

Scottish Adult Oral Health Survey

2016-2018

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Introduction

The Scottish Adult Oral Health Survey (SAOHS) 2016-18

The Scottish Adult Oral Health Survey (SAOHS) was initially carried out as a pilot project in 2015/16 with the support and approval of the Scottish Dental Epidemiology Co-ordinating Committee (SDECC). The principal aim of the pilot project was to assess the feasibility of conducting a survey of adult oral health across Scotland, within an age defined group of people attending primary dental care for an examination appointment. It was anticipated that, if successful, this would be the first stage in the development of a rolling SAOHS programme for different age groups. Prior to this report, the most recent epidemiological survey of the oral health of Scotland's adult population that included a professional oral examination, was carried out as part of the 1998 UK Adult Dental Health Survey (ADHS).¹

In 2015 the SAOHS Group, led by the then Chief Dental Officer, agreed to look at an alternative way to better utilise the routine dental data collected daily within NHS primary care in Scotland. A web-based oral health data collection system was developed by National Services Scotland (NSS), which allowed dentists to record levels of adult oral health and directly transfer this information safely and securely to Information Services Division (ISD) for analysis. ISD worked closely with dentists and other staff from the NHS Boards, NHS Education for Scotland and the Universities of Glasgow and Dundee to pilot this new method as a means of collecting routine adult oral health information.

Following on from the successful pilot, the survey was repeated in 2017/18 and recruited further dentists to provide a representative sample across NHS Boards and deprivation categories.

The long-term purpose of the survey is to record levels of adult oral health across Scotland in order to inform policy, plan services, improve and maintain health and to monitor changes over time. Although this survey was fundamentally testing an alternative approach for gathering epidemiological data, it was also designed to provide a picture of oral health for an under-reported cohort of the population: adults aged 45 years and over.

Data were collected as part of dental examinations in the NHS **General Dental Service** (GDS) and **Public Dental Service** (PDS). The 2018 SAOHS began in December 2017 when participating dentists were asked during a four-month period (December 2017 - April 2018) to collect and submit data from a minimum of 25 patients aged 45 years and over who were attending the service for either a new patient, unscheduled or recall examination appointment. A notable limitation of the data reported here is therefore that it represents only those people who sought a dental examination either as a new or emergency patient, or as a regular patient of the GDS or PDS. **ISD Dental Statistics** show that as at 30th September 2018, 88% of adults aged 45 years and over in Scotland were registered with a dentist. Of those registered 70% participated in GDS or PDS by attending a dentist for examination or treatment within the previous two years.²

This report focuses on the results of the combined 2016 and 2018 surveys. Details of the methodology used to collect and analyse these data can be found in **Appendix A1**. The pilot in 2016 was carried out between December 2015 and March 2016 and details can be found here: <https://www.isdscotland.org/Health-Topics/Dental-Care/Publications/2017-02-21/2017-02-21-SAOHS-Report.pdf>.

Key Definitions

For key definitions of terms used in this report please see the [glossary](#). Diagrams in appendices illustrate key terms to aid understanding: the structure of a tooth and dental implant ([Appendix A5](#)), calculation of oral hygiene scores ([Appendix A6](#)) and calculation of BPE scores ([Appendix A7](#)).

Demographic Measures

Several demographic measures are reported: urban/rurality (using [\[six fold\] Urban Rural Classification](#)³), ethnicity (using [Scotland's New Ethnicity Classification](#)⁴) and an area-based measure of deprivation (using the [Scottish Index of Multiple Deprivation](#)⁵), relating to the participating patients. These measures are defined in the [glossary](#).

Specific Aims of the SAOHS

The aim of this project was to conduct a survey of adult oral health across Scotland, within an age defined group (45+ years) of people attending primary dental care for an examination, as the first stage in the development of a rolling SAOHS programme. The survey addressed the following objectives:

- To examine the feasibility of collecting adult oral health data and establish appropriate methodologies.
- To work in conjunction with primary dental care practitioners to collect data.
- To gather population oral health information as part of dental examinations in the NHS GDS and PDS.
- To assess the condition of the mouth in adults, including the level of dental restorations, periodontal health and plaque control.
- To assess current oral health behaviour (smoking, alcohol consumption and dental attendance).
- To allow for analyses to assess changes over time in oral health and patient behaviour.

Main Points

- This project has shown that collecting survey data in relation to the oral health and behaviour of patients aged 45 years and over as part of a primary dental care examination is feasible.
- In this survey of 3,114 patients, 96% of adults aged 45 years and over who attended primary dental care for an examination had at least one natural tooth.
- Two-thirds (67%) of those with at least one natural tooth had a functional dentition (≥ 21 teeth), that is defined as having enough teeth for general oral function.
- Older patients and those living in the more deprived areas of Scotland were less likely to have a functional dentition.
- This survey will be used to inform the future collection of adult oral health data in Scotland.

Results and Commentary

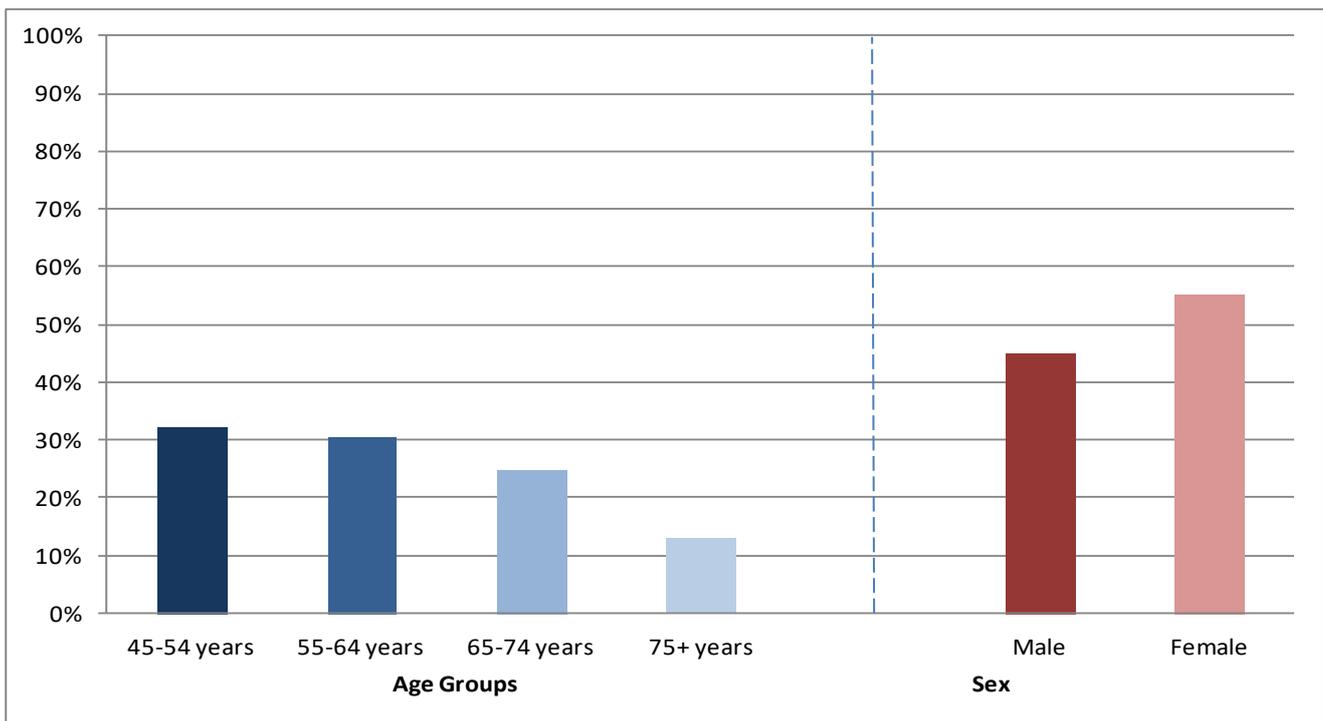
The following information provides national summary analysis for the 3,114 patients collected from 126 dentists who participated in the combined SAOHS 2016-2018. Dentists were asked to submit data for a minimum of 20 (2016) / 25 (2018) patients. Details of the characteristics of dental practices and the service types under which the dentists who participated in the survey can be found in [Appendix A3](#).

Characteristics of Patients Examined

Age and Sex

Of the 3,114 patients aged 45 years and over who participated, 45% were male and 55% were female. This is a slight over-representation of females when compared to the Scottish population ([Appendix A4](#)). Figure 1 presents the distribution of patients across age categories and by sex. Most were aged under 65 years with only 13% aged 75 years and over. Comparisons between the SAOHS data and the Scottish population aged 45 years and over can be found in [Appendix A4](#).

Figure 1: Percentage of patients examined according to age and sex



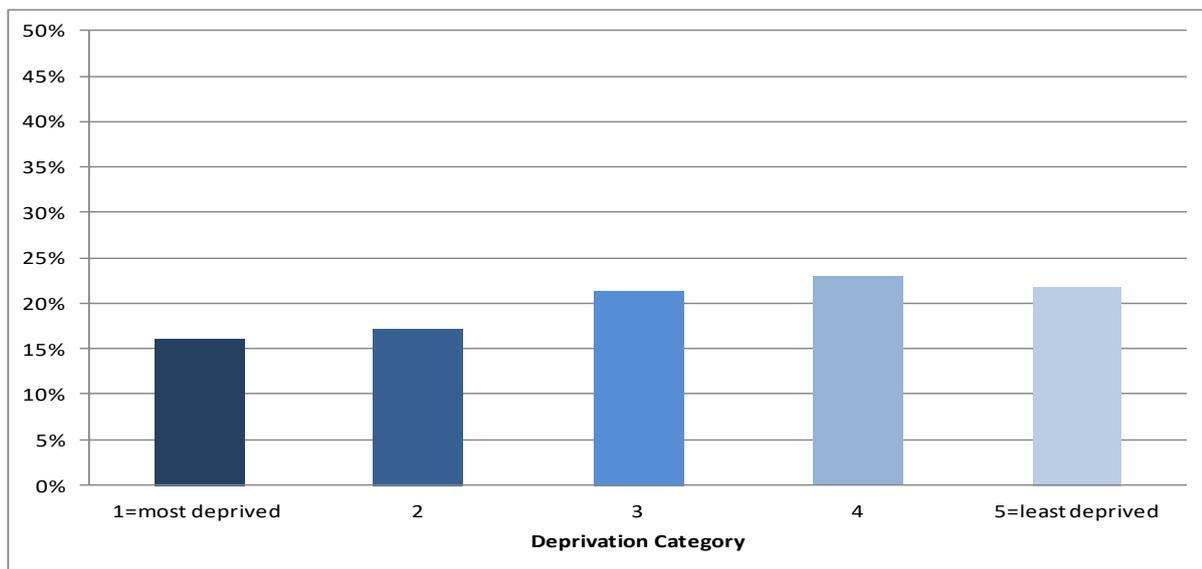
Source: ISD SAOHS database

Additional information relating to the age and sex of patients can be found in [Table 1](#).

Deprivation

Figure 2 shows the percentage of patients examined within each area-based **deprivation category**, using the **Scottish Index of Multiple Deprivation**, based on their home postcode. Comparisons between the SAOHS data and the Scottish population aged 45 years and over broken down by deprivation categories can be found in **Appendix A4**.

Figure 2: Percentage of patients examined by national deprivation category^a



Source: ISD SAOHS database
a. Scotland level SIMD 2016.

Additional information relating to deprivation categories of patients can be found in **Table 1**.

Age and Deprivation

Table 1a shows the percentage and number of patients examined in each age and deprivation category. This table provides the denominators for many of the following tables in the report.

Table 1a: Percentage (Number) of patients examined in each age and deprivation category^{a,b}

SIMD Category	Age (years)				Total % (n)
	45-54 % (n)	55-64 % (n)	65-74 % (n)	75+ % (n)	
1=most deprived	16.9 (169)	15.8 (149)	15.9 (122)	15.2 (61)	16.1 (501)
2	17.7 (177)	18.4 (174)	16.0 (123)	15.2 (61)	17.2 (535)
3	22.5 (225)	19.3 (183)	22.8 (175)	20.4 (82)	21.4 (665)
4	22.9 (229)	25.4 (240)	20.6 (158)	21.9 (88)	23.0 (715)
5=least deprived	19.4 (194)	20.4 (193)	24.0 (184)	27.1 (109)	21.8 (680)
Unknown	0.4 (4)	0.7 (7)	0.8 (6)	0.2 (1)	0.6 (18)
Total	100.0 (998)	100.0 (946)	100.0 (768)	100.0 (402)	100.0 (3,114)

Source: ISD SAOHS database
a. Scotland level SIMD 2016.
b. Percentages in the above table may not add to 100 due to rounding.

NHS Board

Table 1b shows the breakdown of the 3,114 patients by NHS Board of residence. Comparisons between the SAOHS data and the Scottish population aged 45 years and over can be found in [Appendix A4](#).

Table 1b: Distribution of patient sample across NHS Boards^a

NHS Board	Number	Percentage (%)
Ayrshire & Arran	177	5.7
Borders	201	6.5
Dumfries & Galloway	110	3.5
Fife	187	6.0
Forth Valley	266	8.5
Grampian	255	8.2
Greater Glasgow & Clyde	852	27.4
Highland	174	5.6
Lanarkshire	268	8.6
Lothian	337	10.8
Orkney	40	1.3
Shetland	66	2.1
Tayside	144	4.6
Western Isles	19	0.6
Unknown	18	0.6
Scotland	3,114	100.0

Source: ISD SAOHS database

a. Percentages in the above may not add to 100 due to rounding.

Ethnicity

Using the [Scottish Official Statistics Ethnicity Categories 2011](#), patients were asked to indicate which ethnicity category they felt most represented them. 73% identified with being 'White Scottish', 22% in other ethnic categories and this question was not answered by 4% of respondents. Comparisons between the SAOHS data and the Scottish population aged 45 years and over can be found in [Appendix A4](#).

Urban/Rural classification

The majority of patients reported living in large urban areas (34%) or other urban areas (33%). Of other area types, patients tended to live in accessible locations (20%), which is comparable to the results for the Scottish population aged 45 years and over ([Appendix A4](#)).

Oral Health Behaviours

Smoking Status

Patients were asked to report their smoking status: ‘never smoked’, ‘current smoker’ or ‘previous smoker’. Table 2 shows the breakdown of these categories by the sex of the patient. Overall, 13% of patients said they were current smokers.

