



Public Health  
England

Protecting and improving the nation's health

# **National Dental Epidemiology Programme for England: oral health survey of mildly dependent older people, 2016**

A report on the oral health and dental  
service use of older people living in  
supported housing

Version 2

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Public Health England

Wellington House

133-155 Waterloo Road

London SE1 8UG

Tel: 020 7654 8000

[www.gov.uk/phe](http://www.gov.uk/phe)

Twitter: [@PHE\\_uk](https://twitter.com/PHE_uk)

Facebook: [www.facebook.com/PublicHealthEngland](https://www.facebook.com/PublicHealthEngland)

Prepared by: Dental Public Health Intelligence Team.

For queries relating to this document, contact: [DentalPHIntelligence@phe.gov.uk](mailto:DentalPHIntelligence@phe.gov.uk)



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## Executive summary

The summarised results in this report are from the National Dental Epidemiology Programme (NDEP) for England, pilot oral health survey of mildly dependent older people (MDOP), 2015/16. Estimates at national, regional, Public Health England (PHE) centre and, where possible, upper-tier local authority (LA) levels are given.

This was the first oral health survey of this population group and the method was implemented as a pilot. There is, therefore, no directly comparable data to use which could help to show trends. Information from the England data subset of the 2009 Adult Dental Health Survey (ADHS) has been used to give broad comparators and there is general consistency in the findings across the two surveys. The key findings are:

- 9% of participants reported having oral pain on the day of the examination, while 8% were found to have an open pulp, ulceration, fistula or an abscess
- 7% reported having oral pain or discomfort often or very often in the previous year
- 9% reported having discomfort when eating often or very often
- 27% had none of their own teeth and 1.2% had no natural teeth and no artificial replacements
- 42% had a functional dentition as they had 21 or more of their own teeth
- 3.2% of participants were considered to be in urgent need for dental care
- 5.1% needed dental care provided in their home
- 59% were able to attend a general dental practice with no restrictions
- 35% could only receive dental treatment in a downstairs surgery or one accessed by a lift

Poorer oral health tended to be found among participants who were older and those who reported an increased length of time since the last dental visit, being restricted in their ability to attend a dental practice, or being in receipt of various services in their home. Those with a reduced cognitive recall and those with a lower level of education also tended to have worse oral health.

Some measures of oral health were found to be worse in the youngest age group. It is hypothesised that this is related to the circumstances surrounding admission to supported housing which may have changed over time. Thus, people who are now moving into this type of accommodation are more likely to have poorer general health, and other social factors that impact on oral health, than was the case for cohorts of older people who chose supported housing in the past.

The results reveal wide variation at regional and local authority level. Those reporting current pain in their mouths ranged from 4.7% in the South West to 14.5% in London. At

upper-tier local authority level this ranged from 0.0% in 5 areas including Wiltshire, South West to 42.9% in Camden, London. In the North East, 2.4% reported not seeing a dentist in the last two years because they couldn't find one, a figure which increased to 10.3% in the North West. The proportion of people reporting not seeing a dentist in the last two years because they could not afford NHS charges ranged from 4.9% in the West Midlands to 11.2% in the South East.

The areas with poorer oral health tended to be in the more deprived local authority areas. In Haringey and Gloucestershire 0.0% of volunteers were edentulous, compared to 71.8% in Staffordshire. The proportion needing urgent treatment varied from 0.0% in 35 local authority areas to 12.9% in Salford and Brighton and Hove.

Summary results can be found in Appendix 1 of this report. Full tables of results are available at: [www.nwph.net/dentalhealth/](http://www.nwph.net/dentalhealth/)

Local authorities have had responsibility for improving health and reducing inequalities, including oral health, since April 2013.<sup>1,2</sup> This pilot survey is aimed to support this function regarding an important population group. The resulting information provides baseline data. This may be used in joint strategic needs assessments and oral health needs assessments to plan and commission oral health improvement interventions and services for this group.

## Introduction

As part of Public Health England's National Dental Epidemiology Programme, standard examinations and questionnaires of a random sample of older people (aged 65 and above) living in supported housing were undertaken in the year September 2015 to August 2016. This was the first national pilot survey of this age group, developed in response to the lack of information about older people who live in the community but have chosen supported housing for a variety of reasons. This group of older people have particular health and social care needs.

Older people are forming a larger proportion of our population, so there is a clear need to investigate the oral health needs of this group. Several local surveys have been undertaken to determine the oral health status and service use of adults living in nursing or residential homes<sup>3</sup>, but a far greater number live in the community, either in ordinary housing or, for those with an increased level of dependency, in groups of residential units with some degree of support.

The 2009 Adult Dental Health Survey showed an increase in the proportion of older people retaining many of their natural teeth.<sup>4</sup> More complex clinical care is likely to be needed for these people due to many having heavily restored dentitions and a background of complex medical conditions.

Since 1985, standardised and co-ordinated surveys of child dental health have been conducted across the UK. These have produced robust, comparable information for use at regional and local government level and for varying health geographies. PHE now has responsibility for coordinating these surveys in England as part of an annual programme. The PHE dental public health intelligence team facilitated this pilot survey of older people in response to demand. Each local authority commissioned local dental providers to undertake the fieldwork according to a national protocol.<sup>5</sup>

NHS and local authority commissioners and other health planners may use the information produced from this and other surveys when conducting oral health needs assessments at a local level. The surveys form an important component of the commissioning cycle when planning and evaluating local services and health improvement interventions.

## Section 1. Methods

The Elderly Accommodation Council<sup>i</sup> provided a database which listed all known housing developments intended for habitation by people aged 65 years and above by local authority in England. Housing developments which were classed as ‘age exclusive’ were removed from the list, leaving only those classed as ‘enhanced sheltered’, ‘extra care housing’ or ‘sheltered housing’. The database formed the sampling frame for this survey.

The primary sampling unit was lower-tier local authorities. The advised sampling method was that random samples of residential sites were drawn for each local authority in England, such that a minimum of 65 consented residents would be examined from a minimum of 10 residential sites.

Providers of sampled sites were contacted to seek co-operation and, where this was forthcoming, the managers of the sites were then contacted. Managers who were happy to assist advised on the numbers living at each site and the best means of contacting residents anonymously to distribute letters. These letters explained the nature and purpose of the survey and sought willingness to be contacted and to provide personal details. Of those residents who agreed to be contacted directly, the fieldwork teams sought consent from them to take part in the clinical examination and/or the questionnaire.

Clinical and questionnaire data was collected by trained examiners who were generally employed by NHS trusts providing community dental services. A simple clinical examination method using a visual-only technique by trained clinicians was used to measure a variety of basic clinical conditions and needs. These included number and cleanliness of natural teeth, levels of dental caries (tooth decay) and periodontal (gum) disease, presence of visible calculus, fixed and removable replacements for missing teeth, the presence or absence of PUFA signs and the presence of a functional dentition. PUFA is an index of clinical conditions that result from extensive and untreated dental caries (open Pulp, Ulceration, Fistula and Abscess).

A questionnaire (Appendix 2) was developed based on the adult dental health survey questions plus additional questions that were pertinent to this population group. The questionnaire included questions on oral health impacts, ability to attend the dentist, reasons for not seeing a dentist within two years and denture fit. In addition, a question was included as a simple measure of cognitive recall to be able to classify participants

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<sup>i</sup> Elderly Accommodation Council website: [www.eac.org.uk](http://www.eac.org.uk)

into those with full recall ability and less than this. This allowed analysis of the data according to recall ability.

Data was collected on paper and transferred to computer using the Dental Survey Plus 2 computer programme or a tailor-made data collection format in Microsoft Access. Electronic files of the raw, anonymised data were uploaded to a secure folder on a PHE shared network drive by regional dental epidemiology co-ordinators. The dental public health intelligence team collated, checked and cleaned the data then linked the clinical data with the questionnaire data using unique volunteer numbers.

Microsoft Access was used to analyse the data using simple descriptive statistics. Data was analysed according to participant characteristics, which included age group, sex, oral health status, qualifications achieved, cognitive recall, restriction in ability to attend the dentist, time since last saw dentist and receipt of services in the home. Only findings where there appeared to be differences according to the characteristics of the participants are included in this report.

Where possible, comparisons were made with findings from the Adult Dental Health Survey 2009<sup>4</sup>, in which 11,380 adults aged over 16 years participated in England, Wales and Northern Ireland. Of these participants, recruited from ordinary households, 9,660 lived in England and 94% were dentate.

Data suppression was applied when there were insufficient participants examined in a group to allow production of a reliable estimate and results tables are available from: [www.nwph.net/dentalhealth/](http://www.nwph.net/dentalhealth/)

## Methodological evaluation

An evaluation of the method has been carried out using quantitative and qualitative methods. In summary, this found that challenges were encountered at the set up stages of the survey, but that the data collection stage was relatively straightforward. Problems were encountered trying to contact the providers of supported housing and in gaining their agreement to support the survey.

Among supported housing providers that agreed to co-operate many had no manager or only notional ones. Where managers were in place it was often difficult to gain their co-operation. Suspicions about the nature and purpose of the survey were difficult to allay. Some managers and residents said that there was insufficient information in the letters of invitation and others felt there was too much. When residents were contacted, low levels of consent were gained and those people who initially gave consent often changed their minds or forgot that they had previously agreed to take part. In many cases participants were not available on the days that had been organised to carry out the data collection.



The impact of the difficulties encountered at the early stages would be unlikely to have biased the results, but some degree of consent bias may have been introduced by only 56% of residents agreeing to take part. The size and direction of the bias cannot be measured or assumed but should be borne in mind when using the data for planning purposes.

## Section 2. Results

Headline results are presented in this section. Full tables and charts of results at national, government region and upper-tier local authorities are available from:

[www.nwph.net/dentalhealth/](http://www.nwph.net/dentalhealth/)

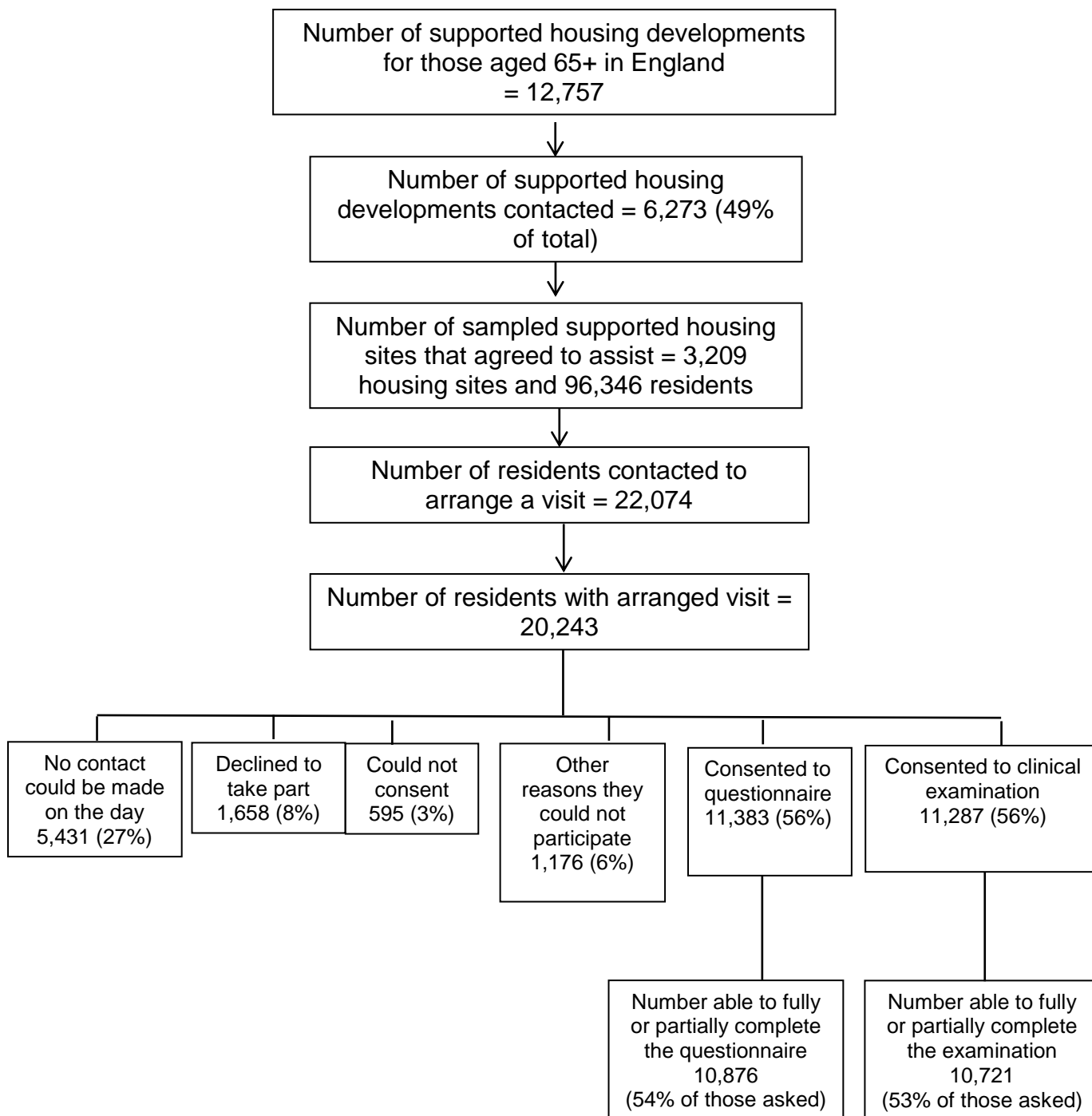
The n value throughout the analyses changes dependent on the sub-group being described. This varies according to participants' response or classification.

### Participation in the survey

In total, 132 out of 152 upper-tier local authorities provided data for the survey, covering 268 out of 326 lower-tier local authorities. Six upper-tier local authorities attempted to take part but were unsuccessful and provided no data. 87% of upper-tier local authorities provided some data (82% of lower-tier local authorities). Local fieldwork teams contacted the providers of 6,273 randomly sampled developments (some of the large providers were contacted multiple times as they have sites across the country). Among the site managers who were contacted, 3,209 agreed to assist. This resulted in 22,074 residents agreeing to be contacted to arrange a survey visit.

