

PLYMOUTH ORAL HEALTH NEEDS ASSESSMENT 2019



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I. Executive summary

A healthy mouth and smile means that people can eat, speak and socialise without pain or discomfort and play their part at home and in society. Unacceptable inequalities in oral health for vulnerable, disadvantaged and socially excluded people can be reduced by focusing on the wider determinants of health as well as individual behavioural change approaches.

Plymouth's population is increasing and the number of older people living in Plymouth is set to rise by over 15,000 by 2034. Older people experience more chronic disease and social isolation and have a greater need for health care services, including dental services. Deprivation in Plymouth is higher than the England average, according to official measures.

Poor oral health is largely preventable but some population groups are at greater risk of tooth decay, gum disease or mouth cancer and have greater difficulty accessing dental services for prevention and treatment. These groups include Looked after children (LAC), people with physical impairments or learning disabilities, people with chronic medical conditions, frailty or dementia. In addition, asylum seekers and refugees, people experiencing homelessness and Gypsy, Roma and Travelling communities are known to, or are likely to, experience dental problems and barriers to accessing dental care in Plymouth. Smoking and alcohol misuse increase people's risk of oral health problems, including mouth cancer. There is limited local data on the prevalence of oral disease in drug misusers.

More than one in five children in Plymouth has visible tooth decay by the age of five years old. Previous detailed surveys have shown a stark variation with deprivation, with over half the children in more deprived areas being affected by decay, in comparison with less than one in ten children in less deprived areas. Oral (mouth) cancer is one of the more serious oral conditions. The incidence and mortality rates for oral cancer in Plymouth are significantly higher than in England as whole.

Oral health improvement (OHI) remains a priority for Plymouth City Council's Child Poverty Action Plan 2019-22. The OHI programme includes a range of oral health improvement activities in community settings, ensuring that parents and children at increased risk of tooth decay can access preventive care and advice beyond dental practices.

Plymouth has 22 dental practices which provide some NHS dental care and 10 private-only dental practices. There is a domiciliary NHS dental care service for Plymouth residents who are unable to leave their home for dental care. Plymouth Community Dental Service (PCDS) provides urgent dental care for people who do not have access to a general dental practice (GDP). PCDS also provides some dental care for children and for people with additional needs or dental phobia who are otherwise unable to access NHS dental care. PCDS also hosts a minor oral surgery service and provides treatment under general anaesthetic at Derriford Hospital. Peninsula Dental Social Enterprise (PDSE) provides community engagement and dental training and its dental students provide patients with an extensive range of dental treatments, under qualified supervision.

University Hospitals Plymouth (UHP) NHS Trust provides specialist dental care at Derriford Hospital, including Maxillofacial Surgery, Orthodontics and Restorative Dentistry.

Over 11,000 adults and over 3,000 children in Plymouth were on the dental waiting list for a routine NHS dental appointment as of 1 October 2019. People living in the most deprived areas of Plymouth are twice as likely to be on this waiting list as people in the least deprived areas. As a proportion of their population, children are more likely to access NHS primary dental care than young people and working age adults or older people. People in more deprived areas are less likely to access NHS primary dental care than people in less deprived areas.

In 2017/18, there was a shortfall of over 20% of the NHS dental care which dental practices in Plymouth were commissioned to provide. This is mainly due to dental practices having difficulty in recruiting dentists to provide NHS dental care. This shortfall is equivalent to the capacity to provide around 27,000 patients with NHS dental care in Plymouth. PDSE saw 1,246 patients in Plymouth in 2018/19, mainly at its Dental Educational Facility (DEF) in Devonport. Patients seen by PDSE were twice as likely to be from more deprived areas of Plymouth and the highest electoral ward rate was over three times higher than the lowest rate. Over 20,000 enquiries were made to the PCDS for urgent dental care appointments in 2018/19. The number of enquiries from people living in the highest deprivation group was almost treble that for the lowest deprivation group. In 2018/19, there were 2,186 referrals to the PCDS access centre for routine children, adult special care, minor oral surgery and dental phobia. In Plymouth, 623 children aged 16 years and under had a total of 3,557 teeth removed under general anaesthetic (GA) in 2018/19. The highest electoral ward rate of children having teeth extracted under GA was almost four times higher than the lowest rate.