Table 2: Smoking status by sex of patients examined^a

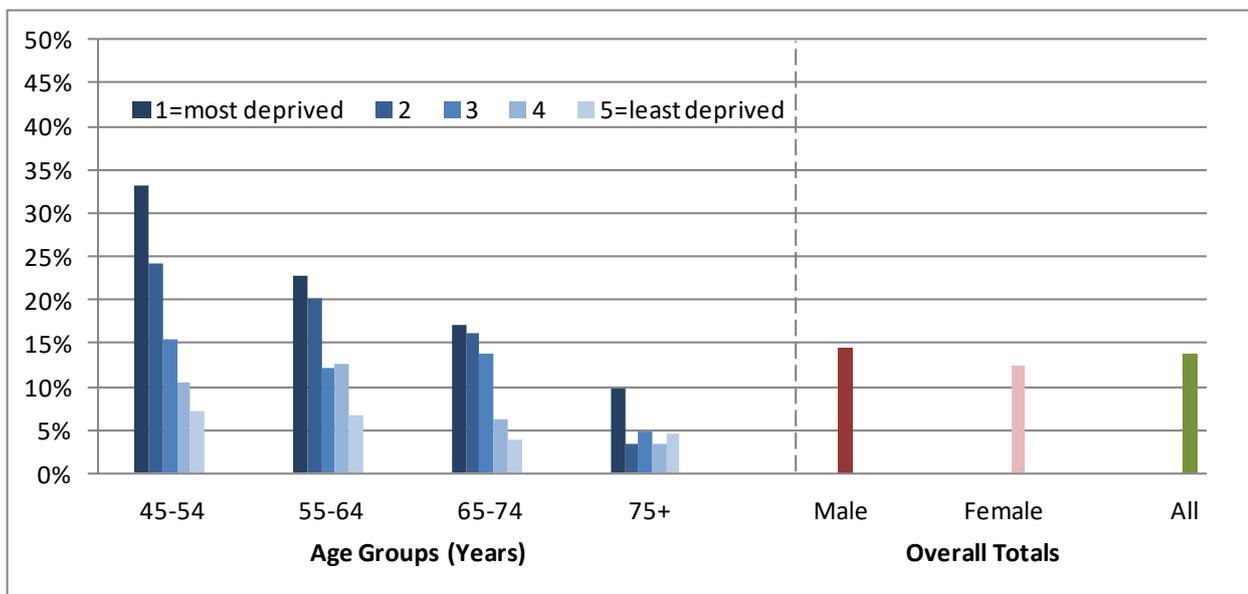
Smoking Status	Sex		
	Male % (n)	Female % (n)	Total % (n)
Never Smoked	49.0 (684)	56.5 (971)	53.1 (1,655)
Current Smoker	14.4 (201)	12.5 (214)	13.3 (415)
Previous Smoker	36.6 (511)	31.0 (532)	33.5 (1,043)
Unknown	0.0 (0)	0.1 (1)	0.0 (1)
Total	100.0 (1,396)	100.0 (1,718)	100.0 (3,114)

Source: ISD SAOHS database

a. Percentages in the above table may not add to 100 due to rounding.

Figure 3 shows the percentage of patients examined who currently smoke according to age, sex and deprivation category. Patients from the most deprived areas were more likely to be current smokers than those from the least deprived areas.

Figure 3: Percentage of patients examined who currently smoke according to age, sex and deprivation category^a



Source: ISD SAOHS database

a. Scotland level SIMD 2016

Additional information relating to patients who currently smoke by age, sex and deprivation category can be found in [Table 2a](#); and all smoking status by age and deprivation category in [Table 2b](#).

Chewing Tobacco

Of all patients who participated, less than 1% reported ever having used chewing tobacco, paan, gutkha, supari or betel quid.

Alcohol Consumption

Patients were asked to indicate how often during the past year they consumed alcohol above the 2015 recommended alcohol guidelines (8 or more units for males; 6 or more for females) on a single occasion. Table 3 shows that 306 males (22%) and 219 females (13%) reported consuming more than the recommended alcohol units on a single occasion, at least weekly, in the last year. The criterion 'at least weekly' has been used in this report to define 'risky drinking'.

Table 3: Frequency of consuming (≥ 6 if female; ≥ 8 if male)^a units of alcohol on a single occasion in the last year, according to sex^b

Alcohol Intake Categories	Sex		
	Male % (n)	Female % (n)	Total % (n)
Never	35.5 (495)	48.4 (831)	42.6 (1,326)
Less than monthly	27.2 (380)	27.3 (469)	27.3 (849)
Monthly	15.1 (211)	11.4 (195)	13.0 (406)
Weekly	20.4 (285)	11.9 (205)	15.7 (490)
Daily or almost daily	1.5 (21)	0.8 (14)	1.1 (35)
Unknown	0.3 (4)	0.2 (4)	0.3 (8)
Total	100.0 (1,396)	100.0 (1,718)	100.0 (3,114)

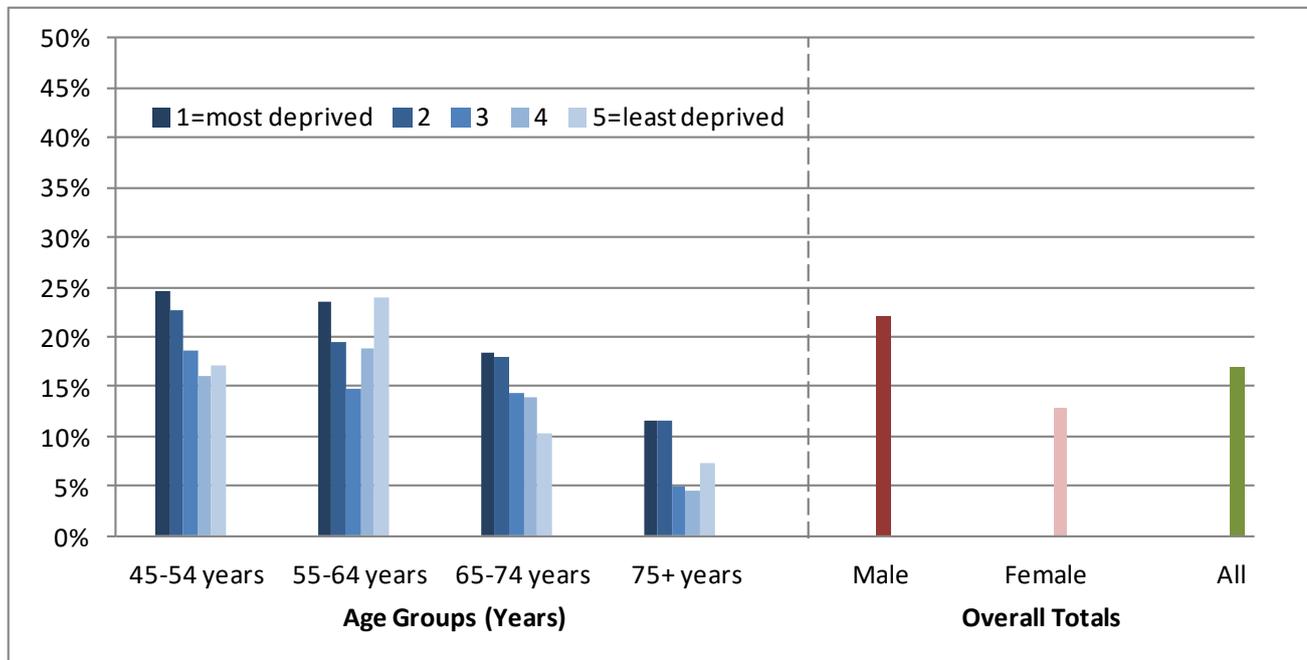
Source: ISD SAOHS database

a. UK Chief Medical Officers have since published new guidelines: <http://www.gov.scot/Topics/Health/Services/Alcohol/safer-drinking>

b. Percentages in the above table may not add to 100 due to rounding.

Figure 4 shows the percentage of patients drinking alcohol at 'risky' levels by age, sex and deprivation category.

Figure 4: Percentage of patients examined reporting 'risky drinking'^a according to age, sex and deprivation category^b



Source: ISD SAOHS database

a. 'Risky drinking' is defined in this report as consuming more than the 2015 recommended alcohol guidelines on a single occasion, at least weekly, in the last year.

b. Scotland level SIMD 2016.

Additional information relating to 'risky drinking' by age, sex and deprivation category of patients examined can be found in [Table 3a](#), and all alcohol consumption categories by age, sex and deprivation category of patients examined in [Table 3b](#).

Alcohol Consumption and Smoking Status

Table 4 shows the association between current smoking status and reported consumption of alcohol at 'risky' levels in the last year. Only 3% of patients were positive for both risk factors.

Table 4: Association between current smokers and 'risky drinking'^{a,b,c,d}

'Risky' alcohol consumption	Patient is a Current Smoker		
	No % (n)	Yes % (n)	Total % (n)
No	72.8 (2,262)	10.3 (319)	83.1 (2,581)
Yes	13.8 (430)	3.1 (95)	16.9 (525)
Total	86.7 (2,692)	13.3 (414)	100.0 (3,106)

Source: ISD SAOHS database

a. Two patients did not answer the question regarding smoking nor alcohol consumption.

b. Six patients did not answer the question regarding alcohol consumption

c. 'Risky drinking' is defined in this report as consuming more than the 2015 recommended alcohol guidelines on a single occasion, at least weekly, in the last year.

d. Percentages in the above table may not add to 100 due to rounding.

Anxiety about Visiting the Dentist

Patients were asked to indicate how anxious they feel about visiting the dentist. Of those who participated in the survey, 971 males (70%) and 938 females (55%) reported not experiencing any anxiety about visiting a dentist (Table 5).

Table 5: Anxiety level when visiting the dentist by sex of patients examined^a

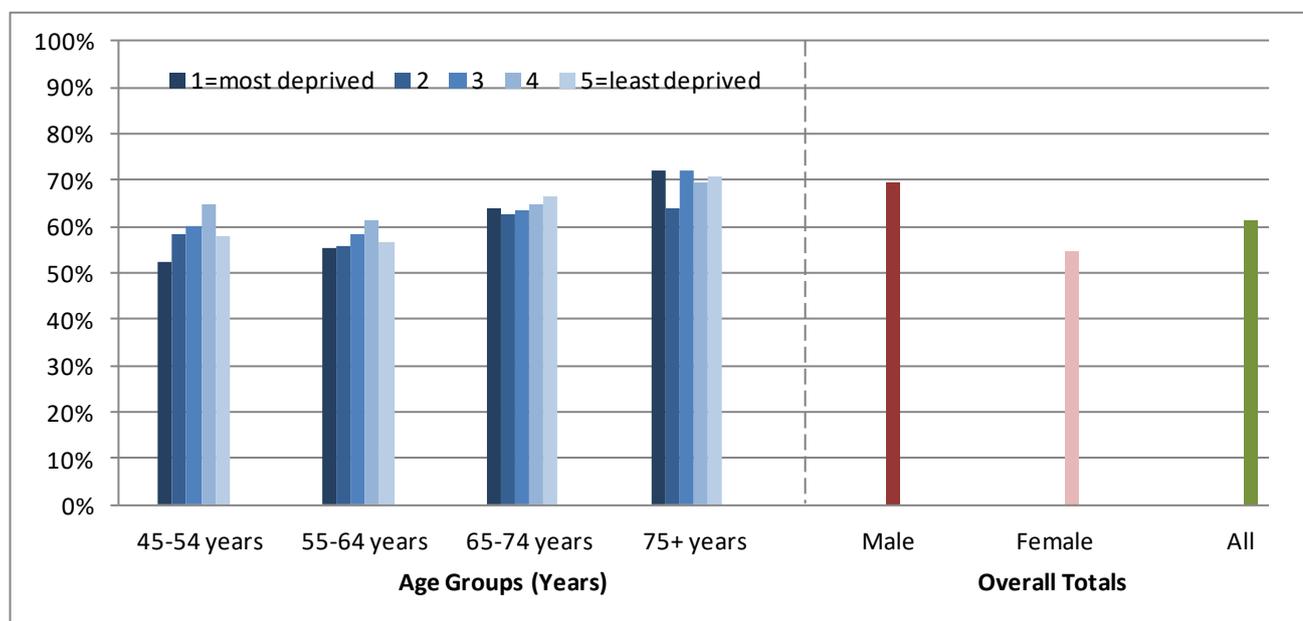
Anxiety	Sex		
	Male % (n)	Female % (n)	Total % (n)
Not anxious	69.6 (971)	54.6 (938)	61.3 (1,909)
Slightly anxious	20.6 (288)	27.0 (464)	24.1 (752)
Fairly anxious	6.4 (90)	9.8 (168)	8.3 (258)
Very anxious	2.1 (29)	5.2 (90)	3.8 (119)
Extremely anxious	1.1 (15)	3.3 (57)	2.3 (72)
Unknown	0.2 (3)	0.1 (1)	0.1 (4)
Total	100.0 (1,396)	100.0 (1,718)	100.0 (3,114)

Source: ISD SAOHS database

a. Percentages in the above table may not add to 100 due to rounding.

Figure 5 provides a breakdown of those patients who reported not experiencing any anxiety about visiting a dentist by age, sex and deprivation category.

Figure 5: Percentage of patients not anxious at visiting the dentist according to age, sex and deprivation category^a



Source: ISD SAOHS database

a. Scotland level SIMD 2016.

Additional information relating to patients reporting no anxiety by age, sex and deprivation category can be found in [Table 5a](#), and all patient anxiety levels by age and deprivation category in [Table 5b](#).

Regular Attendance at a Dentist

Patients were asked when they had last visited a dentist prior to this examination. 1,207 males (86%) and 1,517 females (88%) participating in the survey reported attending a dentist at least once within the last year.

Table 6: Percentage of patients reporting a last visit to the dentist, by sex of patients examined^a

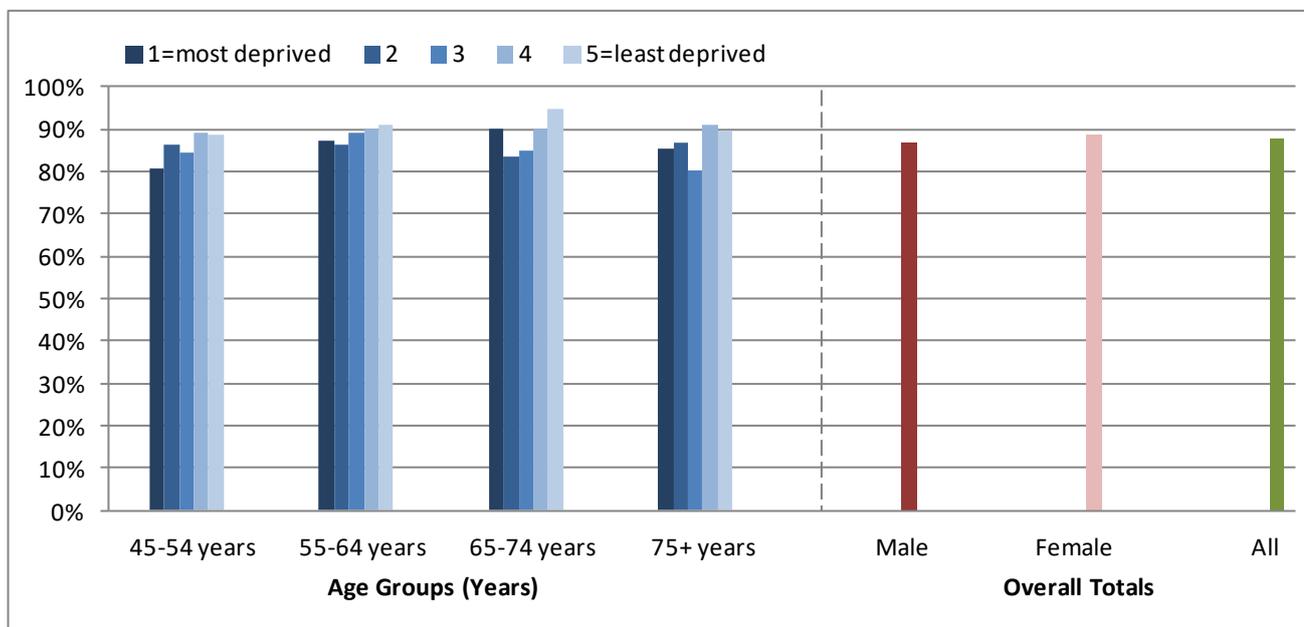
Last visit to a dentist prior to this exam	Sex		
	Male % (n)	Female % (n)	Total % (n)
Within the last 6 months	47.4 (662)	46.9 (806)	47.1 (1,468)
6 months to 1 year ago	39.0 (545)	41.4 (711)	40.3 (1,256)
1 to 2 years ago	7.6 (106)	7.1 (122)	7.3 (228)
More than 2 years ago	5.2 (73)	4.1 (70)	4.6 (143)
Never been to a dentist	0.6 (8)	0.2 (3)	0.4 (11)
Unknown	0.1 (2)	0.3 (6)	0.3 (8)
Total	100.0 (1,396)	100.0 (1,718)	100.0 (3,114)

Source: ISD SAOHS database

a. Percentages in the above table may not add to 100 due to rounding.