Difficulties making contact on the agreed day of visit reduced the numbers who had originally consented to take part by the biggest proportion (27%), followed by those declining (8%) and the number who were unable to give valid consent (3%). This resulted in a 56% consent rate for both the clinical examination and the questionnaire. Among those initially consenting and being at home at the agreed time, 315 did not complete the questionnaire and 508 did not have a clinical examination. This resulted in 10,787 fully and 89 partially completed questionnaires and 10,579 fully and 142 partially completed clinical examinations.

**Figure 1: Flow chart of responses**



## Questionnaire findings

### Characteristics of the sample population

Nationally, 35.5% of people completing the questionnaire were male and 64.4% were female. The age distribution of respondents is shown in Table 1, together with level of educational qualification and cognitive recall.

**Table 1: Characteristics of participants**

		N (%)
<b>All participants (fully or partially completed)</b>		<b>10,876</b>
<b>Sex n = 10,870</b>	Female	7,004 (64.4)
	Male	3,860 (35.5)
<b>Age group (years) n = 10,843</b>	65 to 74	3,608 (33.3)
	75 to 84	4,171 (38.5)
	85+	3,019 (27.8)
<b>Cognitive recall n = 10,777</b>	All 3 words	4,243 (39.4)
	2 words	3,158 (29.3)
	1 word	1,883 (17.5)
	No words remembered	1,278 (11.9)
<b>Qualifications achieved n = 10,791</b>	Degree level or above	1,169 (10.8)
	Other qualification	3,420 (31.7)
	No qualifications	6,055 (56.1)
	Not answered	147 (1.4)

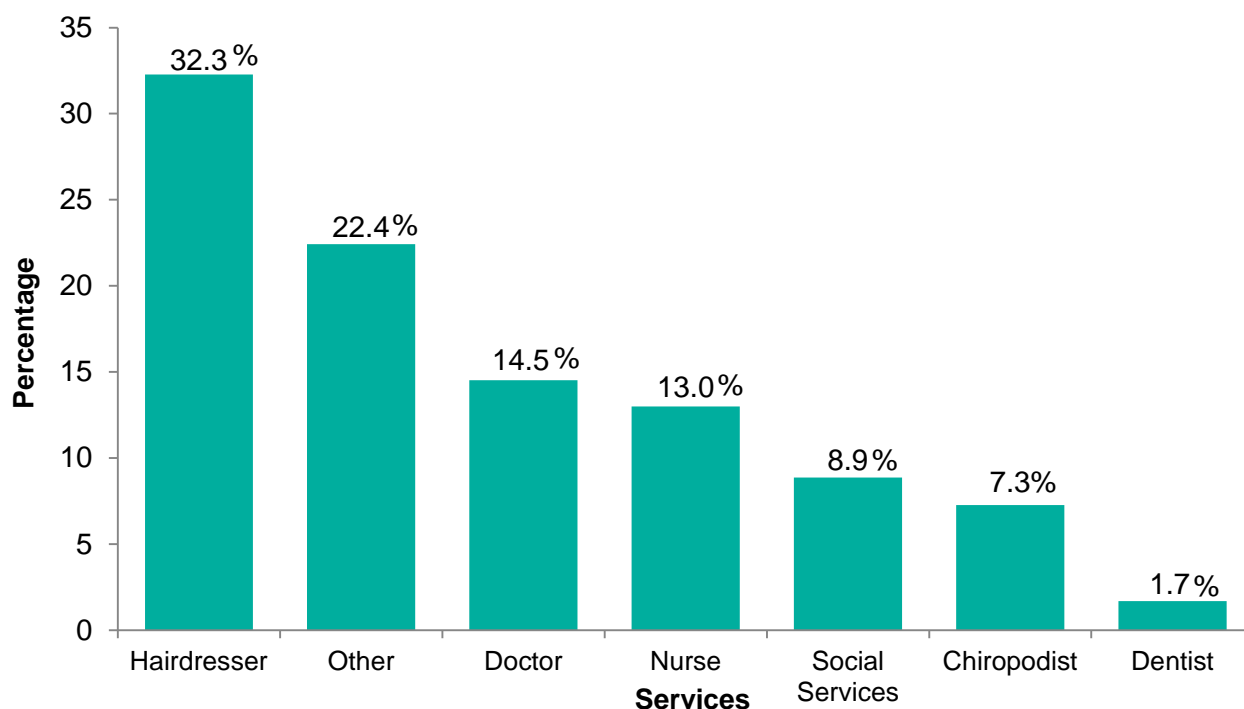
As a simple way of gauging the cognitive recall of participants, three words (nouns) were read out early in the questionnaire and participants were asked to remember them. Towards the end of the questionnaire participants were asked to list the words they had been given. There was an association between the age of the respondents and the number of words they could remember (Table 2).

**Table 2: Ability to recall words by age group**

Age group (years)	N	Three words remembered n (%)	Two words remembered n (%)	One word remembered n (%)	No words remembered n (%)	Not answered n (%)
65 to 74	3,608	1,737 (48.1)	1,002 (27.8)	536 (14.9)	256 (7.1)	50 (1.4)
75 to 84	4,171	1,650 (39.6)	1,264 (30.3)	693 (16.6)	466 (11.2)	71 (1.7)
85 or over	3,019	842 (27.9)	880 (29.1)	642 (21.3)	545 (18.1)	92 (3.0)
Not answered/null	55	14 (25.5)	12 (21.8)	12 (21.8)	11 (20.0)	2 (3.6)

Approximately half of respondents (50.6%) had some form of service delivered regularly within their home. The most common service was hairdressing (32.3%, Figure 2).

**Figure 2: Proportion of different services delivered at home\***



\* Excludes those who did not have any services delivered at their homes (49.4%).

When asked about any long standing illness or disability that limited ability to attend a dental practice for a check-up or treatment, 30.7% responded that they had such a disability.

Respondents were also asked if they were limited in what they could do and where they could get to. Overall, 17.9% said they had no such limitations but could not get to a dentist for another reason.

## Impacts of oral health

Respondents were asked how often during the last year poor oral health had impacted on their daily lives, including pain, difficulties with eating and talking and self-consciousness (Table 3).

In the previous year, 6.6% reported having had painful aching in their mouths ‘fairly or very often’, 4.6% had to interrupt meals or avoid eating because of problems with their mouths, teeth or dentures and 9.3% found it uncomfortable to eat any foods because of problems with their teeth, mouths or dentures. In addition, 2.1% reported having had trouble pronouncing words and 8.3% had been self-conscious or embarrassed because of problems with their teeth, mouths or dentures (Table 3). Any of the above oral health impacts were reported ‘occasionally’ or more often by 51.3% of respondents. For comparison, in the England Adult Dental Health Survey (ADHS) 2009, ‘any oral health

impacts' in the same categories above were reported 'occasionally' or more often by 35.4% of people aged 65 or over.

**Table 3: Self-reported impacts of specific oral health problems and frequency of occurrence in the previous year**

How often during the last year....	N	Never or hardly ever n (%)	Occasionally n (%)	Fairly or very often n (%)
have you had painful aching in your mouth?	10,780	7,873 (73.0)	2,188 (20.3)	715 (6.6)
have you had to interrupt meals or avoid eating with others because of problems with your teeth, mouth or dentures?	10,788	9,307 (86.3)	982 (9.1)	491 (4.6)
have you had trouble pronouncing any words because of problems with your teeth, mouth, or dentures?	10,784	9,824 (91.1)	723 (6.7)	228 (2.1)
have you found it uncomfortable to eat any foods because of problems with your teeth, mouth or dentures?	10,786	7,469 (69.2)	2,299 (21.3)	1,008 (9.3)
have you been self-conscious or embarrassed because of problems with your teeth, mouth or dentures?	10,782	8,658 (80.3)	1,213 (11.3)	895 (8.3)

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

When asked about painful aching in the mouth, 9.3% of respondents aged 65 to 74 years reported experiencing painful aching 'fairly or very often' in the previous year. This was higher than those in the 75 to 84 (5.4%) and over 85 (4.9%) age groups (Table 3). This is the first of several measures in this survey which appear to show higher impacts of poor oral health in the younger age groups. This may be due to several factors. For example, the younger age groups are also more likely to have teeth, which would increase the likelihood of pain due to tooth decay, sepsis, food packing or tooth mobility.

Residents of supported housing who are younger may also represent a different cohort of people from those who entered supported housing at an older age. That is, they may have poorer health in general and higher levels of disability than people who were able to remain in independent housing until an older age.<sup>5</sup>

Respondents who reported some restriction in their ability to attend the dentist, and those who had attended the dentist within the last year, reported a higher prevalence of painful aching in the mouth than those who were not restricted in their ability to attend, or who had a longer time interval since their last dental attendance (Table 4).

**Table 4: Experience of painful aching in the mouth by participant characteristic**

		N	Never or hardly ever (%)	Occasionally (%)	Fairly or very often (%)
<b>All participants</b>		<b>10,780</b>	<b>73.0</b>	<b>20.3</b>	<b>6.6</b>
<b>Age group (years)</b>	65 to 74	3,608	67.0	22.8	9.3
	75 to 84	4,171	73.6	20.3	5.4
	85+	3,019	77.7	16.9	4.9
<b>Restriction in ability to attend the dentist</b>	None	7,312	74.3	20.0	5.4
	Some	3,366	70.0	20.9	9.3
<b>Time since last saw dentist</b>	Within last year	6,081	70.6	22.1	7.0
	Between 1 and 2 years	983	71.3	22.7	5.9
	More than 2 less than 5 years	1,254	74.0	19.1	6.7
	More than 5 years	2,420	78.3	15.6	5.9
	Not answered	58	72.4	10.3	5.2

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

Participants were asked if in the last year they had to interrupt meals or avoid eating with others because of problems with their teeth, mouth or dentures (Table 5). A greater proportion of respondents aged 65 to 74 years reported interruption of meals or avoidance of eating ‘fairly or very often’ (6.2%) than those aged 75 to 84 years (3.9%) or those aged over 85 (3.3%).

**Table 5: Interruption of meals or avoidance of eating with others by age group**

		N	Never or hardly ever (%)	Occasionally (%)	Fairly or very often (%)
<b>All participants</b>		<b>10,788</b>	<b>86.3</b>	<b>9.1</b>	<b>4.6</b>
<b>Age group (years)</b>	65 to 74	3,608	83.5	9.6	6.2
	75 to 84	4,171	86.1	9.5	3.9
	85+	3,019	88.2	7.9	3.3

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

Participants were then asked if they had found it uncomfortable to eat any foods because of problems with their teeth, mouth or dentures within the last year. Respondents in the younger age group of 65 to 74 years were most likely to report discomfort when eating any foods ‘fairly or very often’ (11.9%), compared to those aged 75 to 84 years (8.3%) and those over the age of 85 years (7.5%) (Table 6).

**Table 6: Discomfort eating any foods by participant characteristic**

		N	Never or hardly ever (%)	Occasionally (%)	Fairly or very often (%)
<b>All participants</b>		<b>10,788</b>	<b>69.2</b>	<b>21.3</b>	<b>9.3</b>
<b>Age group (years)</b>	65 to 74	3,608	65.7	21.6	11.9
	75 to 84	4,171	68.8	22.2	8.3
	85+	3,019	72.4	19.5	7.5

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

When asked if they had experienced trouble pronouncing words due to problems with teeth, mouth or dentures in the last year, the proportion that had experienced this ‘fairly or very often’ was broadly similar across the age groups (Table 7).

**Table 7: Reported trouble pronouncing words by participant characteristic**

		N	Never or hardly ever (%)	Occasionally (%)	Fairly or very often (%)
<b>All participants</b>		<b>10,784</b>	<b>91.1</b>	<b>6.7</b>	<b>2.1</b>
<b>Age group (years)</b>	65 to 74	3,608	88.4	8.2	2.7
	75 to 84	4,171	91.2	6.2	1.9
	85+	3,019	92.3	5.4	1.6

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

The proportion of respondents who had been self-conscious or embarrassed ‘fairly or very often’ because of their teeth, mouth or dentures in the previous year was highest in the 65 to 74 year age group at 12.8% (Table 8).

**Table 8: Participants self-conscious or embarrassed by their dental condition by participant characteristic**

		N	Never or hardly ever (%)	Occasionally (%)	Fairly or very often (%)
<b>All participants</b>		<b>10,782</b>	<b>80.3</b>	<b>11.3</b>	<b>8.3</b>
<b>Sex</b>	Female	7,004	78.5	11.5	9.0
	Male	3,860	81.6	10.4	6.9
<b>Age group (years)</b>	65 to 74	3,608	72.9	13.5	12.8
	75 to 84	4,171	81.1	11.0	7.1
	85+	3,019	86.4	8.7	4.3

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

## Denture wearing

When asked about denture wearing, 58.6% of respondents reported having a denture, even if they did not wear it. More females (60.2%) reported owning a denture than males (54.4%).



Of those who had a denture, 59.9% were content with the fit and 70.0% reported their denture to be comfortable. However, 20.3% of respondents who had a denture reported being limited in their choice of food because of it.

Participants were more likely to report owning a denture with increasing age, increasing length of time since the last dental visit, if they reported being restricted in their ability to attend a dental practice, if they received services in the home, if they had lower cognitive recall and if they had a lower level of education (Table 9).

