going to become the fall guy for the fact that they have to restrict the budgets and oh look it's the GPs aren't letting you have anything. I mean it has – it has the potential to be a good thing but I think it's also got the potential to absolutely destroy the NHS if we're not careful with it.' (GP2)

Many also felt that the changes could be detrimental for smaller rural communities:

'...as a practice it's going to be a bad thing because we're small and in order to be able to fight our corner we have to go to more meetings which actually takes us away from the patients' (GP1)

'I think it will have a huge impact ... Some of the localities have people that are new to the role and some haven't even done any contracting for dental contracts before at all. So that knowledge of practices, the locality knowledge of, you know, if you're talking about the Dales it's a very different area to Durham City. That knowledge has gone and so I think it's going to have a huge impact.' (PCT representative)

The doctors felt that commissioning by groups of GPs could be viewed badly by patients in terms of how GPs salaries are determined:

'I think from the NHS point of view as a whole we can all envisage that the practice will be given a lump budget which will include paying all the staff and your own income and so there will be potentially every commissioning or every decision you make for the patient is a conflict between what finances go into your pocket and what goes to the patient, erm into the patient's care. So if you're not referring so many and you make savings then if that's your income but that's seems to be the way they want to put it, all into one budget, which will include doctor's pay in there as well which then means that you will always, or at least if it's put across like that, that the patients will always question what you're doing because if you're doing it to save money to put money into your pocket, which obviously would be a big problem.' (GP1)

Other health care professionals were also sceptical about the possible changes ahead and many felt that they simply did not know enough about it:

'I don't really understand how GPs, when there's supposed to be sitting and seeing patients, are now gonna be managers of money. I just don't see how it, and everybody that you speak to, patients, relatives, say well if there's not enough money and I need an x-ray at the end of March, will I have to wait for the next lot of money to come, you know. And how, is it up to the', I don't, I really don't understand how it's gonna work. I don't.' (District nurse)

'I don't know, we always complain that managers manage and they don't know the job themselves. And yet when you get a clinician in charge of money you say well they should be doing what they're

trained to do which is see patients and, I don't really understand it to be honest.' (District nurse)

'I don't really know very much about it at all to be fair. Erm, it will affect us, definitely. Erm, I think there'll be less money in the pot for us, erm, but how it'll affect us I don't know.' (NHS dentist)

There was also concern expressed over the historical relationship between doctors and dentists, which is perceived to be poor and that this could reflect upon how dental services are commissioned:

'...whilst they [GP consortia] won't be in charge of either the medical or the dental contracts, they will be the future for commissioning in those areas, so you would hope that their local knowledge will influence that. But, you know, historically there's not been a brilliant relationship between doctors and dentists. Erm, so you, kind of, feel that, you know, dentistry may be quite well down the list of priorities.' (PCT representative)

Staff working at the local Primary Care Trust were more aware of the changes ahead. There was concern that local knowledge would be lost and that commissioning would be on a regional level, which could impact greatly on commissioning in rural areas made up of many small communities:

'...people like myself have been here quite a long time, so, you know, there's a lot of corporate knowledge there that's, you know, we've watched practices change. We know the practices; we know the practices who train; we know the practices who are quite forward thinking; erm, and we know the practices that want to, sort of, erm, expand and, and, and, sort of, er, improve. Erm, a lot of that knowledge is gonna disappear. So, you know, you wonder how people are going to, what people are going to use when they're deciding what their commissioning intentions are.' (PCT representative)

6.2.7 Patients Presenting to GPs with Soft Tissue Mouth Lesions

Other aspects of dentistry which caused some concern to doctors and nurses were soft tissue lesions of the mouth, GPs felt that they had little training in this area and were unsure of when and what to refer. One doctor said:

'...it would be useful to, I don't know, use your camera and have somebody you know that you could send photos through to... And have somebody look at stuff so they were not wasting a referral

which is obviously important in the current day and age. But also wasting patients time, if actually we're looking at it and it's their teeth that are catching on it and we're not picking up on that fact and we're sending somebody all the way up to – to see the maxfac bloke when actually they'll look and go, yeah, it's fine, their teeth are catching.' (GP2)

The doctors would be happy to receive further training in this field, they were also happy with the support they received from colleagues in the nearest maxillofacial and oral surgery department:

'...they've got a very good supportive service there. They're very helpful to – I mean they're understanding where we are and the problems we face out here.' (GP1)

Community staff nurses also commented on the training they receive for problems associated with the mouth:

'I wouldn't know what I was looking for now. The only thing that I do know that I've ever been trained for is if, if anybody's got a mouth ulcer and it lasts more than two weeks you're supposed to get a, a referral aren't you?' (District nurse)

Occasionally a Community staff nurse might notice that an older patient is not wearing their denture, but that the patient had adapted to their situation:

'... a lot of them [older people] can't be bothered, can't be bothered to go out, 'Oh no I've just, I just eat sloppy food now.' And they just sort of manage. But we are in that generation, and I suppose in years to come it will change, where they did mix and make do because they lived through the war and they just, if things don't fit they don't want to bother people.' (District nurse)

The GPs and district nurses were open to receiving further training in this field.

6.2.8 Summary for Health Care Professionals

Local health care professionals enjoyed working in Teesdale they felt they had good relationships with the community they serve. The over 65s accounted for a significant proportion of their patient base. They did not perceive any problems in treating older people.

Dentists from an NHS or private dentistry background did not perceive a problem with access; they felt there were enough dentists in the area enabling patients to obtain an appointment should they need one. However, the Salaried Service dentist believed there was a problem with access and the mobile service was extremely busy.

Dentists had reservations about the NHS dental system itself and the constraints of working within it. Dentists and GPs felt the local urgent dental care system was inadequate. The medical practitioners were often faced with treating patients presenting with dental complaints; this may be expected in an area where very few oral health services exist. However, the doctors have no referral pathway for these patients, they were able to treat acute symptoms but it was then the patient's responsibility to seek dental care.

The health care systems in which the professionals worked affected their practice, they have to work in line with current policy and this can create additional pressures. Although doctors and dentists may all work within the NHS, the actual systems in which they work differ greatly. There is a need for health care providers to appreciate the differences that exist between the various sectors within the NHS health care system.

6.3 Phase 2 Round 1 Focus Groups with Older People

After hearing the views of local health care service providers, and the issues which are important to them in terms of local health care services, we now go on to hear the views of local older people as service users. The focus groups held with the over 65s covered topics such as local services and how acceptable they are to residents. They were also used to begin to develop methods of improving local oral health care services. Some of the barriers to accessing dental care which emerged from the first round of interviews also emerged from the focus groups. As the data analysis was carried out in a thematic way, all the data associated with barriers was included in Chapter 4, so is not discussed again here. Additional themes which emerged concerning service provision are presented in the following sections.

6.3.1 Standards of Current Dental Care Provision

Feelings about existing services tended to vary depending on where the participants lived. It may be reasonable to expect to find that those living in Barnard Castle, where local amenities are easily accessible, would be most satisfied with current dental services. However, this was not the case; participants who lived in or very near to Barnard Castle were very dissatisfied with the existing dental service provision. Their main concern with current dental services related mainly to problems with the quality of existing levels of care they were receiving.

'I don't think the dental service is very good at all.' (Albert, aged 65 (FG1))

'I couldn't use the term excellent for the dental service I receive and I'm a Denplan patient...err and I'm not sure how good a plan that is.' (Elsie, aged 68 (FG1))

'I just find the dentistry in Teesdale...I say in Teesdale because I don't know who works in Middleton-in-Teesdale, so I'm really saying Barnard Castle ...I think it's pretty poor.' (Doris, aged 80 (FG1))

Participants living further away from Barnard Castle tended to have more positive attitudes towards their current dental service provision. Some of those

who lived a greater distance from Barnard Castle used the mobile dental unit based at Middleton-in-Teesdale. All comments relating to the dental care provided by this service were good, however, not all were based on personal experience some participants had a perception the mobile unit provided a good service based on the experiences of friends:

'It's very good, they're very good, and she's a very nice lady, the dentist.' (Anne, aged 75 (FG2))

'A friend said to me a while ago that she goes to the mobile in Middleton ... and she thought it was brilliant.' (Maud, aged 78 (GH1))

'She talked, talked a lot about this mobile ... which is...has an excellent reputation.' (Stan, aged 84 (FG1))

Among those participants who were unhappy with their current dental service there was only one who had actually put forward an official complaint. There was a feeling that complaints were not taken seriously, however, this view was based on hearsay:

'Err I know for a fact there have been many official complaints but has anything ever been done?...If you make a complaint it doesn't seem to be followed through.' (Doris, aged 80 (FG1))

'Because in the end, by its nature, every complaint is anecdotal, isn't it? There's no...sort of evidence. I mean it's not necessarily incompetence that affects your err view of the practice... It's all anecdotal. Nobody's ever going to have good evidence unless, you know, their mouth has been ... messed up, which is very rare.' (Elsie, aged 68 (FG1))

These comments show that people are dissatisfied with the service they are receiving; however, it did not appear to be the actual treatment or technical ability which is at fault. It is possible that those who felt dissatisfied with dental services had to some extent been influenced by the views of others, for example, some had heard similar views expressed by friends and family.

Although there was a general feeling of dissatisfaction among participants regarding the available dental services the majority had not complained about it themselves.

6.3.2 Explaining Dissatisfaction with Existing Dental Services

Several factors contributed towards the participants' unhappiness with current dental services; these are discussed in the following section.

6.3.2.1 Lack of Choice

There was a feeling that participants were expected to accept a poor level of care because of their rural location, resulting in extremely few dental services to choose from:

'Well, they've a captive market, haven't they? They can be as offhand as they want to be. You've still got to go to ... to that practice, more or less... We are trapped ... because we don't have a choice.' (Elsie, aged 68 (FG1))

This point was reiterated several times and participants felt that the result of being 'a captive market' was that the poor level of care that exists is allowed to do so because providers of services know that people have no other choice but to use whatever is provided despite its standards. One participant's explanation was as follows:

'I think that if there's a general mediocre standard in the town ... Then they don't have to strive much to improve ... if everything's down to the lowest common denominator, then that's what we get stuck with.' (Albert, aged 65 (FG1))

In a similar way to the health care professionals, participants also expressed dissatisfaction with the availability of urgent care services. There seemed to be little choice in where people could attend to receive urgent care and it usually involved travelling great distances:

'I can remember having problems one weekend and phoning the wonderful NHS Direct which I've never had total success with yet. And they wanted me to go to Guisborough. I don't mind travelling 20 miles...But to travel to Guisborough was just like oh, you must be joking.' (Patricia, aged 65 (FG2))

To put this in context, the participant had been expected to travel about a 130 miles for a round trip to Guisborough taking about 3 hours.

6.3.2.2 Lack of Continuity of Care

Participants were often faced with seeing a different dentist each time they visited their dental practice:

'I'm concerned because the one I've got, erm the practice I go to and the dentist I've got keeps changing... They don't seem to keep them very long. And you just sort of get to know them, then they've gone.' (Maud, aged 78 (FG1))

'And you talk to people and they all say the same ... And that particular dentist is he still there? ... and the turnover is phenomenal.' (Doris, aged 80 (FG1))

From this, it is possible to see that older people, who have been used to visiting the same dentist and are then faced with seeing different practitioners may become unhappy with the service they are receiving.

6.3.2.3 Rurality

An expected barrier to accessing services was the rural setting. In the previous phase of this study some participants had complained about poor public transport, however, in this phase participants talked positively about the available travel scheme and did not raise travelling as such an issue. Even those who lived in more remote areas still managed to attend dental appointments by using a travel scheme:

'We get the Link2 bus into Barnard Castle and the dentist is close to the centre... You ring up and book them to come. Normally we get them to the time we required.' (Frank, aged 74 (FG2))

'They've got a Link2 bus ... where you just phone up and they come and pick you up.' (Maud, aged 78 (FG1))

Advertising of this scheme in between the two phases of the study may account for some of the differences in the way participants talked about travelling. One participant said:

'It has been well publicised.' (Albert, aged 65 (FG1))

However, there was still some uncertainty about the service as some were unsure of how they would use it:

'Nobody can understand how it works. People that I've spoken to up in Middleton and up beyond, they say right, well we'll ring it up and it comes and picks us up at our house, and drops us at the nearest bus stop. We might have to wait an hour or an hour and a half for the bus. That's no use is it?' (Anne, aged 75 (FG2))

Difficulties with travelling not only affect accessing dental services, but affect how people access all services. Travelling was seen as part of rural life:

'Well, how do they manage for anything, period? It's not just dentistry, is it? Every loaf of bread you get, you've got to get in the car or on your horse or whatever or get your skis out.' (Stan, aged 84 (FG1))

And another participant agreed with the above comment and added:

'Have a strategic plan, yeah.' (Maud, aged 78 (FG1))

Participants believed that rural areas could be neglected by decision makers and that rural residents would be expected to tolerate poorer quality services simply based on their place of residence. For example one gentleman said:

'See, it may well be that they, they, whoever they are ... don't expect a very good dental service. That they put up with things which are ... poor, that the majority of us wouldn't put up with if we had the opportunity to alter it. And yet the guys up there, whoever they are, are very happy with what they're doing and they're very happy to draw their salary and their eventual massive pension and they're quite happy to sit in Eastbourne or wherever it is and look at this and say, 'Oh yes, we've got another complaint from Barnard Castle ... Yeah, what a shame can I have another cup of coffee and nothing is done.' (Stan, aged 84 (FG1))

Later this participant reiterated this point:

'So they might turn round and say, 'Oh, we've heard this before. I mean what do you expect? I mean you're living up in the bush somewhere. What do you expect? Gold plate on everything.' (Stan, aged 84 (FG1))

Complaining about the current service provision was considered futile.

Participants believed that those in control of providing services would not endeavour to improve them because of their rural location

A self-reliant and stoic attitude was expressed, for example participants said:

'And they're [rural residents] probably quite capable of fixing it themselves anyway.' (Stan, aged 84 (FG1))

"I'm doing the tractor this afternoon, just pop in and I'll fix your tooth." (Maud, aged 78 (FG1))

'They [rural residents] wait till they've got terrible toothache then go and have it pulled out. You don't go and do a regular check-up and do a filling or anything.' (Patricia, aged 65 (FG2))

In spite of the rural location and problems it may cause, participants did not see it as a reason for not accessing services at all. Participants expressed the view that those living in remote areas would be aware of the impacts of rural life and would not expect services to be delivered to their exact location. For example, comments made were:

'So it's not a valid argument, is it, because if you're there, you...it's like anything, isn't it, milk and bread, basic ... basic living. And you accept that when you go and live in Baldersdale.' (Maud, aged 78 (FG1))

'Yes, that's right. People who actually live out in the sticks ... do know what they're facing and they know they're going to have to ... travel to get to the doctor ... and they know they're going to have to travel to get to the dentist ... or get their feet done or whatever ... Or even get down, in the case, mostly in the case of ladies, getting their hair done. And they travel for that. So it isn't necessarily an excuse.' (Doris, aged 80 (FG1))

6.3.3 Patients' Suspicions and Dentists' Motivations

The dental profession was sometimes regarded with suspicion by participants in this study, especially regarding the way in which dentists are paid. One participant commented on how it may be possible for dentists to increase their earnings by increasing the amount of treatment they provided to patients:

'And err whenever you went to [name of previous dentist] ... you felt that it was thorough and he would explore any opportunities possible. I don't...not just to make money ... but to, to err improve your dentistry. That's ... that's for certain.' (Albert, aged 65 (FG1))

Often the media had also played a part in influencing people's opinions.

Dentists were often portrayed as wanting to make money and this was viewed negatively:

'...do you remember when the doctors were mistakenly awarded a salary increase which took them into six figures. It had been a mistake ...Now the dentists at my practice, they were particularly narked about that and I think it was a general thing among dentists; they were particularly narked about this because nobody accidentally starting taking them into six figures. Whereas I think traditionally weren't dentists kind of better paid than doctors at one time?' (Elsie, aged 68 (FG1))

Participants were aware of how dental practices operate and believed that dentists felt unhappy with working under the rules and regulations of NHS dental practice and that this could result in dentists opting to practice privately:

'They've got a contract with the NHS but they have to pay their own dental nurses, they have to buy their own equipment, and they have to see that it's all serviced and maintained. This doesn't happen with GPs and dentists therefore are getting more and more furious. And that's why they're pulling out and saying well I'm just not going to work, I'll go private because although it doesn't look a lot more in payments on paper there's no upper limit for a private dentist to charge you whereas there is in the NHS.' (Patricia, aged 65 (FG2))

'Because if you're coming out of the dental hospital even as a newly trained dentist I will take a bet that if you could set yourself up in practice you will earn a lot more money than you will going and working for the community dental service.' (Patricia, aged 65 (FG2))

Patricia even had suspicions over the number of places available for training in dental schools. Restricting the number of places for dental students restricts the numbers of qualified dentists. Therefore dentists would be in demand and so could command high salaries:

'Well, this is the other thing, you see, because if you limit the numbers then you're in scarce supply and then you look for more

money and dah de dah. And I haven't honestly seen a desperately poor dentist yet.' (Patricia, aged 65 (FG2))

6.3.4 Ageing

Increased age was raised by some participants as a possible barrier to accessing care. People felt that increased age brought with it a decrease in drive and people felt less able to cope with stressful events.

One participant described this feeling:

'Some of the fight inside you runs out... and, you know, you know, your bolshiness does give out ... to quite a degree ... as each year goes by.' (Doris, aged 80 (FG1))

Also participants felt that they were not being given all the relevant information because of their age:

'Just because people are old it doesn't mean they can't read things and understand and ... work out what they should be able to expect from the dentist.' (Albert, aged 65 (FG1))

Older people may find it easier to access the services they need if the information regarding local services was made more widely available.

Older people also want to feel that they are being treated with respect, one participant commented:

'I don't like this thing where they bring ageism into everything, but, you know, aren't we entitled to more respect than that?...Are we being disrespected because we're not, you know ... we're not ... you know ... young media types.' (Elsie, aged 68 (FG1))

6.3.5 Dentistry as Part of the NHS

There was a general feeling that dentistry was not considered to be part of mainstream NHS services:

'...you get a sort of a sneaky feeling that the government, for want of a better word, has never wanted to be bothered with the dental health service. They've always considered it a little bit peripheral ... and very expensive for them. And they would have liked to have got rid of it.' (Stan, aged 84 (FG1))

'The governments aren't interested in dentistry, are they? You don't die from bad teeth.' (Albert, aged 65 (FG1))

'Dentistry is out on a limb to start with.' (Patricia, aged 65 (FG2))

Dentistry being distinct from mainstream NHS services and the rules and regulations of NHS dental practice were seen to affect the availability of NHS dental services:

'And they seem to make so many rules and regulations nowadays ... that the average dental practice is saying, 'Well, look. We're sick to death of this. We can't do it anymore. We're going to go private' as they say.' (Stan, aged 84 (FG1))

6.3.6 Reasons for Accepting Current Levels of Dental Care

Many potential barriers to accessing dental care were discussed, but not all of these actually stopped people from using the available services. Despite feeling dissatisfied with current dental service provision most participants continued to use the same services and reasons emerged for this.