Figure 6 shows the percentage of patients who attended the dentist at least once within the last year by age, sex and deprivation category.

Figure 6: Percentage of patients examined who reported visiting a dentist within the last year according to age, sex and deprivation category^a



Source: ISD SAOHS database

a. Scotland level SIMD 2016.

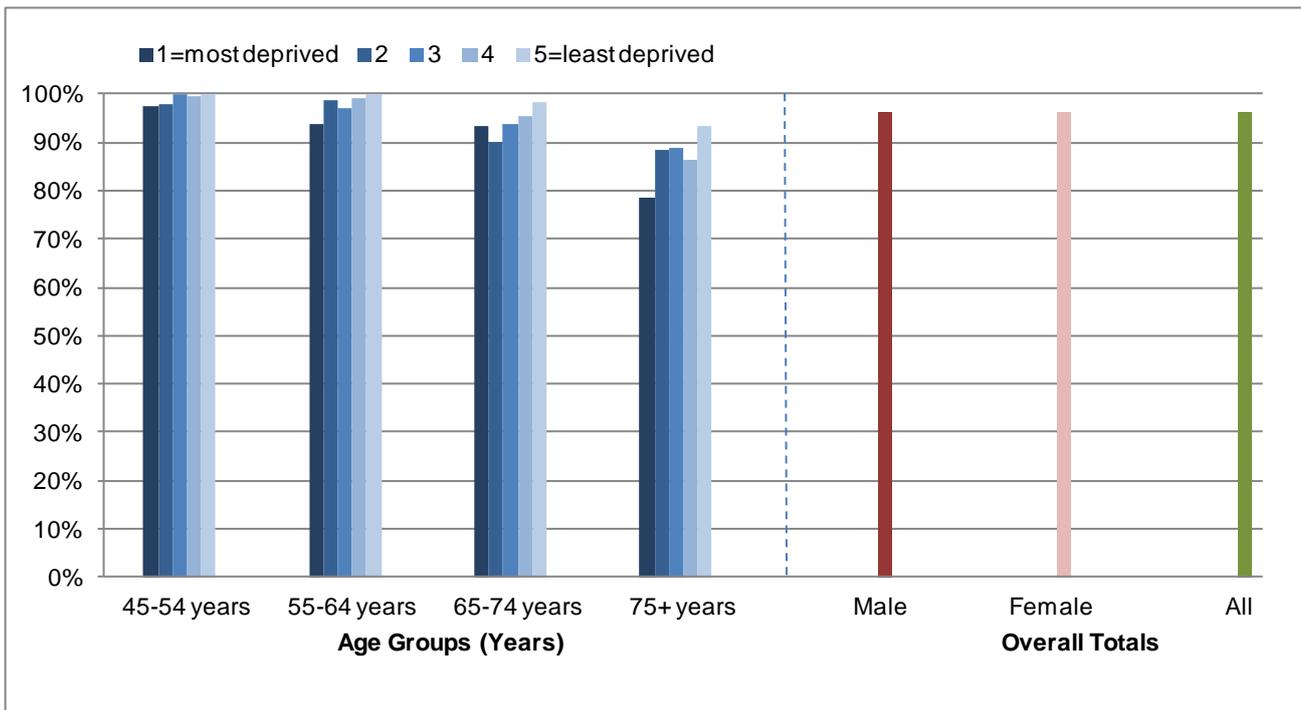
Additional information relating to a patient’s last visit to the dentist within the last year by age, sex and deprivation category can be found in [Table 6a](#), and all patients’ last visit to the dentist by age and deprivation category in [Table 6b](#).

Intra-Oral Examination

Dentate Status

Figure 7 shows the percentage of patients with at least one natural tooth (patients in this group are said to be **dentate**) by age, sex and deprivation category. Overall, 2,998 (96%) of patients who participated were dentate. The percentage of dentate patients decreases with increasing age.

Figure 7: Percentage of patients examined who were dentate according to age, sex and deprivation category^a



Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

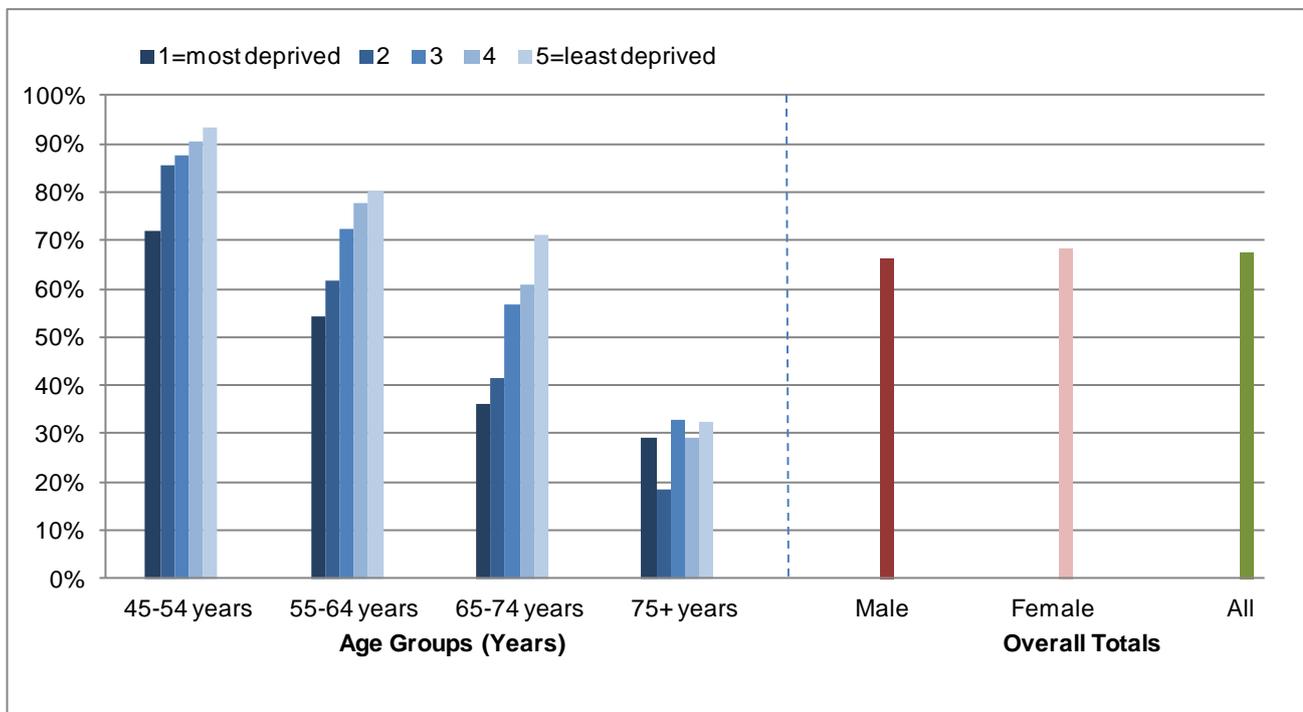
Additional information relating to patients' dentate/edentate status by age, sex and deprivation category can be found in [Table 7a](#).

Functional Dentition

The number of teeth consistent with a **functional dentition** is widely accepted to be 21 or more natural teeth.⁷ Although this figure is somewhat arbitrary, evidence exists to indicate that 21 or more natural teeth enables most dentate individuals to eat what they want without the need for a removable partial denture.⁶

The percentage of the 2,998 dentate patients who had at least 21 natural teeth is 67% (2,019). Figure 8 gives a breakdown by age, sex and deprivation category. The percentage of dentate patients with a functional dentition decreases with age, with the exception of the 75 years and over age group. Generally a higher percentage of dentate patients living in the least deprived areas have a functional dentition.

Figure 8: Percentage of dentate patients examined with a functional dentition by age, sex and deprivation category^a



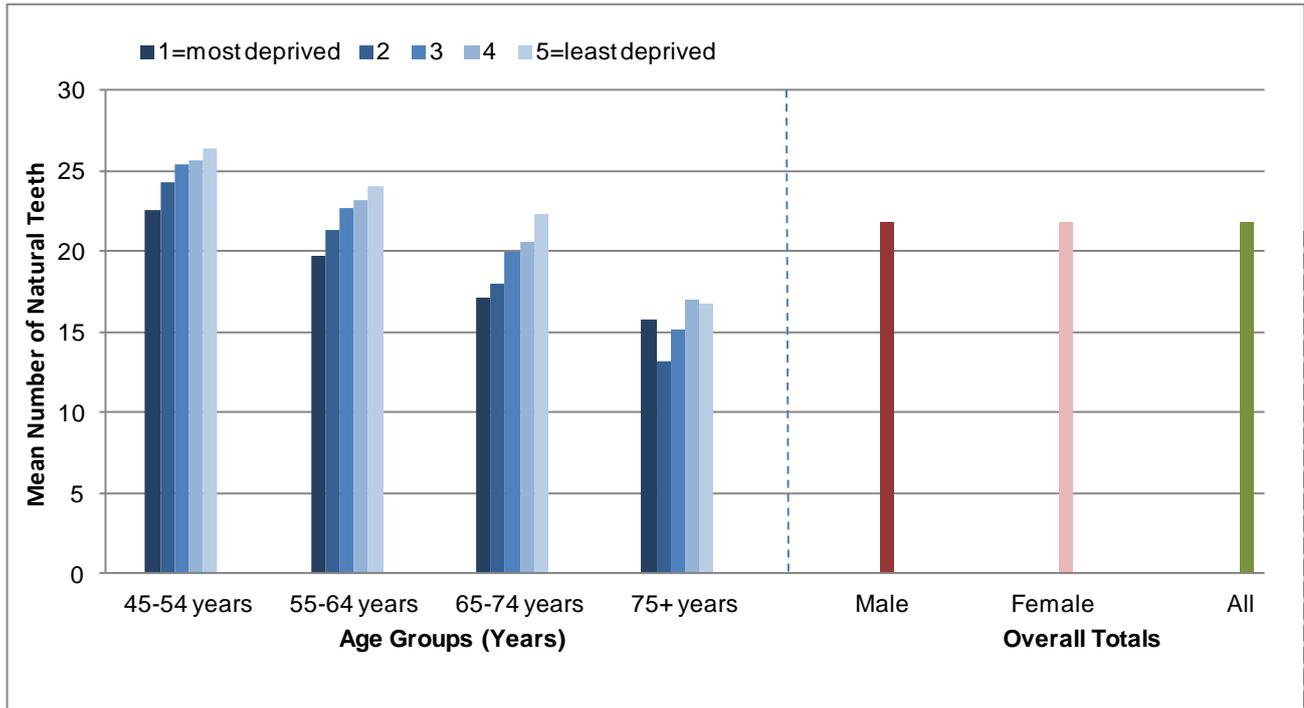
Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

Additional information relating to the functional dentition status by age, sex and deprivation category of patients examined can be found in [Table 7b](#).

Natural Teeth

The mean number of natural teeth among dentate patients was 21.8 for males and 21.9 for females. Figure 9 gives a breakdown by age, sex and deprivation category. The mean number of natural teeth among dentate patients decreases with age and dentate patients living in the most deprived areas generally have fewer natural teeth.

Figure 9: Mean number of natural teeth among dentate patients examined according to age, sex and deprivation category^a



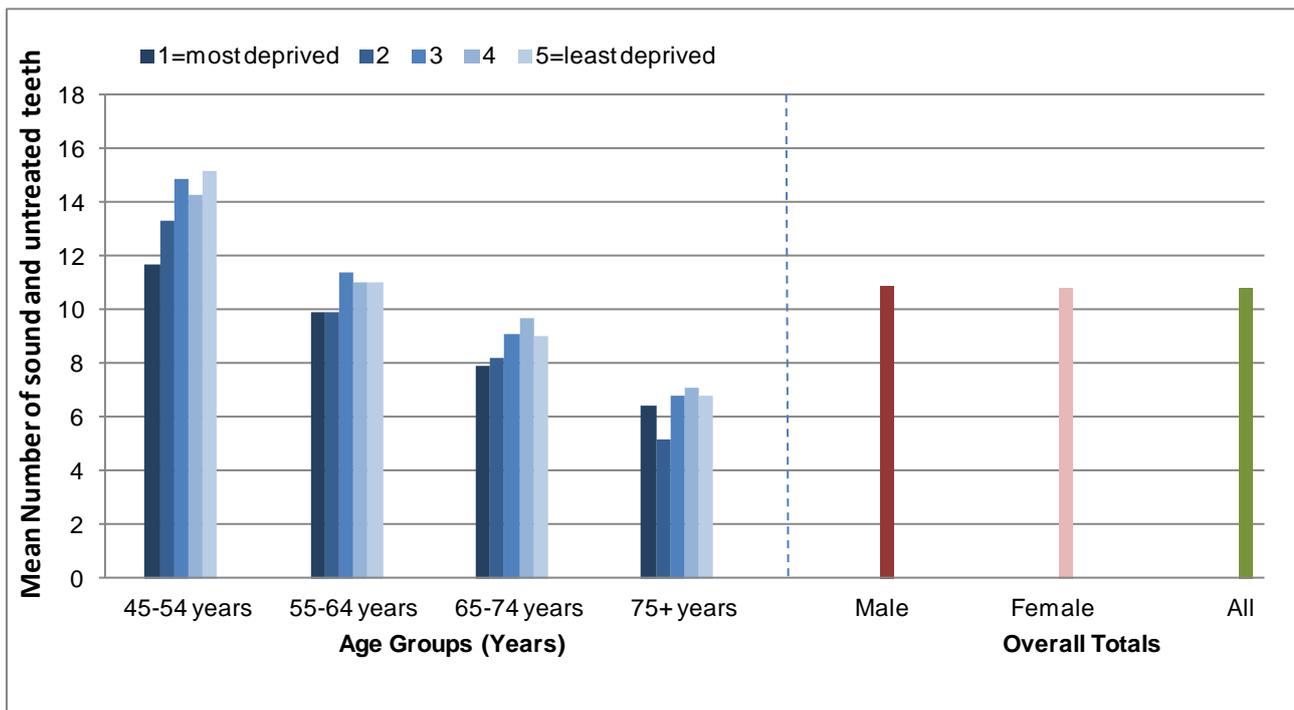
Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

Additional information relating to mean number of natural teeth by age, sex and deprivation category of patients examined can be found in [Table 7c](#).