**Table 9: Responses to the question ‘Do you have a denture, even if you don't wear it?’ by participant characteristic**

		<b>N</b>	<b>Yes (%)</b>	<b>No (%)</b>
<b>All participants</b>		<b>10,793</b>	<b>58.6</b>	<b>41.4</b>
<b>Sex</b>	Female	7,004	60.2	38.9
	Male	3,860	54.4	44.8
<b>Age group (years)</b>	65 to 74	3,608	48.9	50.3
	75 to 84	4,171	58.2	41.2
	85+	3,019	69.8	29.8
<b>Cognitive recall</b>	All 3 words	4,243	53.6	46.1
	2 words	3,158	58.7	41.2
	1 word	1,883	64.7	35.2
	No words remembered	1,278	64.6	35.4
<b>Receipt of services in the home</b>	None	5,373	49.8	43.0
	One or more	5,504	62.9	36.8
<b>Restriction in ability to attend the dentist</b>	None	7,312	55.6	44.3
	Some	3,366	64.7	34.9
<b>Time since last saw dentist</b>	Within last year	6,081	52.7	47.0
	Between 1 and 2 years	983	62.9	36.9
	More than 2 less than 5 years	1,254	64.3	35.4
	More than 5 years	2,420	68.2	31.7
	Not answered	58	51.7	43.1
<b>Qualifications achieved</b>	Degree level or above	1,169	49.4	50.1
	Other qualification	3,420	51.8	47.9
	No qualifications	6,055	63.9	36.0
	Not answered	147	61.2	36.7

NB: In fewer than 15 cases the volunteer preferred not to answer these questions.

The proportion of respondents who reported they were content with the fit of their denture(s) increased with age and reduced cognitive recall (Table 10). Conversely, respondents who were in receipt of services in the home were less likely to be content with the fit of their dentures, as were those who reported they were restricted in ability to attend a dentist. There was no clear direction of association between reported time since last visit to the dentist and satisfaction with dentures.

**Table 10: Responses to the question ‘Are you content with the fit of your denture(s)?’ by participant characteristic**

Who reported that they had a denture		N	Yes (%)	So-so (%)	Not at all (%)	Prefer not to answer (%)
<b>All participants</b>		<b>6,320</b>	<b>59.9</b>	<b>20.6</b>	<b>19.2</b>	<b>0.3</b>
<b>Sex</b>	Female	4,215	60.4	20.7	18.5	0.2
	Male	2,100	58.1	20.2	20.6	0.4
<b>Age group (years)</b>	65 to 74	1,765	53.7	21.0	25.1	0.2
	75 to 84	1,427	59.5	21.2	19.0	0.1
	85+	2,106	65.3	19.4	14.6	0.5
<b>Cognitive recall</b>	All 3 words	2,275	57.5	21.4	20.7	0.1
	2 words	1,853	59.1	21.9	18.7	0.2
	1 word	1,218	60.8	18.7	20.0	0.3
	No words	825	65.0	18.8	15.6	0.5
<b>Receipt of services in the home</b>	None	2,678	61.3	18.6	19.8	0.3
	One or more	3,464	58.9	22.0	18.6	0.2
<b>Restriction in ability to attend the dentist</b>	None	4,065	62.8	19.4	17.4	0.2
	Some	2,178	54.3	22.6	22.6	0.4

Those in the younger age group of 65 to 74 year olds (61.7%) were more likely to report that their denture(s) were comfortable, compared to older participants. Respondents who were restricted in their ability to attend the dentist were less likely to report their denture(s) were comfortable (64.8%) than those who reported no such restriction (72.0%) (Table 11).

**Table 11: Responses to the question ‘Is/are your denture(s) comfortable?’ by participant characteristic**

		N	Yes (%)	So-so (%)	Not at all (%)	Prefer not to answer (%)
<b>All participants</b>		<b>6,320</b>	<b>70.0</b>	<b>16.0</b>	<b>14.0</b>	<b>0.3</b>
<b>Sex</b>	Female	4,215	70.4	15.8	13.3	0.5
	Male	2,100	67.7	16.4	15.4	0.5
<b>Age group (years)</b>	65 to 74	1,765	61.7	17.5	20.4	0.4
	75 to 84	1,427	70.8	16.2	12.8	0.2
	85+	2,106	74.5	14.5	10.1	0.9
<b>Restriction in ability to attend the dentist</b>	None	4,065	72.0	15.0	12.6	0.3
	Some	2,178	64.8	18.0	16.6	0.7

Of the participants who owned a denture, 20.3% reported that they were limited in their choice foods because of it (Table 12). Respondents over the age of 85 were less likely to report their choice of food was limited (17.5%) than 75 to 84 year olds (19.1%) and 65 to 74 year olds (25.0%). Respondents who reported they had some restriction in their in ability to attend the dentist were also more likely to report they were limited in food choices because of their denture (23.6%) than those who had no such restriction (18.4%).

**Table 12: Responses to the question ‘Are you limited in your choice of foods because of your denture(s)?’ by participant characteristic**

		N	Yes (%)	So-so (%)	Not at all (%)	Prefer not to answer (%)
<b>All participants</b>		<b>6,320</b>	<b>20.3</b>	<b>19.6</b>	<b>59.1</b>	<b>1.1</b>
<b>Age group (years)</b>	65 to 74	1,765	25.0	16.9	57.1	1.1
	75 to 84	1,427	19.1	20.8	59.1	0.9
	85+	2,106	17.5	20.5	60.8	1.1
<b>Restriction in ability to attend the dentist</b>	None	4,065	18.4	18.1	62.5	0.9
	Some	2,178	23.6	22.3	53.0	1.1

## Dental attendance

When asked about their dental attendance patterns, 65.4% of respondents had seen a dentist within the last two years. Of those people who had not seen a dentist in the last two years, the most common reason was that they felt there was ‘no need’ for them to do so. Females were more likely to have attended the dentist within the last two years than males (66.2% vs 62.6%), and dentate respondents were far more likely to have visited the dentists within the last two years than edentate respondents (75.4% vs 32.2%).

Reported attendance within the last two years decreased in the older age groups, with 67.5% of 65 to 74-year olds reporting attendance, compared to 60.4% of those aged over 85 (Table 12). This can be compared to the England ADHS 2009, in which 79.3% of 65 to 74-year olds, 68.9% of 75 to 84-year olds and 59.8% of those aged over 85 reported that they had attended within the last two years.

Participants who remembered none of the three words that they were asked to recall at the start of the interview reported the lowest levels of attendance within the last two years (49.8%). With each additional word that was remembered, respondents were more likely to report attendance within the last two years from 59.3% in those who remembered one word, to 65.5% in those who remembered two words and 73.6% in those who remembered all three words. Being in receipt of services in the home, reporting restricted ability to attend the dentist and having a lower level of education were also associated with lower reported dental attendance within the last two years (Table 13).

**Table 13: Responses to the question ‘Roughly how long has it been since you last saw a dentist?’ by participant characteristic**

		N	Within the last 12 months (%)	More than 1 year but less than 2 years ago (%)	More than 2 years but less than 5 years ago (%)	More than 5 years ago (%)	Prefer not to answer (%)
<b>All participants</b>		<b>10,796</b>	<b>56.3</b>	<b>9.1</b>	<b>11.6</b>	<b>22.4</b>	<b>0.5</b>
<b>Dentition</b>	Edentate	2,485	23.1	9.1	15.2	51.5	1.0
	Dentate	8,255	66.3	9.1	10.5	13.6	0.4
<b>Sex</b>	Female	7,004	57.2	9.0	11.5	21.0	0.7
	Male	3,860	53.4	9.2	11.6	24.5	0.3
<b>Age group (years)</b>	65 to 74	3,608	59.6	7.9	11.4	20.3	0.3
	75 to 84	4,171	57.9	8.8	10.7	21.7	0.4
	85+	3,019	49.6	10.8	13.0	25.4	0.8
<b>Cognitive recall</b>	All 3 words	4,243	65.2	8.4	9.1	17.1	7.1
	2 words	3,158	56.1	9.4	12.0	22.2	0.2
	1 word	1,883	49.9	9.4	13.6	26.4	0.5
	No words remembered	1,278	39.2	10.6	15.3	32.4	2.2
<b>Receipt of services in the home</b>	None	5,373	56.9	7.9	9.5	18.2	0.3
	One or more	5,504	51.8	9.6	12.8	24.9	0.7
<b>Restriction in ability to attend the dentist</b>	None	7,312	63.5	8.0	9.4	18.6	0.4
	Some	3,366	40.9	11.3	16.3	30.5	0.7
<b>Qualifications achieved</b>	Degree level or above	1,169	72.0	7.4	9.4	10.7	0.3
	Other qualification	3,420	63.9	9.2	10.4	16.2	0.2
	No qualifications	6,055	49.1	9.4	12.7	28.1	0.6
	Not answered	147	51.0	8.2	9.5	23.1	7.5

In those respondents who had not visited the dentist in the previous two years, the most common reasons were; that they did not feel a need to see a dentist (55.2%), that it was difficult to get to and from the dentist (12.9%) or that they were afraid (12.6%) (Table 14).

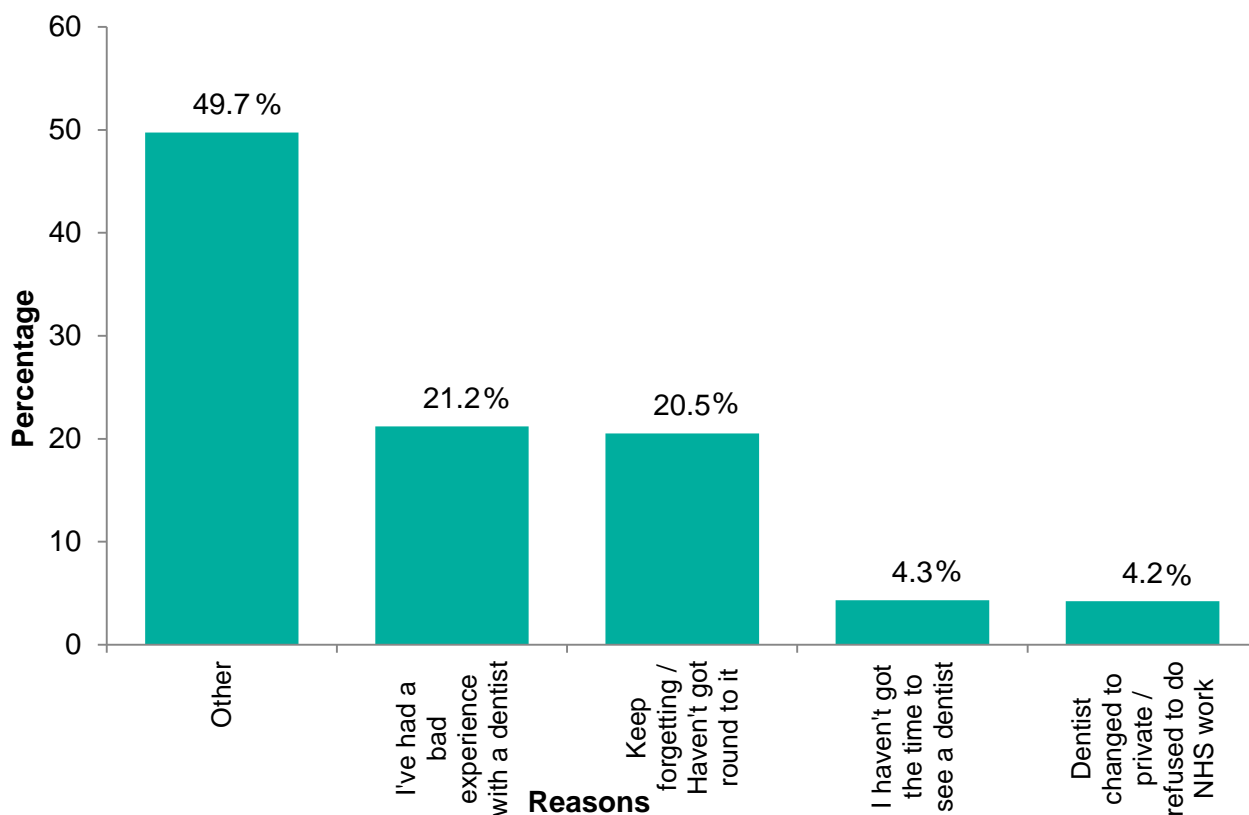
Almost a third (29.6%) stated ‘other’ reasons. For example, I haven't got the time to see a dentist, I keep forgetting/haven't got around to it, I've had a bad experience with a dentist, dentist changed to private/refused to do NHS work (Figure 3).

**Table 14: Reasons given in response to the question ‘What are the reasons why you have not seen a dentist in the last 2 years?’ by participant characteristic**

		N	No need to see dentist (%)	Can't find an NHS dentist (%)	Can't afford NHS charges (%)	I'm afraid of the dentist (%)	It's difficult to get to and from the dentist (%)	Other reasons*	Prefer not to answer (%)
<b>All participants</b>		<b>3,637</b>	<b>55.2</b>	<b>7.3</b>	<b>7.2</b>	<b>12.6</b>	<b>12.9</b>	<b>29.6</b>	<b>0.8</b>
<b>Sex</b>	Female	2,275	53.4	7.0	6.8	14.1	14.8	29.0	0.9
	Male	1,395	56.6	7.5	7.7	10.0	9.4	29.9	0.6
<b>Age group (years)</b>	65 to 74	1,143	39.7	10.7	13.3	20.8	9.2	36.8	0.8
	75 to 84	1,352	55.8	7.4	6.0	12.1	12.1	30.5	0.9
	85+	1,157	67.9	3.6	2.3	4.9	16.9	20.5	0.7
<b>Cognitive recall</b>	All 3 words	1,114	13.6	9.9	8.8	16.1	10.2	30.3	0.5
	2 words	1,080	17.8	7.1	8.2	14.0	13.7	30.3	0.5
	1 word	755	21.6	6.9	6.4	10.9	15.1	32.1	0.7
	No words remembered	611	30.2	3.4	4.3	6.9	12.4	23.7	1.6
<b>Restriction in ability to attend the dentist</b>	None	2,049	58.1	7.5	8.7	13.2	3.7	28.5	0.7
	Some	1,577	49.8	6.8	5.1	11.9	24.5	30.6	1.0
<b>Qualifications achieved</b>	Degree level or above	235	44.7	9.4	8.9	10.6	12.8	34.9	1.3
	Other qualification	910	49.1	8.5	8.1	14.7	14.3	34.1	0.7
	No qualifications	2,473	57.7	6.6	6.7	11.9	12.2	27.2	0.6
	Not answered	48	50.0	8.3	2.1	12.5	10.4	20.8	8.3

\*Other reasons are: I haven't got the time to see a dentist; Keep forgetting/Haven't got around to it; I've had a bad experience with a dentist; dentist changed to private/refused to do NHS work; Other.