Primarily, there are very few dental services to choose from within this rural setting and participants felt they had nowhere else to go; this 'lack of choice' was discussed earlier in this chapter. In order for participants in this study to broaden their choice of dental service provider they would need to be able to travel to other nearby towns in order to access different dental services, but participants were not always willing or able to do so:

'Well, idleness, I suppose, in terms of wanting...not wanting to travel to Darlington.' (Albert, aged 65 (FG1))

Another reason given for tolerating current services was a fear of the unknown, that moving to another service could bring with it a new set of problems:

'And are you jumping out of the frying pan into the fire? You don't know. I mean if I went to Darlington I wouldn't know which dentist to go to.' (Maud, aged 78 (FG1))

The previous comment could show that there is a lack of available information about individual dental practices and their performance. Therefore, choosing a

service was often based on recommendation. The opinions of others were highly regarded and important among this group of rural older people. But participants had not heard any good suggestions for alternative dental services:

'Well, it's anecdotal ... but the reason I haven't changed practices is that I haven't heard that good reports about any others.' (Albert, aged 65 (FG1))

This participant said he stayed with his current dental service provider, despite being disappointed with the service, in order to gain access to urgent care services should the need arise:

'At least you thought well, If it starts aching ... I ...you can go along there ... And you know...and he's done that. He's done that to me. He'll drill the old filling out and put a new one in and stops the ache ... So at least you know you can get that sort of thing.' (Albert, aged 65 (FG1))

Finally, other comments were made which help to explain why participants tolerated poorer levels of service; these could be an indication of older people being more accepting or of their stoicism in a rural community:

'It's the British way.' (Elsie, aged 68 (FG1))

'There isn't a realistic alternative.' (Albert, aged 65 (FG1))

6.3.7 How the Over 65s Felt Dental Services Could be Improved

Some suggestions given by participants in this section are ideal solutions to the problems which exist, but in reality are often not viable or cost effective.

However, older people as service users may not have had sufficient knowledge of service delivery in order to offer more rational solutions; therefore, they gave straight forward solutions which would solve the problems as they saw them. For them to take into account the way the NHS procurement system works, budgets and workforce planning was an unrealistic expectation.

Increasing the time spent by the mobile unit in Teesdale seemed to be a popular way of improving dental services. People felt this could be done by increasing the number of locations it visits, or having more than one dental mobile van.

'So we need another ten of these mobile surgeries.' (Albert, aged 65 (FG1))

'Make the van more accessible. Or bring another van around because Middleton is as far as it goes. And there's quite a few people further up the Dale, you could be at least another 15 or 20 miles up the Dale from Middleton where there's farms and like Newbiggin and Forest.' (Maud, aged 78 (FG1))

Another common suggestion was to make better use of the dental facilities already existing in the local community hospital. A fully equipped dental surgery exists within the local community hospital at Barnard Castle and there was the feeling that this was a much under used resource.

'Can we suggest that they make the Richardson Hospital into a group dental practice there? Close all these practices down ... and move the whole into the Richardson.' (Stan, aged 84 (FG1))

'...it's totally and utterly underutilised.' (Patricia, aged 65 (FG2))

Having dental surgeries on the same site as GP surgeries was also seen as being beneficial:

'...if it was linked to the doctors I often think it would help integrate things a lot more because I think a lot of dental problems are often linked to your other medical problems.' (Anne, aged 75 (FG2))

'If it were in our doctor's surgery it would be easier for us, then there'd be no steps to climb.' (Frank, aged 74 (FG2))

The actual building where treatment is provided was also seen as important by other participants, for example one comment given was:

'...you've got the doctors' practice here where all the doctors are together and it, it seems like it's an excellent building ... And the service provision, I, I've not heard any complaints. It seems excellent. And yet you've got dentists...I've now learned today that there's three ... dotted round Barnard Castle. Whatever their standards, they don't seem to be particularly good. I mean even the buildings are not very good ...They're not purpose built ...they're old houses that have been converted ...They're certainly not built, so you start from a very low base ... The buildings are not right for a start. It isn't conducive to good provision.' (Albert, aged 65 (FG1))

6.3.8 Summary for the Over 65s

Participants showed an implicit and impressive understanding of the economics of health. The lack of competition, restriction of supply and asymmetry of information were all seen as problems, which were often related to rurality and the population size. To some extent the participants were stoic, they portrayed an attitude that they just wanted to get on with life, however, they did feel somewhat abandoned and resigned to their current situation.

Other themes emerged which are not connected to the rural setting or to the age of the participants. Factors emerged which could influence the dentist-patient relationship such as a lack in continuity of care and suspicions participants had regarding the earnings of dentists which could affect the trust between dentist and patient. These are issues which could affect service users of any age in any location.

This section has outlined some of the specific problems regarding local dental service provision; the following chapter explores in more detail some methods for overcoming these problems and for improving local oral health care service for older people in the area.

6.4 Phase 2 Round 2 Focus Groups – Respondent Validation

The following section sections present data from the second round of focus groups. Again, a focus group exercise was used. The initial 9 ideas for improving local dental care services was refined using the information gathered in the first round of focus groups. The Round 1 data was discussed with the supervisory team and advice was taken from a local Consultant in Public Health. Following these discussions some of the 9 options were abandoned as they were deemed as not being viable.

Firstly, the idea of being able to organise a dental examination via the Preventive Health Checks for the over 75s was not possible as following a change to the GPs contract this health check was no longer routinely provided. Secondly, it was felt that to persuade individual practices to change their policy on issuing reminders may be too difficult at a time when there is no patient registration within the current dental contract. Thirdly, volunteer driver schemes within the region did exist and were being promoted at the time, therefore this option was unnecessary. Finally, the denture repair scheme was also felt to be unnecessary, because once the denture got to the dental practice it still had to be sent away for repair. Therefore, the patient is always going to be without their denture for a period of time, unless they have a spare set. Being without a denture for a few days may just be one of those unavoidable circumstances of living in a rural area.

The remaining options were developed further in order to present them to final focus groups for validation and clarification and they are listed in Box 6.2.

Although the concepts were not at a conclusive stage, that is they could not be immediately put into practice, they were given more detail so that participants would be able to understand how they would work and then decide how beneficial they felt the concepts would be in their region. The 5 remaining concepts were briefly presented at the final focus groups and as a focus group exercise the participants were asked to rank the five options in order of how important they felt they were to themselves and to their locality.

Box 6.2 Final Proposals for Improving Oral Health Care Service Delivery

1. Information for all

a) GPs

- Information about local dental practices to be easily accessible, including contact details and whether or not these practices are accepting new NHS patients
- Doctors need a referral pathway for urgent care cases, especially if the patient is not registered with a dentist.

b) District nurses

Initial patient assessments to include simple screening questions about oral health. These would establish whether the patient has any existing oral problems and whether they have seen a dentist in the last 2 years.

c) The over 65s

- Oral health information leaflet containing: information about the reasons regular mouth examinations are recommended, even for the edentulous and preventive advice.
- Information about the available local dental services, including contact details. Also some details about how the dental system works with a brief explanation of expected costs. Additionally, travel information could also be included: contact details of volunteer driver schemes and the Link2 bus.
- These information leaflets should be widely distributed; they could be included in a local paper, at GP surgeries, village halls, libraries, village shops, social groups and online.

2. An Oral Health Promotion Project

- The local Salaried Service has an oral health improvement team which could take on this project. There would be 2 schemes, one for the edentate and one for the dentate.
- The edentate scheme would promote preventive mouth checks and try to overcome the barrier of a lack of perceived need. Those who had a dental examination in the last 2 years could be offered a free mouth check with a local dentist.
- The aim of the dentate scheme would be to promote risk management again preventive, but trying to avoid people only attending when they have a problem.
- The oral health improvement team could visit local social groups to carry out this project, they would need a way of referring patients who did not have a dentist.

3. Increasing the use of the dental surgery within the Richardson Hospital

- Historically funding has been made available for a salaried dentist post within nearby practices in order to overcome problems with access. Therefore, having a salaried dentist post based at the Richardson Hospital could be a possibility if there was available funding and if it was seen as beneficial by the commissioning board.
- A salaried dentist based at the hospital could link to the mobile service providing urgent dental care for patients of the mobile unit if necessary.
- A therapist could provide dedicated sessions for oral health care of the over 65s
- A salaried dentist or dental therapist post would be useful if an oral health promotion project was running, as patients who did not have a dentist could be offered an appointment here.

4. Oral Photography

- Training in taking photographs of oral lesions for doctors, district nurses, dental therapists and any other health care professionals who may be involved in the care of older people.
- The photographs could then be emailed to a local dentist or dental department in a dental hospital for further advice.
- There would be the cost here of providing the camera, although most GP and dental practices now have one

5. The urgent care dental system

- The out-of-hours service is well established in the area and therefore very difficult to change. However, it would be useful for local dentists to receive feedback when one of their patients uses this service.
- GPs need a referral pathway for the patients they see with dental problems. If patients' records were to hold information about which dentist they were registered with, then contacting the dental practitioner would be easier.

6.4.1 Phase 2 Round 2 Focus Group - The Over 65s

Participants did not discuss all 5 concepts (shown in Box 6.2) in great detail, some provoked more discussion than others. For example, the idea of providing training for GPs in oral photography was given little consideration. However, other models such as increasing the use of the local hospital sparked more debate.

During the discussion some participants explained how their ideal dental service would look:

'If there's one initiative with one logo and various services within that remit, that works better doesn't it? ... join it all together. I think what the thing is, the National Health Service as a whole has been messed about and reorganised and restructured so many times over the years that something like this has been fragmented ... If it's a single initiative, it could attract - attract its own sort of body of volunteers if you like for a more unified service.' (Elsie, aged 68)

This idea of having one co-ordinated service was popular with the other members of the group. It seemed to be a way of providing an easy-to-use and easily accessible dental service. One participant highlighted the joined-up services between GPs and pharmacists and that the computer systems in place allowed easy sharing of information, but that dental records were not included in this:

'...the dental service doesn't seem to be included in with this computer system you know between doctors and pharmacists and the hospital. They can look at your x-rays and all of that. So dentistry just isn't included.' (Elsie, aged 68)

Increasing the use of the already existing dental surgery at the Richardson Hospital was also popular. It was proposed that this could be the main centre, or 'hub' for one unified system, with the mobile unit acting as a branch surgery.

Having joined-up services was important to the service users, as one participant said:

'I am surprised to find how little contact there is between the erm GPs and the dental services, it just seemed to me an area that should be tied together, in a rural area... in an area where the population is so spread and the services have to be necessarily

restricted, you'd have thought there'd have been a lot more cooperation between them and working together.' (Albert, aged 65)

Having the correct and up-to-date information was also seen as important for all those involved in both providing and using local services:

'Well this is where the information comes in isn't it? I mean the GPs obviously need information as well as the general public.' (Maud, aged 78)

'...if the local GPs and the district nurses were given maybe just a leaflet, so that if a patient came in saying in I've got raging toothache, what do I do about it, they could say ah, wait a minute, and they could quickly look it up and they'd refer you on.' (Doris, aged 80)

Suggestions were also given for having the information available in the right places and adequately publicised:

'They could publicise...they could be publicising erm dentistry and the need for people with dentures to go and still have checks, by using these television screens in the doctor's surgeries, things like that.' (Anne, aged 75)

Opinions about the oral health promotion project were split. Some participants thought that regular screening was a good idea:

'... there should be a sort of perhaps bi-annual check-up for people over 65 say, which includes everything. And then they can be directed to where is most appropriate ... I'm not talking about dentists, I'm talking about going to your GP ... and having a general health check including your mouth, I mean you include your eyes as well, oh and my GP's tested my eyesight.' (Anne, aged 75)

However, other participants felt that screening would be too expensive and therefore not a viable option for a health care system to provide:

'But yes, but this routine check-up and screening is resisted because it could easily turn up, and would, naturally turn up a lot of new things which would have to be dealt with which would cost money.' (Stan, aged 84)

Participants were unsure about the idea of using day centres, social clubs or luncheon clubs to provide oral health screening:

'No, not to a social group. I, I couldn't see that. But to me, you want to be in the environment where ... dentistry rules what happens ... sort of thing.' (Elsie, aged 68)

Once again the idea of free dental examinations for the over 65s was raised, however, participants did understand the cost implications to the NHS:

'If dentistry examinations were free on whatever, but an annual basis for people over 65, they'd be inundated, of course they would.' (Anne, aged 75)

As highlighted earlier, it was not the actual cost of a dental examination that was the problem; it is the feeling that it does not give value for money. However, screening may not be as successful as anticipated as there were mixed feelings about this, especially when the setting for the screening could be at a social event, for example at a luncheon club.

Participants went on to have some discussion about dental service providers, that is the individuals involved. There was a feeling that as older people they were sometimes treated differently:

'... and it's not necessary but we can get rushed in and out as you say, you never even got your coat off. Erm because you think oh well, they might be dead next time.' (Doris, aged 80)

The group felt it was important to have a good personal relationship with their dentist and that this was particularly important for older people. Certain attributes of the dentist as an individual were highlighted as being advantageous and promote a good relationship between dentist and patient:

'Now if it's a new young dentist, male or female, quite often they are much more thorough.' (Doris, aged 80)

The earlier comment, made by Doris, was an example of how older people may feel discriminated against because of their age; however, they themselves also expressed ageist views by preferring younger dentists.

At the end of the discussion the participants ranked the 5 service delivery models in order of importance, in order to show the value placed on each option and how beneficial participants felt they would be to their age group. The

sample size is very small, and this is not intended to be statistically significant, however, it offers an indication of how people felt about improving local oral health care services. The overall result of this ranking was as follows, with number 1 being most important and number 5 being least important:

1. Increasing the use of the dental surgery within the Richardson Hospital
2. Information for all
3. The urgent care dental service
4. An oral health promotion project
5. Oral photography

6.4.2 Phase 2 Round 2 Focus Group - The Health Care Professionals

This focus group was held with a range of health care professionals and included GPs, a dentist, a dental nurses and a district nurse. There was much less discussion of the service delivery models in this group, the participants seemed confident to rank them without a lot of discussion. This may have been because the group was held during a lunch break and the professionals only had a limited amount of time. Also the health professionals very rarely meet together and they did want to discuss other matters, so it was sometimes difficult to adhere to the topic guide.

There was some discussion about the differences between patients accessing dental care and medical care. It was thought that patients only request to see a dentist when they have a need to do so, that is when they have an acute problem. However, people use general medical practitioners for health checks, medication reviews and more preventive measures. One of the dentists felt that the current dental system did not promote good preventive practice and follow-up care because there was no registration for patients:

'...when they bought in the UDA system in 2006 nobody was supposed to be registered with a dentist, it just was appalling that there was no supposed follow up, um, of patients and you were on your bike once you'd had your treatment finished that was it.'
(Salaried Service dentist)

In a similar way to the over 65s the health professionals also commented on the sharing of computerised dental records. The dentists felt that it would be

beneficial to patient care to have one set of dental records that would be transferred between practices if a patient moved:

'I loved it when the GDC had our teeth mapped from cradle to grave on the computer system but from cradle to grave, and I believe in Scotland they still do that they haven't changed, and they're able to with statistics to pull out things from all these about teeth, and you know, I think it's great. And we stopped that and that's where we've fallen apart I think.' (Salaried Service dentist)

The doctors gave examples of patients they had seen who had presented with dental problems and the dentists gave examples of how medical practice impacted on the oral health of some of their patients. The dentists highlighted the difficulties of treating patients suffering with a dry mouth, which is a side effect of many medications. The dentists had noticed polypharmacy amongst many of their older patients and wondered whether the doctors could alter this in any way. However, other than when an urgent case presented, there seemed to be very little communication between the two professions when they had concerns about patients. The urgent care dental system was discussed as the GPs often saw patients requiring urgent dental care. The dentists felt that the urgent care system in the area was not satisfactory and they were grateful to the doctors for treatment they provide to patients with dental needs.

Having the latest information about which NHS practices were accepting new NHS patients was seen as important and could help the doctors when they see patients with dental problems who really need to see a dentist. The doctors suggested that access to a website would be the best way of accessing this information.

As with the over 65s the health professionals also ranked the models for dental service delivery in order of importance and again this gives an idea of how local health care professionals feel oral health care services could be improved in the area. The list is in order of most beneficial at number 1 and the least at number 5:

1. The urgent care dental service
2. Increasing the use of the dental surgery within the Richardson Hospital
3. Information for all
4. An oral health promotion project

5. Oral photography

6.5 Summary

The over 65s and the health professionals ranked the models for service delivery in very similar ways. The over 65s saw the most important improvement that could be made would be to increase the use of the dental facility within the Richardson Hospital and this would help in alleviating one of their main problems which is a lack of choice.

The most beneficial development that could be made for health professionals was improving the urgent care dental system. The aim would be to have fewer patients with dental symptoms presenting at GP surgeries and dentists would have a more easily accessible service for their patients.

The following chapter goes on to discuss these findings and looks at the implications they could have for local oral health care service delivery.

Chapter 7. Phase 2: Local Dental Services and Providing Care for Older People: Discussion

7.1 Introduction

The previous chapter presented data from focus groups held with groups of over 65s and groups of health care professionals. The discussions were used to address local oral health care service provision and aimed to develop methods of improving local dental services. It was found that there were some specific problems which were common to both service providers and older people as service users. For example, both groups felt that local urgent care dental services were inadequate, that there was a lack of information about local dental services and that use of existing resources could be improved. The following section discusses the data from these findings in more detail.

7.2 The Views of the Health Care Professionals, the Service Providers

The themes which emerged here were related to the systems in which the health care providers have to work and how working in a rural area affected their practice.

7.2.1 The Changing NHS

This research was carried out during a time of great change within the NHS; this had created tension and uncertainty among the health care professionals. In July 2010 a white paper: 'Equity and Excellence: Liberating the NHS' was published. It set out the government's plans to reform the NHS, the aims of which include increasing quality of care for patients, improving health care outcomes, giving patients a greater choice in services and providing more information about health care professionals to patients in order to help them make more informed choices. Groups of GPs, known as GP consortia, will be given freedom and responsibility for commissioning care for their local communities (Equity and Excellence: Liberating the NHS, 2010). The GPs felt anxious about the future transformation of the NHS system. Other health care

professionals were also concerned about future changes; however, they appeared to be less well informed about the details of these changes.