Sound and Untreated Teeth

The mean number of sound and untreated teeth among dentate patients examined is shown by age, sex and deprivation category in Figure 10. The mean number of sound and untreated teeth among dentate patients decreases with age.

Figure 10: Mean number of sound and untreated teeth among dentate patients examined according to age, sex and deprivation category^a



Source: ISD SAOHS database

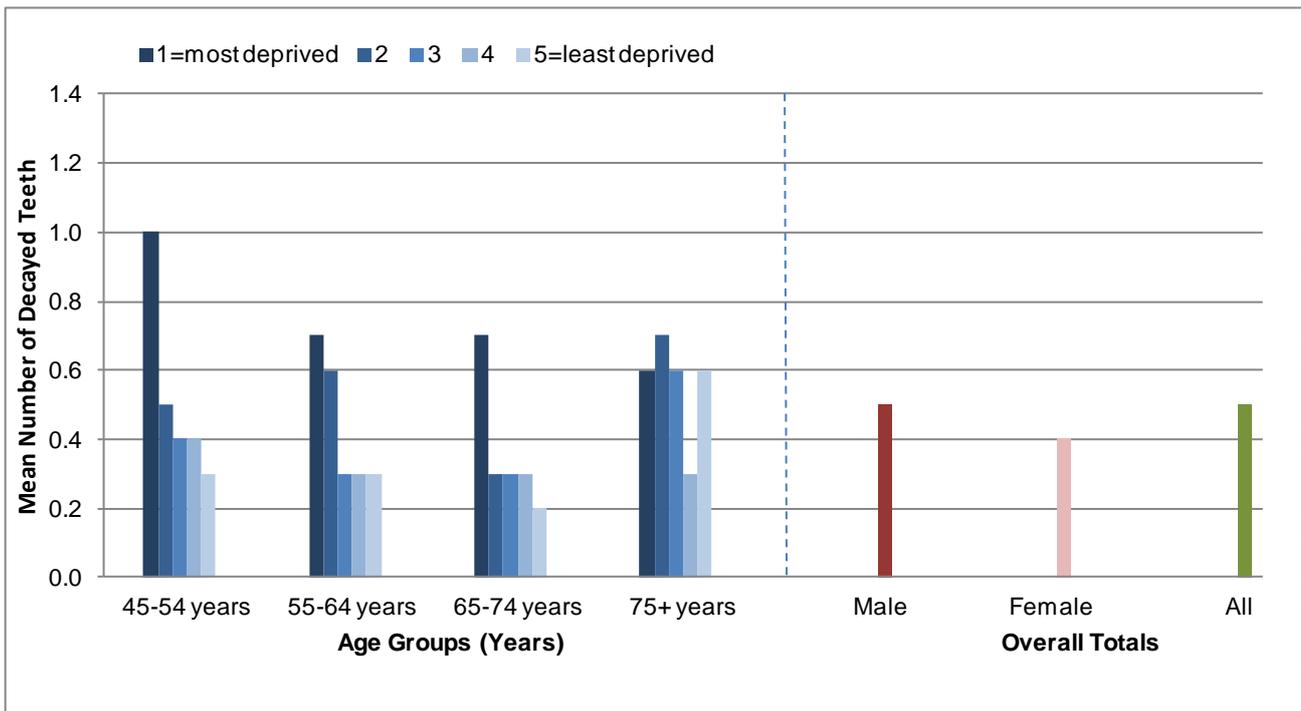
a. Scotland level SIMD 2016.

Additional information relating to the mean number of sound and untreated teeth by age, sex and deprivation category of patients examined can be found in [Table 7d](#).

Decayed Teeth

The mean number of **decayed teeth** presented, relates to obvious visual decay on either the natural crown or root surface of the tooth. Across all dentate patients, the mean number of decayed teeth was 0.5 for males and 0.4 for females. Figure 11 shows the variation in the mean number of decayed teeth by age, sex and deprivation category, with those living in the most deprived areas having in general a higher mean number of decayed teeth.

Figure 11: Mean number of decayed teeth among dentate patients examined according to age, sex and deprivation category^a



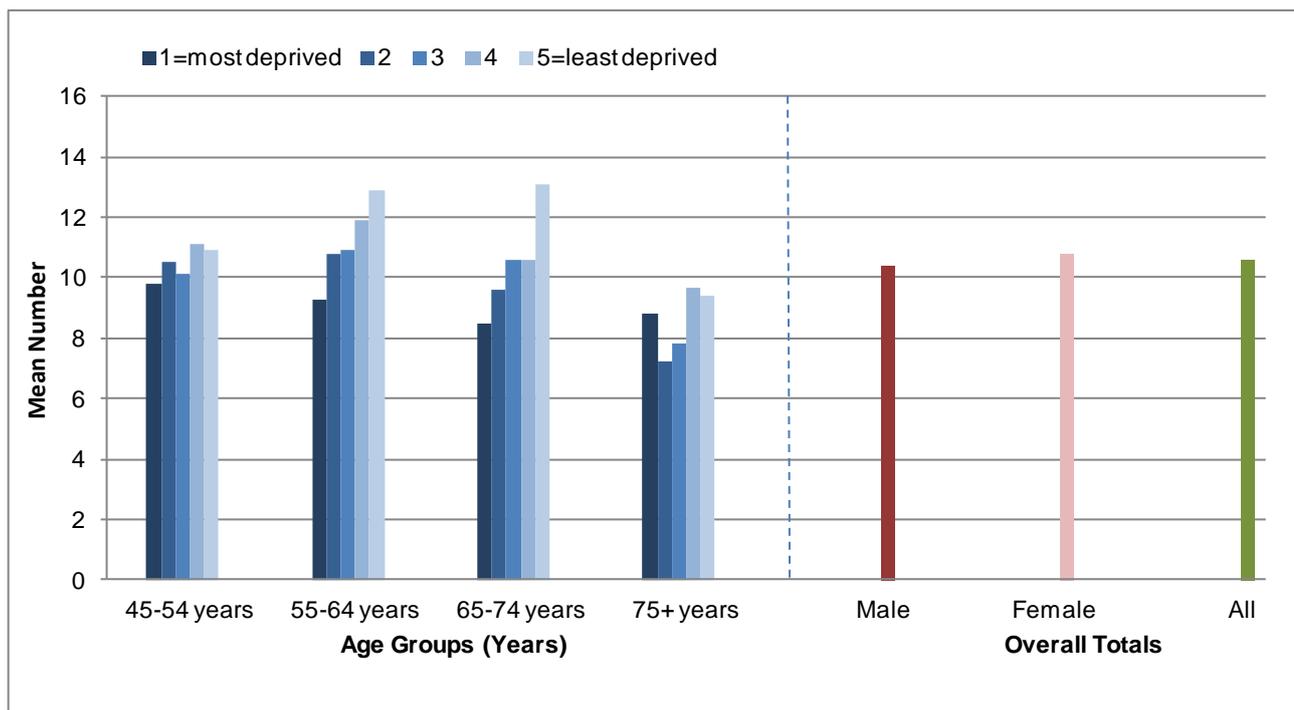
Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

Additional information relating to mean number of decayed teeth by age, sex and deprivation category of patients examined can be found in [Table 7e](#).

Filled Teeth

Filled teeth relates to any type of filling material on either the natural crown or root surface of the tooth. Across all dentate patients examined, the mean number of filled teeth was 10.4 for males and 10.8 for females. Figure 12 gives a breakdown by age, sex and deprivation category. In general, patients living in the least deprived areas had the highest mean number of filled teeth, with those living in the most deprived area tending to have the lowest number of teeth restored in this way.

Figure 12: Mean number of filled teeth among dentate patients examined according to age, sex and deprivation category^a



Source: ISD SAOHS database
a. Scotland level SIMD 2016.

Additional information relating to mean number of filled teeth by age, sex and deprivation category of patients examined can be found in [Table 7f](#).

Sound and Untreated, Decayed and Filled Teeth

The mean number of sound and untreated, decayed and filled teeth is shown by age category in Table 7.

Table 7: Mean number of sound and untreated, decayed and filled teeth among dentate patients examined by age of patient

Age Category (years)	Mean number of:		
	Sound and untreated teeth	Decayed teeth	Filled teeth
45 – 54	14.0	0.5	10.5
55 – 64	10.7	0.4	11.3
65 – 74	8.8	0.3	10.8
75+	6.5	0.6	8.7

Source: ISD SAOHS database

Artificial Crowns

Fifty percent of dentate patients had at least one artificial crown 633 males (47%) and 855 females (52%). Table 8 shows the frequency distribution of crowns for all dentate patients examined.

Table 8: Frequency distribution of crowns for all dentate patients examined^a

Number of Crowns	Frequency	Percentage
0	1,501	50.1
1	560	18.7
2	364	12.1
3	204	6.8
4	141	4.7
5	83	2.8
6	45	1.5
7	35	1.2
8	26	0.9
9+	30	1.0
Unknown	9	0.3
Total	2,998	100.0

Source: ISD SAOHS database

a. Percentages in the above table may not add to 100 due to rounding.

Bridges, Veneers and Dental Implants

Thirteen percent of dentate patients had at least one bridge, 5% had at least one veneer and 2% had at least one dental implant. Table 9 shows the percentage of patients with bridges, veneers or dental implants by sex.

Table 9: Percentage of dentate patients with bridges, veneers and dental implants^a

At least one:	Sex		
	Male % (n)	Female % (n)	Total % (n)
Bridge	11.8 (158)	14.6 (242)	13.3 (400)
Veneer	3.2 (43)	6.5 (108)	5.0 (151)
Dental Implant	1.6 (21)	2.4 (40)	2.0 (61)

Source: ISD SAOHS database

a. Percentages calculated from total dentate patients recorded as male (1,343) and female (1,655).

b. Percentages in the table above may not add to 100 due to rounding.

Additional information relating to the frequency distribution of bridges can be found in [Table 9a](#).

Oral Hygiene

The Simplified Oral Hygiene Index⁸ was used to assess the amount of debris/plaque present on six index teeth - four at the back (posterior) and two at the front (anterior). Debris/plaque is scored individually on each of these six teeth on a scale of 0 to 3, with 0 indicating no discernible debris/plaque present and 3 that debris/plaque covers more than two thirds of the tooth surface (see Figure A3 in [Appendix A6](#)).

Table 10 shows the breakdown of oral hygiene scores for all dentate patients examined, with the highest score presented for each patient. Overall, 445 males (33%) and 464 females (28%) had a score of 2 or 3.

Table 10: Highest oral hygiene index score recorded for dentate patients examined^{a,b}

Oral Hygiene Score	Sex		
	Male % (n)	Female % (n)	Total % (n)
0	8.3 (112)	13.1 (217)	11.0 (329)
1	58.5 (785)	58.7 (972)	58.6 (1,757)
2	27.3 (366)	23.5 (389)	25.2 (755)
3	5.9 (79)	4.5 (75)	5.1 (154)
Unknown	0.1 (1)	0.1 (2)	0.1 (3)
Total	100.0 (1,343)	100.0 (1,655)	100.0 (2,998)

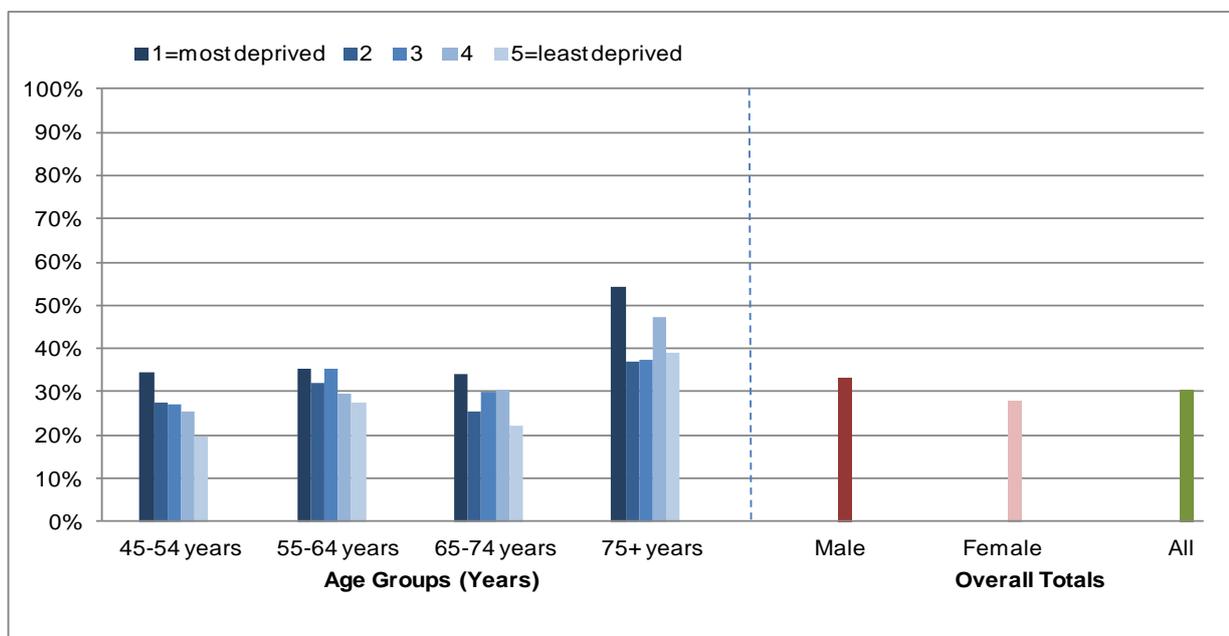
Source: ISD SAOHS database

a. Percentages calculated from total dentate patients recorded as male (1,343) and female (1,655).

b. Percentages in the above table may not add to 100 due to rounding.

Figure 13 shows the percentage of patients identified as having a score of 2 or 3 on at least one tooth surface by age, sex and deprivation category. The amount of debris/plaque on tooth surfaces was generally higher in those from the more deprived areas. There is a tendency for the percentage of patients with high oral hygiene index scores to increase with age.

Figure 13: Percentage of dentate patients examined with an oral hygiene index score of 2 or 3 according to age, sex and deprivation category^a



Source: ISD SAOHS database

a. Scotland level SIMD 2016.

Additional information relating to oral hygiene index scores of 2 or 3 by age, sex and deprivation category of patients examined can be found in [Table 10a](#); and all oral hygiene index scores by age and deprivation category of patients examined in [Table 10b](#).

Basic Periodontal Examination (BPE)

The **Basic Periodontal Examination (BPE)**⁹ is a simple and rapid tool that is used to provide an indication of the condition of the structures that support the teeth. The mouth is divided into six areas (sextants), representing the posterior and anterior teeth in each jaw. All teeth are examined using a periodontal probe and a score is given ranging in severity from 0 to 4 (see **Appendix A7**). The findings indicate if a more detailed assessment of the periodontal condition is required and also provide basic guidance on treatment need. The highest score in each sextant was recorded for each patient and the highest score across sextants was analysed.

Table 11 shows the breakdown of BPE scores, using the highest sextant score for each dentate patient. The findings show that 395 males (29%) and 420 females (25%) have a highest sextant BPE score of 3 or 4.