**Figure 3: Breakdown of ‘other’ reasons for not having seen a dentist the previous two years**



## Clinical findings

### Edentulousness and numbers of standing teeth

Of those who were examined clinically, 27.0% of participants were edentulous, that is having no remaining natural teeth in either jaw. The average number of natural teeth was 13.7, with more teeth remaining in the lower jaw (7.6) than the upper (6.1). The proportion of participants with any remaining natural teeth was lower in those who were older, female, had reduced ability, reported a longer time interval since their last dental visit, reported restriction in their ability to attend the dentist and had a lower level of education (Table 15).

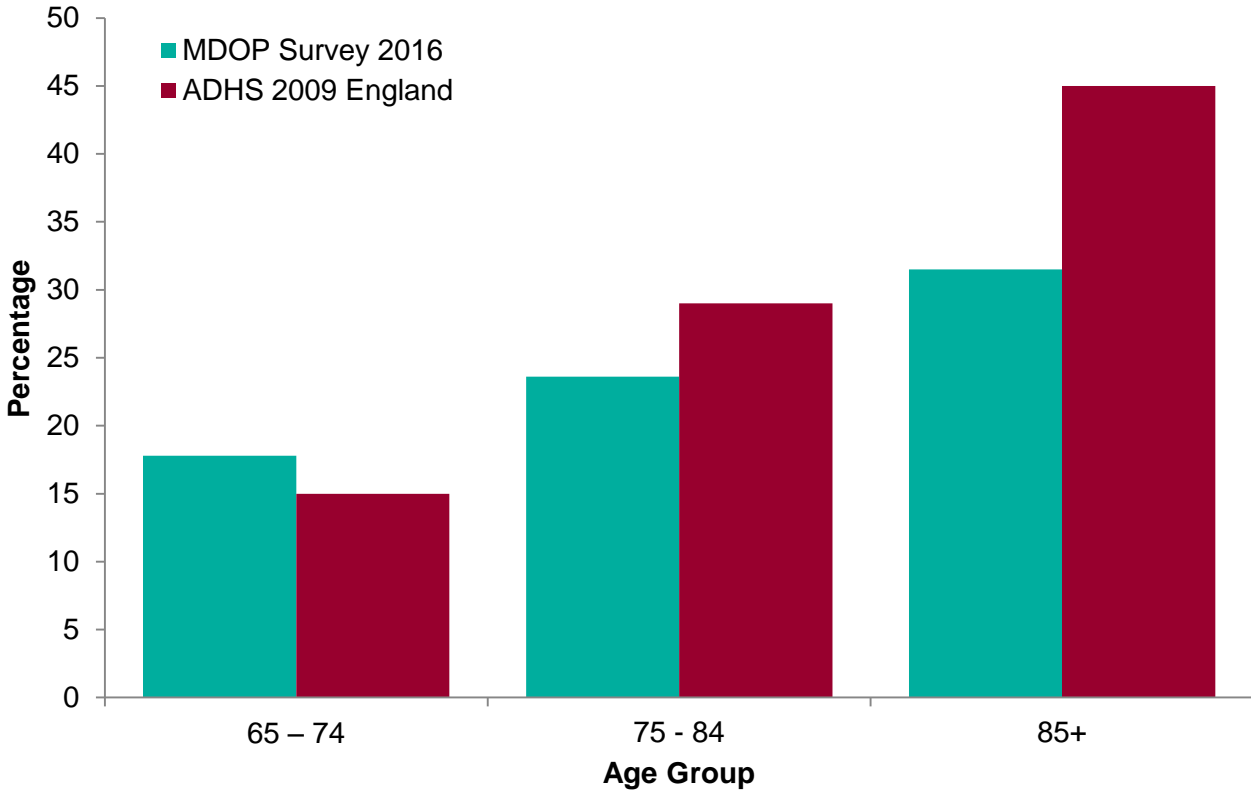
A functional dentition has previously been considered as 21 or more standing teeth. Participants in the younger age groups, those with no restriction in their ability to attend the dentist, those with a shorter time since they last saw a dentist, and those with a higher level of education were more likely to have a functional dentition (Table 15).

**Table 15: Edentulousness and numbers of natural teeth by participant characteristic**

		N	Edentulous participants (%)	Dentate Participants (N=8,232)			
				Mean number of natural teeth in lower jaw	Mean number of natural teeth in upper jaw	Mean number of natural teeth	Participants with 21 or more teeth (%)
<b>All participants</b>		<b>10,601</b>	<b>27.0</b>	<b>9.7</b>	<b>7.9</b>	<b>17.6</b>	<b>41.7</b>
<b>Sex</b>	Female	6,812	25.9	9.7	8.0	17.7	41.3
	Male	3,774	20.9	9.7	7.8	17.5	42.4
<b>Age group (years)</b>	65 to 74	3,514	17.8	10.3	8.7	19.0	50.2
	75 to 84	4,087	23.6	9.7	7.9	17.6	41.1
	85+	2,944	31.5	9.0	6.7	15.7	30.4
<b>Cognitive recall</b>	All 3 words	4,163	17.8	10.1	8.5	18.6	47.3
	2 words	3,105	23.2	9.7	7.7	17.4	40.2
	1 word	1,846	28.8	9.4	7.4	16.8	36.8
	No words remembered	1,254	32.1	8.9	6.7	15.6	31.8
<b>Restriction in ability to attend the dentist</b>	None	7,163	19.9	10.1	8.2	18.3	45.6
	Some	3,300	30.9	8.9	7.0	15.9	31.9
<b>Time since last saw dentist</b>	Within last year	5,979	9.6	10.1	8.4	18.5	45.8
	Between 1 and 2 years	972	23.3	9.3	7.2	16.5	36.2
	More than 2 years	3,575	46.4	8.9	6.7	15.6	32.6
<b>Qualifications achieved</b>	Degree level or above	1,149	12.0	10.5	9.0	19.6	54.5
	Other qualification	3,357	16.4	10.1	8.4	18.6	47.2
	No qualifications	5,930	29.6	9.3	7.3	16.6	35.2
	Not answered	139	30.9	9.5	7.4	16.9	37.3

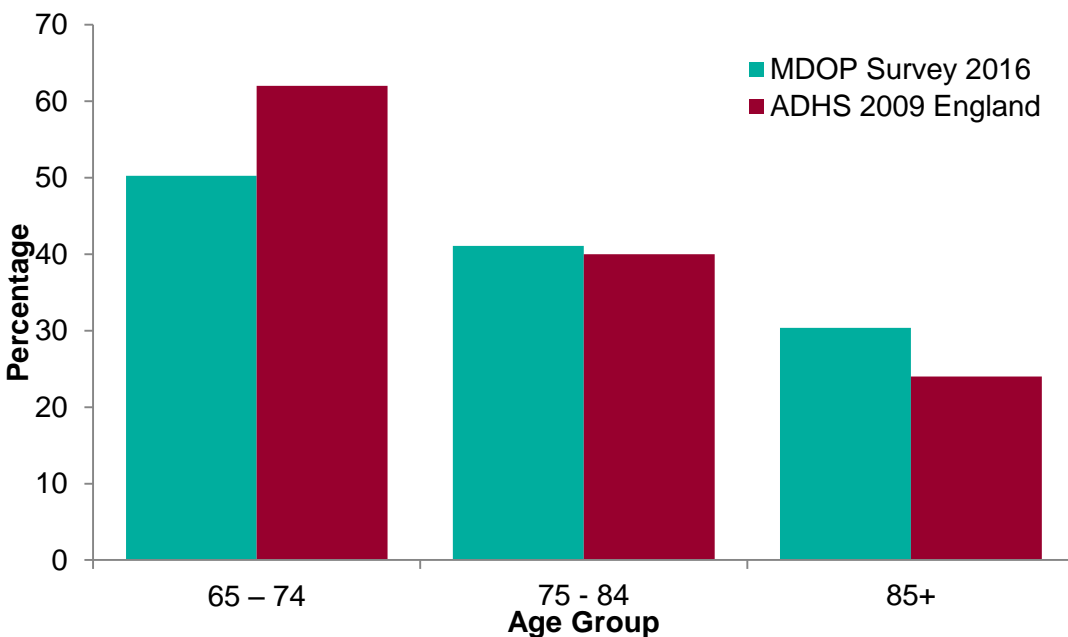
The 65 to 74-year olds in the current sample had a higher prevalence of edentulousness (17.8%) than the same age group in the 2009 ADHS England sample (15%) (Figure 4). Conversely, in the older age groups, the current sample was less likely to be edentulous, 23.6% of those aged 75 to 84 years compared with 29% in the ADHS 2009 England sample. For those aged over 85, 31.5% of participants in the current sample were edentulous, compared to 45% in the ADHS 2009 England sample.

**Figure 4: Prevalence of edentulousness by age group for survey of mildly dependent older people (MDOP) and adult dental health survey (ADHS)**



Of dentate 65 to 74-year-olds, 50.2% had 21 or more natural teeth, less than the same age group in the ADHS 2009 England sample (62%) (Figure 5). In the 75 to 84-year age group, 41.1% had 21 or more teeth, which is similar to the same age group in the ADHS 2009 England sample (40%). In the oldest age group of 85 years and over, 30.4% had 21 or more teeth compared to 24% in the ADHS 2009 England sample.

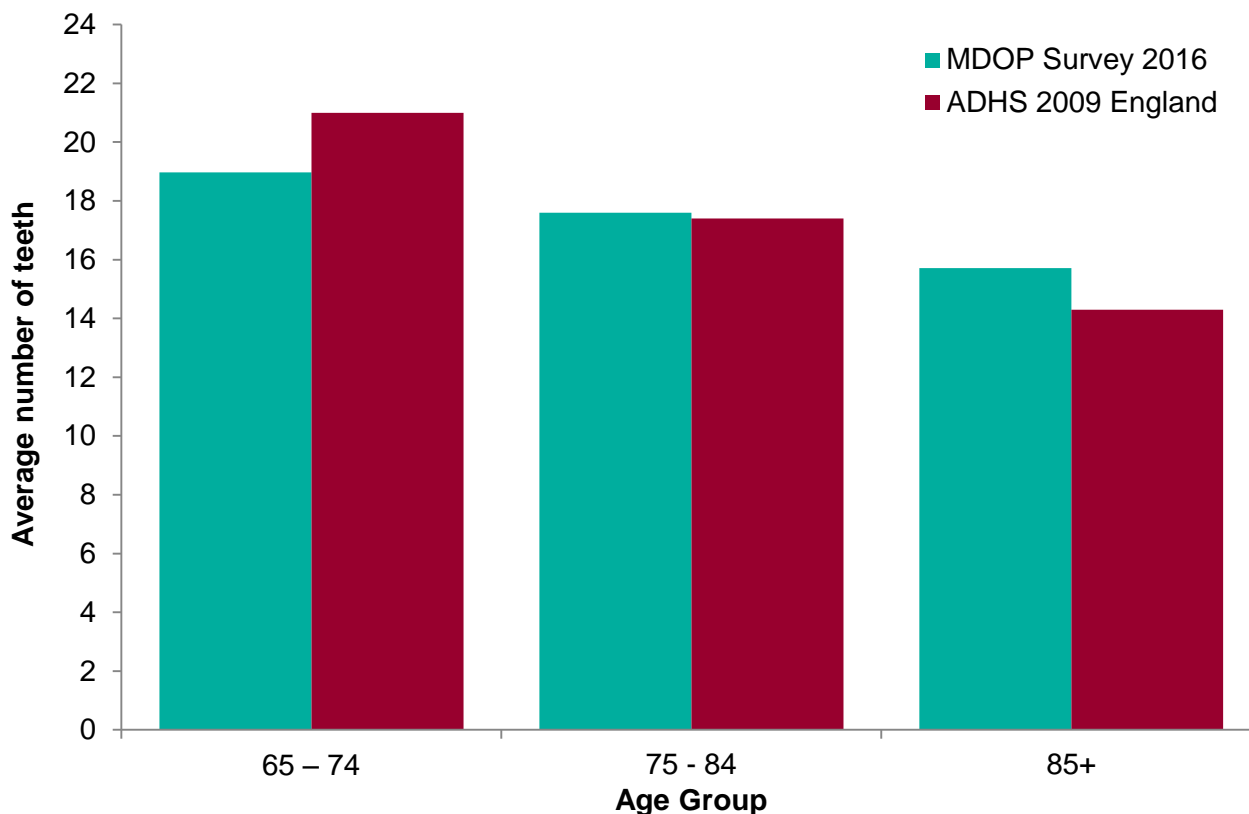
**Figure 5: Prevalence of 21 or more teeth by age group**





The average number of remaining natural teeth was very similar in all age groups as in the ADHS 2009 England sample (Figure 6).

**Figure 6: Average number of remaining natural teeth by age group**



### Presence of fixed and removable tooth replacements

Examiners recorded the number of natural teeth that were missing for any reason and noted which of these had been replaced by fixed or removable replacements. A small percentage of participants had no natural teeth or replacements (1.2%). This figure was highest among those with poorest recall (2.3%), those with restricted ability to attend the dentist (2.2%) and those who had not seen a dentist recently (2.9%) (Table 16). More than 90% of participants had one or more missing teeth that had no replacements, either fixed or removable.

A minority of participants had fixed replacements of missing teeth (7.5%), and this was slightly more common among the younger age group of 65 to 74 year-olds (9.0%). Older participants, those with lower cognitive recall, those in receipt of services, a restriction in their ability to attend the dentist, a longer time span since their last dental attendance or a lower level of education were less likely to have fixed replacement of missing teeth and more likely to have removable replacements.