GPs felt constrained by the system in which they worked and there were concerns about the future and the changes that are occurring within the NHS. The GPs felt they already had great demands placed upon them and that rurality meant that their patients had increased demands. For example, GPs felt that their patients would always come to them first, even with acute complaints, however, in an urban setting these patients may have a wider choice of services available to use, such as walk-in centres, or their own dentist closer to home. This specific rural concern suggests that there is scope to better structure services.

The dentists have recently seen huge changes to the NHS dental system. They also talked about the constraints of the system in which they worked and how this had altered the way they practice. The introduction of the 2006 contract, where UDAs became the unit of currency, was viewed negatively. It was felt that working towards a target does not promote spending time with patients and therefore could adversely affect the important dentist-patient relationship. The lack of patient registration was also seen as a barrier towards accessing dental care and towards providing continuing care.

The change in patient registration under the new system has discouraged dentists from seeing and taking on new patients (Department of Health, 2009). The over 65s had commented that they like to receive reminders for their dental check-ups; however, with the changes to patient registration, many practices have stopped issuing these. The extent to which this is a particular concern when managing older people is not clear, it may be a more general complaint and there was no evidence that there was any specific issue for older patients. The House of Commons Health Committee report on dental services in 2007 did recommend that the Department of Health reinstate the requirement for patients to be registered with an NHS dentist to once again encourage continuing care for patients.

Dentists were concerned that the current NHS dental system could potentially be detrimental to patient care as it does not always allow them to provide the most beneficial treatments for their patients (Davies and Macfarlane, 2010).

The cost to the dentist for providing certain treatments such as crown and bridge work which involves laboratory work could dissuade dentists from offering these options to patients; other recent studies have reported similar findings (Department of Health, 2009; Davies and Macfarlane, 2010).

Concerns over future changes to the NHS and the systems in which these health care professionals worked and the impact any changes may have were so great that other smaller issues could be overshadowed.

7.2.2 Treating Older Patients

Older people accounted for the majority of the patient base for this group of health care workers and treating older patients was not seen as being significantly different to any other type of patient

The GPs provided regular reviews for their older patients with complex medical histories. The dentists described the types of treatments they were regularly providing for older people and they had noticed an increase in the prevalence of root caries. The Adult Dental Health Survey of 2009 found that 7% of adults had active root decay and this proportion varied by age, with 1% of 16 to 24 year olds affected compared with 11% of 55 to 64 year olds and 20% of 75 to 84 year olds (White *et al.*, 2011). The dentitions of those aged 65 and over may be heavily restored after a life time of dental care and these dentitions will need to be maintained (Meeting the challenges of oral health for older people: a strategic review: Chapter 3 Oral Health and Older People, 2005).

7.2.3 Local Oral Health Care Services

7.2.3.1 Urgent Care Dental Services

Urgent care is important and worthy of specific consideration because when people are in pain the urgent care system is their first port of call. Also patients with pain are patients with real and immediate need and they require a system which allows them to access appropriate care quickly.

The health care professionals sampled were unhappy with certain aspects of the existing dental services particularly the urgent care dental system, which

impacted on the non-dental workforce as well as dental teams. The medical GPs reported seeing high numbers of patients presenting with dental complaints. GPs suggested that often patients felt that visiting them was more convenient than seeking specialist dental care, they also felt that they had good relationships with their patients and that patients may come to them first, before seeking dental advice. Anderson *et al* (1999) found that the rate of attendance of patients with dental problems was greater in smaller medical practices, they felt their findings may be due to the relationship patients have with their doctor. Those who visit their family doctor regularly may have a stronger relationship with them and are therefore more likely to seek advice from them than from a dentist whom they see far less often (Anderson *et al.*, 1999). This ties in with the comments made earlier by the doctors about how they felt about rural practice, working in a small community for a long time and getting to know patients well.

GPs had no referral pathway for patients with dental complaints, therefore they treated the acute symptoms in the best way they could (with medication) and it was then the patient's responsibility to arrange further dental care. The system simply did not link up. This is quite possibly the case in many urban areas, but it may be less important in that environment, where access and choice are less of an issue. In a rural setting the doctor is often much easier to get to than the dentist (GP practices are more widely distributed), whilst out-of-hours services often require even greater distances to travel. When distances are large and transport difficult, the ability to provide a coherent health service is perhaps even more important.

The dentists, as well as the GPs expressed dissatisfaction with the out-of-hours dental service for several reasons. They felt it was an awkward system for patients to access; it usually involved travelling large distances for patients; and dentists did not receive any feedback from the service when their patients had used it. The out-of-hours system has strict criteria which patients need to fit in order to use it, local health care professionals and the public may benefit from being made aware of these criteria, and as frequent first points of contact the GP could and perhaps should hold that information.

The urgent care system was commissioned some time ago and is well established and therefore difficult to alter, however, better communication between the service and the local dentists would help to improve it. Feedback could be sent to dentists whose patients attend for an appointment and these patients can then be targeted to try and prevent future problems. This could be made a condition of on-going commissioning.

7.2.3.2 The Dental Skill Mix

A survey carried out for the Commission for Rural Communities in 2007 found that there was a shortage of NHS dentists in England at that time, which was considered to be having a direct impact on the provision of dentistry in rural areas. Rural dental practices often found it harder than their urban counterparts to recruit and retain dentists, particularly vocational trainee dentists (Commission for Rural Communities, 2007). Widening the skill-mix and increasing the opportunities for dental care professionals could play a role in building dental care capacity for older people in the future; however, there are significant implications for health policy, professional bodies and dental team working (Gallagher *et al.*, 2010).

The term dental care professional (DCP) includes dental nurses, hygienists, dental therapists, dental technicians, orthodontic therapists and clinical dental technicians. DCPs must be registered with the General Dental Council (GDC); they can then undertake further courses, both for the purpose of continuing professional development, and for furthering their own career by gaining additional qualifications. Recently within the UK, training opportunities for DCPs have expanded rapidly, with an increasing number of dental schools providing training courses (Godson *et al.*, 2009).

Under current GDC regulations patients cannot gain direct access to a DCP, they must first be seen by a dentist who can then refer them to the appropriate DCP. It has been suggested that patients should have direct access to DCPs and that this would facilitate greater competition between not only DCPs but also between DCPs and dentists, where either one could provide a particular dental treatment (Dentistry: An OFT market study, 2012).

One dentist in this study had commented that the use of DCPs was better suited to the Salaried Dental Service rather than general practice. There is a lack of knowledge and understanding regarding the range of clinical duties DCPs are able to provide and how they can be used cost-effectively; these factors could affect their acceptance by the dental profession and by service users (Jones *et al.*, 2007). This lack of understanding has resulted in restricted practice for many DCPs, for example dental therapists who are capable of providing simple restorative treatments being employed to provide hygiene treatment only (Jones *et al.*, 2007).

Oral health care is constantly developing and with an increasing proportion of older people now retaining natural teeth new approaches and processes to workforce planning may need to be adopted. One method would be to fully utilise DCPs and this was suggested in the final report of a market study of dentistry (Dentistry: An OFT market study, 2012). However, barriers such as a lack of knowledge regarding DCPs has profound effects on their acceptance by both the dental profession and the public (Jones *et al.*, 2007).

Although commissioning new additional dental services in the area may alleviate some of the problems with access and choice, it may not be easy to do. There is an existing dental surgery within the Richardson Hospital and at the time of this study this was a much under-used resource and there may be some options around using this resource as part of a pathway. Having a dentist or dental therapist working here more often may increase the options for patients, but would come at some cost. Whereas, a dental practitioner based at the hospital (for example from Salaried Services) could provide a linked service to the mobile unit and may provide a very useful service for GPs who could refer their patients with dental symptoms.

7.3 The Views of the Over 65s, the Service Users

The over 65s discussed the current standards of local dental services. In general they were dissatisfied with current levels of oral health care service provision and the reasons which emerged for this included a lack of choice,

closely associated with the rural setting and factors associated with attitudes towards dental practitioners and the dental system.

7.3.1 Rurality and Lack of Choice

The participants perceived rurality to be a factor which would be considered by those responsible for the planning and commissioning of local services.

However, instead of decision makers providing extra or improved services to help overcome barriers which may exist because of the rural setting, it was felt that decision makers may use the rural setting as an excuse for not providing enough good quality services or not improving existing ones.

This attitude is quite defeatist and it may be due to the age of the participants or to the nature of rural dwellers. Research investigating help seeking behaviour has shown that low expectations are common among older people and that often there is a strong sense of resignation (Walters *et al.*, 2001). Therefore, older people in this study may have lower expectations of the care they receive, which is confounded by the environmental factors of living in a rural area.

People living in rural communities have been found to have functional attitudes towards health and health care, for example, they can often be stoic and can differentiate between a health problem which can be endured for a while compared to one which interferes with functioning (Veitch, 2009; Johnson *et al.*, 2011).

The physical distance from health services in rural areas can also influence people's decision on whether to seek help or not (Veitch, 2009). In a study looking at the factors which influence access to health and social care in the farming communities of Northern Ireland, Heenan (2006) found that there was a prevailing culture of self-help. The factors which prevented use of services included a fear of stigmatisation and pride in being self-reliant. The ability to carry on despite a health problem was associated with strength of character, and conditions must be deemed very serious before consulting a health professional (Heenan, 2006). Rural Teesdale is a similar area, with farming families spread over a large area; therefore, this culture of stoicism and self-reliance may also apply to this area of study. Scharf and Bartlam (2008) also

reported on the self-reliance of older rural people, that they often tended to play down their experience of disadvantage and displayed a dominant culture of independence (Scharf and Bartlam, 2008). The poor access to services this group of older people experienced due to their geographical location could mean they are social excluded, and therefore, are disadvantaged by their rural place of residence (Scharf and Bartlam, 2008).

The comments from participants give the impression that older people living in rural communities may not see their oral health as a high priority, that other factors may be more important. Rurality itself may not be a major barrier to accessing services, people living in rural areas realise that services may not be easily accessible, but they accept this as part of rural life. However, there was also a feeling of resignation; that part of rural life was having poorer quality services because they are not improved by those making the decisions.

7.3.2 Attitudes Towards Dentists and the Dental System

The participants expressed the view that dentistry was not seen as part of the mainstream NHS and suggested that dentistry could be considered less important than other NHS services. Also, dentistry is different to most other areas of the NHS because of the economic transaction which takes place between dentist and patient. While most other health care is free at the point of use, about half of NHS dental patients have to pay a substantial contribution to the cost of their care. Patient charges have been found to have an immediate bearing on the relationship between the dentist, the patient and the NHS (Department of Health, 2009) and in deed the participants did have suspicions regarding the earnings of dentists. Hill *et al* (2003) carried out a qualitative study of patients perceptions of dental services, they reported that patients found dentists impersonal in their approach to patient care, pre-occupied with technical aspects of treatment and how much money they could make (Hill *et al.*, 2003).

Participants also highlighted problems of continuing care within the dental system. Kressel and Haycock (1988) found that a lack of continuity in care can be a factor in patient dissatisfaction and can lead to patients seeking care

elsewhere. In particular they found that the older people were and the longer they had been seeing their dentist the less likely they were to consider changing their dental practitioner (Kressel and Haycock, 1988).

7.3.3 Raising Concerns and Making Changes

Many participants felt that they were tolerating a poor service, some had complained about it and others had heard of friends or relatives who had complained. Most participants continued to use the dental service even though they were unhappy with it. Participants had not always experienced poor dental services first hand, however, there was a generalised belief that some of the current dental services available were below average and it is possible this feeling had been generated through the spreading of stories about other people's bad experiences and undermining confidence in the service. There was also a perception that the complaints system was of little use. Again this belief was often based on the experiences of others, however, for those who had put forward a complaint, it was felt that these were not handled well and so had little effect. It is possible that the general feeling that local dental services are poor could be a result of a culture of mistrust, with opinions being based on hearsay rather than experiences. This may be specific to this area and related to the services which exist here or it could be associated with the culture of this rural community.

Bedi *et al* (2005) found that overall people are unlikely to complain and those that do are usually younger people. This is possibly because there is a lack of knowledge by the public concerning the complaints procedure (Bedi *et al.*, 2005). A recent Office of Fair Trading investigation found that the complaints system is very complicated and underused (Dentistry: An OFT market study, 2012). This can lead to a decrease in competition within the dental market, as those providing the service could be unaware that the service users are not satisfied and so the service is left to continue without any intervention. There are government plans to update the patient leaflet and highlight the information regarding the complaints procedure and the opportunity to give patient feedback on the NHS Choices website and so more work is being done to improve the information available to the public on patients' views of different dental practices

(Government Response to the Office of Fair Trading Market Study into Dentistry, 2012), however this needs to be in a form that is appropriate for older populations. Individuals need to feel that their complaint is taken seriously; however, there is little evidence that this is currently the case.

Many continued to use the service despite being unhappy with it because they were unsure about changing their dental practice, unsure of where they could go and whether or not they would be accepted as a new NHS patient and there were also concerns as to whether one dentist was any better than another. Again this was based on perceptions; a recent study found that the public's perceptions of difficulties accessing dental services are important and influence dental service use (Marshman *et al.*, 2012). It is possible that older people may be more accepting of the health care they have available and display stoicism in continuing to use the local service (Ettinger, 1992). Increased acceptance may be related to increased age, which is associated with lower expectations (Gregory *et al.*, 2012) or this increased acceptance may be part of rural culture. Poorer services appeared to be an anticipated limitation of rural life.

7.4 Summary for Phase 2

The findings from this phase of the study highlight some specific areas for improvement of local oral health care services, for example, the urgent care dental system and the lack of existing information regarding dental services. These were issues which were raised by both the service providers and service users. Both groups also emphasised the opportunity for making better use of already existing resources. The findings have implications for improving the oral health of older people in this rural setting. There are also some wider implications, in terms of other areas of impact of this research, for example, regarding the methods used, and for commissioning of older people's services in other similar areas. Drawing on all the information gathered throughout both phases of this study these implications are discussed in more detail in the following chapter.

Chapter 8. Overall Discussion

This chapter draws on all the data gathered throughout both phases of this study in order to highlight the areas where the findings from this study can contribute towards improving oral health services in Teesdale. This chapter also highlights the wider implications this study has for commissioning services in rural areas in the UK and the wider implications of the methods used.

8.1 Implications for Methods

This study used participatory methods and engaged with the public as well as relevant stakeholders. Using these types of methods may be useful in other areas of health service research. The following section discusses the practicalities of conducting research in a community setting, including problems which arose and how they were managed. This section then goes on to discuss the limitations of the study and it also highlights the benefits and strengths of the methods used in this study.

8.1.1 A Reflexive Account of the Research Process

At the beginning of the study the aim was to have variation within the group of older people, for example, people from different age groups, socio-economic backgrounds and different geographic locations. Due to the difficulties during the recruitment phase I needed to widen the sampling criteria and many more villages were visited than I had originally planned (See section 3.2.1.3). There were problems in gaining access to many of the voluntary groups operating in the villages. Gaining the trust of the gatekeepers within these voluntary organisations was a difficulty I had not anticipated. At first the leaders of the voluntary groups and organisations were unsure about the project, they were understandably keen to protect this vulnerable group and required reassurance that the project would be carried out sensitively and ethically. There were also geographical problems; visiting Teesdale involved a lot of travelling for me on many, many occasions, which was also very time consuming. Once the gatekeepers were satisfied with the research project, they did allow me to visit

their events. However, many locations I visited were small hamlets often with just a few houses surrounding a main farm house and so the impact of the rural setting resulted in more locations being visited in order to recruit participants than I had initially anticipated. This meant that recruitment was a long process and on reflection I should have allowed more time for this.

Once recruited participants then took part in an in-depth interview. During the phase 1 interviews I felt my interview technique did improve markedly as I learned how to frame questions and how to best order questions to encourage participants to give full answers, that is, by starting with easy to answer, very open questions. As the interview process became easier for me I felt I was able to make the participants feel comfortable and not threatened in any way by the experience. As a result I feel participants did give personal accounts, full of rich detail.

During the interviews I tried to remain neutral, for example, during interviews with older people I did not talk about my professional position as a dentist as I did not want this to influence the accounts given. For example, where dental attendance was infrequent, participants were truthful about it and gave full explanations about their feeling towards dentistry and dental practitioners. I was careful to by ask open questions and allow the participant to respond fully. I did probe into topics of interest, but did not engage in any conversation or debate during the interviews. Occasionally I was asked during an interview if I was a dentist. When this occurred I was honest in my response, however, I do not feel this affected the data collection as participants felt comfortable enough at that point to still give detailed accounts.

As recruitment during the first phase of the study was difficult and time consuming we decided to use Voice North, a well-established patient involvement group. Voice North is frequently used to assist in research in Northern England, and they aided me in recruiting participants aged 65 and over during Phase 2. There is an inherent risk in using such an organisation that the individuals may have self-interest in participating. However, it was necessary to be practical during recruitment, especially in terms of the time and financial constraints. On balance, using this organisation to aid recruitment was beneficial, allowed the recruitment process to be completed quickly as it was

not reliant on just one researcher. The majority of adults have some experience of oral health care (Steele and O'Sullivan, 2011) and there is no reason to suppose that the group of older adults involved in this study are not broadly representative of older people's views of dental health care in Teesdale.

Recruiting the health care professionals for Phase 2 was proved very challenging, largely as there are so few practising in the region. Those who were asked to participate responded positively. The health care professionals had busy schedules and I managed to set up one focus group which they could all attend. I felt it was an achievement to recruit and set up this focus group with the busy health care professionals. However, during their focus group they were keen to discuss many other matters, not related to the research topic. The various health professionals very rarely met together and they used this opportunity to discuss current issues related to their practice. However, because I was appreciative just to have all the professionals participating I found it difficult to keep the discussion focused on the research question all of the time. I did not want to hinder their conversation or appear ungrateful. Consequently, a little more time might have allowed slightly greater development of some of the ideas which emerged. If I was to carry out similar studies in the future I think I would have the experience and feel more confident in moderating health professionals.

A thematic approach was taken to data analysis and it was appropriate for this study. Data analysis was carried out in a rigorous manner giving validity to the findings and to the recommendations presented in the final chapter.

8.1.2 Limitations of Method

Qualitative methods provide a powerful tool for data gathering and analysis, but are not without limitations. Some limitations have already been discussed in Chapter 3, these include small sample sizes used in qualitative studies and the need for transparency when describing the methods used and the way data is collected and analysed. It can sometimes be difficult to generalise from qualitative data and often the term transferability is preferred, as discussed in Section 3.3.9.1. In order to maximise the transferability of the findings I have given full accounts of the research context, the area of study, the participants involved and how they were recruited, the research process, including how

data was collected and analysed. This will ensure that the process of this study is made explicit and judgements can then be made by other researchers about its transferability to other contexts.