Table 11: Percentage of dentate patients examined in each BPE category

BPE Score	Sex		
	Male % (n)	Female % (n)	Total % (n)
0	3.6 (49)	6.1 (101)	5.0 (150)
1	12.1 (162)	13.7 (227)	13.0 (389)
2	54.7 (735)	54.5 (902)	54.6 (1,637)
3	21.6 (290)	19.0 (315)	20.2 (605)
4	7.8 (105)	6.3 (105)	7.0 (210)
Unknown	0.1 (2)	0.3 (5)	0.2 (7)
Total	100.0 (1,343)	100.0 (1,655)	100.0 (2,998)

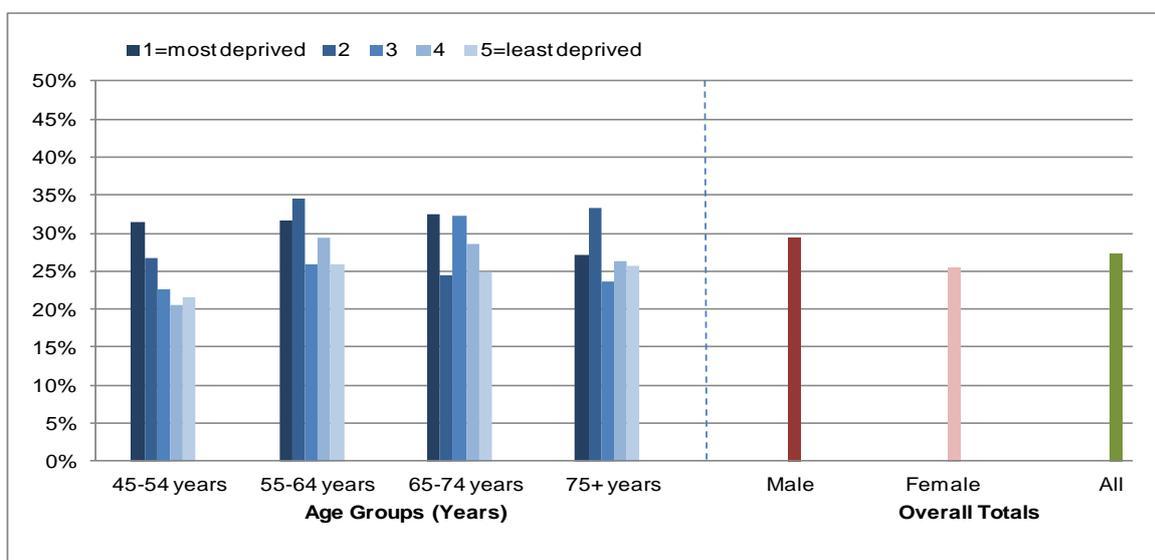
Source: ISD SAOHS database

a. Percentages calculated from total dentate patients recorded as male (1,343) and female (1,655).

b. Percentages in the above table may not add to 100 due to rounding.

Figure 14 shows the percentage of patients identified as having BPE scores of 3 or 4 by age, sex and deprivation category.

Figure 14: Percentage of dentate patients examined with a BPE score of 3 or 4 according to age, sex and deprivation category^a



Source: ISD SAOHS database

a. Scotland level SIMD 2016.

Additional information relating to BPE scores of 3 or 4 by age, sex and deprivation category of dentate patients examined can be found in [Table 11a](#).

The associations of age, deprivation category and smoking status with highest BPE scores in dentate patients are presented in Table 12. A higher percentage of patients who are current smokers had BPE scores of 3 or 4, than patients who reported being previous smokers or not smoking at all.

Table 12: Frequency distribution of BPE scores in dentate patients by age, deprivation category and smoking status^{a,b}

	BPE 0 % (n)	BPE 1 % (n)	BPE 2 % (n)	BPE 3 % (n)	BPE 4 % (n)	Unknown % (n)
Age Group						
45-54 years	4.4 (44)	13.3 (132)	57.8 (572)	18.7 (185)	5.6 (55)	0.1 (1)
55-64 years	5.3 (49)	11.7 (109)	53.3 (495)	21.0 (195)	8.3 (77)	0.3 (3)
65-74 years	5.4 (39)	13.2 (96)	52.7 (383)	20.9 (152)	7.7 (56)	0.1 (1)
75+ years	5.1 (18)	14.7 (52)	52.8 (187)	20.6 (73)	6.2 (22)	0.6 (2)
Deprivation category						
1=most deprived	3.6 (17)	14.1 (66)	50.7 (237)	19.1 (89)	12.2 (57)	0.2 (1)
2	4.5 (23)	11.8 (60)	53.7 (274)	22.2 (113)	7.3 (37)	0.6 (3)
3	5.0 (32)	13.3 (85)	55.3 (354)	20.2 (129)	5.9 (38)	0.3 (2)
4	5.6 (39)	13.7 (95)	54.7 (379)	19.5 (135)	6.5 (45)	0.0 (0)
5=least deprived	5.8 (39)	12.1 (81)	57.6 (386)	19.9 (133)	4.5 (30)	0.1 (1)
Unknown	0.0 (0)	11.1 (2)	38.9 (7)	33.3 (6)	16.7 (3)	0.0 (0)
Smoking						
Never smoked	5.6 (90)	14.0 (226)	58.0 (938)	17.5 (283)	4.6 (75)	0.2 (4)
Previous smoker	4.6 (46)	12.8 (127)	52.6 (522)	21.2 (210)	8.7 (86)	0.1 (1)
Current smoker	3.6 (14)	9.3 (36)	45.2 (176)	28.8 (112)	12.6 (49)	0.5 (2)
Unknown	0.0 (0)	0.0 (0)	100.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)

Source: ISD SAOHS database

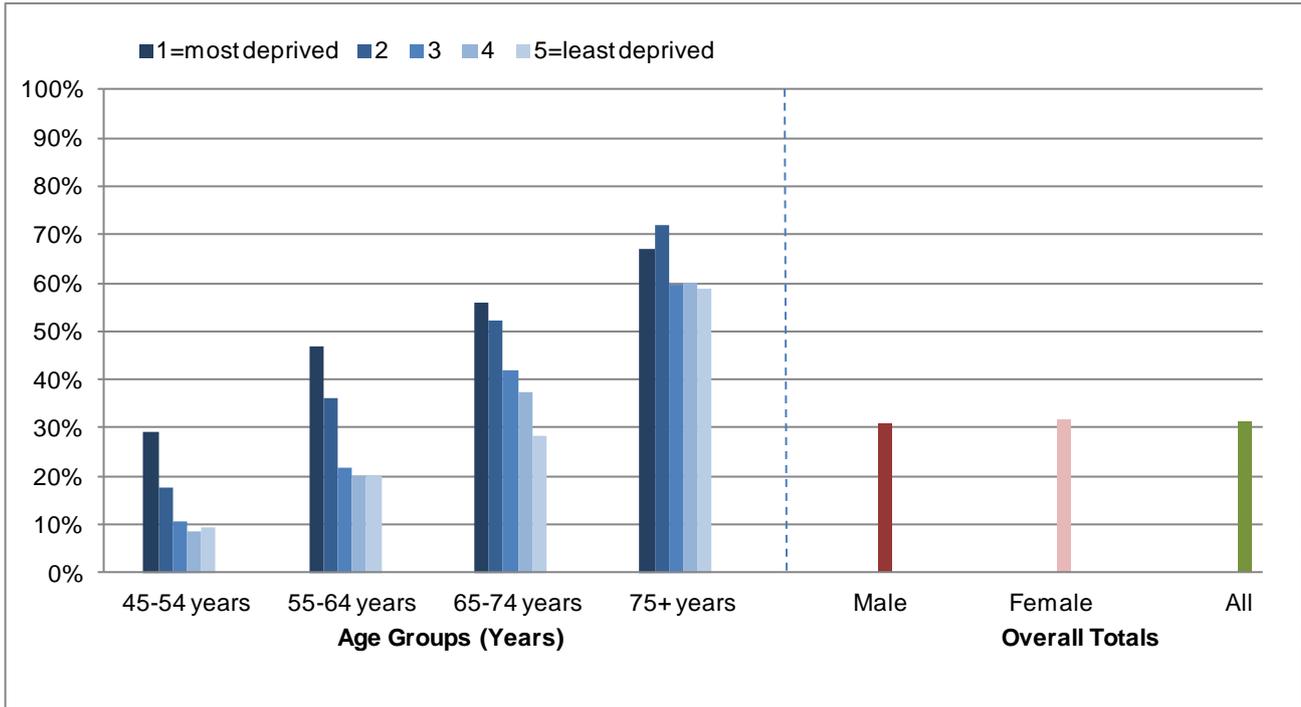
a. Percentages in the above table may not add to 100 due to rounding.

b. Scotland level SIMD 2016.

Dentures

Of the patients who participated in the survey, 974 (31%) reported wearing a **denture** of some type, with the 75 and over age group being most likely to wear one 251(62%). Figure 15 shows a breakdown of those who wear a denture by age, sex and deprivation category. There is a clear social gradient with denture use with a higher percentage of those from more deprived areas wearing dentures, with the exception of the 75 and over age group.

Figure 15: Percentage of all patients examined who wear any type of denture according to age, sex and deprivation category^a



Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

Additional information relating to denture wear by age, sex and deprivation category can be found in [Table 13a](#).

Dentures can be either ‘full’ (replacing all of the teeth and supporting structures) or ‘partial’, (replacing one or more missing teeth) and can replace teeth in either the upper or lower jaws.

Full and full refers to dentures replacing all teeth in both the upper and lower jaws. Full and partial are dentures replacing all teeth in either the upper or lower jaw, and some missing teeth in either the upper or lower jaw. Full refers to a denture replacing all teeth in either the upper or lower jaw, partial and partial are dentures replacing some missing teeth in both the upper and lower jaws and partial is a denture replacing missing teeth in either the upper or lower jaw.

Table 13 shows a breakdown of the type of denture worn by patients in each age category. Most people who wear dentures wear partial dentures.

Table 13: Percentage (Number) of patients examined who wear dentures by denture type within each age group^a

Type of Denture	Age Groups			
	45-54 years % (n)	55-64 years % (n)	65-74 years % (n)	75+ years % (n)
Full and Full	7.0 (10)	6.9 (18)	11.9 (38)	16.7 (42)
Full and Partial	6.3 (9)	6.5 (17)	9.4 (30)	15.5 (39)
Full	7.7 (11)	13.4 (35)	15.7 (50)	18.7 (47)
Partial and Partial	11.3 (16)	11.8 (31)	10.7 (34)	10.0 (25)
Partial	67.6 (96)	61.5 (161)	52.4 (167)	39.0 (98)
Total	100.0 (142)	100.0 (262)	100.0 (319)	100.0 (251)

Source: ISD SAOHS database.

a. Percentages in the above table may not add to 100 due to rounding.

Soft tissue examination

The soft tissue examination involved examining all areas of the mouth other than the teeth and gums in a systematic manner. Findings such as white, red or speckled areas, ulcers or lumps are described collectively as **soft tissue lesions** and can represent or highlight an underlying condition or diagnosis. Seven areas of the lips, mouth and throat were examined. A 'best guess' diagnosis was recorded that described the lesion in the dentists' own words. These were grouped by site (lips, cheeks, upper and lower areas of jaw supporting the teeth, under the tongue, tongue, palate and throat) and by common description or diagnosis.¹⁰ Overall, 288 patients (9%) had one or more type of soft tissue lesion identified, with a total of 331 lesions recorded. No potentially malignant lesions were noted for those patients examined. Table 14 shows the number and percentage of lesions recorded in each area of the mouth and throat that was examined.

Table 14: Number and Percentage of lesions recorded in each area of the mouth examined^{a,b}

Area of Mouth	Number	Percentage
Lips	40	12.1
Cheeks	104	31.4
Jaw	64	19.3
Tongue	61	18.4
Under the tongue	6	1.8
Palate	54	16.3
Throat	2	0.6
Total	331	100.0

Source: ISD SAOHS database.

a. Patients may have more than 1 lesion recorded.

b. Percentages in the above table may not add to 100 due to rounding.

Additional information relating to soft tissue examinations can be found in [Appendix A8](#).

Glossary

BPE	Basic Periodontal Examination: The BPE is a simple and rapid screening tool for gum disease that is used to indicate the level of further examination and to provide basic guidance on treatment required. ⁹
Bridge	A bridge is a false tooth or teeth which are secured in place by attachment to one or other teeth beside it. It is a permanent, non-removable, means of filling the space where a missing tooth or teeth exists.
Crown	A crown is an artificial covering that fits over the remaining part of a prepared tooth. It can be made of a tooth coloured material, metal or a combination of both. ¹¹
Decayed teeth	Decay is the destruction of a tooth caused by bacteria in the presence of free sugars. ¹²
Deprivation Category	The deprivation classification used within this report is based on quintiles of deprivation: quintile 1 is the most deprived and quintile 5 is the least deprived. ⁵
Dental implant	A dental implant is a metal screw that can replace the root of a tooth when it fails. It is surgically placed into the jawbone and is used to support one or more false teeth. ¹³
Dentate	A dentate individual is someone who has at least one natural tooth.
Denture	A denture or 'false teeth' are a replacement for missing teeth which look and function in the same way as natural teeth. Dentures are made of either acrylic (plastic) or metal and can be removed from the mouth. ¹³
Ethnicity	Within this report ethnicity is described by the Scottish Official Statistics Ethnicity Categories 2011 ⁴ and describes which ethnicity category patients felt most represented them.
Filled teeth	Teeth which have been repaired using a material such as a white filling, dental amalgam or another material.
Functional dentition	The number of teeth consistent with a functional dentition ⁷ is widely accepted to be 21 or more natural teeth. Although this figure is somewhat arbitrary, evidence exists to indicate that 21 or more natural teeth enables most dentate individuals to eat what they want without the need for a removable partial denture. ⁶
GDS	NHS General Dental Services The GDS is usually the first point of contact for NHS dental treatment in Scotland. The majority of GDS is provided by independent dentists ('High Street dentists') who have arrangements with NHS boards to provide care through the GDS.
PDS	NHS Public Dental Service The main role of the PDS is to provide GDS for people who cannot access care from an independent dentist. From 1 January 2014 the salaried general dental service merged with the Community Dental Service to become the

Public Dental Service (PDS). Historically, GDS was also provided by salaried dentists who were directly employed by NHS boards to provide an alternative service when considered the best solution to meet local needs.

Plaque

Plaque is a sticky film which builds up on the surface of the teeth and is a known factor in the development of gum disease. If plaque is not regularly removed by brushing, the gums can become irritated and inflamed. Plaque which is not removed eventually hardens into a substance called calculus which is also irritating to the gums.¹⁴

SDPBRN

Scottish Dental Practice Based Research Network

SIMD

[Scottish Index of Multiple Deprivation](#).⁵

The SIMD Classification identifies small area concentrations of multiple deprivation presented at data zone level and based on postcode unit information. Seven domains (income, employment, education, housing, health, crime and geographical access) are combined into an overall index to rank relative multiple deprivation in all geographical areas throughout Scotland.

For this index, the most deprived quintile is shown by SIMD1 and the least deprived quintile is shown by SIMD5. There were SIMD releases in 2004, 2006, 2009, 2012 and 2016; SIMD 2016 is used in this report.

Simplified Oral Hygiene Index

The Simplified Oral Hygiene Index is a rapid method for evaluating oral cleanliness in a population group.⁸

Soft tissue lesion

A soft tissue lesion is an abnormality of the soft tissues of the mouth or throat which can represent or highlight an underlying condition or diagnosis.¹⁰

Sound and untreated teeth

Sound and untreated teeth are those with no visible decay or restoration of any kind, including those, such as veneers and crowns, which are not always used to manage disease¹¹.