The total annual cost to the NHS was likely to be approximately £540,625.00. Treatment under GA can be a traumatic experience for children and their carers, carries a risk of life threatening complications, and is disruptive in terms of time taken off school and work.

2. Introduction

Despite improvements in oral health in England over the last forty years, many people continue to suffer the pain and discomfort associated with oral diseases, which are largely preventable. A healthy mouth and smile means that people can eat, speak and socialise without pain or discomfort and play their part at home and in society. Oral health is an integral part of health and wellbeing and many of the key risk factors are associated with other diseases.

The distribution and severity of oral diseases varies between areas. Unacceptable inequalities exist with more vulnerable, disadvantaged and socially excluded groups experiencing more oral health problems. As with health inequalities, oral health inequalities are not inevitable. They stem from inequalities in income, education, employment and neighbourhood circumstances throughout life, and can be reduced. Focusing on the wider determinants of health and individual behavioural change approaches to improving oral health are necessary to achieve sustainable improvements in oral health related behaviours. Social, environmental, economic circumstances or lifestyle place vulnerable groups at high risk of poor oral health or make it difficult for them to access dental services.

From April 2013 the statutory responsibility for the commissioning of oral health improvement transferred from the NHS to local authorities. NHS England has the statutory duty to commission NHS dental services. The current dental public health functions of local authorities now include a statutory requirement to assess their local population's oral health needs, develop oral health strategies and commission or provide oral health improvement programmes.

The aim of this oral health needs assessment is to identify local groups of people who are at high risk of poor oral health, and determine their likely needs. It can therefore be used as the basis for developing interventions for oral health improvement tailored to the local population.

Potential uses of this needs assessment include:

- Aiding decision makers across the city; the information can be used as a basis for the development of strategies to improve the oral health of people in Plymouth and for the commissioning of services according to the needs of the population.
- Providing evidence that can be used in the preparation of bids and business cases.
- Assisting service providers considering future development of their services.

3. Plymouth in context

3.1 Background

This section covers Plymouth's neighbourhoods, electoral wards, deprivation groups and current and projected population.

Plymouth is divided into 39 neighbourhoods. These neighbourhoods are aggregations of the city's 161 Lower Super Output Areas (LSOAs). As well as existing in their own right, the neighbourhoods can be grouped together to form 20 electoral wards, five neighbourhood deprivation groups and a variety of other local geographies.

3.2 Population (current and projections)

Plymouth, at mid-year 2017, had an estimated population of 263,070; females accounting for 50.2% and males 49.8% (reflecting the England split of 50.7% and 49.3%).¹

Comparisons between Plymouth, the South West and England by age groups are shown in Table I. In 2017, children and young people aged under 18 accounted for 19.9% of the population. Due to approximately 27,000 students residing in the city, the percentage of 18-24 year olds (12.2%) is higher than that found in England as a whole (8.7%).

The proportion of the working-age (15-64 year old) population (64.9%) is higher than that in the South West (61.6%) and England (63.9%). 18.1% of Plymouth residents are aged 65+ which is comparable with the England average (18.0%) but lower than the South West average (21.8%).

Table I: Numbers and percentages by age group in Plymouth, the South West and England, 2017

Age group	Plymouth		South West		England	
	No.	%	No.	%	No.	%
Under 5	15,308	5.8	300,770	5.4	3,384,925	6.1
Under 16	47,120	17.9	977,522	17.6	10,637,971	19.1
Under 18	52,296	19.9	1,096,477	19.7	11,869,346	21.3
18-24	32,180	12.2	471,357	8.5	4,828,279	8.7
15-64	170,672	64.9	3,427,027	61.6	35,542,943	63.9
65+	47,686	18.1	1,210,974	21.8	10,030,511	18.0
75+	21,620	8.2	551,000	9.9	4,535,330	8.1
85+	6,376	2.4	170,607	3.1	1,352,056	2.4

Source: ONS mid-year population estimates, 2017

Plymouth's population is not evenly split across the city. There are higher numbers of people living in the wards to the west and southwest of the city. The ward with the biggest population is St Peter and the Waterfront (17,400) whilst Plympton Chaddlewood has the smallest

population (7,900).