There were some specific difficulties encountered during the recruitment of participants in this study, especially for Phase 1. The aim was to achieve a sample which reflected the diversity found among older people, however, the practicalities of recruiting in a rural area meant that this was challenging and all opportunities for constructing the sample needed had to be taken. The final sample for Phase 1 contained more women than men but the point of data saturation was reached with this gender mix. There was no particular indication to suggest that men had any specific issues compared to women in terms of the way they used or thought about dental services and so there are no specific concerns about the gender mix.

One group of older people whose views I initially wanted to include was the housebound or frail elderly. This group may experience specific difficulties in accessing dental services and often require domiciliary care. Gaining access to this group was very difficult indeed. There was one housebound participant included in this study and so some views are captured, but clearly they will not extend to the full range of views from this subgroup. The needs of this group are probably sufficiently distinctive to merit completely separate work.

The final sample also contained variation in terms of place of residence of participants, an indicator of socio-economic status, and a mix of edentulous and dentate participants and a mix of dental attenders and infrequent attenders. As discussed in section 3.2.1.2 voluntary groups, such as Teesdale Day Clubs, were used to recruit participants. Many of these luncheon clubs were held in very small villages and hamlets and so the geography of the area was problematic. As numbers of people attending these groups was often very small, it meant I had to visit more events at more locations than I had anticipated in order to recruit enough participants to reach data saturation.

8.1.3 The Strengths of this Study

The aim of this study was to improve local oral health care service for people aged 65 and over in a rural community. Recruitment of both older people and health care professionals can be challenging. Also recruiting within rural communities has unique difficulties, where geography and travelling are problematic. The study shows the value of taking time to build relationships with other organisations and with participants in order to engage them in research. Once participants were recruited to the study, they became highly engaged with it and this is reflected by the detail given during data collection.

This study used participatory techniques which aided data collection. The use of focus group exercises was particularly useful for the over 65s as discussing service delivery is a topic which requires some understanding of the systems in which health care is provided. The focus group exercise gave some information of the types of services that could be used, this information helped to start the debate and then further ideas were generated. Participants were also asked to take part in a ranking exercise during the focus groups, I could then compare the results of this exercise between the older people and the health professionals and, again, this proved to be a good way of involving the participants.

This study engaged with older residents within the community to establish their feeling towards oral health and local dental services. It gathered their opinions on how services could be improved. The research also involved local dentists, GPs, District Nurses and former PCT staff to gain an understanding of service delivery from the providers' perspectives. This research involved a high level of public/patient/key stakeholder involvement which required dedication and time to achieve; this was worthwhile as it produced detailed and valuable data. We were able to build a real picture of oral health care service delivery and its utilisation by local older people and this allowed us to see where improvements could be made that would benefit all the groups involved. The concepts for improving oral health care services which were developed were validated by taking them back to repeated focus groups. Therefore, the recommendations that are given should be robust and capable of implementation.

8.2 Implications for Oral Health of Older People

This investigation showed that the oral health priorities of older people were not straightforward and neither were they stable across the life course; there was strong and consistent evidence that they had changed and evolved. The impact of life course has been found to be significant in other recent studies and can impact upon oral health care usage by older people (Borreani *et al.*, 2010).

The literature suggests that gradually throughout life people have become more aware of oral health messages and have adopted certain oral health care practices (McKenzie-Green *et al.*, 2009). Participants reported on their current oral health care practices and emphasised the importance of having teeth, whether they be dentures for the edentate or retained natural teeth in the dentate. The social importance of dental appearance had become apparent among this group of older participants and great value had been placed on having teeth, especially for social functioning. The data suggests that different levels of value were placed on oral health at various stages of life, for example many participants felt oral health was not a priority when they were younger, when working and raising a family were far more important. The impact of dental aesthetics on social functioning among older people has been reported in the literature (Heft *et al.*, 2003; Kiyak and Reichmuth, 2005).

Oral health related quality of life was important but this was usually expressed in terms of a lack of symptom. Participants were satisfied with their oral health as long as they were not suffering any pain or had no dental problems and had teeth which were aesthetically acceptable. It was common for those who were free from any oral symptoms to feel that there was no real need to visit a dentist regularly, this view was particularly common among the edentate, but also for some dentate participants. Seeking dental care was often seen as necessary only when symptoms or problems occur; this is a common finding in studies of older people and oral health in other settings (Ettinger, 1992; Slack-Smith *et al.*, 2010).

In order to improve the oral health for this group of older people it is essential that they have the correct information on which to base their decisions about using dental services. They need information on the importance of preventive

dentistry and the reasons behind the promotion of regular mouth checks and dental examinations. This knowledge would help their decision making about using dental services, rather than their dental attendance being based on historic patterns of dental visiting and often only in response to pain. It is also important for dentists to acknowledge older people's oral health history and life history when they do attend for dental treatment, as this impacts greatly on their current decisions about seeking dental care and receiving dental treatment.

8.3 Implications for Commissioning of Oral Health Care and Other Services

This investigation outlined the barriers which exist when older people access services. The study also highlighted the contextual factors which impact on how older people choose to use health care services, for example, the rural setting and rural culture. These factors need to be considered in order to commission appropriate services.

8.3.1 Factors to Consider when Commissioning Appropriate Services

Barriers to accessing dental care do exist for this group of older people, though the scale of these cannot be measured easily. The range of barriers are in part similar to those which exist for adults anywhere; for example, cost and a desire for value for money. Other barriers relate more specifically to older people and their dental status, for example, the lack of perceived need among the edentulous. However, some barriers related more specifically to the rural setting, such as, difficulties with travel and transport.

Increased age was cited as a barrier, however, data from this study shows that older people were actively involved in social groups and often made use of primary medical care services, but not dental services. Therefore the evidence suggests that old age itself did not necessarily result in people being unable to access the services they needed. However, chronic illness and resultant disability are clearly age related so there will always be a group of frail older people, including those who are housebound, for whom accessing services will be more difficult.

The frail elderly, in particular, may not want extensive dental treatment, either because they perceive no need for it or because they are too unwell to demand it (Holm-Pedersen *et al.*, 2005). There are few if any clear guidelines about managing care for this group. It is important to attempt to find the true requirements of these patients and then provide a realistic treatment plan tailored to their needs. Without a clear definition of needs, commissioning an appropriate service may be difficult and complex. A system such as the Salaried Dental Services which is targeted towards groups with different needs may well be better suited to providing this care. More research would be needed in this area to establish whether recent UK policy developments within dentistry have impacted upon dental care for the frail elderly or whether further improvements are necessary in terms of access to services and quality of care provided (Caines, 2010).

Emotional barriers, such as the dentist-patient relationship, emerged as very important factors. The data show that the personal relationship between the patient and dentist greatly affected people's opinion of an entire service and influenced whether people use the service or not. Simple things such as the dentist having a polite and friendly manner can help people overcome their fears and change their attitude towards accessing care (Borreani *et al.*, 2010). To what extent these relatively simple considerations relate specifically to older people rather than being a more universal concern is impossible to determine from these data, but amongst this group it was certainly an important consideration.

There was clear evidence for a need to improve the urgent care dental system and this would benefit both service users and local health care workers. Both older people and the health professionals expressed the view that resources in this area should be used well, in order to benefit the whole community, particularly already existing resources. For example, there was a much under used dental surgery at the local hospital and this was seen as an underutilised capital resource. This could be considered when commissioning oral health care services in the future.

Lack of information was a common barrier and it affected accessing dental care at all levels. Older people wanted more information, not only about costs and

availability of services, but also about oral health. They requested more preventive advice and more explanations of treatments and treatment options, so that they are able to make informed decisions. To what extent a lack of information and understanding underpinned the lack of perceived need is unclear but these two observations (lack of need and desire for information) appear somewhat contradictory. As a rural older population this is perhaps a group that has had to be rather self-reliant and perhaps we should be careful about equating a low perceived need with a lack of a desire for more information. Participants expressed a need for information about several aspects of dental care, including how to use the existing dental system, information on costs involved and local services available to them. They also wanted information on oral health.

These barriers are important considerations when commissioning services. Some are specific to providing dental services, but not all. Some barriers surrounding travel in a rural area, lack of information and increased age could apply to the provision of other services, such as medical services and social care services. Overall, it was clear that patients' perceptions of oral health services were not positive and there is a need, not only, to develop services but to also to try to change perceptions of services.

8.3.2 The Dental Market in a Rural Setting

Another factor to be considered when commissioning dental services is that dental care is provided in a market setting, albeit an unusual and managed one. The dentist provides services direct to paying consumers, who even under NHS regulations often have to pay a fee, and theoretically the consumer has a choice about whether or not to use a service. Consumer choice is a fundamental requirement of any market, even in health. At the beginning of this investigation it was not anticipated that the influence of health economics on oral health care service provision for older people would be a major factor. However, the data suggest that the dental market, and older people as market players within it, is an important way to consider service development.

Many older participants were dissatisfied with current dental services; their main complaint was a lack of choice which may be expected in this rural setting where services are far more dispersed. However, people mostly complained about a lack of choice because they were unhappy with their current dental service and there were a number of reasons for this. The factors involved in their lack of satisfaction were strongly associated with the personal attributes of dentists as individuals and the dentist-patient relationship. The data suggest that people were not assessing the service based on the technical competence of the dentist, but were judging it on a much more personal level. The significance of this was such that it affected people's perceptions of the entire service even where the experience was limited to a single practitioner or practice. Newsome and Wright (2000) found that patient perceptions are often dominated by aspects of the service which are unrelated to the technical ability of the dentist and instead are centred on the attitudes, behaviour and communication skills of all people within a practice who come into contact with patients (Newsome and Wright, 2000).

In a rural area dissatisfaction with any given practice becomes even more significant where there may be very few local dental practices or providers from which to choose. In this study, participants who were unhappy with their local NHS dental practice often felt they had nowhere else to go. Oral health care service users are consumers of a service, usually able to choose their dental service from the range available to them in the market place. Well-functioning competitive markets are characterised by active, well informed consumers. This type of consumer is more likely to seek and choose a dentist who provides high quality services, thus driving up the standards of oral health care (Dentistry: An OFT market study, 2012). Competition within the market place delivers greater productivity and value for money of the care provided whilst choice itself is valued by consumers, at least this is the theory. This concept can be applied to health care markets as much as any other market, where competition between service providers will encourage efficiency and raise quality (Propper, 2012). Increasing choice to the consumer would promote competition, however, in small and dispersed populations competition and choice are not easy to engender for simple reasons of geography, consequently there is a tendency for the market to fail.

Several factors appeared to contribute to the market failure of dental services within the rural setting of this study. First, and most important, is the limited supply of available services and this is a particular consideration in a rural setting. Secondly there is an asymmetry of information and this can be a concern in any setting, but has been particularly highlighted in this study. The desire for information was addressed briefly earlier in this chapter. Recent research has shown that there is a lack of information available to the public regarding the quality of dental treatment, dental services and patient satisfaction levels achieved by different dental practices generally in the UK (Dentistry: An OFT market study, 2012). Therefore, even where services are widely available and there is a choice of providers, patients are unable to shop around for what they feel is the best dental service because they do not have the necessary information to do so. This, in turn affects competition as patients stay with the same practice, even though they may be unhappy with the service it provides, instead of going elsewhere. In rural locations competition between service providers may be lacking, this combined with low levels of information and demand, leads to a stagnant market (Rural health economies and the Health Bill, 2011). Older people may be less able to choose between services because of problems with travel or a lack of mobility and therefore they may seek other solutions, such as visiting their GP instead, which may be a more convenient option for them. As a consequence of this there is even less market pressure from this age group and so the resulting services for older people are very poorly attuned.

This raises an interesting theoretical point; do the effects of age actually compound the failure of the market in terms of services for older people? In the healthcare market the government purchase services on behalf of the consumers or service users (Donaldson and Gerard, 2005). Therefore in small populations, including rural settings such as Teesdale, where choice and competition between services is not always possible, it becomes the responsibility of the government to ensure a satisfactory service is in place through robust commissioning. If there is little market pressure from older people, is this an argument for a greater input from the visible hand of the state? This could be an area for future research.

Running alongside commissioning there generally needs to be a thorough system in place for monitoring services so that commissioners have the information they need to make informed choices on behalf of the population. The Department of Health is currently developing a Dental Quality and Outcomes Framework (DQOF), this has three major components: clinical effectiveness, patient experience and safety. If the results of the quality measures were made publicly available it would provide patients with information to help them make informed decisions about choosing a dental practice. The information would also be useful to commissioners and would help to increase the standards of care being offered (Dentistry: An OFT market study, 2012). This is probably a poor substitute for a perfect market, but given the geographic and demographic realities, in this case it is difficult to see how the conditions of the market could easily be improved in any other way.

8.4 Summary

This study highlighted the contextual factors which impact on how older people choose to use oral healthcare services and the barriers which exist when accessing these services. These findings have implications for how services may be commissioned in rural areas. The following chapter presents the conclusions and some recommendations for improving oral health care for older people in Teesdale.

Chapter 9. Conclusions and Recommendations

9.1 Conclusions

The findings from this research have provided the following conclusions, which relate to the objectives:

Objective 1: To document oral health care services that are already available in the area

- There are few oral health care services within Teesdale; these are documented in section 1.3.1. For increased choice in services it is necessary to travel outside of Teesdale to surrounding parts of County Durham or North Yorkshire.

Objective 2: To explore the oral health priorities of older people and their perceived barriers to obtaining dental care and to establish whether the local community is aware of services available in their area

- This group of older people were found to have a fairly low set of needs and demands.
- Barriers did exist to accessing dental care in this rural environment. Lack of perceived need was very important, but other barriers were based around: rural issues such as travel; the dental care system, including costs and lack of information; and emotional barriers such as fear and anxiety and the dentist-patient relationship. Some barriers which emerged reflected possible cultural characteristics of rural dwellers, participants often displayed a stoic attitude towards health care and also showed signs of resignation to the provision of poor quality services based on their rural location.
- Participants were aware of most of the services in the area, but not all of them, for example, there was low awareness of available travel schemes and the domiciliary dental care service. However, the information available regarding local dental care services was often limited and therefore participants were unsure how to access them.
- For those with limited mobility (ie the frail and housebound) accessing dental care could be very difficult.

Objective 3: To explore the views of members of the professions involved in provision of these services, including GPs, Salaried Service Dentists, GPs and District Nurses

- The health professionals were constrained by the systems they worked within and services appeared to be not well joined up.
- There were specific concerns regarding the urgent care dental system and there was no clear referral pathway for the patients presenting to their GP with dental complaints and this was a concern.

Objective 4: To use the information gained to develop new and innovative ways of delivering oral health care to the local population

- The interaction between the people and the current dental system did not work well; there was an inevitable lack of competition and an asymmetry of knowledge and information. As a market it was failing older people.
- The key to providing good services in a rural area appears to be communication and information. Good communication needs to exist between healthcare professionals and patients, and between healthcare services themselves. An effective model of service delivery to meet the health and well-being needs of older rural residents requires a joined-up approach.
- Healthcare services should be delivered in a way that makes full use of local facilities; involving voluntary, community, private sectors and the public in working together and addressing on-going challenges with funding, transport and the NHS system. There needs to be robust and flexible commissioning based on local knowledge and good monitoring of the services in place.

9.2 Recommendations

What does a better dental service look like to older rural patients?

The data from this investigation show that older people in a rural setting would like a service characterised by:

- Better information
- A user friendly urgent care system (perceived need does not always apply here because you do not know you need this type of care until you actually need it)
- A choice of dental care providers to provide competition and improve standards; or, more robust commissioning
- To be able to cope with the costs involved and feel the service is good value for money
- Sympathetic dental care providers
- Good links and a joined up approach between oral health care and all of the other health care services used by older people

Whilst these were the needs of older people in a rural setting in the North East of England, there is no reason to believe that they would not be generalisable and could be found in other similar rural areas of the UK. These needs may be very similar to those of older people in other settings, for example in urban areas. However, in a rural setting the joining up of services is a particularly significant need. Where oral health care services are sparse, older people may rely on other healthcare professionals, such as GPs for dental advice. It is therefore important that there is good communication between local health care services. In order to meet these needs robust commissioning and committed health care providers are fundamental. The following recommendations are based on the data collected during both phases of this investigation and aim to address the needs listed above.

1. Information

The evidence demonstrates a clear desire for information. Up to date information would benefit all groups and would empower older people as players in the dental services market locally.

For older people:

- Information for older people giving specific oral health information and advice for this age group

- Information on available services, including contact details of local dental practices and the domiciliary service
- Information detailing how to use local services including information on costs and how the current system works
- Information on local travel schemes including the Link2 bus and volunteer driver schemes operating within Teesdale
- All information should be available in formats acceptable to older people and available at places they would visit, for example, GP surgeries, village halls, the mobile library and online. New and electronic media and use of the internet may not be appropriate for the current generation of older people; however, this may well change in the future. Paper based information would be most valuable for older people; leaflets should have clear presentation and be available in large print. All information could be given in one leaflet or there could be 2 separate leaflets, one for oral health information and advice and the other regarding local service and the dental system
- This information could be provided via the Primary Care Services Agency (PCSA)

For local health care workers:

- Up to date information regarding which practices are accepting new NHS patients. The best way of providing this would be via an online system or web based approaches using existing NHS systems
- GP practices should be made aware of the criteria for use of the urgent care dental system

2. Pathways

We would recommend a clear referral pathway for GPs to use for patients they see with oral symptoms:

- This pathway could feed into the Salaried Dental Service system or to local NHS dentists. The salaried service's role could be to provide an initial assessment and urgent care treatment. Following this, if the patient was suitable for care within the general dental services, they could then be referred to a GDP. If patients were to be referred to local general dental practitioners additional incentives for this may be required.
- Any pathway would need to use existing resources well; involving both the salaried services (primary sector) and primary care dental services in local patient pathways. Clinical networks like this could benefit older people in this rural community. This would need to be supported by commissioners and the necessary information passed to patients and carers. (See point 1: Information)
- GPs do not routinely ask patients if they have a regular dentist, this could be useful to do when updating medical records as patients could be prompted into registering with a dentist at that point. This information could be recorded as part of a medical history form (either paper form or online system)
- Feedback from the urgent care dental system to dental practitioners to inform them when their patients have used the service. Providing a feedback letter and ensuring follow up could be a contractual requirement.