Urban Rural Classification

The Scottish Government six-fold Urban Rural Classification (SGUR6FOLD)³ provides a standard definition of rural areas in Scotland. The classification distinguishes between urban, rural and remote areas with 1 identifying a large urban area, and 6 a remote rural area.

Veneer

A veneer is a thin layer of porcelain or other tooth coloured material made to fit over the front surface of a tooth to repair damage or improve the appearance.¹¹

List of Tables

Table No.	Name	Time period	File & size
1	<u>Number of patients by age, sex and deprivation category.</u>	2016-18	Excel [20kb]
1a	<u>Percentage and number of patients examined in each age and deprivation category.</u>	2016-18	Excel [20kb]
1b	<u>Distribution of patient sample across NHS Boards.</u>	2016-18	Excel [20kb]
2	<u>Smoking status by sex of patients examined.</u>	2016-18	Excel [19kb]
2a	<u>Number of 'Current smoker' status by age and deprivation category of patients examined.</u>	2016-18	Excel [19kb]
2b	<u>Number of all smoking statuses by age and deprivation category of patients examined.</u>	2016-18	Excel [19kb]
3	<u>Frequency of consuming (>=6 if female; >=8 if male) units of alcohol on a single occasion in the last year, according to sex.</u>	2016-18	Excel [21kb]
3a	<u>Frequency of 'risky drinking' on a single occasion in the last year according to age, sex and deprivation category of patients examined.</u>	2016-18	Excel [21kb]
3b	<u>Frequency of alcohol consumption categories according to age, sex and deprivation category of patients examined.</u>	2016-18	Excel [21kb]
4	<u>Association between current smokers and 'risky drinking'.</u>	2016-18	Excel [10kb]
5	<u>Anxiety level when visiting the dentist by sex of patients examined.</u>	2016-18	Excel [24kb]
5a	<u>Number and percentage of patients with no anxiety level when visiting the dentist by age and deprivation category of patients examined.</u>	2016-18	Excel [24kb]
5b	<u>Number and percentage of all anxiety levels when visiting the dentist by age and deprivation category of patients examined.</u>	2016-18	Excel [24kb]
6	<u>Percentage of patients reporting a last visit to the dentist, by sex of patients examined.</u>	2016-18	Excel [23kb]
6a	<u>Number and percentage of patients last visit to the dentist in the last year by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [23kb]
6b	<u>Number and percentage of last visit to the dentist by age and deprivation category of patients examined.</u>	2016-18	Excel [23kb]
7	<u>Mean number of sound and untreated, decayed and filled teeth among dentate patients examined, by age of patient.</u>	2016-18	Excel [37kb]
7a	<u>Dentate/edentate status by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [37kb]

7b	<u>Functional dentition status by age, sex and deprivation category of patients examined, by number and percentage of patients.</u>	2016-18	Excel [37kb]
7c	<u>Mean number of natural teeth by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [37kb]
7d	<u>Mean number of sound and untreated teeth by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [37kb]
7e	<u>Mean number of decayed teeth by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [37kb]
7f	<u>Mean number of filled teeth by age, sex and deprivation category of patients examined.</u>	2016-18	Excel [37kb]
8	<u>Frequency distribution of crowns for all dentate patients examined.</u>	2016-18	Excel [11kb]
9	<u>Percentage of patients examined with bridges, veneers and dental implants.</u>	2016-18	Excel [13kb]
9a	<u>Frequency distribution of bridges for dentate patients examined.</u>	2016-18	Excel [13kb]
10	<u>Highest oral hygiene index score recorded for dentate patients examined.</u>	2016-18	Excel [20kb]
10a	<u>Number and percentage of dentate patients examined with an oral hygiene score of 2 or 3 according to age, sex and deprivation category of patients examined.</u>	2016-18	Excel [20kb]
10b	<u>Number and percentage of dentate patients examined in each oral hygiene score category by age and deprivation category of patients examined.</u>	2016-18	Excel [20kb]
11	<u>Percentage of dentate patients examined in each BPE category.</u>	2016-18	Excel [19kb]
11a	<u>Number and percentage of dentate patients examined with a BPE score of 3 or 4 according to age, sex and deprivation category of patients examined.</u>	2016-18	Excel [19kb]
12	<u>Frequency distribution of BPE scores in dentate patients by age, deprivation category and smoking status.</u>	2016-18	Excel [13kb]
13	<u>Percentage and number of patients examined who wear dentures by denture type within each age group.</u>	2016-18	Excel [15kb]
13a	<u>Number and percentage of all patients examined who wear any type of denture according to age, sex and deprivation category of patients examined.</u>	2016-18	Excel [15kb]
14	<u>Number and percentage of lesions recorded in each area of the mouth examined.</u>	2016-18	Excel [11kb]
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A3-A8	<u>Comparisons between SAOHS data and the Scottish</u>	2016-18	Excel [28kb]

	<u>population.</u>		
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A10	<u>Soft tissue lesion type recorded in each area of the mouth examined, ordered from most to least frequently recorded.</u>	2016-18	Excel [28kb]

List of Figures

Figure No.	Name	Time period	File & size
1	<u>Percentage of patients examined according to age and sex.</u>	2016-18	Excel [15kb]
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3	<u>Percentage of patients examined who currently smoke according to age, sex and deprivation category.</u>	2016-18	Excel [17kb]
4	<u>Percentage of patients examined reporting 'risky drinking' according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
5	<u>Percentage of patients not anxious at visiting the dentist according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
6	<u>Percentage of patients examined who reported visiting a dentist within the last year according to age, sex and deprivation category.</u>	2016-18	Excel [15kb]
7	<u>Percentage of patients examined who were dentate according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
8	<u>Percentage of dentate patients examined with a functional dentition by age, sex and deprivation category.</u>	2016-18	Excel [16kb]
9	<u>Mean number of natural teeth among dentate patients examined according to age, sex and deprivation category.</u>	2016-18	Excel [15kb]
10	<u>Mean number of sound and untreated teeth among dentate patients examined according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
11	<u>Mean number of decayed teeth among dentate patients examined according to age, sex and deprivation category.</u>	2016-18	Excel [15kb]
12	<u>Mean number of filled teeth among dentate patients examined according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
13	<u>Percentage of dentate patients examined with an oral hygiene score of 2 or 3 according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]

14	<u>Percentage of dentate patients examined with a BPE score of 3 or 4 according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
15	<u>Percentage of all patients examined who wear any type of denture according to age, sex and deprivation category.</u>	2016-18	Excel [16kb]
A1	<u>Percentage of dental practices in each deprivation category.</u>	2016-18	Excel [10kb]

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Appendices

A1 - Methodology

Background

The most recent epidemiological survey which incorporated a clinical examination of the oral health of Scotland's adult population was carried out as part of the 1998 UK ADHS. Scotland did not participate in the 2009 ADHS^{11, 15} leaving an information gap around the current oral health status of the adult population in Scotland. In order to partially address this gap, the then Chief Dental Officer for Scotland formed the SAOHS group to develop and pilot a practice-based oral health data collection system which could utilise routine data already collected within the primary care dental setting.

Feasibility study

During April and May 2013 a feasibility study, with a convenience sample of General Dental Practitioners (GDPs) was carried out. Twenty-four **SDPBRN** (Scottish Dental Practice Based Research Network) Rapid Evaluation Practitioners gathered non-identifiable oral health data for 20 consecutive patients at either a first visit, unscheduled or recall examination. Results from the feasibility study were used to inform discussions around:

- The suitability of the oral health data collected
- The acceptability of the system to GDPs and patients
- Additional resources required for GDPs to assess, record and extract the required oral health dataset data.

It was subsequently decided that gathering data as part of a routine dental examination would be feasible but required development before being fully implemented. This development process took the form of two successive SAOHS development projects.

1. Pilot survey 2016

The SAOHS project was initiated in 2015/16 as a pilot survey to test methods of recruitment and data collection, the quality and usefulness of the collected data, and the resources required. Details of the survey can be found here: <https://www.isdscotland.org/Health-Topics/Dental-Care/Publications/2017-02-21/2017-02-21-SAOHS-Report.pdf>.

For the pilot project, data collection within primary dental care was restricted to patients aged 45 years and over and attending for an examination appointment. It was envisioned that this would be the first stage in the development of a rolling SAOHS programme.

For the pilot survey, all dentists across Scotland were eligible to participate in order to assess recruitment rates for future full-scale surveys. During the three month period in which data were submitted, 92 dentists and 1,867 patients participated in the pilot survey.

2. SAOHS 2018

A boost sample consisting of an additional 42 dentists and 1,247 patients were recruited during the period December 2017 – April 2018. Data were combined with the pilot survey (2016) to enable more robust estimates to be produced (particularly within strata).

For the SAOHS 2018, dentists were asked to collect and submit data from a *minimum* of 25 patients aged 45 years and over who were attending the service for either a new patient, unscheduled or recall examination appointment. Otherwise the methodology was identical to that for the pilot survey (2016).

Further analyses carried out have shown that distributions of patients within the survey are generally in line with the overall distribution of the Scottish population in relation to age groups, sex and Scottish quintiles of deprivation.

Information Governance

An ethical opinion on this survey was sought via the Scientific Officer of the West of Scotland Research Ethics Service. It was deemed to be a service evaluation/ development and therefore NHS ethical approval was not required.

Two Privacy Impact Assessments were carried out in 2016 and 2018 to identify the most effective way to comply with data protection obligations and meet individuals' expectations of privacy. All appropriate steps to protect the confidentiality of patient information were taken in line with Caldicott Principles.

Methodology

Initial communications about the pilot were maintained and delivered via the Scottish Dental website (<http://www.scottishdental.org/scottish-adult-oral-health-survey-2015-16/>) and SDPBRN website (<http://www.sdpbrn.org.uk/current-projects-2/adult-dental-health/>).

Initial communications for the 2018 survey can be assessed at:

<https://www.scottishdental.org/scottish-adult-oral-health-survey-2017-8/> and <http://www.sdpbrn.org.uk/qi-research/research-audit-saoh-2017-18/>.

As part of the survey dentists were asked to carry out their regular dental examination plus a series of additional tasks:

1. Gain verbal consent from the patient to take part in the survey and record this in the patient notes.
2. Ask and record specific aspects of the patient's personal information.
3. Ask and record the answers to a series of questions which related to the patient's oral and general health behaviours.
4. Examine and record routine oral health data during the patient's dental examination.

Eligible patients had to be 45 years or over in each respective survey year and attending a new patient, unscheduled or recall examination appointment. All patients were asked to read the SAOHS Information Sheet for Patients (see [Appendix A9](#)) and were given time to ask any questions before deciding whether to take part.

All dentists submitted completed questionnaires for each patient via the SAOHS web-form (see [Appendix A2](#)), which was only accessible via a secure NHS network.

Data Management

The information collected was brought together and managed on behalf of the survey group by ISD. The data were received by ISD and extracted from the database. Range and consistency checks were undertaken to ensure data quality, which included corrections to any errors in dentists' email addresses, practice postcodes, GDC numbers and patients' postcodes, and inserting 'missing' values for incomplete questions. Final checks of the data were carried out to remove any duplicate patients/records. Data from all dentists were then combined in a master file.

Data quality checks were made on all variables using histograms and frequency tabulations to ensure all data were within established ranges and were consistent. Validity of the

submitted data was checked by comparing to other national oral health surveys and the Scottish Health Survey.¹⁶

Data Analysis

Summary statistics were produced for all variables: means and standard deviations; medians, quartiles and range for continuous where appropriate. Percentages were reported for categorical data. Where appropriate, data were stratified by age groups (45-54 years; 55-64 years; 65-74 years; 75+ years), sex and area-based deprivation categories (based on home postcode using national Scotland SIMD 2016⁵).

Where appropriate, oral health/behaviour variables were derived based on clinically important descriptors such as: current smoking status, alcohol consumption on a single occasion, anxiety levels when visiting the dentist and when the patient last visited a dentist before their current visit. Statistical tests were not performed; instead, data were described rather than testing specific hypotheses.

In general weights are used in surveys to correct for differences in the probability of selection or to adjust for non-responses or differences between the population covered by the survey frame and the target population. A survey expert within ISD was consulted to investigate whether weightings could effectively be applied to the SAOHS results. Weights were not applied because:

- This survey is a 'convenience' sample and hence sampling probabilities have not been applied.
- Due to the survey being web-based, no submissions were made for patients that declined to participate.
- Differential distribution across strata were generally similar to the Scottish population.

Using SAOHS data to support quality improvement within primary dental care

As part of their NHS terms and conditions of service, dentists on an NHS Board 'dental list' are required to undertake at least 15 hours of Quality Improvement (QI) activity during each three-year QI cycle. Since 2014, participation in eligible research that supports quality improvement in primary dental care can now count for up to seven hours QI credit in any three-year cycle. Most dentists working in the GDS are eligible to claim funding for certified QI activity. More information about QI (Research) can be accessed [here](#).

The SAOHS project was approved for up to five hours QI credit, dependent on the number of patients examined. Dentists who wished to claim this credit were required to reflect on the survey data for their own patients, compare the data for their own patients with the national average, and develop and implement action plans for improving or maintaining quality. In total, 88 dentists claimed and were awarded QI hours for their participation in the combined SAOHS project. More information about the QI (Research) component of the SAOHS project can be accessed [here](#).

A2 - Scottish Adult Oral Health Survey Questionnaire 2018

Section A

Details to be completed by the dentist at a new or recall examination appointment for patients meeting criteria defined within the Scottish Adult Oral Health Survey guidance notes.

A1. Examination Date:	
-----------------------	--

A2. Practice Postcode:	
------------------------	--

A3. GDC number:	
-----------------	--

A4. Select which type of service you are providing for the patient at this appointment:	
General Dental Practice	
Public Dental Service	
Out of Hours Emergency Dental Service	

Section B

Patient details to be asked and recorded by the dentist for the patient who will be examined during this appointment. Please note: only patients aged 45 or over are eligible for this survey.

B1. Surname:	
--------------	--

B2. Forename:	
---------------	--

B3. Sex:	
----------	--

B4. Date of Birth:	
--------------------	--

B5. Postcode:	
---------------	--

Section C

Questions to be asked by dentist and answers recorded as indicated.

C1. Have you ever smoked?					
Never smoked		Current smoker		Previous smoker	

C2. Have you ever used chewing tobacco, paan, gutkha supari or betel quid?					
Yes		No		Unsure	

C3. How often have you consumed 6 or more units of alcohol (if female), or 8 or more units of alcohol (if male) on a single occasion in the last year?									
Never		Less than monthly		Monthly		Weekly		Daily or almost daily	

C4. Which of the following options best describes how you feel about visiting the dentist?									
Not anxious		Slightly anxious		Fairly anxious		Very anxious		Extremely anxious	

C5. When did you last see a dentist before today?									
Within the last 6 months		6 months to 1 year ago		1 to 2 years ago		More than 2 years ago		Never been to dentist	

Section D

To be completed following intraoral examination (see guidance notes).

D1. Charting of Permanent Teeth Present

Indicate whether each permanent tooth is present and sound (S), decayed (D), missing (M) or filled (F). If decayed and filled please chart as decayed.

18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38

D2. How many crowns does the patient have? (excluding bridges)

D3. How many bridges does the patient have?