The wards to the west, in addition to Efford & Lipson, have the highest numbers of 0-4 year olds in the city. In contrast, wards in the east, in addition to Compton, have the highest numbers of those aged 85+.

Plymouth’s population has increased by nearly 12,000 (4.7%) over the last ten years, yet this is below the growth rate in both the South West (7.1%) and England (8.2%).^{2,3} The Office for National Statistics (ONS) estimates that the city’s population will be around 274,300 by 2034, a projected increase of 4.3%.⁴

Figure I: Plymouth’s change in population by 2034, by age group

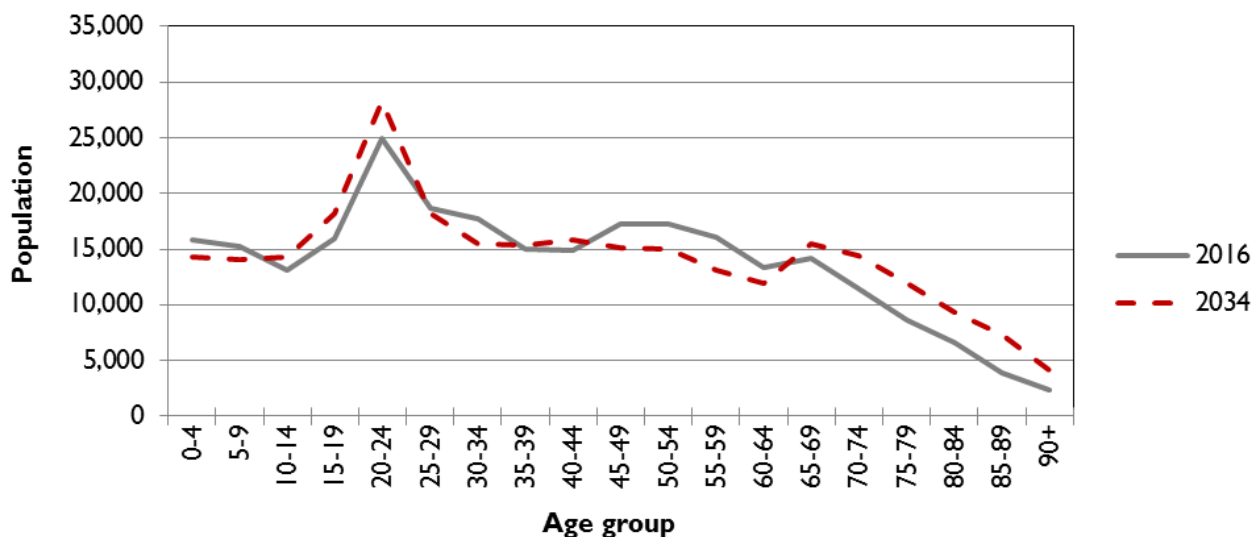


Figure I shows there will be a shift in the population structure of Plymouth over the next twenty years as the proportion of the population aged 65+ increases. The ONS projects a rise in the percentage of the national population in this age group, from 18.0% in 2016 to 23.2% by 2034. In Plymouth the percentage of the population aged 65+ is projected to increase from 17.9% in 2016 to 22.7% in 2034.² There is a projected 32.7% increase in the number of people aged 65+ between 2016 and 2034 (an additional 15,400 individuals) in Plymouth compared to a 40.0% increase nationally. Over the same time period, those aged 85+ will have a percentage increase of 83.0% (an additional 5,180 individuals in the city and a total in the age group of around 11,408).