3. Resources:

- The mobile unit is an invaluable resource; however, better planning of the mobile service would help. An audit should be carried out to assess the service the mobile unit is currently providing. This would help to establish where patients are travelling from and the type of patients being seen. Further assessment can then be made on whether these patients should

be having their treatment on the mobile unit or whether they could be suitable for dental care within the general dental services.

- The mobile dental unit needs to have guidelines set for its use which make clear the locations it should visit. The rural setting may justify the use of the mobile unit on a purely geographical basis; however, guidelines should include the areas from which patients are able to access this service, with a geographical boundary in place.
- Clinical guidelines should be set for use of this service
- This is a very popular service and if it is still oversubscribed after the guidelines have been followed, then it may be beneficial to the area to increase the number of sessions that the unit visits Teesdale.

4. Robust commissioning

- Robust commissioning is required to ensure local dental practices are fulfilling all parts of their contract, for example carrying out patient satisfaction surveys. If this information could be made freely available it would benefit patients when choosing a dental practice. This information could be available through the NHS Choices website.

5. Care of the housebound and frail older people

- From this investigation models of delivery of oral health care for this group are less supported by evidence. Further research is needed to explore the needs of the housebound and frail and how best care can be provided for this difficult to access group
- District nurses to include simple screening questions for oral health status when carrying out assessments. For patients who do need dental care the District Nurses will then need a referral pathway. This would need to be to the Salaried Services as these patients are likely to require specialist care, or at least specialist assessment.

- District nurses need to know the details of dental practices accepting new NHS patients and which dental practices provide domiciliary services. Again access to a website or online system containing this information may be the best way of doing this.

9.3 Further research and Dissemination

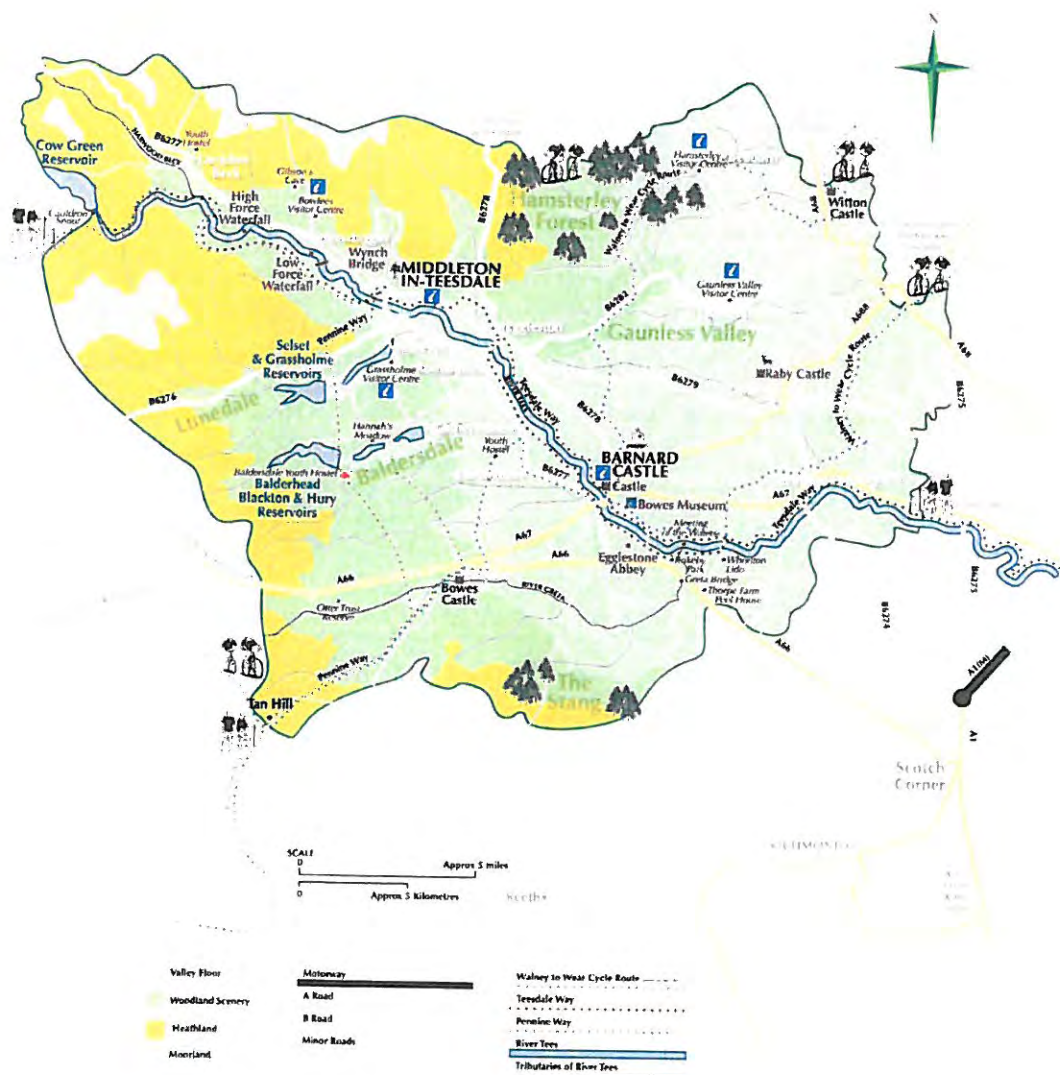
- The findings and recommendations of this study may be relevant to other rural populations in the UK, where similar characteristics are found. There may be some further work that would be valuable in terms of cross checking the generalisability of these findings and recommendations. A repetition of the whole interview process would probably not be helpful; however, a process of feeding back the recommendations to other new health care professionals and citizen focus groups may be appropriate.
- It may be possible in the future to implement some of the changes recommended in this study. It may be possible to pilot some of the recommendations and then evaluate the new services to establish whether they do improve oral health services for the over 65s.

Dissemination and next steps:

- A newsletter providing feedback and further information will be sent to the voluntary groups and organisations involved in this study
- I am in the process of writing a journal article describing the historical context of oral health care for older people. The aim is to submit this to Ageing and Society.
- A meeting has been set up with local Consultant in Dental Public Health and key commissioners to discuss the findings of this study and address possibilities for its implementation

Appendices

Appendix A
Map of Teesdale



Appendix B

Favourable Ethical Opinion – Phase 1



National Research Ethics Service

County Durham & Tees Valley 2 Research Ethics Committee

Professorial Unit of Surgery
University Hospital of North Tees
Piperknowle Road
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TS19 8PE

Telephone: 01642 624164
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05 March 2008

Mrs Lucy Devapal
Clinical Research Associate
Newcastle University
Dental School - Restorative Department 3rd Floor
Framlington Place
Newcastle upon Tyne
NE2 4BW

Dear Mrs Devapal

Full title of study: Investigation of the Barriers faced by Older People when Accessing Dental Services in a Rural Community in North East England
REC reference number: 08/H0908/9

Thank you for your letter of 22 February, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Ethical review of research sites

The Committee has designated this study as exempt from site-specific assessment (SSA). There is no requirement for [other] Local Research Ethics Committees to be informed or for site-specific assessment to be carried out at each site.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>	
Application	5.5	16 January 2008	
Investigator CV	1	03 December 2007	
Protocol	1	01 December 2007	
Covering Letter		02 January 2008	
Covering Letter		22 February 2008	
Letter from Sponsor		23 February 2007	
Interview Schedules/Topic Guides	1	08 January 2008	
Interview Schedules/Topic Guides	Dentists - Version 1	08 January 2008	
Advertisement	1	10 December 2007	
Participant Information Sheet: Dentists	2	20 February 2008	
Participant Information Sheet: Participants 65+	2	20 February 2008	
Participant Consent Form	2	20 February 2008	
Confirmation of indemnity		18 December 2007	
Letter from funder			
Participant reply slip dentists	Version 1	10 December 2007	
Participant reply slip over 65s	Version 1	10 December 2007	
Letter of information GP, Police etc	Version 1	18 December 2007	

R&D approval

All researchers and research collaborators who will be participating in the research at NHS sites should apply for R&D approval from the relevant care organisation, if they have not yet done so. R&D approval is required, whether or not the study is exempt from SSA. You should advise researchers and local collaborators accordingly.

Guidance on applying for R&D approval is available from
<http://www.rdforum.nhs.uk/rdform.htm>.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Website > After Review

Here you will find links to the following

- a) Providing feedback. You are invited to give your view of the service that you have received from the National Research Ethics Service on the application procedure. If you wish to make your views known please use the feedback form available on the website.
- b) Progress Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- c) Safety Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- d) Amendments. Please refer to the attached Standard conditions of approval by Research Ethics Committees.

- e) End of Study/Project. Please refer to the attached Standard conditions of approval by Research Ethics Committees.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nationalres.org.uk.

08/H0908/9**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

Rachel Duncan
Chair

Email: leigh.morgan@nth.nhs.uk

Enclosures: Standard approval conditions

Copy to: Mr Richard Errington, RM & G Unit Lead, County Durham PCT,
Henson Close, South Church Enterprise Park, Bishop Auckland,
DL14 6WA

Appendix C

Favourable Ethical Opinion - Phase 2

National Research Ethics Service
County Durham & Tees Valley Research Ethics Committee

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09 August 2010

Mrs Lucy Devapal
Restorative Dept - School of Dental Sciences
Newcastle University
Framlington Place,
Newcastle upon Tyne
NE2 4BW

Dear Mrs Devapal

Study Title: Investigation of the Barriers faced by Older People when
Accessing Dental Services in a Rural Community in the
North East of England
REC reference number: 10/H0908/36
Protocol number: 1 (dated 24 March 2010)

Thank you for your letter of 02 August 2010, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research

governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where the only involvement of the NHS organisation is as a Participant Identification Centre (PIC), management permission for research is not required but the R&D office should be notified of the study and agree to the organisation's involvement. Guidance on procedures for PICs is available in IRAS. Further advice should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Investigator CV – Lucy Devapal	1	19 April 2010
Investigator CV – Professor AG Walls	1	Undated
Protocol	1	24 March 2010
Letter from Funder	1	Undated
Lone Worker Policy	1	31 May 2010
REC application	IRAS 3.0	01 June 2010
Covering Letter	1	27 May 2010
Interview Schedules/Topic Guides - Professionals	1	04 May 2010
Letter of invitation to participant - Dentists	1	19 April 2010
Letter of invitation to participant - GPs	1	19 April 2010
Letter of invitation to participant – PCT Staff	1	26 April 2010
Letter of invitation to participant – Health Care Professionals	1	19 April 2010
Letter of invitation to participant – 65+ group	1	19 April 2010
Participant Information Sheet: Dentists	2	29 July 2010
Participant Information Sheet: GPs	2	29 July 2010
Participant Information Sheet: Health Care Professionals	2	29 July 2010
Participant Information Sheet: PCT Staff	2	29 July 2010
Participant Information Sheet: Over 65 years	2	29 July 2010
Participant Consent Form: All Groups	2	27 July 2010
Response to Request for Further Information	1	02 August 2010

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

10/H0908/36

Please quote this number on all correspondence

Yours sincerely

Leigh Pollard

JP Dr John Drury
Chair

Email: leigh.pollard@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: Mr Richard Errington, RM & G Unit Lead, County Durham PCT,
University Science Park, John Snow House, Durham, DH1 3YG

Appendix D

R & D Favourable Opinion - Phase 1

Research Management & Governance Unit
Henson Close
South Church Enterprise Park
Bishop Auckland
County Durham
DL14 6WA

Tel: 01388 452297
Fax: 01388 452290
Safehaven Fax: 01388 452297
www.countydurhampct.nhs.uk

Our ref: RE-MM255
Your ref:

18 February 2008

Direct line: 01388 452299
Switchboard: 01388 458835
Fax: 01388 452290
Email: richard.errington@cdpct.nhs.uk

Mrs Lucy Devapal
Clinical Research Associate
Restorative Department – 3rd Floor
School of Dental Sciences
Newcastle University
Newcastle upon Tyne
NE2 4BW

Dear Lucy

Investigation of the Barriers faced by Older People when Accessing Dental Services in a Rural Community in North East England – Part 1

The Research Management & Governance Unit of County Durham & Tees Valley Primary Care Trusts gives **approval** for Part 1 of this project to begin on behalf of **County Durham PCT (Durham Dales area)** subject to the following conditions:

- Approval from the Research Ethics Committee with site-specific approval where appropriate.
- Honorary Contracts have been issued where relevant.

- Any Accidents and Complaints related to the research are reported to the PCT(s) and RM&G Unit through the usual systems.
- Serious Adverse Events affecting local patients are reported to the PCT(s) and RM&G Unit promptly.
- The RM&G Unit is informed of any changes to the original Protocol before they are implemented.
- The Researchers will provide assistance with any Monitoring or Audit requests from the RM&G Unit or the PCT(s).
- The research will not require any financial support from the PCT(s), unless there is a written agreement to the contrary.
- The PCT(s) and RM&G Unit are informed when the project ends.

Best wishes in your research.

Yours sincerely

R. Errington

Richard Errington
RM&G Unit Lead

Copy to:
Kirstie Hesketh, Patient Safety & Governance Manager, (South PDA)

Appendix E

R & D Favourable Opinion - Phase 2

Our Reference RE-787
Your Reference

Direct line 0191 374 4211
Main number
E-mail richard.errington@nhs.net

County Durham & Tees Valley
Primary Care Trusts'
Research Management &
Governance Unit
John Snow House
University Science Park
Durham
DH1 3YG

Tel: 0191 301 1300
Fax: 0191 374 4242
Safehaven Fax: 0191 374 4102
www.countydurhampct.nhs.uk

24 August 2010

Lucy Devapal
School of Dental Sciences
Restorative Department – 3rd Floor
Framlington Place
Newcastle upon Tyne
NE4 4 BW

Dear Ms Devapal,

Investigation of the Barriers Faced by Older People when Accessing Dental Services in a Rural Community in the North east of England

R&D: 466

REC Ref: 10/H0908/36

The Research Management & Governance Unit of County Durham & Tees Valley Primary Care Trusts gives **approval** for this project to begin in **County Durham PCT** subject to the following conditions:

- Approval from the NHS National Research Ethics Service.
- Honorary Contracts/Letters of Access have been issued where relevant.
- Any accidents and complaints related to the research are reported to the PCT(s) and RM&G Unit through the usual systems.
- Serious adverse events affecting local patients are reported to the PCT(s) and RM&G Unit promptly.

Lady Ann Calman, Chair
Yasmin Chaudhry, Chief Executive

Passionate about health

- The RM&G Unit is provided with copies of any updated documentation after NRES approval and before it is implemented.
- The researchers will provide assistance with any monitoring or audit requests from the RM&G Unit or the PCT(s).
- The research will not require any financial support from the PCT(s), unless there is a written agreement to the contrary.
- The PCT(s) and RM&G Unit are informed when the project ends.

Best wishes in your research.

Yours sincerely,

R. Errington

Richard Errington
RM&G Unit Lead

Copy to:

Wendy Stephens, Clinical Effectiveness and Research Development Manager

<i>Main Documentation Approved</i>	<i>Version</i>	<i>Date</i>
R&D Form	n/a	
CV Devapal	n/a	
Protocol	1	24/03/2010
Information sheet: GPs	2	29/07/2010
Information sheet: over-65s	2	29/07/2010
Information sheet: health professionals	2	29/07/2010
Information sheet: PCT staff	2	29/07/2010
Information sheet: dentists	2	29/07/2010
Consent form: all groups	2	27/07/2010
Invite letter: dentists	1	19/04/2010
Invite letter: PCT staff	1	26/04/2101
Invite letter: over-65s	1	19/04/2010
Invite letter: health professionals	1	19/04/2010
Invite letter: GPs	1	19/04/2010
Topic guides: over-65s	1	29/03/2010
Topic guides: professionals	1	29/03/2010

Appendix F

Phase 1 Topic Guide: Over 65s

Introduction

I'd just like to thank you for agreeing to take part in this project. In this interview we are going to talk about dental treatment and dental services and how you feel about using them. Also we'll talk a little bit about your health and the health of your mouth and how you feel about that. So I'm going to start with those aspects of health.....

Health

- General health
- Oral health
 - Impact of oral health on general health
 - Oral health behaviours: eg t.brushing, dental visits
- Attitudes towards health
 - Dental attendance and visiting patterns
 - Feelings about dentists/dental treatment
- Accessing health and dental services

Questions:

- ❖ Can you tell me a little bit about your teeth?
Probes: Have you ever had any problems with your teeth?
 How was that sorted out?
 How did that affect other aspects of your life? OR Do you feel that the way your teeth are/mouth is affects other parts of your life?
- ❖ Can you describe to me how you look after your teeth?
- ❖ How do you feel about visiting the dentist?
Probe: Is visiting the dentist important to you?
 If you did feel that you wanted to see a dentist now, how would you organise that?
- ❖ Can you tell me a little bit about your general health?
Probe: Do you see your GP or nurse regularly?
 How do you go about seeing the people that you need to? eg getting to GP or home visits?
 Do any other people visit you at home? Eg meals on wheels, libraries

Barriers

- Availability
- Lack of information
- Transport
- Lack of mobility
- Attitude towards oral health
- Need for an escort
- Accessibility
- Costs
- Anxiety (dental treatment, leaving the house)

NB Some points may already have been mentioned

We've talked a little bit about your teeth and the health of your mouth and we've just mentioned how you would arrange to see a dentist. I'd now like to talk about that in more detail.....

Questions:

- ❖ Have you ever had any difficulties in getting to see a dentist? In what way?
OR
- ❖ Tell me about the last time you visited a dentist?
Probes: Where to find information about where dentists are?
Problems getting there? Transport?
Someone to come with you?
Difficulties with steps?
Have you heard about dentists that visit you at home? Is this something you would feel comfortable with?
- ❖ Do you know if you would need to pay for your dental treatment?
Probes: Have you heard about new NHS charges?

Local Services

We're almost at the end now; I'd just like to finish off with a couple of questions about services in Teesdale

- ❖ Can you tell me about any services you make use of? eg clubs etc
- ❖ Are there any services that you feel you don't have access to that would be useful for you?
- ❖ Is there anything that you can think of that would improve services or help you more in any way?
- ❖ If we were going to change dental services, what could we do that would benefit you more?

At the end:

Is there anything that we haven't covered that you would like to tell me about?

Thank you for taking part

Appendix G

Phase 2 Topic Guide: Focus Group with GPs

Topic Guide: Professionals

Aim: To explore your views on providing dental services for older people using a widely varied skill mix

Introduction

- Thanks
- Confidentiality and Recording
- How information will be used
- Introduction of participants

Opening Topic

- What are the participants' role? Could you explain a little bit about it?