D4. How many veneers does the patient have?

D5. How many dental implants does the patient have?

D6. Does the patient wear a denture?
 Yes
 No

D7. If the answer to question 12 was 'yes' what type of denture? (select all which apply)

F/-	<input type="text"/>
-/F	<input type="text"/>
F/F	<input type="text"/>
P/-	<input type="text"/>
-/P	<input type="text"/>
P/P	<input type="text"/>

D8. Plaque Score

Indicate plaque score from 0 to 3 for each sextant (see guidance notes).

18-14	13-23	24-28
48-44	43-33	34-38

D9. Basic Periodontal Examination (BPE)

Indicate BPE score from 0 to 4 including * for each sextant (see guidance notes).

D10. Soft Tissue Examination

Record if soft tissue lesion present by intraoral site. If lesion present record 'Best Guess' diagnosis.

Intraoral Site	Lesion Present Y/N	If a lesion is present what is your 'Best Guess' diagnosis
Lips		
Buccal Mucosa		
Alveolus		
Tongue		
Floor of Mouth		
Palate		
Fauces		

D11. NHS Treatment Prescribed

List the SDR items by 4 digit code (e.g. 1401) prescribed in the current course of treatment for this patient.

D12. Private Treatment Prescribed

Please select private treatment items prescribed in the current course of treatment for this patient, select those which apply.

Examination	
Preventive Care	
Periodontal Treatment	

Conservative Treatment	
Surgical Treatment	
Dentures	
Orthodontic Treatment	
Other Treatment	

Section E

Please note this question is optional. Question to be asked by the dentist:

E1 Which of the categories best describes your ethnicity?	
White Scottish	
White English	
White Welsh	
White Northern Irish	
White British	
White Irish	
White Gypsy/ Traveller	
White Polish	
Any other white ethnic group	
Any mixed or multiple ethnic group	
Pakistani, Pakistani Scottish or Pakistani British	
Indian, Indian Scottish or Indian British	
Bangladeshi, Bangladeshi Scottish or Bangladeshi British	
Chinese, Chinese Scottish or Chinese British	
Other Asian, Asian Scottish, Asian British	
African, African Scottish or African British	
Caribbean, Caribbean Scottish or Caribbean British	
Black, Black Scottish or Black British	
Other African, Caribbean or Black	
Arab, Arab Scottish or Arab British	
Other ethnic group	
Refused/ Not provided by the patient	

A3 - Characteristics of Dental Practices of the Participating Dentists

In total 126 dentists submitted data for the survey. The majority of patients were seen under General Dental Service arrangements (86%), with 14% being seen by dentists working under Public Dental Service arrangements and only 1% in Out of Hours.

Table A1 shows a breakdown of the number and percentage of patients who participated in the survey at dental practices in each NHS Board.

Table A1. Number and percentage of patients who participated in the survey at dental practices in each NHS Board^{a,b}

NHS Board	Number	Percentage
Ayrshire & Arran	161	5.2
Borders	201	6.5
Dumfries & Galloway	110	3.5
Fife	180	5.8
Forth Valley	275	8.8
Grampian	249	8.0
Greater Glasgow & Clyde	907	29.1
Highland	167	5.4
Lanarkshire	240	7.7
Lothian	347	11.1
Orkney	40	1.3
Shetland	66	2.1
Tayside	151	4.8
Western Isles	20	0.6
Scotland	3,114	100.0

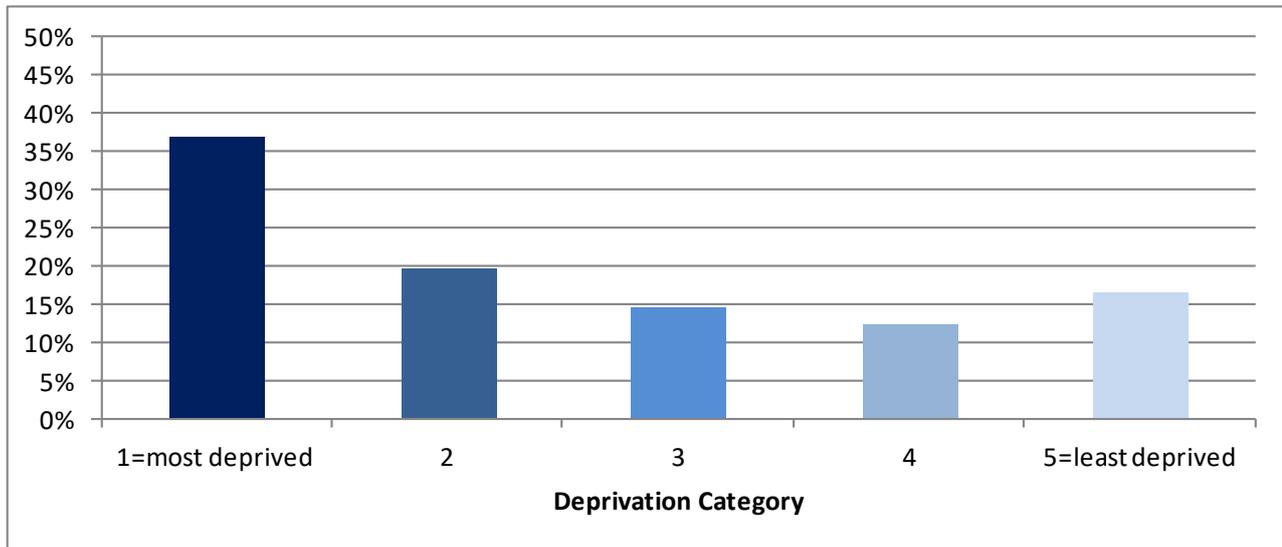
Source: ISD SAOHS database.

a. Participation is based on postcode of the dental practice.

b. Percentages in the above table may not add to 100 due to rounding.

Figure A1 shows the percentage of practices within each deprivation category based on their postcode.

Figure A1: Percentage of dental practices in each deprivation category^a



Source: ISD SAOHS database
 a. Scotland level SIMD 2016.

Patient and practice deprivation

Table A2 shows a breakdown of patient deprivation category by the deprivation category of the dental practice that they visited.

Table A2 – Patient deprivation category by practice deprivation category^{a,b}

Patient deprivation category	Practice deprivation category				
	1 % (n)	2 % (n)	3 % (n)	4 % (n)	5 % (n)
1=most deprived	29.2 (335)	11.9 (73)	3.9 (18)	11.7 (46)	5.8 (30)
2	19.1 (219)	23.7 (145)	17.9 (82)	10.4 (40)	9.6 (49)
3	13.6 (156)	28.5 (175)	40.0 (183)	21.0 (81)	13.6 (70)
4	19.3 (221)	22.0 (135)	24.5 (112)	31.2 (120)	24.8 (127)
5=least deprived	18.4 (211)	12.7 (78)	13.1 (60)	25.2 (98)	45.6 (234)
Unknown	0.3 (4)	1.1 (7)	0.4 (2)	0.5 (2)	0.6 (3)

Source: ISD SAOHS database.
 a. Scotland level SIMD 2016.
 b. Percentages in the above table may not add to 100 due to rounding.

A4 - Comparisons between SAOHS data and the Scottish Population

The tables below provide comparisons between the SAOHS data and the population of adults aged 45 years and over in Scotland.

Table A3 – Comparison of age group distribution between SAOHS data and the Scottish population^a

Age Group (Years)	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
45-54	998	32.0	792,119	31.5
55-64	946	30.4	707,897	28.2
65-74	768	24.7	564,596	22.5
75+	402	12.9	447,971	17.8
Scotland	3,114	100.0	2,512,583	100.0

Source: ISD SAOHS database; 2017 National Records Scotland data zone population estimates.

a. Percentages in the above table may not add to 100 due to rounding.

Table A4 – Comparison of sex distribution between SAOHS data and the Scottish population^a

Sex	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
Male	1,396	44.8	1,179,604	46.9
Female	1,718	55.2	1,332,979	53.1
Scotland	3,114	100.0	2,512,583	100.0

Source: ISD SAOHS database; 2017 National Records Scotland data zone population estimates.

a. Percentages in the above table may not add to 100 due to rounding.

Table A5 – Comparison of deprivation category distribution between SAOHS data and the Scottish population^{a,b}

Deprivation Category	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
1=most deprived	501	16.1	448,927	17.9
2	535	17.2	493,531	19.6
3	665	21.4	524,844	20.9
4	715	23.0	531,890	21.2
5=least deprived	680	21.8	513,391	20.4
Unknown	18	0.6	0	0.0
Total	3,114	100	2,512,583	100

Source: ISD SAOHS database; 2017 National Records Scotland data zone population estimates.

a. Scotland level SIMD 2016.

b. Percentages in the above table may not add to 100 due to rounding.

The table below provides comparison between the SAOHS data and the population of adults aged 45 years and over in Scotland.

Table A6 – Comparison of NHS Board distribution between SAOHS data and the Scottish population^a

NHS Board	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
Ayrshire & Arran	177	5.7	190,987	7.6
Borders	201	6.5	63,229	2.5
Dumfries & Galloway	110	3.5	82,472	3.3
Fife	187	6.0	179,015	7.1
Forth Valley	266	8.5	144,624	5.8
Grampian	255	8.2	262,433	10.4
Greater Glasgow & Clyde	852	27.4	503,655	20.0
Highland	174	5.6	168,958	6.7
Lanarkshire	268	8.6	308,417	12.3
Lothian	337	10.8	370,124	14.7
Orkney	40	1.3	11,708	0.5
Shetland	66	2.1	11,050	0.4
Tayside	144	4.6	201,042	8.0
Western Isles	19	0.6	14,869	0.6
Unknown	18	0.6	0	0.0
Scotland	3,114	100.0	2,512,583	100.0

Source: ISD SAOHS database; 2017 National Records Scotland data zone population estimates.

a. Percentages in the above table may not add to rounding

Table A7 – Comparison of ethnicity distribution between SAOHS data and the Scottish population^{a,b,c}

Ethnicity	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
White Scottish	2282	73.3	2,040,684	87.0
White British	552	17.7	211,213	9.0
White Irish	21	0.7	26,077	1.1
White Gypsy/Traveller	*	*	1,190	0.1
White Polish	*	*	6,523	0.3
Any other white ethnic group	60	1.9	23,572	1.0
Mixed or multiple ethnic group	5	0.2	2,211	0.1
Pakistani, Pakistani Scottish or Pakistani British	15	0.5	9,691	0.4
Indian, Indian Scottish or Indian British	7	0.2	5,647	0.2
Chinese, Chinese Scottish or Chinese British	11	0.4	6,257	0.3
Other Asian, Asian Scottish or Asian British	6	0.2	3,581	0.2
African, African Scottish or African British	5	0.2	2,961	0.1
Caribbean, Caribbean Scottish or Caribbean British	*	*	940	0.0
Black, Black Scottish or Black British	*	*	483	0.0
Arab, Arab Scottish or Arab British	*	*	-	-
Other African, Caribbean or Black	*	*	158	0.0
Other ethnic group	9	0.3	1,216	0.1
Refused/Not provided by patient/Not Known	126	4.0	2,099	0.1
Total	3,114	100	2,344,503	100

Source: ISD SAOHS database; Census 2011, National Records Scotland.

a. The different Scotland Population total in Table A7 when compared to Tables A3 to A6 above is due to different sources of data: 2011 Census data has been used in Table A7; 2017 National Records Scotland data zone estimates in Tables A3 to A6.

a. Percentages in the above table may not add to 100 due to rounding.

b. * indicates values that have been suppressed due to the potential risk of disclosure and to help maintain confidentiality.

Table A8 – Comparison of urban/rural distribution between SAOHS data and the Scottish population^a

Urban/Rural Classification	SAOHS		Scotland Population	
	Number	Percentage	Number	Percentage
Large Urban Areas	1,066	34.2	773,183	30.8
Other Urban Areas	1,013	32.5	889,069	35.4
Accessible Small Towns	287	9.2	252,250	10.0
Remote Small Towns	139	4.5	95,615	3.8
Accessible Rural	344	11.0	322,984	12.9
Remote Rural	246	7.9	179,482	7.1
Unknown	19	0.6	-	-
Total	3,114	100.0	2,512,583	100.0

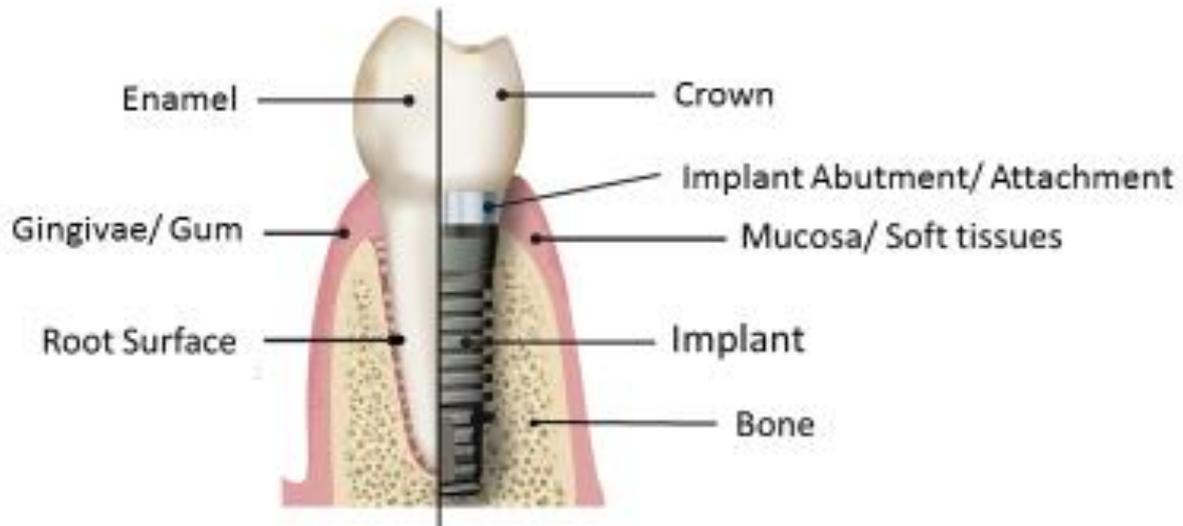
Source: ISD SAOHS database; 2017 National Records Scotland data zone population estimates.

a. Percentages in the above table may not add to 100 due to rounding.

A5 - Parts of the tooth / dental implant

Figure A2 shows several parts of a tooth or dental implant defined above.