Plymouth will also see a decrease in the percentage of the population aged 0-4 years. This age group is projected to decrease by 9.8% between 2016 and 2034 (reducing from 15,847 to 14,288 individuals).⁴ This is larger than in the national figure, which is projected to see only a 4.8% decrease.

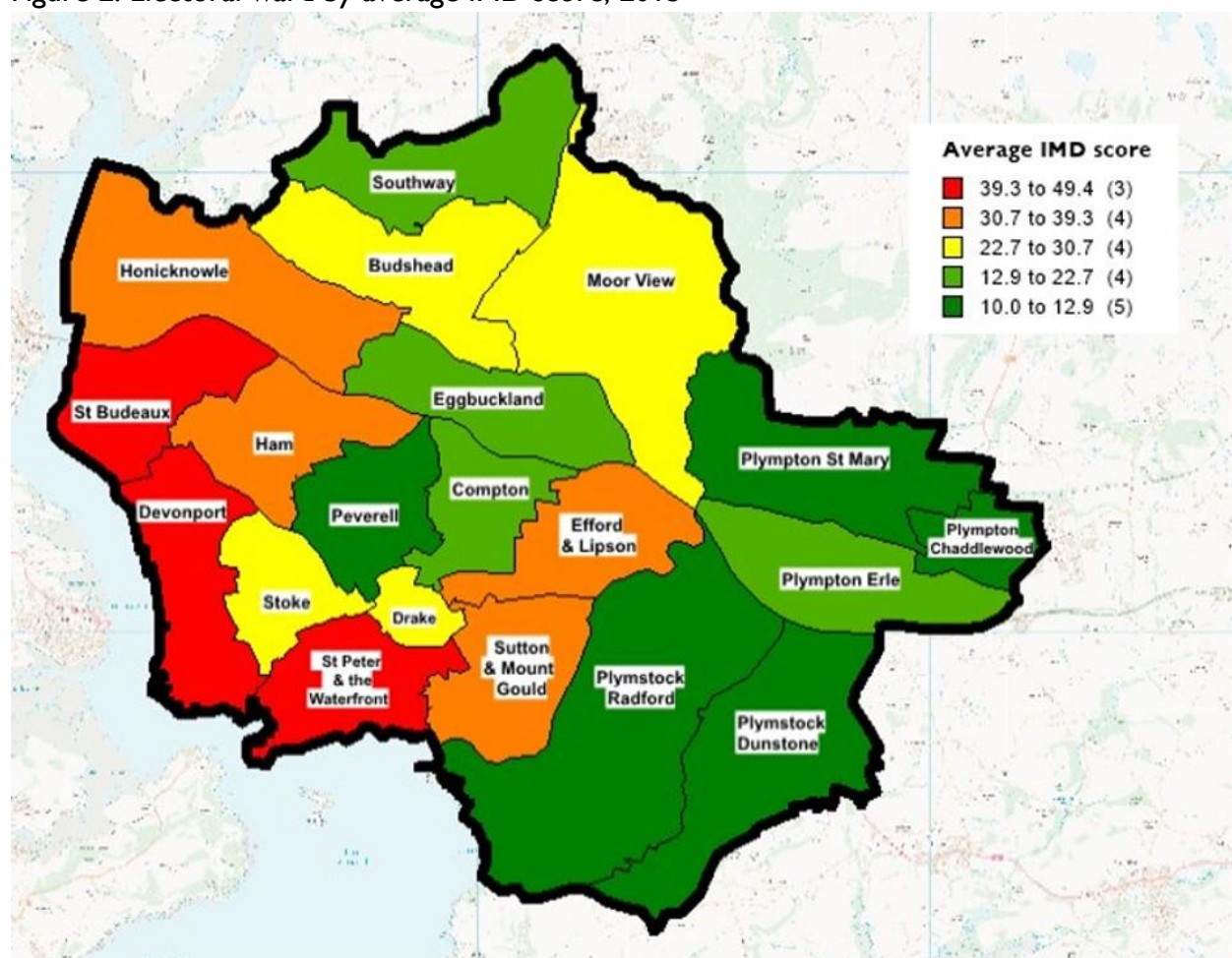
With an increase in age, health and wellbeing needs increase; there is a higher burden of chronic disease, an increased susceptibility to the negative impacts of social isolation, and an associated raised need for health care services.