**Table 16: Numbers of missing natural teeth and replacements by participant characteristic**

		N	Mean number of missing natural teeth	Participants with fixed replacement (%)	Participants with removable replacement (%)	Participants with one or more missing teeth with no replacement (%)	Participants with no natural teeth or replacements (%)
<b>All participants</b>		<b>10,601</b>	<b>18.3</b>	<b>7.5</b>	<b>53.1</b>	<b>93.2</b>	<b>1.2</b>
<b>Age group (years)</b>	65 to 74	3,514	16.0	9.0	42.5	94.4	1.5
	75 to 84	4,087	18.3	7.4	53.4	93.8	1.1
	85+	2,944	21.0	5.9	65.7	91.1	1.0
<b>Cognitive recall</b>	All 3 words	4,163	16.5	9.6	48.8	95.1	0.6
	2 words	3,105	18.5	6.6	53.5	92.6	1.0
	1 word	1,846	19.8	6.3	57.9	91.7	2.0
	No words remembered	1,254	21.1	5.1	59.1	92.0	2.3
<b>Receipt of services in the home</b>	None	4,910	16.7	8.7	48.2	94.4	1.0
	One or more	5,385	19.7	6.4	57.6	92.1	1.5
<b>Restriction in ability to attend the dentist</b>	None	7,163	17.1	8.5	52.0	94.1	0.8
	Some	3,300	20.8	5.4	58.1	91.2	2.2
<b>Time since last saw dentist</b>	Within last year	5,979	15.1	10.2	47.1	96.1	0.3
	Between 1 and 2 years	972	19.1	7.4	56.3	93.5	0.7
	More than 2 years	3,575	23.3	3.1	62.2	88.2	2.9
<b>Qualifications achieved</b>	Degree level or above	1,149	14.7	11.4	44.7	96.0	0.5
	Other qualification	3,357	16.3	10.3	46.7	95.4	0.7
	No qualifications	5,930	20.1	5.3	58.3	91.5	1.6
	Not answered	139	19.6	4.3	51.1	92.1	2.2

## Presence of calculus

Dentate participants were examined for the presence of visible plaque and sub- or supra-gingival calculus. Of those who were examined, 69.9% of participants had any visible plaque and 61.3% had any visible calculus.

The proportion of participants with plaque was similar to those observed in the ADHS 2009 England sample. The proportion of participants with visible calculus decreased slightly in the older age groups and the same pattern was observed in the ADHS 2009 England sample.

All measures of oral cleanliness were poorer in participants who were male, had poorer cognitive recall, were in receipt of home services, were restricted in their ability to attend the dentist and who reported a longer time since their last dental visit. Having no educational qualifications was also associated with poorer oral cleanliness on every measure compared with those participants with any qualification (Table 17).

**Table 17: Presence of visible calculus in dentate participants, by participant characteristic which showed differences**

		N	Participants with visible plaque (%)	Participants with visible calculus (%)
<b>Dentate participants</b>		<b>8,232</b>	<b>69.9</b>	<b>61.3</b>
<b>Sex</b>	Female	5,181	66.1	59.4
	Male	3,041	76.4	64.5
<b>Age group (years)</b>	65 to 74	2,958	69.4	62.0
	75 to 84	3,168	68.7	61.2
	85+	2,061	72.4	60.2
<b>Cognitive recall</b>	All 3 words	3,462	65.0	58.5
	2 words	2,417	70.4	61.6
	1 word	1,336	75.6	64.3
	No words remembered	868	78.9	67.6
<b>Receipt of services in the home</b>	None	5,822	67.6	61.1
	One or more	2,317	72.5	61.7
<b>Restriction in ability to attend the dentist</b>	None	5,822	67.4	60.3
	Some	2,317	76.6	63.7
<b>Time since last saw dentist</b>	Within last year	5,455	63.8	55.8
	Between 1 and 2 years	754	77.2	67.4
	More than 2 years	1,978	83.7	73.9
<b>Qualifications achieved</b>	Degree level or above	1,017	67.6	57.9
	Other qualification	2,839	67.3	60.2
	No qualifications	4,255	72.2	62.9
	Not answered	102	72.5	60.4

## Posterior functional contacts

Participants were examined for the presence of functional contacts<sup>ii</sup> between their natural or artificial replacement molar and premolar teeth. The majority of participants had at least one posterior segment with a functional contact, with only 15.8% having no

<sup>ii</sup> A functional contact is present when a back tooth in one jaw bites against a tooth in the other jaw, allowing biting and grinding to take place. Someone with no functional contacts may be restricted in their choice of foods as they cannot effectively chew.

contact on either side. Functional contacts were more common in the premolar segment (81.3%) than in the molar segment (68.3%).

The prevalence of having any functional pre-molar or molar contacts was lower in males, with increasing age, with reduced cognitive recall, with receipt of services in the home, with reported restriction in ability to attend the dentist, with reported a longer time since their last dental attendance and in those who had a lower level of educational attainment (Table 18).

**Table 18: Posterior functional contacts by participant characteristic**

		N	Participants with one or both molar segments having a functional contact (%)	Participants with one or both pre molar segments having a functional contact (%)	Participants with no functional contacts in either premolar or molar segments (%)
<b>All participants</b>		<b>10,615</b>	<b>68.3</b>	<b>81.3</b>	<b>15.8</b>
<b>Sex</b>	Female	6,827	69.4	83.1	14.0
	Male	3,774	66.3	78.0	18.8
<b>Age group (years)</b>	65 to 74	3,524	66.5	80.1	16.9
	75 to 84	4,086	68.6	81.8	15.3
	85+	2,951	70.3	82.2	14.6
<b>Cognitive recall</b>	All 3 words	4,178	71.6	84.4	12.6
	2 words	3,105	66.8	80.0	16.7
	1 word	1,841	66.9	80.4	17.1
	No words remembered	1,255	63.3	75.5	21.4
<b>Receipt of services in the home</b>	None	4,909	70.8	83.2	14.1
	One or more	5,400	66.1	79.6	17.2
<b>Restriction in ability to attend the dentist</b>	None	7,179	71.3	84.0	13.1
	Some	3,301	61.7	75.2	21.5
<b>Time since last saw dentist</b>	Within last year	5,991	72.3	86.5	10.4
	Between 1 and 2 years	974	66.5	81.2	16.4
	More than 2 years	3,576	62.5	72.7	24.2
<b>Qualifications achieved</b>	Degree level or above	1,151	78.2	86.1	10.4
	Other qualification	3,360	71.4	83.7	13.5
	No qualifications	5,939	64.8	79.1	17.9
	Not answered	140	63.6	77.9	20.0

## Presence, type and status of dentures

Of those participants who were examined, 29.1% were wearing a partial denture. Wearing a partial denture was more common with increasing age, being female, in those who reported no restriction in visiting the dentist and in those who had attended the dentist more recently (Table 19).

Dentures that were being worn on the day of the clinical examination were assessed for their characteristics and condition. Among those with partial dentures, 19.8% had one or more metal-based dentures. Participants were judged to be wearing a partial denture in need of repair in 8.1% of cases and in need of full replacement in 13.0% of cases.

Wearing a partial denture that was judged to be in need of repair or replacement was more common in those participants who were male, were restricted in their ability to attend the dentist and who had a longer time interval since their last dental visit. Participants in the younger age group of 65 to 74 years were more likely to be wearing a partial denture judged to be in need of replacement than those in the older age groups. Having a partial denture judged to be in need of repair was most common in those aged 75 to 84 years.

**Table 19: Partial dentures by participant characteristic**

		N	Participants with upper or lower partial dentures (%)	Participants with metal base partial dentures (upper or lower) (%)	Participants with acrylic base partial dentures (upper or lower) (%)	Participants with partial dentures intact (upper or lower) (%)	Participants with partial dentures in need of repair (upper or lower) (%)	Participants with partial dentures in need of replacement (upper or lower) (%)
<b>All participants</b>		<b>10,622</b>	<b>29.1</b>	<b>19.8</b>	<b>82.8</b>	<b>81.7</b>	<b>8.1</b>	<b>13.0</b>
<b>Sex</b>	Female	6,835	29.5	19.5	83.0	83.2	7.5	12.0
	Male	3,772	28.4	20.5	82.4	78.7	9.0	14.7
<b>Age group (years)</b>	65 to 74	3,521	26.2	15.4	86.0	78.3	7.5	16.6
	75 to 84	4,086	29.6	22.3	81.1	82.1	9.0	11.6
	85+	2,959	32.1	21.0	81.9	84.6	7.3	11.2
<b>Restriction in ability to attend the dentist</b>	None	7,176	30.0	21.0	81.4	83.6	7.9	11.1
	Some	3,307	27.2	17.0	86.0	76.8	8.3	17.7
<b>Time since last saw dentist</b>	Within last year	5,975	37.0	21.4	81.4	86.1	6.9	9.7
	Between 1 and 2 years	976	31.6	16.6	86.0	76.6	10.7	16.2
	More than 2 years	3,595	15.6	15.2	86.5	67.2	10.7	24.2

It was slightly more common for participants to wear full dentures than partial dentures, with 31.0% of participants wearing one in either arch, or in both arches (19.2%), on the day of the clinical examination. The most common material used for full dentures was acrylic but a minority of participants with a full denture were wearing one that contained a metal base (3.3%). An even smaller minority of participants with a full denture were wearing overdentures (0.2%) or implant retained dentures (0.1%). Wearing a full upper or lower denture was more prevalent with increasing age, in females, with reduced cognitive recall, in those who reported restriction of ability to attend a dental practice, with longer time span since last dental attendance and in those who had a lower level of education (Table 20).

**Table 20: Full denture use by participant characteristic**

Participant characteristic		N	Full dentures (%)	Metal base full dentures (%)	Acrylic base full dentures (%)	Intact full dentures (%)	Full dentures in need of repair (%)	Full dentures in need of replacement (%)
<b>All Participants</b>		<b>10,622</b>	<b>31.0</b>	<b>3.3</b>	<b>97.9</b>	<b>83.0</b>	<b>6.5</b>	<b>14.8</b>
<b>Sex</b>	Female	6,835	33.1	3.1	97.9	83.7	6.5	14.5
	Male	3,772	27.4	3.8	97.9	81.5	6.7	15.5
<b>Age group (years)</b>	65 to 74	3,521	22.3	2.7	98.2	81.3	6.5	17.1
	75 to 84	4,086	30.9	3.4	97.9	81.6	7.0	15.5
	85+	2,959	41.7	3.6	97.6	85.3	6.1	12.9
<b>Cognitive recall</b>	All 3 words	4,174	24.9	3.8	97.7	82.9	6.0	16.0
	2 words	3,110	31.4	3.2	97.6	83.2	7.5	13.7
	1 word	1,847	35.9	3.3	98.0	83.3	6.2	14.8
	No words remembered	1,255	41.4	2.7	98.7	81.7	6.5	15.4
<b>Receipt of services in the home</b>	None	4,913	25.3	3.4	97.9	85.2	6.1	13.3
	One or more	5,402	36.1	3.3	97.9	81.4	7.1	15.7
<b>Restriction in ability to attend the dentist</b>	None	7,176	27.3	3.3	98.0	84.7	6.4	13.0
	Some	3,307	38.9	3.3	97.8	80.0	6.7	18.0
<b>Time since last saw dentist</b>	Within last year	5,975	17.8	4.5	96.8	88.1	4.4	10.2
	Between 1 and 2 years	976	33.6	4.0	96.3	85.7	5.8	12.2
	More than 2 years	3,595	52.2	2.6	98.8	79.5	7.8	18.0
<b>Qualifications achieved</b>	Degree level or above	1,152	18.7	4.7	97.2	85.1	7.4	10.2
	Other qualification	3,361	24.0	3.5	97.6	82.8	6.5	13.9
	No qualifications	5,942	37.4	3.1	98.1	83.0	6.6	15.4
	Not answered	141	32.6	8.7	95.7	78.3	0.0	26.1



In the clinical examination, 6.6% of participants were wearing a full denture which examiners judged to need repair or replacement. Wearing a full denture in need of repair or replacement was more prevalent in participants with reduced cognitive recall, who were in receipt of services in the home, who reported being restricted in their ability to attend a dental practice, who reported a longer time interval since their last dental attendance and who had a lower level of education.

**Table 21: Dentures by participant characteristic**

		N	Participants with both upper AND lower full dentures (%)	Participants with upper or lower overdentures (%)	Participants with upper or lower implant retained dentures (%)
<b>All participants</b>		<b>10,622</b>	<b>19.2</b>	<b>0.2</b>	<b>0.1</b>
<b>Sex</b>	Female	6,835	21.2	0.1	0.1
	Male	3,772	15.4	0.4	0.2
<b>Age group (years)</b>	65 to 74	3,521	12.2	0.2	0.1
	75 to 84	4,086	19.1	0.2	0.2
	85+	2,959	27.6	0.4	0.1
<b>Cognitive recall</b>	All 3 words	4,174	15.1	0.1	0.1
	2 words	3,110	18.9	0.3	0.1
	1 word	1,847	22.8	0.4	0.3
	No words remembered	1,255	25.7	0.2	0.2
<b>Receipt of services in the home</b>	None	4,913	15.0	0.3	0.2
	One or more	5,402	23.1	0.3	0.2
<b>Restriction in ability to attend the dentist</b>	None	7,176	16.3	0.3	0.1
	Some	3,307	25.1	0.1	0.1
<b>Time since last saw dentist</b>	Within last year	5,975	7.6	0.3	0.1
	Between 1 and 2 years	976	20.3	0.2	0.0
	More than 2 years	3,595	37.7	0.3	0.1
<b>Qualifications achieved</b>	Degree level or above	1,152	9.5	0.7	0.1
	Other qualification	3,361	13.2	0.1	0.1
	No qualifications	5,942	24.3	0.2	0.1
	Not answered	141	21.3	0.7	0.0

## Presence of current pain and PUFA conditions

Participants were asked if they had current pain and if they thought the pain was coming from their teeth. Current pain was reported by 9.5% of dentate participants of whom 72.9% thought the pain was coming from their teeth. Current pain was more frequently reported by females and in those who reported restriction in their ability to attend a dental practice. The prevalence of current pain was higher in the present sample than in

the ADHS 2009 England sample, where 7.9% of participants aged over 65 years reported current pain.

PUFA conditions (open pulp, traumatic ulceration, fistula or abscess) were present in 7.8% of dentate participants, which is similar to the ADHS 2009 England sample, where PUFA conditions were observed in 7.3% of participants aged over 65.