Services

- Could you tell me a little bit about how GP services are provided in the area?
- Do you have any opinions about dental service provision in Teesdale?

Questions

1. Teesdale has a large population of over 65s, does this group up make a large proportion of you patient base?
Your practice is in a very rural location, do patients travel far to come to the surgery?
How do you think rurality affects your patients?
Do you have many housebound patients? How are these people treated?
2. An issue which residents were concerned about were the urgent dental care services in the area. As these are limited do you find that many patients with oral problems come to you instead?
If a patient did present with an oral problem would you know where and how to refer them?
3. Some participants had a problem with a lack in continuity of care in that they see a different dentist each time – do similar problems exist in GP services?
Do you think the rural location is a factor?
Can you think of any ways to overcome this?
4. In general dentists still have a poor image among the general public, with many people, especially older people, anxious about visiting the dentist. But everybody seemed happy with their doctor and the service they receive. Why do you think these differences exist?
5. There seem to be a number of older people who never or very rarely visit a dentist and we were looking for ways that we could encourage these people to attend. GPs and district nurses who may be the first point of contact for some older people.
I had heard about health checks for over 75s, do these happen routinely?
Could an oral health question be added in to flag up non-attenders?
6. Some of the ideas that we have looked at for making access to oral health care easier for older people involve using other health professionals.
How would you feel about receiving further training in oral health problems?
Do you feel this lies within your responsibilities and professional boundaries?
I was thinking especially about the housebound, in particular about oral cancer, that GPs and District Nurses could receive more training in how to spot these lesions or even photograph them to be sent for an opinion?

How do you feel about other professionals being involved in providing oral health care services, do you feel it is the responsibility of dentists?

7. Huge changes to PCTs are happening and to the way services are procured.
What are your feeling and expectations about the coming changes within NHS?
How do you think the changes to commissioning and the formation of GP consortia will affect dental practice?
Joined up services? Better communication between different services?
How do you think it will impact on rural areas?

Appendix H

Phase 1 Participant Information Sheet: Over 65s

Participant Information Leaflet

Dentistry in the Dale



We would like to invite you to take part in a research study. This leaflet will give you information on why this research is being carried out, and what is involved for you in participating.

The Project

Newcastle University and County Durham Primary Care Trust are looking at dental services for the Over 65s in Barnard Castle and Teesdale. As an increasing proportion of the population in this area is aged 65 and over, it is important that the correct level of dental services are provided for this group. In particular the study will look at barriers to accessing dental services in this area where previously there has been a scarcity of oral healthcare. Therefore there may be people in Teesdale with dental problems who, for one reason or another, cannot gain access to NHS dental treatment.

The opinions and views of Over 65s, along with the views of local dentists will be sought in order to find out whether dental services in Teesdale are acceptable or whether they need to be improved.

The Aim

The results of the study will provide information which could be used by planners and service providers of County Durham to improve dental services in Teesdale for the Over 65s.

This study also is part of my PhD at Newcastle University.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Taking Part

A number of interviews or group discussions will be carried out with approximately 30 residents of Teesdale aged 65 and over.

It is up to you whether to take part or not. If you do agree to participate, you are still free to leave the study at any time without giving a reason. If you do withdraw from the study during or after the interview, it is up to you to decide whether the information you have already given can still be used.

If you would like to be involved please contact the researcher, Lucy Devapal in order to discuss the study further and ask any questions you may have, the contact number is given later in this information sheet.

Before the interview or group discussion takes place you will be asked to sign a consent form to ensure that you fully understand all aspects of the study. You will be given a copy of

the consent form and this Participant Information Sheet to keep.

The Interviews and Group Discussions

If you agree to participate in an interview the researcher, Lucy Devapal will visit you at home to conduct the interview. Alternatively we can arrange for transport to the Richardson Hospital to have the interview there, if this is necessary your travelling expenses will be paid.

Group discussions will be held at a convenient location and travelling expenses will be paid where necessary.

Interviews and group discussions are informal and give you the opportunity to voice your opinions, views and experiences concerning your dental care. They are likely to last about 1 hour.

With your permission they will be tape recorded. We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be stored securely at the university and it will only be discussed with the research team who are:

- Mrs Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.
- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recordings will be kept in secure, password protected storage until the end of the PhD programme and will then be destroyed securely. The manuscripts will be stored

securely at Newcastle University for ten years and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes of this research.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Mrs Lucy Devapal, Clinical Research Associate, School of Dental Sciences, Newcastle University on

Tel: 07960347274 or 0191 2228719

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact: Dr K Brittain on 0191 2227045

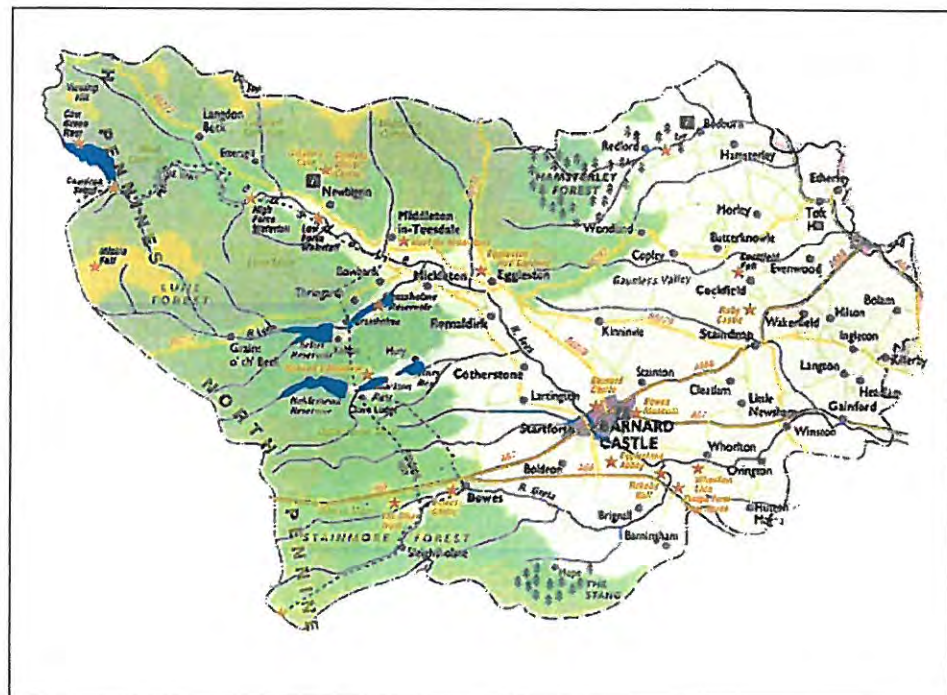
All research in the NHS is assessed by an independent group of people, called a research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by County Durham and Tees Valley 2 Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. In telling us your experiences and voicing your concerns it may be possible to bring about change in your area.

If you would like to take part in this study, or for any further information please contact:

Lucy Devapal on 07960347274 or 0191 2228719



Appendix I

Phase 1 Participant Information Sheet: Dentists

Participant Information Leaflet

Dentistry in the Dale



We would like to invite you to take part in a research study. This leaflet will give you information on why this research is being carried out, and what is involved for you in participating.

The Project

Newcastle University and County Durham Primary Care Trust are looking at dental services for the Over 65s in Barnard Castle and Teesdale. As an increasing proportion of the population in this area is aged 65 and over, it is important that the correct level of dental services are provided for this group. Research has shown that older people are increasingly retaining their natural teeth, often requiring more complex dental treatment.

There has been a scarcity of dental services in Teesdale and this study will look at the barriers to accessing dental services in the area for those aged 65 and over.

The opinions and views of Over 65s in the area along with the views of local dentists will be sought. As a local dentist I would like to hear your views about dental services and how you feel about the provision of these services. You may have noticed a change in the demand for domiciliary care? Has the new contract affected the delivery of dental services, in particular for the elderly? I would like to hear your opinions.

The Aim

The results of the study will provide information which could be used by planners and service providers of County Durham to improve dental services in Teesdale for the Over 65s.

This study also is part of my PhD at Newcastle University.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Taking Part

A number of interviews, approximately 30, will be carried out with residents of Teesdale aged 65 and over. Interviews will also be held with local dentists from both the Salaried Dental Services and General Dental Services

It is up to you whether to take part or not. If you do agree to participate, you are still free to leave the study at any time without giving a reason. If you do withdraw from the study during or after the interview it is up to you to decide whether the information you have already given can still be used.

If you would like to be involved please contact the researcher, Lucy Devapal in order to discuss the study further and ask any questions you may have, the contact number is given later in this information sheet.

Before the interview takes place you will be asked to sign a consent form to ensure that you fully understand all aspects of the study. You will be given a copy of the consent form and this Participant Information Sheet to keep.

The Interviews

If you agree to participate the researcher, Lucy Devapal will visit you at your place of work, at a time convenient for you, to conduct the interview.

Interviews are informal and give you the opportunity to voice your opinions, views and experiences concerning the provision of dental care in Teesdale. They are likely to last about 1 hour.

With your permission the interview will be tape recorded. We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be stored securely at the university and it will only be discussed with the research team who are:

- Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.

- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recording of your interview will be kept in secure, password protected storage until the end of the PhD programme and will then be destroyed securely. The manuscripts of the interviews will be stored securely at Newcastle University for ten years and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of Newcastle upon Tyne

Tel: 07792659266 or 0191 2228719

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact: Dr K Brittain on 0191 2227045

All research in the NHS is assessed by an independent group of people, called a research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley 2 Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. In telling us your experiences and voicing your concerns it may be possible to bring about change in your area.

If you would like to take part in this study, or for any further information please contact:

Lucy Devapal on 07792659266 or 0191 2228719

Appendix J

Phase 1 Consent Form

Participant Identification Number:

Participant Consent Form

Researcher: Lucy Devapal

Please initial box

1. I confirm that I have read and understand the information sheet dated.....(version.....) for the above study. ☐
2. I have had the opportunity to consider the information and ask any questions, and have had these answered satisfactorily. ☐
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐
4. I agree to allow the interview/group discussion to be audiotaped, and I understand that it will be transcribed word for word. ☐
5. I understand that my name will not be used in any manuscripts, reports or documents and that my identity will remain anonymous to everyone except the Chief Investigator (Lucy Devapal). My identity will be anonymised from the time of the interview and throughout the study. ☐
6. I agree to participate in this study ☐

Name of Participant

Date

Signature

Name of Person
Taking Consent

Date

Signature

Appendix K

Raw Data

2 Oral Health

Participant	2.1 Importance of Oral Health	2.2 Attitude towards Tooth Loss	2.3 Previous Dental Experience	2.4 Dental Attendance	2.5 Dentures	2.6 Attitudes towards General Health
P1	"I go on a regular basis um, every six months, and have done for as long as I can remember, you know, whenever we've lived I've always gone for six monthly check ups and tried to keep my teeth in reasonable shape" pg11m	"Does not like the thought of losing any of her natural teeth pg6b/71	"Always been a regular attendee, has always received NHS treatment, but has also paid for the occasional item of private treatment because it was not available on the NHS eg composite filling pg5. Feels the service she has received has always been good pg1m	"I go on a regular basis um, every six months, and have done for as long as I can remember, you know, whenever we've lived I've always gone for six monthly check ups and tried to keep my teeth in reasonable shape" pg11m. "I think exercise and loachache are two of the worst cases that anybody can have, so in order to avoid, you know, being in a situation where I'm going to be in pain, then I would rather have six monthly checks and make sure that everything is okay pg21	"Does not like the thought of having to wear dentures, has heard her mother's bad experiences of them eg foot getting stuck underneath them and hand of problems from others eg keeping them in place, altering food choices and cleaning them pg7	
P2	"Believes the appearance of teeth is more important to women pg20b. Feels she should see her dentist more regularly but has never got round to it and feels there has been no need pg1m - pg3b1	"Comment about possibility of losing her natural teeth 'I wouldn't be very happy, really but I am in my 70s now but then adds: So, you know, I think I'll probably hang onto them for the rest of my life pg10	"Was a regular attendee during childhood and until 6 years ago, has had a lot of restorative treatment 'I've got a mouth full of fillings' pg21. Had bad experience with a previous dentist when she was tipped too far back in dental chair and felt she couldn't breathe properly, thought the dentist had done this so he could work quicker pg221. Thought dentist used to do all the treatment he possibly could in order to make the most money pg12m		"Would not like to wear a denture, remembers her father having problems with his dentures eg ulcers and the dentures being ill fitting so he would have to leave them out pg11m	"On medication and is supposed to have yearly review with doctor, but this well overdue, commented 'I keep thinking, well, if there's nothing wrong with me why waste their time?' and feels the same about visiting the dentist pg311
P3	"When asked whether teeth are important, answered 'They are when they're aching' pg16m. Was important for his denture to be comfortable and to feel confident that it would not come out as he used to do a lot of public speaking pg20b		"Had accident age 12 and has worn a denture since the pg9b. Used mobile unit about 2 years ago, was happy with this service pg171, had restorative treatment there pg51. Saw another dentist at this time who advised an extraction, but when he returned to mobile unit dentist there said tooth could be restored P3 chose to have restoration pg3b.		"New denture since 12 years old, so used to it now. 'Yeah, doesn't bother me at all pg101. Was important for his denture to be comfortable and to feel confident that it would not come out as he used to do a lot of public speaking pg20b	"Has recently been attending cardiac clinic and cardiac rehabilitation gym organised through GP pg27m. GP has advised exercise and so he now sometimes gets off the bus a stop later and walks back or will take the stairs instead of the lift pg281. Sees GP yearly for review and sees nurse regularly for Warfarin check pg29b/301
P4	"Worries she will be left with no teeth at all if denture were to break pg51. Does not think she would be able to talk without dentures pg27b	"Had teeth removed gradually and dentures fitted. Was once having some posterior teeth removed and requested dentist also remove 2 upper anterior teeth in order to close an existing gap. P4 was happy with result. Never felt like she missed her natural teeth because as soon as they were removed immediate dentures were fitted pg6b/71.	"Was a regular attendee, visited GDC every 6 months because she was told to, commented 'I went on my own accord because they kept saying we should come for a check up every about every six months and I mean all he did was take the set out and just sort of went round with his fingers and said on yes, you're fine. And that's it pg1m.	"When talking about regular attendance and reasons for visiting dentist, 'If anything's going alright, normally would you?' 'I shouldn't think unless they've started something' pg4m. Would attend more regularly if she knew she 'not worry about visiting the dentist pg11.	"Worries about breaking her denture pg51. Always been pleased with her dentures and the fact that she was able to have immediate repairs. Can eat anything with her dentures pg22. Now that she has dentures she does not worry about visiting the dentist pg11.	"The difference between oral health care and general health care. 'You know what you've got coming if you go to the dentist but you don't know what the doctor might find' pg10m. Visits GP regularly pg10m
P5	"Want teeth to look nice, was unhappy with natural teeth, but dentures looked much better pg9b/101	"Was pleased to have own teeth removed and dentures fitted because she had never really like her own natural teeth 'Yeah I was, yeah, thought it was lovely. Yes. But if you could take them out and clean them and put them back in again' pg9b/101.	"Received first set of dentures 40-50 years ago pg9m. Present set fitted when she came out of hospital 4 yrs ago, and never seen dentist since then pg3b/41.	"Sees no reason for attending because she has dentures but 'I mean what would you go back for with false teeth?' pg21m.	"Very happy with present dentures 'they've been perfect pg91. Sometimes has sore spot under denture, and you think that's because I haven't been I suppose. You see you just put up with it don't you?' pg4b	"Has been seriously ill in the past, but now well recovered, but still uses GP services regularly pg10b.
P6	"I brush them few and far between like, you know pg51. Knows he should brush teeth more often, eg after meals pg51. Feels oral health care is part of general health care and states 'if you neglect your teeth for whatever reason you can get all sorts of problems in your mouth' pg7b	"Would not be upset if he had to have his remaining natural teeth removed. The only concern would be that eating may become more difficult pg16m	"Has no worries about receiving dental treatment pg101. Had upper denture fitted in the 1970s and is still wearing the same one pg2b	"Does not visit dentist regularly pg3b/41. Believes he would not be able to see an NHS dentist in BC, instead would need to travel to Dartington if he did need to see a dentist pg4m. Has no problems with teeth at present pg3m. Would only need to see a dentist if he had a problem pg1m.	"Had top denture since the 1970s and had very few problems with it since then pg3b. Has few problems eating with dentures pg4b, but his wife does have problems and often leaves her dentures out to eat pg21	"Considers himself generally fit and well, considering his age pg3m. Does not visit doctor very often, 'try tips to the doctors are few and far between' pg3b. Often walks into BC centre because 'I've got a thing about looking after your heart like and if it it benefits my health so be it' pg121.