Figure A2: Parts of a tooth and dental implant

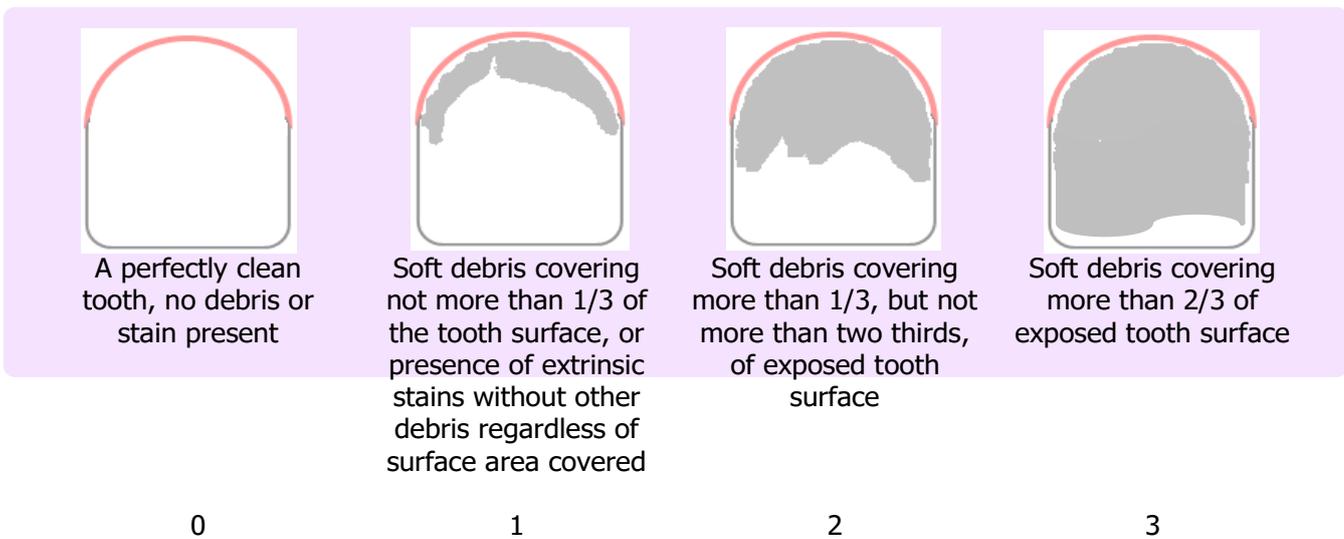


Source: Image reproduced in an amended format with kind permission from Scottish Dental Clinical Effectiveness Programme.

A6 - Calculation of Oral Hygiene Scores

The Simplified Oral Hygiene Index⁸ was used to assess the amount of debris/plaque present on six index teeth - four at the back (posterior) and two at the front (anterior). Debris/plaque is scored individually on each of these six teeth on a scale of 0 to 3, with 0 indicating no discernible debris/plaque present and 3 that debris/plaque covers more than two thirds of the tooth surface (Figure A3). The highest score for each examination was then recorded.

Figure A3: Debris present on teeth



Source: Image reproduced in an amended format with kind permission from Scottish Dental Clinical Effectiveness Guidelines group.

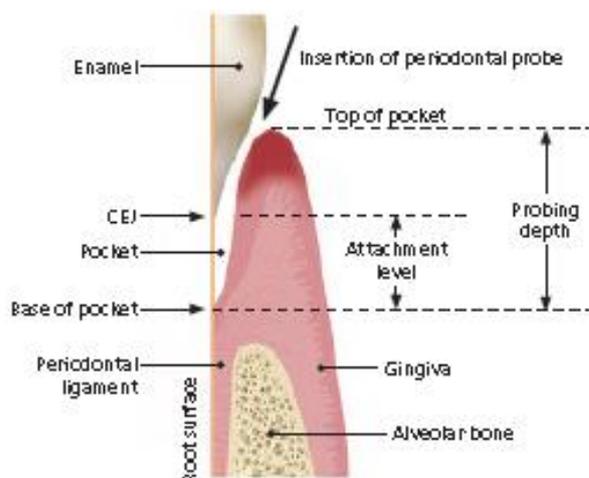
A7 - Calculation of BPE Scores

Teeth were divided into six sections and all teeth (with the exception of third molars) were examined in each section. A probe was used to assess periodontal health with a score given ranging in severity from 0 to 4 (see Figures A4 and A5 and Table A9). The highest score in each section was then recorded.

Figure A4: Probing depths observed at sites with BPE scores 0, 1, 2, 3, 4 and *¹⁷



Figure A5: BPE teeth probing¹⁷



Source: Image reproduced in an amended format with kind permission from Scottish Dental Clinical Effectiveness Programme.

Source: Image reproduced in an amended format with permission from Scottish Dental Clinical Effectiveness Programme.

Table A9: Basic Periodontal Examination (BPE) scores^a

Score	Definition
0	No pockets >3.5 mm, no calculus/overhangs, no bleeding after probing (<i>black band completely visible</i>)
1	No pockets >3.5 mm, no calculus/overhangs, but bleeding after probing (<i>black band completely visible</i>)
2	No pockets >3.5 mm, but supra- or subgingival calculus/overhangs (<i>black band completely visible</i>)
3	Probing depth 3.5-5.5 mm (<i>black band partially visible, indicating pocket of 4-5 mm</i>)
4	Probing depth >5.5 mm (<i>black band entirely within the pocket, indicating pocket of 6 mm or more</i>)
*	Furcation involvement; significant loss of attachment of tooth to supporting structures

- a. Furcation involvement, the significant loss of attachment of tooth to support structures, was not included within the analyses for this report.

A8 - Soft Tissue Lesions

Soft tissue lesions were recorded by intraoral site as free text responses. These were recorded as a 'best guess' diagnosis describing in the dentist's professional opinion what the lesion was most likely to be. No further tests or referral confirmation was sought for the purpose of the survey. The responses were reviewed and grouped by analogous term or common theme.

Of the soft tissue lesions recorded, undefined trauma was the most common theme recorded accounting for 93 of the recorded lesions (28%). Table A10 shows each type of soft tissue lesion recorded in each area of the mouth examined.

Table A10: Soft tissue lesion type recorded in each area of the mouth examined, ordered from most to least frequently recorded

Area of Mouth	Soft Tissue Lesion Type
Lips	Herpes simplex cold sore
	Haemangioma/Haematoma
	Angular cheilitis
	Mucocele
	Trauma
	Pigmentation
	Polyp
Cheeks	Apthous Ulcer
	Keratositis/trauma or other lesion associated with cheek biting
	Lichen planus/lichenoid reaction
	No indicative diagnosis
	Apthous ulcer
	Haemangioma/ Haematoma
	Draining sinus
	Dry mouth
	Fordyce spots
	Papilloma
	Polyp
Amalgam tattoo	
Jaw	Amalgam tattoo
	No indicative diagnosis
	Tori/Bony exostoses
	Keratosis
	Draining sinus/chronic infection
	Desquamative gingivitis
	Trauma
	Infected socket/ Alveolar osteitis
	Gingival hyperplasia

	Denture induced lesion/ trauma
	Apthous ulcer
	Lichen planus/Lichenoid reaction
Tongue	Trauma
	Lichen planus/Lichenoid reaction
	Geographic tongue/benign glossitis
	Haemangioma/ Haematoma
	Papilloma
	Exogenous staining/coating
	Keratosis
	Evidence of previous surgery
	Apthous Ulcer
	Fissuring/ anatomical feature on tongue
	Fungal infection
	Polyp
	No indicative diagnosis
Under the tongue	Fungal infection
	Lichen planus/Lichenoid reaction
	Mucocele
	Keratosis
	Trauma
	Apthous Ulcer
Palate	Denture Induced Stomatitis
	Trauma
	Denture Induced Lesion
	No indicative diagnosis
	Tori/ Bony exostoses
	Palatal erythema/Erythematous lesion
	Pigmentation
	Keratosis
	Lichen planus/Lichenoid reaction
	Blocked minor salivary gland
	Papilloma
Throat	Trauma
	Undefined lesion

Source: ISD SAOHS database.

A9 - SAOHS Information Sheet for Patients

Scottish Adult Oral Health Survey 2017/18

Your NHS dental practice is taking part in a national survey called the Scottish Adult Oral Health Survey. We would like to invite you to take part in the survey which will look at how we collect information about dental health. Before agreeing to take part you need to understand why the survey is being carried out and what it would involve. Please take time to read the following information carefully. If you would like more information then please feel free to discuss the survey with the dentist you are seeing today or contact a member of the survey team on 01382 383941.

This leaflet answers some of the questions you may have about taking part in this survey. Please take time to read through the following information carefully.

What is the purpose of the survey?

The main purpose of this survey is to gain a picture of the dental health of the adult population in Scotland. Currently we do not have much information on the dental health of adults over the age of 45. Information collected will be used locally and nationally to effectively plan dental services.

Why have I been invited to take part?

You have been invited to take part because you are attending a check-up or examination appointment with an NHS dentist who has opted into the survey. Everyone who has been invited to attend is over the age of 45.

Do I have to take part?

No, it is up to you to decide. We encourage you to read this information sheet and discuss it with your dentist. If you agree to take part the dentist you are seeing today will record this in your patient record to show you have agreed to take part.

If you change your mind, you are free to withdraw at any stage, and you do not need to give a reason. If you wish to withdraw during the survey please let your dentist know. The data collected, prior to you withdrawing will be removed from the survey.

If you decide not to take part in the survey, or if you wish to withdraw at any time, it will not influence your care or treatment in any way, now or in the future.

What type of survey is it?

This is a national survey which is taking part in NHS dental practices across Scotland. We hope to have 320 dentists involved in the survey. The dentists will record routine information about 25 to 40 of their patients.

What will happen if I decide to take part?

The dentist will carry out your regular dental exam plus a series of additional tasks.

1. The dentist will record specific aspects of your personal information.
2. The dentist will ask you a series of questions which relate to your dental and general health. They will record the answers to these questions.
3. The dentist will carry out and record the information from an extended dental examination.

The information collected will be brought together and managed for the NHS by the Information Services Division (ISD). ISD is part of NHS National Services Scotland (NSS). ISD is working with dentists and other staff from the NHS Health Boards, NHS Education for Scotland, the Universities of Glasgow and Dundee and the Chief Dental Officer for Scotland to gather this patient information.

What will I have to do?

You will be asked to:

1. Read this information sheet
2. Discuss the survey with the dentist you are seeing today
3. Tell the dentist whether you give consent and agree to take part in the survey

What are the possible disadvantages and risks of taking part?

Your appointment may take up to 5 minutes longer than a regular dental examination appointment. There are no known risks of taking part in the survey.

What if there is a problem?

If you have a concern about any aspect of this survey, you should ask to speak to a member of the dental team who will do their best to answer your questions. If you wish to speak to a member of the survey team then please contact: Susan Carson on 01382 383941.

Will my taking part in this survey be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in strictest confidence. The data will be stored securely by Information Service Division, NHS National Services Scotland. It will be analysed by authorised employees of ISD and the Universities of Glasgow and Dundee. There is a possibility that in future we will link together information about you from different sources for example to understand associations with dental conditions and other aspects of health. All members of the survey team have a duty of confidentiality to you.

What will happen to the results of the survey?

The results of the survey will be published in the Scottish Adult Oral Health Survey report and in professional medical publications. No individual will be identifiable in any publication.

What should I do now?

Please inform the dentist you are seeing today if you want to take part in the survey or not. If you decide to participate the dentist will carry out the survey as part of an extended dental examination.

Further information on the safe and secure use of personal information can be obtained at:

<http://www.isdscotland.org/About-ISD/Confidentiality/20150910-SafeSecureInfo-web.pdf>

OR please request a copy of this information from the dentist who is seeing you today.

A10 - Links and Comparisons to Other Sources of Dental Health Information

The sources below offer information related to dental services and dental health. Where these sources are external to ISD, we cannot guarantee the content or accessibility of these web sites.

Dental data in Scotland

ISD publishes

- Information relating to the [general dental service workforce](#) in Scotland.
- An annual [NHS Adult & Child Fees and Treatments](#) report providing information on GDS fees paid to dentists and on treatments provided to children and adults.
- A biannual [NHS Registration and Participation](#) report providing information on NHS General Dental Services (GDS) registrations and participation (contact with GDS).
- An annual [National Dental Inspection Programme \(NDIP\)](#) report which advises the Scottish Government, NHS boards and other organisations concerned with children's health of the oral disease prevalence in their area.
- An annual [Primary Care in Dentistry](#) report, published on behalf of the Scottish Dental Practice Board, which provides information on how primary care dental services are managed and provided in Scotland, and how well these services are operating.

The 2017 [Scottish Health Survey](#) covers dental health topics such as dental health problems and trends in prevalence of natural teeth, but not oral health behaviours.

Table A11. Is SAOHS comparable with other UK dental survey data?

Country	Comparable to SAOHS?	Available	Links
Rest of UK	No - different methodologies used.	Yes	The Adult Dental Health Survey collected information about adults' teeth in England, Wales and Northern Ireland.

Please note that if you want to compare deprivation levels in Scotland and England, the Scottish Index of Multiple Deprivation (SIMD) is not directly comparable with the Index of Multiple Deprivation used in England.

A11 - Publication Metadata

Metadata Indicator	Description
Publication title	Scottish Adult Oral Health Survey 2016-2018
Description	This report presents the results of the Scottish Adult Oral Health Survey carried out December 2015 – March 2016 and December 2017 - April 2018
Theme	Dental care
Topic	Adult’s dental health
Format	PDF and Microsoft Excel
Data source(s)	Scottish Adult Oral Health Survey database
Date that data are acquired	December 2015 – March 2016 and December 2017 – April 2018
Release date	30 April 2019
Frequency	Frequency of potential future iterations is currently unknown.
Timeframe of data and timeliness	December 2015 – March 2016 and December 2017 – April 2018; 37 and 12 months in arrears.
Continuity of data	Unknown.
Revisions statement	These data are not subject to planned major revisions. However, ISD aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and may be updated in future.
Revisions relevant to this publication	None
Concepts and definitions	See Glossary, References and Appendices.
Relevance and key uses of the statistics	The principal aim of the Scottish Adult Oral Health Survey was to assess the feasibility of collecting adult oral health data and establish appropriate methodologies for this to occur routinely in future. An additional key aim was to record levels of adult oral health in Scotland. This survey was carried out as the first stage in the development of a rolling Scottish Adult Oral Health Survey programme.
Accuracy	Data was collected by dentists during routine dental examinations; it is considered that data recorded by practitioners during oral health examinations is accurate. Data recorded during the examination in relation to oral health behaviour (i.e. smoking, alcohol consumption) relies on the patient accurately responding to survey questions; without any method to confirm this data, it is considered that the data collected is accurate.
Completeness	A data quality reporting process included measures of data accuracy and completeness in order to ensure data quality.
Comparability	Comparisons with UK-wide statistics. See Appendix A9 .

Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and clarity	Tables and charts are accessible via the ISD website .
Value type and unit of measurement	Various dental/epidemiological and demographic units of measurement.
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Not assessed at this time.
Last published	21 February 2017
Next published	Frequency of potential future iterations is currently unknown.
Date of first publication	21 February 2017
Help email	isd-dental-info@nhs.net
Date form completed	8 March 2019

A12 - Early access details

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD is obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department

NHS Board Chief Executives

NHS Board Communication leads

Early Access for Management Information

These statistics will also have been made available to those who needed access to 'management information', i.e. as part of the delivery of health and care:

Early Access for Quality Assurance

These statistics will also have been made available to those who needed access to help quality assure the publication:

Early Access Job Title	Early Access Contact Name	Early Access Email Address	Early Access Reason
Professor of Dental Public Health	L M D Macpherson	Lorna.Macpherson@glasgow.ac.uk	Members of Publication Writing Group
Senior Lecturer in Statistics	A Sherriff	Andrea.Sherriff@glasgow.ac.uk	
Clinical Lecturer / Consultant in Dental Public Health	S Carson	susan.carson@nhs.net	
Head of Programme (Implementation)	L Young	linda.young@nes.scot.nhs.uk	
Consultant in Dental Public Health	D Richards	derek.richards@nhs.net	

A13 - ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).