PUFA conditions were more prevalent in males, in the youngest age group of 65 to 74 years, in those who reported they were restricted in their ability to attend the dentist, and in those who had a longer time interval since their last dental attendance.

**Table 22: Presence of current pain and PUFA conditions by participant characteristic**

		N	Of these, those		
			Reporting current pain in mouth (%)	who think pain is related to teeth (%)	With one or more PUFA conditions (%)
<b>Dentate participants</b>		<b>8,165</b>	<b>9.5</b>	<b>72.9</b>	<b>7.8</b>
<b>Sex</b>	Female	5,138	9.6	69.5	6.8
	Male	3,017	9.3	78.7	9.6
<b>Age group (years)</b>	65 to 74	11.2	74.9	8.4	11.2
	75 to 84	8.4	72.8	7.5	8.4
	85+	8.6	68.7	7.7	8.6
<b>Restriction in ability to attend the dentist</b>	None	5,779	8.3	70.8	6.6
	Some	2,297	12.5	75.9	10.9
<b>Time since last saw dentist</b>	Within last year	5,409	9.0	68.8	6.0
	Between 1 and 2 years	744	10.9	79.3	8.9
	More than 2 years	1,967	10.5	79.3	12.4

## Treatment need, urgency and setting

For each participant, examiners were asked to note the type of treatment that was needed and with only a limited visual examination possible, the level of urgency and the most appropriate setting for the treatment.

The examiners felt that the majority of participants needed some type of further investigation or treatment (68.7%). The most common reason was for further examination, with or without additional diagnostic tests (56.8%), followed by removal of calculus (33.1%), and prevention including fluorides (28.8%).

**Table 23: Percentage of participants with various treatment needs**

	Participants (%)
No treatment indicated	31.3
Examination with or without further diagnostic tests	56.8
Prevention advice – OH, diet, additional fluoride	28.8
Removal of calculus	33.1
Minor restoration – simple direct fillings	13.9
Major restoration – crowns/bridges/veneers/inlays, with or without endodontic treatment	2.4
Extraction(s) or other minor surgery	11.1
Minor prosthetic care – repair, relines, addition, repair, copy for existing denture	8.6
Major prosthetic care – provision of one or more new partial or complete dentures	15.4
Other treatment	1.3

Examiners judged the treatment required to be urgent for 3.2% of participants. Participants who reported they were restricted in their ability to attend a dental practice, and those who had a longer time interval since their last dental visit were slightly more likely to be judged to be in need of urgent treatment.

**Table 24: Need for urgent treatment, by participant characteristic which showed differences**

	N	Participants with urgent need for treatment (%)	Participants with need for routine care (%)
<b>All participants</b>	<b>10,100</b>	<b>3.2</b>	<b>86.2</b>
<b>Restriction in ability to attend the dentist</b>	None	2.8	87.6
	Some	4.2	88.8
<b>Time since last saw dentist</b>	Within last year	2.6	86.3
	Between 1 and 2 years	2.8	91.5
	More than 2 years	4.4	89.6

When asked which dental setting would be most appropriate for the treatment required, examiners reported that the majority of participants could be treated in any dental surgery, with or without ambulatory transport (59.1%), or in a downstairs dental surgery, with or without ambulatory transport (34.9%). Domiciliary care was thought to be necessary for 5.1% of participants (Table 23).

**Table 25: Setting for the provision of treatment which would best meet the needs of the volunteer**

	Participants (%)
Wholly as a domiciliary care case as the volunteer cannot leave the house unless hospital treatment is required	5.1
Attendance in dental surgery with or without ambulatory or transport support	59.1
Attendance in a downstairs dental surgery with or without ambulatory or transport support	34.9
Attendance at a hospital department	0.5
Other	0.3

## Section 3. Implications of results

### Variations in health

This survey has shown that residents of age-restricted supported housing have a range of oral conditions which impact on their ability to eat, talk and socialise. Variations related to age, gender, limitations on ability to attend a dentist and time since last attendance, as well as memory and educational level have been revealed.

The results also show wide variation at regional and local authority level. Those reporting current pain in their mouths ranged from 4.7% in the South West to 14.5% in London. At upper-tier local authority level this ranged from 0.0% in 5 areas including Wiltshire, South West to 42.9% in Camden, London. In the North East, 2.4% reported not seeing a dentist in the last two years because they couldn't find a dentist while this figure was 10.3% in the North West. The proportion of respondents who had not seen a dentist in the last two years because they could not afford NHS charges ranged from 4.9% in the West Midlands to 11.2% in the South East.

The areas with poorer oral health tended to be in the more deprived local authority areas. In Haringey and Gloucestershire, 0.0% of volunteers were edentulous, compared to 71.8% in Staffordshire. The proportion needing urgent treatment varied from 0.0% in 35 local authority areas to 12.9% in Salford and Brighton and Hove.

### Putting this information to use

#### **Planning programmes to maintain and improve the oral health of mildly dependent older people.**

Older adults living in supported housing may be regarded as the group that are most likely to become more dependent as they age. So local authorities may consider that interventions to improve their oral health will avoid more difficult problems in the future. The findings of this survey would suggest that such programmes should address a range of issues including improving home care (oral hygiene and diet), awareness of the need for regular dental check-ups, including for those with no natural teeth, awareness of the links between good oral health and general health and ways to access dental care.

#### **Planning clinical services for mildly dependent older people.**

Whilst many of this group are able to attend general dental practices some are restricted in the ease of doing this and others require services more tailored to their mobility needs.

Services need to be planned for those with urgent needs; 3% of this population.

As 59% of the participants had either partial or full dentures there is a clear, continuing need for good prosthetic care to repair and replace these to reduce the proportion who are dissatisfied with the fit and function of their dentures.

## Section 4. References

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4. NHS Information Centre. Adult dental health survey 2009. The Health and Social Care Information Centre, 2011.
5. Public Health England. Dental public health epidemiology programme: Oral health survey of older people, 2015-2016 National protocol, 2017.
6. Pannell J and Blood I. Supported housing for older people in the UK: an evidence review. Joseph Rowntree Foundation, 2012.

## Appendix 1. Summary tables

The complete sets of tables with detailed results are available from:

[www.nwph.net/dentalhealth/](http://www.nwph.net/dentalhealth/)



# A report on the oral health and dental service use of older people living in supported housing

Appendix 1. Dental Public Health Epidemiology Programme for England, Oral Health Survey of mildly dependant older people 2016, upper tier local authority (LA)

Public Health England		* Result suppressed as N count fewer than 15 Whole or part LA no data collected Whole or part LA did not partake in survey																		
Region	Upper Tier LA Code	Upper Tier LA Name	Reason why not seen a dentist in last two years :																	
			% volunteers with any oral health impacts fairly or very often	% volunteers not seen a dentist within the last two years	% can't find an NHS dentist	% say it's difficult to get to and from the dentist	% can't afford NHS charges	% volunteers edentulous	% with no posterior functional contacts	% volunteers with fixed replacement	% volunteers with removable replacement	% dentate volunteers with visible plaque	% dentate volunteers with visible calculus	% volunteers with partial dentures in need of replacement	% volunteers with full dentures in need of replacement	% dentate volunteers reporting current pain in mouth	% dentate volunteers with one or more PUFA conditions	% volunteers with urgent need for treatment	% volunteers who would require domiciliary treatment	
Country	E92000001	England	17.7	34.0	7.3	12.9	7.2	27.0	15.8	7.5	53.1	69.9	61.3	13.0	14.8	9.5	7.8	3.2	5.1	
East Midlands	E06000015	Derby	*	*	*	*	*	*	*	*	*	*	*	*	No data	*	*	*	*	
	E10000007	Derbyshire	10.4	28.6	4.5	18.2	13.6	20.8	14.3	11.7	59.7	54.1	49.2	7.4	8.3	4.9	23.0	0.0	3.9	
	E06000016	Leicester	20.6	34.4	3.8	5.7	3.8	19.4	20.8	2.6	51.0	69.6	63.2	6.7	16.7	4.8	8.0	1.9	7.1	
	E10000018	Leicestershire	15.2	25.5	5.3	10.6	9.6	16.3	14.2	9.0	51.2	81.8	69.6	16.8	15.6	6.8	11.4	1.6	3.6	
	E10000019	Lincolnshire (Data for Boston, East Lindsey, Lincoln and West Lindsey only)	28.9	48.9	18.2	31.8	9.1	40.9	18.2	4.5	50.0	78.9	64.9	*	*	21.1	2.6	2.4	9.1	
	E10000021	Northamptonshire	16.6	33.1	8.5	12.8	9.1	20.6	16.2	4.9	56.5	79.8	68.6	16.2	19.4	7.1	10.2	3.4	3.3	
	E06000018	Nottingham	8.5	59.2	7.1	9.5	14.3	41.4	20.0	0.0	64.3	61.9	42.9	*	23.7	4.8	2.4	1.4	4.3	
	E10000024	Nottinghamshire	8.5	33.6	8.8	19.1	2.9	29.2	16.0	6.1	59.0	51.3	39.1	10.3	14.5	13.3	4.0	7.2	7.4	
	E06000017	Rutland	8.7	36.8	16.0	4.0	12.0	20.3	15.9	7.2	62.3	76.4	67.3	11.1	31.8	3.6	10.9	0.0	2.9	
East of England	E06000055	Bedford	10.3	25.6	5.0	25.0	5.0	15.4	9.0	9.0	55.1	89.4	65.2	9.7	4.8	6.1	3.0	5.1	5.1	
	E10000003	Cambridgeshire	13.5	24.0	12.8	12.8	9.0	22.6	6.6	4.3	48.8	46.7	48.6	3.1	1.4	8.6	3.1	3.4	4.8	
	E06000056	Central Bedfordshire	20.3	29.0	0.0	0.0	10.0	13.2	16.2	8.8	48.5	66.1	55.9	7.4	*	5.1	6.8	5.9	2.9	
	E10000012	Essex (Data for Braintree, Castlepoint, Colchester, Epping Forest, Harlow, Tendring and Uttlesford only)	19.7	41.3	2.9	28.6	1.4	22.7	22.1	7.0	48.8	57.0	60.4	16.3	12.0	11.9	4.8	1.5	7.7	
	E10000015	Hertfordshire																		
	E06000032	Luton	25.4	43.3	0.0	10.3	13.8	13.4	17.9	10.4	53.7	82.8	63.8	12.5	5.0	8.6	15.5	7.5	9.0	
	E10000020	Norfolk	19.8	26.3	7.6	9.1	3.0	19.4	6.8	12.7	48.1	62.5	64.5	2.9	3.4	10.0	1.0	3.0	2.9	
	E06000031	Peterborough	20.0	29.2	10.5	5.3	15.8	56.5	6.5	10.9	43.5	28.2	28.2	*	*	0.0	0.0	3.1	0.0	
	E06000033	Southend-on-Sea	*	*	*	*	*	*	*	*	*	*	*	*	No data	*	*	No data	No data	No data
	E10000029	Suffolk	19.9	22.7	11.4	32.9	4.3	13.6	13.0	10.4	48.2	80.2	65.5	8.8	28.1	7.8	7.5	3.2	3.7	
E06000034	Thurrock																			
London	E09000002	Barking and Dagenham	15.2	56.1	2.7	5.4	0.0	20.0	23.1	4.6	43.1	88.5	80.8	13.3	10.5	3.8	5.8	6.2	3.0	
	E09000003	Barnet	10.0	15.0	*	*	*	35.0	20.0	10.0	60.0	50.0	38.9	*	*	11.1	22.2	0.0	5.0	
	E09000004	Bexley	29.4	26.5	*	*	*	12.1	12.1	3.0	30.3	53.3	53.3	*	*	30.0	10.0	0.0	7.4	
	E09000005	Brent	10.6	40.9	0.0	0.0	0.0	37.0	28.3	0.0	52.2	100.0	96.6	*	11.8	20.0	34.5	13.3	6.7	
	E09000006	Bromley	20.3	25.0	12.5	12.5	12.5	10.9	18.8	1.6	59.4	50.9	54.4	13.8	13.3	7.0	8.8	7.8	6.3	
	E09000007	Camden	30.8	41.0	6.3	25.0	6.3	12.5	30.8	12.5	42.5	85.7	45.7	6.7	*	42.9	2.9	0.0	6.5	
	E09000008	Croydon	29.0	27.0	3.7	11.1	11.1	12.0	28.0	22.0	39.0	90.9	72.7	10.7	11.8	10.2	8.0	4.0	4.1	
	E09000009	Ealing	26.2	32.3	0.0	23.8	14.3	23.1	20.3	10.8	53.8	68.0	68.0	15.8	9.1	4.0	No data	0.0	27.7	
	E09000010	Enfield	14.0	28.0	*	*	*	22.4	16.3	14.3	46.9	74.4	53.8	*	*	30.8	5.1	0.0	10.2	
	E09000011	Greenwich	17.3	36.5	0.0	42.1	0.0	25.5	17.6	0.0	43.1	71.1	47.4	*	*	13.2	0.0	3.9	23.7	
	E09000012	Hackney (including City of London)	19.6	48.2	3.7	11.1	7.4	16.1	23.2	14.3	30.4	80.9	72.3	*	*	12.8	8.5	14.3	8.6	
	E09000013	Hammersmith and Fulham	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E09000014	Haringey	15.0	35.0	*	*	*	0.0	15.0	5.0	40.0	60.0	75.0	*	*	10.0	5.0	20.0	0.0	
	E09000015	Harrow	12.7	25.5	*	*	*	36.4	7.4	7.3	47.3	74.3	80.0	*	11.1	17.1	23.5	3.6	18.5	
	E09000016	Havering	21.7	45.0	16.0	24.0	4.0	6.7	23.7	5.0	40.0	98.2	82.1	38.9	*	23.2	5.4	5.0	20.4	
	E09000017	Hillingdon	22.2	33.3	*	*	*	20.6	11.8	5.9	58.8	69.0	79.3	*	*	10.3	3.4	4.3	6.1	
	E09000018	Hounslow	*	*	*	*	*	*	*	*	*	*	*	*	No data	No data	*	No data	*	*
	E09000019	Islington	22.9	51.4	0.0	11.1	5.6	24.2	24.2	6.1	42.4	88.5	42.3	*	*	23.1	0.0	0.0	0.0	
	E09000020	Kensington and Chelsea	*	*	*	*	*	*	*	*	*	*	*	*	No data	*	*	*	*	*
	E09000021	Kingston upon Thames	16.2	32.4	4.2	8.3	8.3	13.7	15.1	6.8	45.2	88.9	88.9	46.2	26.7	7.9	0.0	2.7	2.7	
	E09000022	Lambeth	26.9	38.5	5.0	5.0	15.0	11.5	15.4	17.3	48.1	82.6	89.1	17.4	*	17.4	8.7	5.8	13.0	
	E09000023	Lewisham	44.0	40.0	*	*	*	16.0	16.0	20.0	36.0	100.0	85.7	*	*	19.0	19.0	0.0	13.6	
	E09000024	Merton	16.0	16.0	*	*	*	5.1	3.8	8.9	35.4	56.0	42.7	12.0	*	8.0	4.0	11.4	5.0	
	E09000025	Newham	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E09000026	Redbridge	17.2	37.9	*	*	*	3.3	23.3	10.0	43.3	72.4	58.6	*	*	6.9	3.4	3.3	3.4	
	E09000027	Richmond upon Thames	21.9	35.6	7.7	7.7	11.5	20.5	12.3	4.1	53.4	89.7	86.2	21.4	14.3	13.8	3.4	2.7	4.1	
	E09000028	Southwark	31.8	20.5	0.0	6.7	20.0	13.6	20.5	6.8	47.7	100.0	73.7	5.3	*	26.3	26.3	20.5	2.4	
	E09000029	Sutton	16.2	27.9	5.3	5.3	10.5	13.2	8.8	5.9	50.0	55.9	33.9	9.5	6.7	1.7	1.7	5.9	4.5	
	E09000030	Tower Hamlets	17.0	47.9	4.3	17.4	13.0	12.5	25.5	10.4	37.5	83.3	76.2	*	*	16.7	9.5	6.3	8.3	
	E09000031	Waltham Forest	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E09000032	Wandsworth	16.4	30.1	9.1	4.5	0.0	13.9	9.7	13.9	59.7	83.9	59.7	12.0	4.5	16.1	11.3	6.9	7.0	
	E09000033	Westminster	42.5	57.5	4.3	4.3	4.3	25.0	20.5	10.0	57.5	78.1	59.4	*	0.0	28.1	9.4	7.1	3.4	