2 Oral Health

As a child OH was not that important because: Was not too upset to lose natural teeth
her family could not afford toothpaste and brushes, only started cleaning teeth age 13
pg5 + pg71. Always attended dentist regularly until recently pg5b. Teeth obviously important to us. So in a way, no I don't think I minded as when P7 forgot to put lower denture in one. Yeah, well I had to accept it didn't? pg71
day and went out, was very embarrassed and could not attend her usual dancing club pg10.
Believes teeth are important visually and for eating pg25m. Believes oral health care is part of the general health care system. It's got to be honest, I? pg25m. See some people don't bother and I know they don't, cause they're terrified no one likes going. Do they? But I think prevention's better than cure. pg26m

Looked after her teeth from being old enough to understand the importance of this herself
pg26 + pg31. Previous dentist told her she said that the gums were not doing it needed to have me look out pg21. Then had remaining teeth removed at a time under LA and had dentures fitted, same set as she has now
pg23. Was very impressed with this treatment thinks it was because he was a surgeon pg24 + pg30. Remembers having fillings without LA, before it became routine pg7b/8r, and this led to bad experience with a dentist pg8r

Was regular attendee until 2 years ago but stopped receiving reminders/re-regulation and therefore did not attend pg35b/36r. Has recently returned to see dentist and has an appointment coming up, she would like new set of dentures. Attends in order to prevent future problems pg 26m

Present dentures about 25years old, but very worn and loose and food sometimes gets stuck underneath the lower pg4m. Suffers from ulcers unsure if this is due to dentures being ill fitting or just old age pg8m. Has to leave lower denture out at night sometimes because of ulcers, but always leaves upper one in pg10r. Has problems eating some foods eg bacon, lettuce pg11m. Social and dietary impact. I mean sometimes you can go out for a meal and the meat's tough so you just don't eat it pg12m

Makes sure she eats a healthy diet pg12. However, later comments 'I'm not healthy, I'm not a healthy. Ah no, no, I've got cancer' per pg13b. But still remains 'cheerful' and again expresses an acceptance of the situation. I didn't want me breast off, but I had to accept it. pg14m. Regularly attends GP surgery for checks on BP and meds and walks to surgery pg16. Tries to keep fit, walks wherever she can and goes dancing regularly pg16b. Believes prevention is better than cure and so always attends for screening appointments eg mammograms pg26b/27r

P7

Importance of teeth and OH shown by the fact. When asked if she would be upset to lose her remaining teeth and would rather keep her natural teeth answered: Well you would wouldn't you? I'm quite happy with what I've got at the moment pg17r

Regular dental attendee pg11, recently requested emergency home visit for broken tooth, but dentist refused pg11. Previously had all upper teeth removed due to pyorrhea and had upper immediate denture fitted. Thinks had this done with an injection pg2b. Has had 3 sets of dentures pg8r. Has lower partial denture and thinks dentist may have refused to come out because he thought it was a denture tooth that had broken, but it was a natural tooth pg15r + pg15b

P8 attends every six months. Ughm. So as long as it doesn't ache pg1b. Attends in order to avoid any problems and avoid needing any treatment. Cause I'm scared of the dentist, so I've always gone, so there's nothing very much the matter when I go? pg23m

Uses toilet soap to clean denture pg14. Has problems with dentures - cannot eat steak pg19b. Also had previous problems with a denture which caused her to mumble when she spoke pg10m

P8

As a child cannot remember having toothpaste, as could not afford it, looking after pg2m. Gingivitis and on it was terrible, that you should not be a priority for the family pg35b/36r. Importance of having teeth now is shown by the fact that if she did not have any but the dentist told us the says 'Well, you're gonna have trouble all the time, bleeding, you know with this bleeding and everything' pg5b. The only time they've been out was when I broke them eating this apple, just the top and I went back, then I stopped in the house and I didn't go to out. God with being young I didn't wanna look like Nanny Nee Teeth pg7m. Teeth important for appearance and speech when in hospital would not see any visitors until she had dentures in pg7b/8r

P9

Lost teeth in her 30s due to gum disease toothpaste, as could not afford it, looking after pg2m. Gingivitis and on it was terrible, that you should not be a priority for the family pg35b/36r. Importance of having teeth now is shown by the fact that if she did not have any but the dentist told us the says 'Well, you're gonna have trouble all the time, bleeding, you know with this bleeding and everything' pg5b. The only time they've been out was when I broke them eating this apple, just the top and I went back, then I stopped in the house and I didn't go to out. God with being young I didn't wanna look like Nanny Nee Teeth pg7m. Teeth important for appearance and speech when in hospital would not see any visitors until she had dentures in pg7b/8r

Had all dentures by her 30s, they've always been great and I've never had any other teeth since I've got them in, has only had them repaired once pg3r. Had extraction with gas and air, once when pregnant and dentist not happy with her for not telling him pg12m. Had all her teeth removed and immediate dentures placed. All out and air in pg10r

Has not had reason to return to dental apart from when denture needed a repair. And I've never been because I... well I haven't needed to go pg2m. Is happy with the teeth she has and so I just haven't, I haven't bothered you know pg7r.

Been happy with the set of dentures she has had since being in her 30s. Cleans dentures with denture cream pg3b. The only time they've been out was when I broke them eating this apple, just the top and I went back then, I stopped in the house and I didn't go to out. God with being young I didn't wanna look like Nanny Nee Teeth pg7m. 'Well I can't speak without. I can't speak properly, because I'm that, just used to them. So when I take them out and clean them, I can't speak. I just hope nobody rings us when I'm cleaning pg8r. I just take them out and clean them. On a morning or if I'm going anywhere or if I thought the breath was a bit smelly, and that's all pg4b. Can eat anything with dentures pg19b, but cannot bite no apples would cut them up instead pg13r.

P10

Had teeth removed 6 at a time, and at time of final extractions had dentures fitted pg10r. Had not liked visiting the dentist as a child pg10b and even as an adult was worried about extractions because she had heard bad stories from friends, but remembers the actual extractions being fine. It was marvelous pg71r. Once needed to have denture repaired and travelled to a clinic where this could be done whilst waiting pg13m. Has attended present dentist for adjustments of dentures because of ulcers pg14m. GP advised to have teeth removed because of diasternal and peptic ulcers pg16m

Does not see that there is a reason to attend the dentist if dentures are comfortable pg5b/7r. Has attended present dentist due to painful mouth ulcers and had adjustments of dentures pg14m.

Has suffered with painful mouth ulcers, thinks this could have been due to Stentent pg14r. Lower denture is very slack, dentist says there is nothing that can be done because the ridge has resorbed. Has tried using adhesive, but with no success pg18r. Can eat anything with dentures pg19b

2 Oral Health

P11

Had full dentures at age 20, then had to wait for provision of dentures, so had no teeth at all for several months. pg368t. Had full set of teeth removed due to pyorrhea pg10t. Remembers having teeth taken out at home in bed, with doctor and dentist present. pg11m. Has NHS dentist and is pleased with dentures. He provided pg27t.

Only wears upper denture, cannot wear lower because lower ridge resorbed pg13m + pg18. Cleans dentures every night using Stentodent pg14t. Has some problems eating with dentures eg cannot eat nuts pg18t. Manages without wearing lower denture pg20. Is pleased with the dentures she has (about 5 years old pg20b) pg27t. Denture broke once whilst on holiday in Canada, it was fixed with superglue which lasted until she got home, and then had a new set made pg34b.

P12

Remembers using salt to clean teeth when she was a child when no one could afford toothpaste pg36b/37t.

I lost mine, I had them out in '48, just after the National Health started. There was such a lot of people waiting for new dentures, I had to wait twelve months. pg9m. Now has home visits pg15t.

Finds that she remembers when taking it she is not wearing her dentures pg8t. Uses denture cream to clean dentures pg15b. Has difficulty eating caramel, they stick to the palate pg18b. Cannot bite into an apple, cuts them up instead pg20t.

P13

Had good teeth, but had them all removed to prevent future problems. I was frightened in case it would bother me having had my daughter and I got them out like. But they weren't bad or anything. I've had good teeth and added. But there must have been something wrong with my gums like when they took them out like pg16t.

We used to go, oh once a month. And I had lovely teeth. But then I think I got pyorrhea in the gum. pg37m. P13 then had all teeth removed and dentures fitted pg16. Free treatment was provided at the local dental hospital, when P13 moved away from the area she no longer attended regularly pg37m.

I used to go regular, cause it didn't cost me anything pg36t.

P14

At different points in the interview expresses different levels for the priority given to teeth and OH at different times in her life, for example, suggests she would be embarrassed to be seen in BC without any dentures in pg10b, but when she was younger wasn't gonna keep going back. pg8t and had just had teeth removed and was willing to have dentures provided she commented 'no wasn't bothered, you know I thought 'well I've no teeth and that's there is' and I couldn't take a month off work, just cause I'd no teeth in pg9t. Working and looking after her family was her main priority pg1t.

Had teeth removed gradually and dentures fitted, when the last of her teeth were removed she was not upset about it. No it never bothered me honey. No. But I mean I was starting to have toothache and I mean I wasn't gonna keep going back. pg8t

Had bad experiences as a child, remembers being sent on her own to have an extraction (pg30) and seeing a dentist in someone's front room and comments frequently that the dentist so bad she could not cope with it, then would 'bothered' her pg1b, pg2b, pg4t. Description of how receiving dental treatment was as a child pg1, pg10-11. Was a service that provided extractions only. 'Oh I never had a filling, no there was may fillings in them days' pg2b/3t. Did not like the injections pg4b when older. 'I'd always gone and had gas. I never sat. Cause I was frightened' pg4b.

Has only ever attended with a dental problem. 'I've never had a check up all of my life' (pg30). Would have toothache until pain was so bad she could not cope with it, then would have to attend pg3t. 'I've never been to see them since I got my teeth off them. So I mean it could be getting on to twenty years' pg2b/3t. 'Honey' and was only returning to have dentures changed for 50th birthday party pg20. Has no intention of returning to dental now. 'I won't be going again until the years time when I'm ninety-five and I want them cleaning again.' pg20m.

Worn full dentures for about 40 years and only had 2 sets in that time pg1m. Wears dentures all the time, only takes them out to clean them pg15. Presen set of dentures 20 years old pg20 and has never had any problems with dentures, except cannot bite into apples pg14m.

Commented about visiting the GP 'well there's nothing wrong with me but has appointments to review her medication pg35b. Has had hip replacement pg35b. Takes fish oil and vitamin tablets pg35b. Still plays badminton once a week. 'I don't play as much as I did, maybe only have a couple of games, one before the break and one after, it just depends how many's there, if there's not that many there I might have more' pg37b/38t.

P15

Some level of importance shown because P15 brushes teeth twice a day pg15m and even though does not attend dentist regularly commented that she should pg13m.

Remembers childhood experiences of seeing dentist in someone's home pg10b. 'Well it was just a matter when we were young, you went in, you sat in the chair, they got on with the job and that was it. They didn't make you feel at home.' pg27b. Remembers school dentist and having teeth removed at school pg17b. Had bad experience with a previous dentist, when the sedation had not worked properly pg12t. Then found a dentist she liked and had restorative treatment with him under sedation and now still has most of her natural teeth and a partial denture pg13t. Is pleased with treatment she has received, except for one which she does not like the appearance of and believes that one should have been crowned pg14t.

Has partial denture, sleeps with denture in, but cleans teeth twice a day pg14b/15t.

Thinks oral health care is part of general health care pg27t. Commented 'I never liked going to the doctors but I do now' pg27t. When talking about visiting her doctor 'I just go when I have to go' pg35m.

2 Oral Health

Importance of OH influenced by carer. The thing that you, you stick with Maurice is, it's, it's where you draw the line. One of the dentists said to me can't you clean his teeth for him? And I said no, you know, he's 65 now and you've got to let him get on and do something. We've got him an electric toothbrush to try and help. But erm, he doesn't clean his teeth properly really. But I won't cross that line of taking his toothbrush off him and saying oh here, give it to me and I'll do it. I don't know why, but there's some things I won't do and I let him get on pg10

Repeated, but I am a bit concerned now because they're not getting cleaned properly. And it just seems a bit, I don't know, if I get his toothbrush and I say, oh here I'll clean them! and... it was easier if he got them descaled. I will have to get in touch with the van and I will have to take him back. pg10L

Wife believes OH Care is important for P16. Yes, it's an integral part of keeping him trying to chew and right because of the stroke. pg15b, but for herself it is not such a priority. It's a long way down my list. I need my knee done long before I need my teeth. pg20L

Since P16 cannot chew as well now they have had to make changes to their diet pg22m

P16

Attends dentists regularly pg3m. I've always looked after my teeth, always go to the dentist. pg4L Husband edentulous but also visits regularly for check-ups pg4m. Believes dental care is very much part of health care because it can affect your whole health. pg6L

* pg13L: I like my own teeth and I like them. I'm proud of keeping my own teeth. pg5b. Also must believe OH important as comments. I mean I bought my children up to go. I mean they all went and they go actually pg10L

P17

Believes she would get used to wearing a denture if she had to, but would prefer to keep her own teeth. Compares herself to husband can eat toffees, he can't [laughter]. And I can bite an apple. pg7m

Well I'm fortunate I have got all my own teeth because I've always, partly because I don't like pain so I go to the dentist regularly. pg1m. Attendance influenced by relationship with dentist, attended once practice in BC regularly, but when their dentist left they had a poor experience with new dentist and so did not return there pg1b/2L. Now visits mobile unit every year pg3m.

Husband has dentures, after having numerous problems with his natural teeth he eventually had them all removed and wished he had had it done sooner. pg4/5 Comment: I can eat toffees, he can't [laughter]. And I can bite an apple. pg7m

If people don't look after their teeth their general health will suffer. pg13L

Wife believes P16 would not be able to cope with dentures, but is hoping they will not be necessary because he has strong teeth pg21L. Before stroke P1 attended dentist in BC, now this is difficult due to slips. Has had box of tricks to the house. And he said because he's so sensitive I'm going to inject him. And he just did a quarter and they were beautiful. But you need that level of, of intensity and care. pg3b + pg2L. Then had some treatment on the mobile unit. So there is still, thank god, a dental van that comes to Middleton and I have had him on there, and, bless her, she did say if I went every six months she would try and get descale his teeth but because they're so sensitive he starts squealing like a little stuck pig to be honest when he's on the right side. And they've only got those 15 minute appointments, you see, so it's all quite rushed and you can't rush him, you've seen it in the wheelchair. pg2b

So therefore what the needs is constant descaling really and cleaning. pg1b/2L

Does not see doctor that often, has meds on repeat prescription and sees physiotherapist regularly pg22b. Physio visits home and P16 goes to Richardson for treatment as well pg23L. Because of difficulties chewing now they have had to change diet to softer foods and minced foods pg22L

2 Oral Health

P18 Fell she used to have good teeth, but thinks she did not take good care of them pg11 + pg20. Comments that when she was having her teeth removed she could not have gone without any teeth. And then I was working at the Glaxo and there was no way I was gonna go without my teeth with the workers there at Glaxo! pg17. She expressed feelings of shame that her teeth did not have a good appearance due to gum disease. And I had a lot of teeth, quite a good few teeth like but they were, the gums were getting a big and the gums were receding and making them look long in the tooth. So were they giving you problems at the time of? IV. Ee I don't really remember that they were you know, I think it was pride. pg21. I was quite happy to think I had some teeth cause working in a factory I wasn't gonna go without any pg2b. Teeth important for eating pg6l. Shows some regret that she may have rushed the decision to have all her teeth removed pg7l. Appearance of teeth important, show by the way she comments on a neighbour who has bad teeth pg16l. When she was working her teeth were not really her highest priority. - I shouldn't have done really. it's sad to think about it, but when you're working you've got everything pg3l.	Was relieved that she had dentures immediately following the removal of her natural teeth pg2b. She made a quick decision to have her natural teeth removed and regrets that she may have rushed into it pg3b. I'd have waited and had it properly examined maybe, but then again if you gums are growing you can't, you have to give in (people with all these teeth hanging down, they're horrible pg7l).	When she noticed that her gums were receding she decided to have them all removed and have dentures. Went to a dentist who she only saw for that one course of treatment. She felt that dentists did not really bother about treating gum disease then pg3b. For my gums were started to go a little bit, but the dentist didn't bother a lot really, no like they do nowadays pg17. Never a regular attendee, only visited a dentist if she needed a tooth out or a filling pg3b. Went to the dentist if she had toothache, but felt there was no alternative pg3b.	When younger attended only if she had a problem eg toothache pg3b. Then later in life attended because she did not like the appearance of her receding gums. I think it was pride. That I was getting long in the tooth! pg2. Never had regular check ups, but her husband does (who is a dentist) P18 feels it's worth it for him because the dentist might detect something pg6l. She did return with a problem with her dentures when they were sore, but felt the charge for this adjustment was quite high pg3m. Would only go now if she felt she needed a new set of dentures pg4m. Fell she has never really had any need to visit the dentist! No, no. Only pride pg5b.	Was happy with her dentures pg2. Can eat anything pg6l.	As long as she can eat without problems she is happy. Well I think if you can eat anything, if you don't eat properly, it affects your health doesn't it? pg6l. Does not see GP often, the last couple of years have been because she has had problems pg8m. Thinks gaining to much weight is a problem and so likes to keep slim pg8m.
P19 When asked whether the health of his teeth was important to him he answered 'Yes. Why if they start decaying you get poison off them I suppose' pg2b. Uses an electric brush to help overcome problems with lack of vision, finds this is better than a manual pg6b10l. OH must be of some importance as has been a regular attendee for past 20 years (pg17) and overcomes barriers of transport etc to get to appointments.		Remembers experiences from early adulthood of seeing a dentist. They had the room. And he just sat you down in a chair and you went back until you couldn't get back any further and then he started work. It was creepy pg6l. Took his children with him, but fortunately this experience has not deterred them from attending now pg7l.	Regular attendee in mobile unit, overcomes several barriers eg transport, lack of vision and need for escort in order to attend.		See doctor only when necessary.
P20 When asked whether the health of his teeth was important to her she answered 'I think you have to look after them haven't you really, I mean if you don't want tooth ache and that sort of thing. You know' pg7b. OH must be of some importance as has always been a regular attendee and overcomes barriers of transport etc to get to appointments.		Always been a regular attendee, was disappointed with a recent course of treatment at her dentist and then changed to mobile unit as husband was already going there and needs her to go with him anyway pg14.	Regular attendee in mobile unit, overcomes several barriers eg transport and poor mobility pg14.		See doctor only when necessary.

Appendix L

Phase 2 Participant Information Sheet: GPs



Dentistry in the Dale

Participant Information Sheet

I would like to invite you to take part in our research study. To help you decide here is some information about why the study is being carried out and what it would involve if you agree to participate.

The Purpose of the Study

The UK population is growing older. Over the last 25 years the population aged 65 and over has increased by 1.5 million. In this period the oral health of older people has improved resulting in older people retaining some of their natural teeth. In many cases the teeth which are being retained are heavily restored and require regular routine maintenance. In the past many older people have been edentulous (no remaining natural teeth) and it has been relatively simple to provide denture services on a domiciliary basis. However, providing maintenance for natural teeth involves hard tissue dental surgery and only limited care of this kind can be provided on a domiciliary basis, without extensive equipment.

The study area of Teesdale was chosen because it has a large population of over 65s, spread across many small rural communities and there are few dental services within the area.

Providing dental care for older people, especially for those with retained natural teeth, in a rural area is challenging for dentists and for those commissioning the service.

The Aim

This study aims to improve oral health services for people aged 65 and over by developing new and innovative ways of providing dental services for this group.

This study is also part of my PhD. The first part of the research project, which is now complete, explored the oral health beliefs and attitudes of people aged 65 and over and it also looked at the barriers they face when accessing dental services in Teesdale.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Expenses

You will receive £50 of high street shopping vouchers for taking part in 2 interviews or small group discussions; you will receive the vouchers at the end of the second interview/group discussion. If you only attend one interview/group discussion then you will receive a £25 voucher.

If necessary you will also be able to claim travel expenses to and from the venue, this will be paid at a rate of £0.30 per mile.

Taking Part

As a General Practitioner working in this area you may be interested in taking part in this study. Taking part involves being a participant in 2 interviews or small group discussions, others working in a similar field to yourself, including other doctors, dentists, district nurses and PCT Staff (dental decision makers/commissioners/finance/public health) are also being invited to take part.

Participation is entirely voluntary, if you do agree to take part you will be asked to sign a consent form to ensure you fully understand all aspects of the study. You will be given a copy of the consent form and this Participant Information Sheet for your records.