3.3 Deprivation

Deprivation measures attempt to identify communities where the need for healthcare is greater, material resources are fewer and exacerbated by lower literacy levels, result in less capacity to cope with the consequences of ill-health. A deprived area is conventionally understood to be a place in which people tend to be relatively poor and are relatively likely to suffer from misfortunes such as ill-health.

The Index of Multiple Deprivation 2015 (IMD 2015) is the official measure of deprivation and shows deprivation in Plymouth is higher than the England average. One area in the St Peter and the Waterfront ward falls within the most deprived 1% in the country. Figure 2 shows IMD 2015 average score by electoral ward. This ranges from Plympton Dunstone with an IMD 2015 score of 10.0 to 49.3 for St. Peter & the Waterfront.

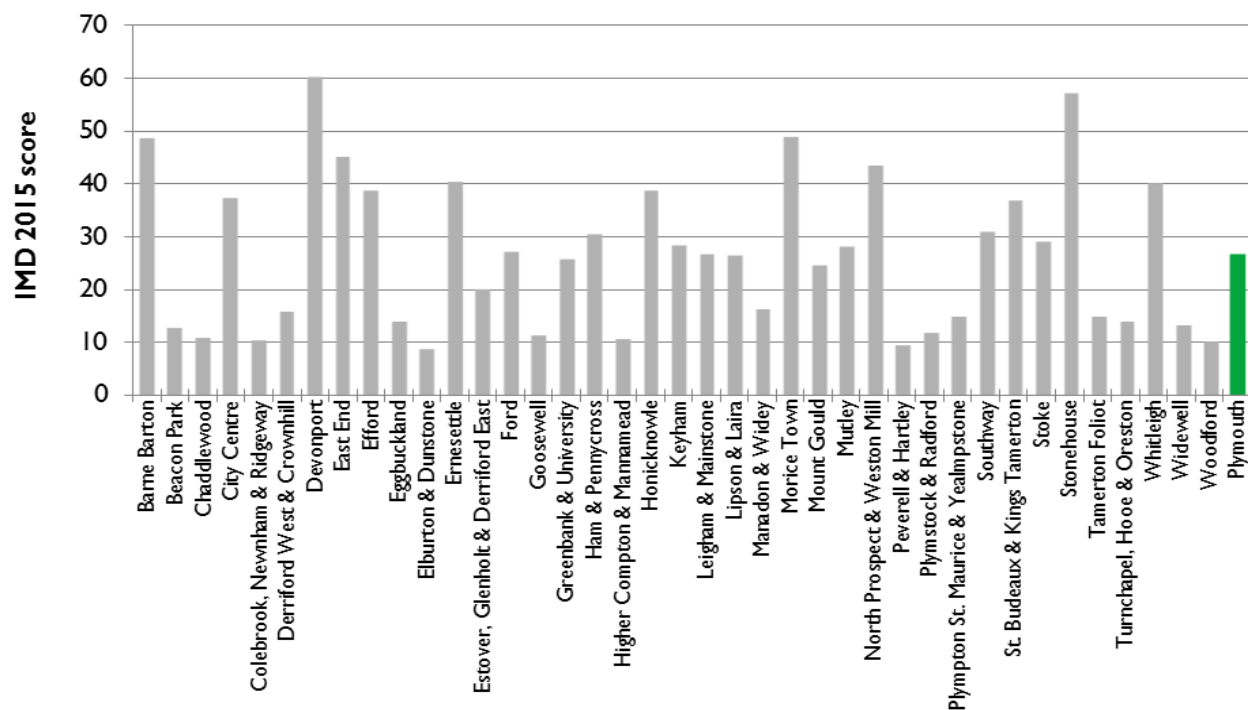
Figure 2: Electoral ward by average IMD score, 2015



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As IMD 2015 is not routinely available at neighbourhood level, analysis has been carried out by Plymouth City Council’s Public Health Team to produce IMD 2015 scores for each of the city’s 39 neighbourhoods. The results of this analysis are shown in Figure 3.