# A report on the oral health and dental service use of older people living in supported housing

Appendix 1 continued. Dental Public Health Epidemiology Programme for England, Oral Health Survey of mildly dependant older people 2016, upper tier local authority (LA)

Public Health England		* Result suppressed as N count fewer than 15 Whole or part LA no data collected		Reason why not seen a dentist in last two years :																
Region	Upper Tier LA Code	Upper Tier LA Name	% volunteers with any oral health impacts fairly or very often	% volunteers not seen a dentist within the last two years	% can't find an NHS dentist	% say it's difficult to get to and from the dentist	% can't afford NHS charges	% volunteers edentulous	% with no posterior functional contacts	% volunteers with fixed replacement	% volunteers with removable replacement	% dentate volunteers with visible plaque	% dentate volunteers with visible calculus	% volunteers with partial dentures in need of replacement	% volunteers with full dentures in need of replacement	% dentate volunteers reporting current pain in mouth	% dentate volunteers with one or more PUFAs conditions	% volunteers with urgent need for treatment	% volunteers who would require domiciliary treatment	
North East	E06000047	County Durham	13.4	50.7	0.0	27.3	3.0	38.8	14.9	0.0	65.7	73.2	70.7	6.3	15.2	12.2	24.4	9.0	25.4	
	E06000005	Darlington	15.2	48.5	0.0	3.2	0.0	53.8	20.0	3.1	75.4	90.3	48.4	12.5	18.9	0.0	35.5	10.6	9.2	
	E08000037	Gateshead	31.3	46.2	0.0	6.7	3.3	52.5	19.7	1.6	62.3	77.1	54.3	20.0	29.6	14.3	2.9	10.0	1.6	
	E06000001	Hartlepool	33.3	20.0	*	*	*	20.0	13.3	6.7	53.3	*	*	*	*	*	*	0.0	0.0	0.0
	E06000002	Middlesbrough	14.3	28.6	*	*	*	19.0	14.3	4.8	33.3	29.4	64.7	*	*	11.8	0.0	0.0	4.8	
	E08000021	Newcastle upon Tyne	13.2	23.7	*	*	*	10.5	10.5	10.5	47.4	58.8	47.1	*	*	8.8	2.9	5.9	0.0	
	E08000022	North Tyneside	10.3	36.2	0.0	0.0	0.0	39.7	17.2	6.9	58.6	75.0	57.5	*	0.0	7.5	0.0	0.0	1.7	
	E06000057	Northumberland	26.1	52.2	*	*	*	26.1	8.7	4.3	60.9	100.0	93.8	*	*	0.0	11.8	10.0	5.0	
	E06000003	Redcar and Cleveland	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E08000023	South Tyneside	26.2	33.8	9.1	0.0	13.6	52.3	16.9	6.2	56.9	40.8	32.7	22.2	23.8	2.0	0.0	0.0	1.5	
	E06000004	Stockton-on-Tees	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E08000024	Sunderland	18.5	56.9	0.0	8.1	16.2	61.9	25.4	4.8	63.5	75.6	80.5	23.8	39.1	9.8	22.0	0.0	4.8	
North West	E06000008	Blackburn with Darwen	17.9	35.7	*	*	*	48.1	21.4	3.7	74.1	*	86.7	*	*	13.3	13.3	7.7	3.4	
	E06000009	Blackpool	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E08000001	Bolton	26.2	41.5	11.1	14.8	18.5	50.8	24.6	0.0	61.9	19.4	30.6	*	7.1	30.6	16.7	0.0	4.6	
	E08000002	Bury	10.9	42.2	25.9	7.4	0.0	40.6	29.7	6.3	54.7	66.7	66.7	*	3.6	10.3	2.6	0.0	1.6	
	E06000049	Cheshire East	13.8	29.3	5.9	5.9	5.9	13.8	8.8	12.1	43.1	78.0	40.0	5.9	*	10.0	2.0	1.7	0.0	
	E06000050	Cheshire West and Chester	4.6	20.0	*	*	*	13.8	9.2	12.3	53.8	32.1	19.6	0.0	0.0	0.0	0.0	3.1	1.5	
	E10000006	Cumbria	15.1	39.4	9.2	13.2	6.6	33.2	13.9	7.8	61.1	71.5	61.5	11.5	16.0	4.6	3.1	1.3	4.4	
	E06000006	Halton	20.0	41.5	0.0	11.1	3.7	25.4	25.4	6.3	65.1	61.7	51.1	7.4	4.3	8.5	0.0	1.6	0.0	
	E08000011	Knowsley	28.8	38.5	0.0	0.0	10.0	16.0	22.0	16.0	56.0	88.6	81.8	26.3	*	11.4	2.3	2.0	4.0	
	E10000017	Lancashire	22.5	43.7	12.4	6.5	3.6	36.3	11.7	3.9	64.0	64.5	52.6	22.1	13.4	10.5	3.6	3.3	2.7	
	E08000012	Liverpool	14.8	40.7	0.0	13.6	0.0	31.5	25.9	3.7	48.1	85.4	75.6	13.3	*	12.2	4.9	3.8	0.0	
	E08000003	Manchester	20.0	53.8	8.8	8.8	5.9	40.6	28.6	3.1	53.1	92.1	76.3	*	17.2	23.7	38.8	2.0	4.2	
	E08000004	Oldham	10.9	45.3	17.2	17.2	0.0	32.8	23.4	4.7	53.1	59.1	65.9	*	0.0	6.8	9.1	0.0	1.6	
	E08000005	Rochdale	22.4	44.8	10.0	6.7	3.3	38.2	17.6	1.5	66.2	61.9	88.1	*	5.6	11.9	2.4	2.9	2.9	
	E08000006	Salford	20.0	30.8	0.0	15.0	0.0	24.6	21.5	10.8	64.6	98.0	106.9	37.9	38.9	12.2	38.8	12.9	9.2	
	E08000014	Sefton	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E08000013	St. Helens	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E08000007	Stockport	9.0	31.3	9.5	4.8	0.0	25.8	15.2	7.6	59.1	51.0	63.3	25.0	44.0	10.2	25.0	1.6	0.0	
	E08000008	Tameside	20.0	44.6	28.6	28.6	25.0	28.1	9.4	1.6	57.8	58.7	80.4	*	25.9	23.9	19.6	0.0	6.8	
	E08000009	Trafford	22.9	45.7	13.3	6.7	6.7	39.1	20.9	2.9	60.9	44.2	48.8	18.8	38.2	19.5	24.2	1.6	1.6	
	E06000007	Warrington	16.9	30.8	0.0	5.0	0.0	9.2	26.2	6.2	44.6	49.2	27.1	3.7	0.0	1.7	0.0	1.5	3.1	
	E08000010	Wigan	33.8	45.6	6.5	19.4	3.2	50.7	17.6	0.0	71.6	36.1	19.4	*	7.5	11.1	16.7	0.0	1.5	
	E08000015	Wirral	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
South East	E06000036	Bracknell Forest	8.1	25.8	*	*	*	12.9	21.0	6.5	32.3	75.9	63.0	*	*	7.4	0.0	1.6	4.8	
	E06000043	Brighton and Hove	23.8	59.5	8.0	4.0	0.0	35.0	17.5	15.0	52.5	65.4	61.5	*	13.3	3.8	4.0	12.9	5.1	
	E10000002	Buckinghamshire	19.7	32.6	5.6	11.1	12.5	20.2	16.2	16.2	53.9	64.3	58.9	9.9	10.4	6.0	2.2	1.0	8.6	
	E10000011	East Sussex	22.5	25.6	*	*	*	7.9	15.4	7.9	26.3	66.7	40.0	*	*	21.6	21.6	5.0	3.3	
	E10000014	Hampshire	21.6	28.0	10.0	22.9	10.0	23.6	15.9	4.6	52.5	73.6	67.3	20.5	21.5	15.8	9.9	1.1	8.5	
	E06000046	Isle of Wight	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E10000016	Kent (Data for Ashford, Canterbury, Dartford, Dover, Shepway, Swale and Thanet only)	15.9	46.8	5.1	5.1	13.6	24.6	23.0	7.9	57.1	65.3	64.2	7.9	15.4	5.3	11.6	3.1	4.6	
	E06000035	Medway	21.5	44.6	0.0	0.0	20.7	30.8	12.3	6.2	67.7	88.9	80.0	0.0	12.0	24.4	33.3	4.6	6.2	
	E06000042	Milton Keynes	15.4	30.8	20.0	10.0	0.0	15.6	15.6	6.3	46.9	83.3	68.5	8.7	11.8	20.4	3.8	2.3	4.6	
	E10000025	Oxfordshire	18.4	23.2	6.8	9.6	15.1	14.0	13.3	11.1	48.6	73.1	63.5	19.6	18.1	6.6	9.2	1.3	2.5	
	E06000044	Portsmouth	4.5	34.1	0.0	0.0	6.7	13.6	18.2	0.0	45.5	68.4	28.9	13.3	*	5.3	5.3	0.0	9.1	
	E06000038	Reading	24.3	45.9	5.9	47.1	0.0	13.5	29.7	10.8	37.8	100.0	93.5	*	*	6.3	3.1	0.0	0.0	
	E06000039	Slough	7.7	35.4	8.7	8.7	0.0	18.5	12.3	7.7	46.2	94.3	73.6	22.2	11.8	13.2	5.7	0.0	4.6	
	E06000045	Southampton	21.5	38.5	4.2	4.2	8.3	42.2	21.5	7.8	71.9	89.2	73.7	27.3	24.1	2.6	0.0	3.1	4.1	
	E10000030	Surrey (Data for Elmbridge, Guildford, Surrey Heath and Woking only. Tandridge did not participate)	31.0	48.3	*	*	*	37.9	13.8	13.8	51.7	81.8	85.7	*	*	4.5	9.1	3.0	0.0	
	E06000037	West Berkshire	28.2	30.8	*	*	*	28.2	15.4	5.1	48.7	85.7	71.4	*	*	10.7	3.6	5.4	2.6	
	E10000032	West Sussex	10.9	23.6	*	*	*	19.1	2.1	23.4	51.1	58.5	39.0	0.0	*	12.5	11.1	2.8	3.5	
	E06000040	Windsor and Maidenhead	18.2	45.5	6.7	16.7	13.3	21.2	6.1	6.1	45.5	88.5	67.3	*	22.7	21.2	5.8	0.0	6.1	
E06000041	Wokingham	9.8	14.6	*	*	*	4.9	7.3	4.9	43.9	74.4	48.7	6.3	*	0.0	0.0	0.0	0.0		

# A report on the oral health and dental service use of older people living in supported housing

Appendix 1 continued. Dental Public Health Epidemiology Programme for England, Oral Health Survey of mildly dependant older people 2016, upper tier local authority (LA)