You are free to leave the study at any time, without giving a reason. If you do withdraw from the study during or after taking part in an interview/group discussion the information you have given up to the point of leaving the study will still be used.

If you were to lose the mental capacity to give consent during the course of the study, the information you have given up until that point will still be used.

Interviews and Small group discussions

I will aim to hold the interviews or small group discussions at times and locations convenient to you. If there are other health professionals working nearby who are also taking part then I may ask them to attend also, this would be a small group discussion. If there is no-one else available then it would be a one-to-one interview.

Ideally you will attend for 2 interviews/group discussions each one lasting around 1 hour. With your permission all interviews/group discussions will be digitally audio-recorded.

During the interview or group discussion you will be presented with various methods of delivering oral health care services for older people, not only provided by dentists but involving other health care professionals and using settings other than a dental surgery, for example, GP surgeries or Village Halls. You will then have the opportunity to comment on the proposed models for dental service delivery, to discuss their advantages and disadvantages and to express how you feel about having other health care professionals involved in the delivery of oral health care services. You may also have some ideas of your own you would like to put forward.

Confidentiality

We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be stored securely at the university and it will only be discussed with the research team who are:

- Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.
- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recordings will be held securely on the University server which is password and username protected and can only be accessed by the Principal Investigator. At the end of the PhD programme all recordings will be destroyed securely. The manuscripts and other paperwork, such as any correspondence and consent forms, will be stored securely at Newcastle University until completion of the PhD study and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences. Direct quotations from the audio recordings will be used in the thesis, other publications and presentations which arise from this study. However, your name will not appear in any written document or verbal presentation.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of
Newcastle upon Tyne

Tel: 0191 2228719

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact:

Richard Errington
Research Governance Lead County Durham & Tees Valley PCTs
0191 3744211

All research in the NHS is assessed by a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. The aim is to improve access to NHS dental services in your area for the over 65s. Telling us your experiences and voicing your concerns will help us to design a service which is acceptable to all local health and social care providers.

If you would like to take part in this study, or for any further information please contact Lucy Devapal on 0191 2228719

Appendix M

Phase 2 Participant Information Sheet: Dentists



Dentistry in the Dale

Participant Information Sheet

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The Purpose of the Study

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As a dentist working in this area you may be interested in taking part in this study. Taking part involves being a participant for 2 interviews or small group discussions. Others working in a similar field to yourself, including other dentists, general medical practitioners, district nurses and PCT Staff (dental decision makers/commissioners/finance/public health) are also being invited to take part.

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If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of
Newcastle upon Tyne

Tel: 0191 2228719

Email: lucy.devapal@ncl.ac.uk

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact:

Richard Errington

Research Governance Lead County Durham & Tees Valley PCTs

0191 3744211

All research in the NHS is assessed by a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. The aim is to improve access to NHS dental services in your area for the over 65s. Telling us your experiences and voicing your concerns will help us to design a service which is acceptable to all local health and social care providers.

If you would like to take part in this study, or for any further information please contact Lucy Devapal on 0191 2228719 or lucy.devapal@ncl.ac.uk

Appendix N

Phase 2 Participant Information Sheet: District Nurses



Dentistry in the Dale

Participant Information Sheet

I would like to invite you to take part in our research study. To help you decide here is some information about why the study is being carried out and what it would involve if you agree to participate.

The Purpose of the Study

The UK population is growing older. Over the last 25 years the population aged 65 and over has increased by 1.5 million. In this period the oral health of older people has improved resulting in older people retaining some of their natural teeth. In many cases the teeth which are being retained are heavily restored and require regular routine maintenance. In the past many older people have been edentulous (no remaining natural teeth) and it has been relatively simple to provide denture services on a domiciliary basis. However, providing maintenance for natural teeth involves hard tissue dental surgery and only limited care of this kind can be provided on a domiciliary basis, without extensive equipment.

The study area of Teesdale was chosen because it has a large population of over 65s, spread across many small rural communities and there are few dental services within the area.

Providing dental care for older people, especially for those with retained natural teeth, in a rural area is challenging for dentists and for those commissioning the service.

The Aim

This study aims to improve oral health services for people aged 65 and over by developing new and innovative ways of providing dental services for this group.

This study is also part of my PhD. The first part of the research project, which is now complete, explored the oral health beliefs and attitudes of people aged 65 and over and it also looked at the barriers they face when accessing dental services in Teesdale.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Expenses

You will receive £50 of high street shopping vouchers for taking part in 2 interviews or small group discussions; you will receive the vouchers at the end of the second interview/group discussion. If you only attend one interview/group discussion then you will receive a £25 voucher.

You will also be able to claim travel expenses to and from the venue, this will be paid at a rate of £0.30 per mile.

Taking Part

As a District Nurse or other health professional providing services for older people, perhaps on domiciliary basis, you may be interested in taking part in this study. Taking part involves being a participant for 2 interviews or small group discussions, others working in a similar field to yourself, including doctors, dentists, other district nurses and PCT Staff (dental decision makers/commissioners/finance/public health) are also being invited to take part.

Participation is entirely voluntary, if you do agree to take part you will be asked to sign a consent form to ensure you fully understand all aspects of the study. You will be given a copy of the consent form and this Participant Information Sheet for your records.

You are free to leave the study at any time, without giving a reason. If you do withdraw from the study during or after taking part in an interview/group discussion the information you have given up to the point of leaving the study will still be used.

If you were to lose the mental capacity to give consent during the course of the study, the information you have given up until that point will still be used.

Interviews and Small group discussions

I will aim to hold the interviews or small group discussions at times and locations convenient to you. If there are other health professionals working nearby who are also taking part then I may ask them to attend also, this would be a small group discussion. If there is no-one else available then it would be a one-to-one interview.

Ideally you will attend for 2 interviews/group discussions each one lasting around 1 hour. With your permission all interviews/group discussions will be digitally audio-recorded.

During the interview or group discussion you will be presented with various methods of delivering oral health care services for older people, not only provided by dentists but involving other health care professionals and using settings other than a dental surgery, for example, GP surgeries or Village Halls. You will then have the opportunity to comment on the proposed models for dental service delivery, to discuss their advantages and disadvantages and to express how you feel about having other health care professionals involved in the delivery of oral health care services. You may also have some ideas of your own you would like to put forward.

Confidentiality

We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be stored securely at the university and it will only be discussed with the research team who are:

- Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.
- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recordings will be held securely on the University server which is password and username protected and can only be accessed by the Principal Investigator. At the end of the PhD programme all recordings will be destroyed securely. The manuscripts and other paperwork, such as any correspondence and consent forms, will be stored securely at Newcastle University until completion of the PhD study and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences. Direct quotations from the audio recordings will be used in the thesis, other publications and presentations which arise from this study. However, your name will not appear in any written document or verbal presentation.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of
Newcastle upon Tyne

Tel: 0191 2228719

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact:

Richard Errington
Research Governance Lead County Durham & Tees Valley PCTs
0191 3744211

All research in the NHS is assessed by a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. The aim is to improve access to NHS dental services in your area for the over 65s. Telling us your experiences and voicing your concerns will help us to design a service which is acceptable to all local health and social care providers.

If you would like to take part in this study, or for any further information please contact Lucy Devapal on 0191 2228719

Appendix O

Phase 2 Participant Information Sheet: PCT Staff



Dentistry in the Dale

Participant Information Sheet

I would like to invite you to take part in our research study. To help you decide here is some information about why the study is being carried out and what it would involve if you agree to participate.

The Purpose of the Study

The UK population is growing older. Over the last 25 years the population aged 65 and over has increased by 1.5 million. In this period the oral health of older people has improved resulting in older people retaining some of their natural teeth. In many cases the teeth which are being retained are heavily restored and require regular routine maintenance. In the past many older people have had no remaining natural teeth and it has been relatively simple for dentists to provide denture services for older people in their own homes, known as a domiciliary service. However, providing maintenance for natural teeth involves using extensive dental equipment and only limited care of this kind can be provided in peoples' homes.

The study area of Teesdale was chosen because it has a large population of over 65s, spread across many small rural communities and there are few dental services within the area.

Providing dental care for older people, especially for those with retained natural teeth, in a rural area is challenging for dentists and for those commissioning the service.

The Aim

This study aims to improve oral health services for people aged 65 and over by developing new and innovative ways of providing dental services for this group.

This study is also part of my PhD. The first part of the research project, which is now complete, explored the oral health beliefs and attitudes of people aged 65 and over and it also looked at the barriers they face when accessing dental services in Teesdale.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Expenses

You will receive £50 of high street shopping vouchers for taking part in 2 interviews or small group discussions; you will receive the vouchers at the end of the second interview/group discussion. If you only attend one interview/group discussion then you will receive a £25 voucher.

You will also be able to claim travel expenses to and from the venue, this will be paid at a rate of £0.30 per mile.

Taking Part

As a member of County Durham PCT Staff working in this area you may be interested in taking part in this study. Taking part involves being a participant for 2 interviews or small group discussions, others working in a similar field to yourself and also local dentists, general medical practitioners and nurses are also being invited to take part.

Participation is entirely voluntary, if you do agree to take part you will be asked to sign a consent form to ensure you fully understand all aspects of the study. You will be given a copy of the consent form and this Participant Information Sheet for your records.

You are free to leave the study at any time, without giving a reason. If you do withdraw from the study during or after taking part in an interview/group discussion the information you have given up to the point of leaving the study will still be used.

If you were to lose the mental capacity to give consent during the course of the study, the information you have given up until that point will still be used.

Interviews and Small group discussions

I will aim to hold the interviews or small group discussions at times and locations convenient to you. If there are other health professionals working nearby who are also taking part then I may ask them to attend also, this would be a small group discussion. If there is no-one else available then it would be a one-to-one interview.

Ideally you will attend for 2 interviews/group discussions each one lasting around 1 hour. With your permission all interviews/group discussions will be digitally audio-recorded.

During the interview or group discussion you will be presented with various methods of delivering oral health care services for older people, not only provided by dentists but involving other health care professionals and using settings other than a dental surgery, for example, GP surgeries or Village Halls. You will then have the opportunity to comment on the proposed models for dental service delivery, to discuss their advantages and disadvantages and to express how you feel about having other health care professionals involved in the delivery of oral health care services. You may also have some ideas of your own you would like to put forward.

Confidentiality

We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be stored securely at the university and it will only be discussed with the research team who are:

- Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.
- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recordings will be held securely on the University server which is password and username protected and can only be accessed by the Principal Investigator. At the end of the PhD programme all recordings will be destroyed securely. The manuscripts and other paperwork, such as any correspondence and consent forms, will be stored securely at Newcastle University until completion of the PhD study and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences. Direct quotations from the audio recordings will be used in the thesis, other publications and presentations which arise from this study. However, your name will not appear in any written document or verbal presentation.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of
Newcastle upon Tyne
Tel: 0191 2228719
Email: lucy.devapal@ncl.ac.uk

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact:

Richard Errington
Research Governance Lead County Durham & Tees Valley PCTs
0191 3744211

All research in the NHS is assessed by a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. The aim is to improve access to NHS dental services in your area for the over 65s. Telling us your experiences and voicing your concerns will help us to design a service which is acceptable to all local health and social care providers.

If you would like to take part in this study, or for any further information please contact Lucy Devapal on 0191 2228719 or lucy.devapal@ncl.ac.uk

Appendix P

Phase 2 Participant Information Sheet: Over 65s



Dentistry in the Dale

Participant Information Sheet

I would like to invite you to take part in our research study. To help you decide here is some information about why the study is being carried out and what it would involve if you agree to participate.

The Purpose of the Study

The UK population is growing older. Over the last 25 years the population aged 65 and over has increased by 1.5 million. In this period the oral health of older people has improved resulting in older people retaining some of their natural teeth. In many cases the teeth which are being retained are heavily restored and require regular routine maintenance. In the past many older people have had no remaining natural teeth and it has been relatively simple for dentists to provide denture services for older people in their own homes, known as a domiciliary service. However, providing maintenance for natural teeth involves using extensive dental equipment and only limited care of this kind can be provided in peoples' homes.

The study area of Teesdale was chosen because it has a large population of over 65s, spread across many small rural communities and there are few dental services within the area.

Providing dental care for older people, especially for those with retained natural teeth, in a rural area is challenging for dentists and for those commissioning the service.

The Aim

This study aims to improve oral health services for people aged 65 and over by developing new and innovative ways of providing dental services for this group.

This study is also part of my PhD. The first part of the research project, which is now complete, explored the oral health beliefs and attitudes of people aged 65 and over and it also looked at the barriers they face when accessing dental services in Teesdale.

Funding

The funding for this project has come from the Richardson Trust and will be used to benefit oral health services in Teesdale.

Expenses

Lunch/refreshments will be provided and as a token of appreciation you will receive a £50 high street shopping voucher for attending 2 focus groups. If you only attend 1 focus group then you will receive a £25 voucher.

Travel expenses will also be paid at a rate of £0.30 per mile for private car use, public transport and taxi fares will be paid in full on production of tickets/receipts.

Taking Part

As an older person living in Teesdale you may be interested in taking part in this study. Taking part involves being a participant in 2 group discussions along with other older residents of Teesdale.

Participation is entirely voluntary, if you do agree to take part you will be asked to sign a consent form to ensure you fully understand all aspects of the study. You will be given a copy of the consent form and this Participant Information Sheet to keep.

You are free to leave the study at any time, without giving a reason. If you do withdraw from the study during or after taking part in a group discussion, the information you have given up to the point of leaving the study will still be used.

If you were to lose the mental capacity to give consent during the course of the study, the information you have given up until that point will still be used.

Group Discussions

I will aim to hold the focus groups at times and locations convenient to all those taking part. Ideally you will attend for a total of 2 group discussions each one lasting up to 1½ hours. With your permission all group discussions will be digitally audio-recorded.

At the group discussions you will be presented with some new ways we think dental services may be able to be provided, these may involve not only dentists but possibly other health care professionals, for example doctors, and they will involve using other sites rather than just dental surgeries, for example Village Halls.

You will then have the opportunity to comment on the proposed ideas for dental service delivery and whether you might use that kind of service in the future and you may have some ideas of your own to share with us.

Confidentiality

We will follow legal and ethical practice and all the information you give will be handled in confidence. Your name will not appear in the report or in any publications arising from the study. All information will be

stored securely at the university and it will only be discussed with the research team who are:

- Lucy Devapal – Clinical Research Associate – Newcastle University
- Professor Angus Walls – Professor of Restorative Dentistry – Newcastle University.
- Professor Jimmy Steele – Professor of Oral Health Services Research – Newcastle University
- Dr Katie Brittain – Lecturer in Social Gerontology – Newcastle University

The digital recordings will be held securely on the University server which is password and username protected and can only be accessed by the Principal Investigator. At the end of the PhD programme all recordings will be destroyed securely. The manuscripts and other paperwork, such as any correspondence and consent forms, will be stored securely at Newcastle University until completion of the PhD study and then these too will be disposed of securely.

Results

The results of this study will be used in a written thesis for my PhD. The findings may also be published in scientific journals and presented at conferences. Direct quotations from the audio recordings will be used in the thesis, other publications and presentations which arise from this study. However, your name will not appear in any written document or verbal presentation.

If you do take part you will be sent a newsletter to inform you of the findings and outcomes.

Queries and Questions

If you have a concern about any aspect of this study, you can speak to the main researcher:

Lucy Devapal, Clinical Research Associate, School of Dental Sciences, University of Newcastle upon Tyne

Tel: 0191 2228719

If you are unhappy about the study and would prefer to speak to someone other than the researcher please contact:

Richard Errington

Research Governance Lead County Durham & Tees Valley PCTs

0191 3744211

All research in the NHS is assessed by a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion County Durham and Tees Valley Research Ethics Committee.

Who will benefit from this study?

We would like to hear your views, they are important to us. The aim is to improve access to NHS dental services in your area for the over 65s. Telling us your experiences, voicing your concerns and sharing your

opinions and ideas will help us to design a dental service which is acceptable to all.

If you would like to take part in this study, or for any further information please contact Lucy Devapal on 0191 2228719

Appendix Q

Phase 2 Consent Form 65+



Participant Identification Number:

Participant Consent Form: Dentistry in the Dale

Researcher: Lucy Devapal

Please initial box

1. I confirm that I have read and understand the information sheet dated.....(version.....) for the above study. ☐
2. I have had the opportunity to consider the information and ask any questions, and have had these answered satisfactorily. ☐
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and the information I have given up to the point of leaving the study will still be used. ☐
4. I agree to allow the group discussions to be audiotaped, and I understand that it will be transcribed word for word. ☐
5. I understand that my name will not be used in any manuscripts, reports or documents and that my identity will remain anonymous to everyone except the Chief Investigator (Lucy Devapal) and a second researcher, who will be present at the focus groups. My identity will be anonymised from the time of the group discussion and throughout the study. ☐
6. I agree that anonymous, direct quotes may be used in written documents, oral presentations, publications and the researcher's PhD thesis. I understand that my name will not appear in any written documentation or oral presentation. ☐
7. I understand that the data will be securely stored by the researcher (Lucy Devapal) and that my identity and involvement will remain confidential. ☐
8. I agree to give my doctor's contact details in order to inform them that I am taking part in this study. ☐
9. I understand that should I lose mental capacity to give consent during the course of the study that the information I have already given up to that point will still be used, but that from that point onwards I will be withdrawn from the study. ☐

Please turn over 318

10. I agree to take part in this study

☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

Appendix R

Phase 2 consent form – health professionals

Participant Identification Number:

Participant Consent Form: Dentistry in the Dale

Researcher: Lucy Devapal

Please initial box

1. I confirm that I have read and understand the information sheet dated.....(version.....) for the above study. ☐
2. I have had the opportunity to consider the information and ask any questions, and have had these answered satisfactorily. ☐
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and the information I have given up to the point of leaving the study will still be used. ☐
4. I agree to allow the interviews, small group discussions and focus groups to be audiotaped, and I understand that it will be transcribed word for word. ☐
5. I understand that my name will not be used in any manuscripts, reports or documents and that my identity will remain anonymous to everyone except the Chief Investigator (Lucy Devapal). My identity will be anonymised from the time of the group discussion and throughout the study. ☐
6. I agree that anonymous, direct quotes may be used in written documents, oral presentations, publications and the researcher's PhD thesis. I understand that my name will not appear in any written documentation or oral presentation. ☐
7. I understand that the data will be securely stored by the researcher (Lucy Devapal) and that my identity and involvement will remain confidential. ☐
8. I understand that should I lose mental capacity to give consent during the course of the study, that information I have already given up to that point will still be used in the research. ☐
9. I agree to take part in the above study. ☐

Please turn over321

Name of Participant	Date	Signature
Name of Person taking Consent	Date	Signature

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