Public Health England		* Result suppressed as N count fewer than 15		Whole or part LA no data collected		Whole or part LA did not partake in survey		Reason why not seen a dentist in last two years :												
Region	Upper Tier LA Code	Upper Tier LA Name	% volunteers with any oral health impacts fairly or very often	% volunteers not seen a dentist within the last two years	% can't find an NHS dentist	% say it's difficult to get to and from the dentist	% can't afford NHS charges	% volunteers edentulous	% with no posterior functional contacts	% volunteers with fixed replacement	% volunteers with removable replacement	% dentate volunteers with visible plaque	% dentate volunteers with visible calculus	% volunteers with partial dentures in need of replacement	% volunteers with full dentures in need of replacement	% dentate volunteers reporting current pain in mouth	% dentate volunteers with one or more PUFFA conditions	% volunteers with urgent need for treatment	% volunteers who would require domiciliary treatment	
South West	E0600022	Bath and North East Somerset	27.3	11.4	*	*	*	9.1	6.8	18.2	54.5	75.0	67.5	21.1	*	10.0	7.5	9.1	11.1	
	E0600028	Bournemouth																		
	E0600023	Bristol, City of	19.4	16.4	*	*	*	13.4	10.4	11.9	31.3	55.0	60.0	*	*	3.3	0.0	*	0.0	
	E0600052	Cornwall (including Isles of Scilly)																		
	E1000008	Devon (Data for East Devon, Exeter, Mid Devon, North Devon, Teignbridge, Torridge and West Devon only)	16.2	20.9	15.1	18.9	9.4	14.7	8.7	11.5	51.2	85.6	75.5	20.2	15.8	4.2	12.5	6.0	1.6	
	E1000009	Dorset																		
	E1000013	Gloucestershire	10.0	3.3	*	*	*	0.0	3.3	10.0	40.0	46.7	30.0	*	*	6.7	3.3	0.0	3.3	
	E0600024	North Somerset	18.5	16.9	*	*	*	15.4	10.8	9.2	52.3	7.3	30.9	0.0	0.0	3.6	1.8	4.5	4.5	
	E0600026	Plymouth	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E0600029	Poole																		
	E1000027	Somerset	18.0	29.2	3.8	9.6	7.7	32.6	21.3	1.7	54.5	79.0	74.6	13.0	5.8	3.5	3.5	1.7	2.8	
	E0600025	South Gloucestershire	19.7	18.0	*	*	*	14.8	3.3	8.2	42.6	89.5	47.4	4.5	*	10.5	7.0	1.7	3.4	
	E0600030	Swindon	4.9	21.3	*	*	*	21.3	16.4	9.8	57.4	88.5	63.5	4.8	0.0	7.7	17.3	0.0	0.0	
	E0600027	Torbay	23.0	27.9	23.5	17.6	11.8	23.3	13.3	21.7	43.3	93.6	83.0	15.8	6.7	4.3	6.4	0.0	3.3	
E0600054	Wiltshire	10.9	16.4	*	*	*	14.5	9.1	12.7	38.2	85.7	59.2	0.0	*	0.0	12.2	0.0	1.6		
West Midlands	E0800025	Birmingham																		
	E0800026	Coventry	23.1	40.0	4.0	16.0	12.0	36.1	24.6	4.9	50.8	65.9	26.2	6.7	18.5	18.6	2.3	1.5	58.7	
	E0800027	Dudley																		
	E0600019	Herefordshire, County of	4.3	17.4	*	*	*	14.5	10.1	11.6	63.8	79.7	62.7	6.9	15.8	5.1	1.7	0.0	2.9	
	E0800028	Sandwell																		
	E0600051	Shropshire	30.6	22.2	*	*	*	25.0	16.7	5.6	66.7	55.6	51.9	12.5	*	18.5	3.7	0.0	0.0	
	E0800029	Solihull	6.5	19.4	*	*	*	22.6	3.3	14.5	48.4	90.6	94.3	5.3	5.9	5.7	5.8	3.6	3.3	
	E1000028	Staffordshire	10.1	46.7	4.1	11.1	4.4	71.8	15.1	2.2	60.8	54.7	44.7	9.2	10.2	5.4	1.9	2.8	3.4	
	E0600021	Stoke-on-Trent	1.4	52.8	2.6	7.9	2.6	51.4	19.4	1.4	63.9	47.5	37.5	*	16.7	7.5	0.0	2.8	5.6	
	E0600020	Telford and Wrekin	22.7	27.3	*	*	*	38.1	4.8	14.3	61.9	*	*	*	*	*	*	*	0.0	0.0
	E0800030	Walsall																		
	E1000031	Warwickshire																		
	E0800031	Wolverhampton	33.3	54.8	4.3	28.3	2.2	38.1	26.2	0.0	57.1	92.3	90.4	26.7	11.4	15.4	0.0	2.4	16.7	
	E1000034	Worcestershire	21.9	32.4	2.9	26.5	5.9	51.9	22.1	7.7	51.0	65.1	57.0	3.1	8.3	11.6	20.0	8.6	4.2	
Yorkshire and the Humber	E0800016	Barnsley																		
	E0800032	Bradford	21.4	21.4	*	*	*	14.8	14.8	3.7	44.4	52.2	34.8	*	*	13.0	0.0	0.0	0.0	
	E0800033	Calderdale	24.2	33.3	*	*	*	24.2	9.1	9.1	51.5	68.0	84.0	*	*	12.0	4.0	0.0	12.5	
	E0800017	Doncaster	13.8	30.8	15.0	15.0	10.0	53.8	15.4	4.6	60.0	55.8	55.8	41.2	25.9	7.0	11.6	1.3	5.0	
	E0600011	East Riding of Yorkshire	34.4	46.9	6.7	6.7	13.3	31.3	15.6	6.3	59.4	68.2	63.6	*	13.3	22.7	36.4	3.1	3.2	
	E0600010	Kingston upon Hull, City of																		
	E0800034	Kirklees	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E0800035	Leeds																		
	E0600012	North East Lincolnshire	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E0600013	North Lincolnshire	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E1000023	North Yorkshire	14.6	25.2	11.8	14.5	5.3	27.9	14.5	13.4	46.0	60.7	66.0	11.1	12.0	8.7	8.1	2.2	0.8	
	E0800018	Rotherham	10.9	32.7	0.0	0.0	0.0	32.7	25.5	3.6	58.2	54.1	56.8	*	0.0	5.4	27.0	0.0	0.0	
	E0800019	Sheffield	26.2	40.0	15.4	19.2	3.8	26.2	18.5	6.2	47.7	68.8	75.0	18.8	25.0	10.4	2.1	0.0	6.2	
	E0800036	Wakefield	14.3	55.6	8.6	20.0	2.9	50.0	17.7	4.8	64.5	78.8	75.8	*	15.6	6.1	0.0	1.6	1.6	
E0600014	York	23.7	54.2	6.3	15.6	6.3	32.8	23.7	5.2	58.6	76.9	50.0	*	21.7	12.5	15.8	0.0	14.7		
Region	E1200004	East Midlands	14.8	33.0	8.0	12.9	8.6	22.2	16.2	6.1	55.5	73.3	62.5	13.7	17.6	7.7	9.8	2.9	4.5	
	E1200006	East of England	18.0	27.8	7.5	18.2	6.1	19.5	11.7	9.2	48.7	64.0	58.5	7.3	10.2	8.3	4.7	3.5	4.5	
	E1200007	London	21.2	35.2	5.2	11.5	7.8	17.1	17.8	9.1	46.2	77.8	66.9	16.4	15.0	14.5	8.0	5.9	8.4	
	E1200001	North East	20.0	42.0	2.4	9.6	6.7	42.2	17.5	4.2	60.6	64.2	56.6	12.3	21.2	7.5	10.1	4.5	6.3	
	E1200002	North West	19.2	40.2	10.3	10.1	5.2	32.4	17.7	5.5	59.7	63.7	56.8	14.9	15.1	10.8	9.1	2.5	2.9	
	E1200008	South East	18.2	32.5	7.8	12.4	11.2	20.5	15.5	9.3	50.6	74.6	63.5	14.2	16.6	10.2	7.8	1.9	5.0	
	E1200009	South West	16.8	20.9	9.8	15.8	7.6	18.3	11.7	10.1	48.4	74.9	65.2	12.4	10.4	4.7	7.8	2.9	2.4	
	E1200005	West Midlands	13.5	41.4	4.0	14.4	4.9	54.8	16.4	4.3	58.9	63.7	53.7	8.8	11.8	8.5	4.2	2.8	8.6	
	E1200003	Yorkshire and The Humber	17.8	34.3	9.3	14.2	6.1	32.4	17.1	8.4	52.2	63.5	63.8	15.1	14.8	9.7	10.7	1.9	3.2	
Country	E9200001	England	17.7	34.0	7.3	12.9	7.2	27.0	15.8	7.5	53.1	69.9	61.3	13.0	14.8	9.5	7.8	3.2	5.1	

# Appendix 2. Survey questionnaire

Public Health England Dental Public Health Epidemiology Programme  
Oral health survey of older people, 2015-2016

## Questionnaire

Unique ID number	Lower-tier local authority code								Number of participant			

I would like to ask you some questions about you and your dental health. Then I'd like to go on to some questions about using dental treatment services.

I won't write your name or address details on this form.

First an item that I can complete without asking you:

**1 Sex of volunteer**

- Male
- Female
- Not answered

Now could you tell me please -

**2 What was your age last birthday?**

- 65 – 74
- 75 – 84
- 85 or over
- Not answered

I am going to read you three words and I would like you to remember them for later, please: **pear shoe table**

**3. Do any of these services regularly come to you in your home?**

- Hairdresser
- Doctor
- Social services
- Nurse
- Dentist
- Other \_\_\_\_\_
- Not answered

Now I am going to ask you some questions about your health and lifestyle.

**4. Do you have any long standing illness or disability that limits your ability to attend the dentist's practice for a check-up or treatment?**

- Yes (go to question 5)
- No (go to question 6)
- Not answered

**5. Are you limited to what you can do and where you can get to?**

- No, but I can't get to the dentist for another reason  
Details of reason.....
- Yes, I can't sit in a dentist's chair
- Yes, I can't climb stairs so need a downstairs surgery
- Yes, I can't leave the house so need a dentist to come to me
- Yes, I am bedbound so need a dentist to come to me
- Not answered

I am now going to ask you some questions about your mouth and teeth.

**HOW OFTEN during the last year....**

	Never, or hardly ever	Occasionally	Fairly often or very often	Prefer not to answer
6... have you had <b>painful aching</b> in your mouth?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7... have you had to <b>interrupt meals</b> or avoid eating with others because of problems with your teeth, mouth or dentures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8... have you had trouble <b>pronouncing any words</b> because of problems with your teeth, mouth, or dentures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9... have you found it <b>uncomfortable to eat any foods</b> because of problems with your teeth, mouth or dentures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10... have you been <b>self-conscious or embarrassed</b> because of problems with your teeth, mouth or dentures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11 Do you have a denture, even if you don't wear it?**

- Yes – go to question 12
- No – go to question 15
- Not answered

**12 Are you content with the fit of your denture(s)?**

Yes  So-so  Not at all  Not answered

**13 Is/Are your denture(s) comfortable?**

Yes  So-so  Not at all  Not answered

**14 Are you limited in your choice of foods because of your denture(s)?**

Yes  So-so  Not at all  Not answered

I would now like to ask you some questions about going to the dentist.

**15 Roughly how long has it been since you last saw a dentist?**

- Within the last 12 months
  - More than 1, but less than 2 years ago
  - More than 2 years ago
  - More than 5 years ago
  - Not answered
- go to question 17
- 
- The diagram consists of two boxes with arrows pointing to them from the list of options. The top box is connected to the first two options ('Within the last 12 months' and 'More than 1, but less than 2 years ago') and contains the text 'If either of these are the answers, go to question 17'. The bottom box is connected to the next two options ('More than 2 years ago' and 'More than 5 years ago') and contains the text 'If either of these are the answers, go to question 16'.

*Ask volunteers who have not seen a dentist in the last 2 years.*

**16 What are the reasons why you have not seen a dentist in the last 2 years?**

Wait for volunteer response first, prompt only for clarification

TICK ALL THAT APPLY

- No need to see the dentist / nothing wrong with my teeth / no natural teeth
- I can't find an NHS dentist
- I can't afford the NHS charges
- I haven't got the time to see a dentist
- I am afraid of dentists / I don't like seeing the dentist
- Keep forgetting / Haven't got round to it
- It's difficult to get to and from the dentist
- I've had a bad experience with a dentist
- Dentist changed to private / refused to do NHS work
- Other (please specify) \_\_\_\_\_
- Not answered



I'd now like to ask you about your education

**17 Do you have any educational qualifications for which you received a certificate?**

- Yes, at degree level or above
- Yes, another kind of qualification but below degree level
- No
- Not answered

**18 I asked you to remember three words at the beginning of this interview; do you remember what they were?** (For interviewer to note - Pear, shoe, table)

- Yes (volunteer lists all three)
- Yes (volunteer can only remember two of the words)
- Yes (volunteer can only remember one of the words)
- No (volunteer can't remember any of the words)
- Not answered

**19 We have asked you a lot of questions. Is there anything you would like to say that we haven't asked you about dental health and dentistry?**

- No
- Yes – record these below

TICK ALL THAT APPLY

- |  |  |
|--|--|
| <input type="checkbox"/> No NHS dentist available                | <input type="checkbox"/> Dentist over-loaded   |
| <input type="checkbox"/> Dislike drift from NHS                  | <input type="checkbox"/> Satisfied             |
| <input type="checkbox"/> Treatment should be free                | <input type="checkbox"/> Better than in past   |
| <input type="checkbox"/> Costs too much (no mention of NHS/free) | <input type="checkbox"/> Frightened of dentist |
| <input type="checkbox"/> Can't get appointment                   | <input type="checkbox"/> Other details _____   |
| <input type="checkbox"/> Not answered                            | _____  |

To finish I would like to ask 3 questions about your vision

**20 Do you have difficulty seeing, even if wearing glasses?**

- No – no difficulty
- Yes – some difficulty
- Yes – a lot of difficulty
- Cannot do at all
- Not answered

**21 Do you have difficulty seeing and recognising a person you know from 7 meters (20 feet) away, even if wearing glasses?**

- No – no difficulty
- Yes – some difficulty
- Yes – a lot of difficulty
- Cannot do at all
- Not answered

**22 Do you have difficulty seeing the print in a map, newspaper, or book, even if wearing glasses?**

- No – no difficulty
- Yes – some difficulty
- Yes – a lot of difficulty
- Cannot do at all
- Not answered

**Thank you for completing the interview.**

**23 This questionnaire was .....**

- Completed in its entirety
- Not completed as the volunteer withdrew consent or decided not to continue
- Not completed as the volunteer could not cooperate