Figure 3: IMD 2015 scores for the Plymouth neighbourhoods



As well as producing information on a locality basis, this information is also produced for the city’s five deprivation groups. These groups are based on combinations of neighbourhoods sorted according to their IMD 2015 score. The eight neighbourhoods with the highest IMD 2015 scores are grouped together to make the 'most deprived' group and the eight neighbourhoods with the lowest IMD 2015 scores are grouped together to make the 'least deprived' group. The three intervening groups are referred to as 'upper middle', 'middle' and 'lower middle'. The neighbourhoods which together make up the most deprived and least deprived neighbourhood groups are shown in Table 2.

Table 2: Neighbourhoods in the most deprived and least deprived groups

Group	Neighbourhood	Group	Neighbourhood
Most deprived	1. Devonport	Least deprived	32. Plymstock & Radford
	2. Stonehouse		33. Goosewell
	3. Morice Town		34. Chaddlewood
	4. Barne Barton		35. Higher Compton & Mannamead
	5. East End		36. Colebrook, Newnham & Ridgeway
	6. North Prospect & Weston Mill		37. Woodford
	7. Ernesettle		38. Peverell & Hartley
	8. Whitleigh		39. Elburton & Dunstone

4. Vulnerable groups

4.1 Background

All age groups and populations are at risk of poor oral health even though it is largely preventable. Oral diseases are not uniformly distributed, but are increasingly concentrated in vulnerable and socially disadvantaged groups. This section looks at the groups most at risk of poor oral health. These include children and adults living in areas of material and social deprivation, children with special educational needs and disabilities (SEND), Looked after children (LAC) and children at risk of neglect or abuse. Vulnerable groups also include adults with long-term health problems or disabilities, those affected by substance misuse, people who smoke, homeless people, asylum seekers and refugees, and Gypsy, Roma and Travelling communities.

Oral health inequalities

There is limited local data available about the oral health status, needs and service usage of vulnerable groups in the population. However a review of the literature suggests that they are likely to have poorer oral health than the rest of the population; have more difficulty accessing dental care; and have worse health outcomes than the general population. There is a strong relationship that exists between dental decay and social deprivation, as decay levels are higher in areas where deprivation is higher and access to services and costs are significant barriers. It is therefore reasonable to assume that people in vulnerable and socially disadvantaged groups and people experiencing deprivation will need greater support in maintaining good oral health.

Improving oral health and addressing inequalities requires a combination of strategies. These include preventing disease through measures which benefit the whole population, combined with measures specifically targeted at individuals with the greatest susceptibility to disease. Preventing oral diseases should be a priority at all stages of people's lives. Measures to improve health literacy of the whole population can have a range of benefits. They can increase health knowledge and build resilience, encourage positive lifestyle change, empower people to effectively manage long-term health conditions and reduce the burden on health and social care services.⁵ In terms of oral health improvement, these include healthy food choices, nicotine replacement therapy (NRT), fluoride toothpaste, toothbrushes, transport to shops and dental services. Strategies are needed that will have a cumulative and significant impact on quality of life from childhood through to later years.⁶

Challenges to reducing oral health inequalities in vulnerable groups

The main challenges in improving the oral health of vulnerable groups include a poor awareness of oral health, outside of the dental community, specifically in terms of oral health literacy, scope for prevention, and how to access dental services. Furthermore, for those that engage with social care services, oral health may not feature in general care plans. This needs to be considered in the wider context of the socio-economic determinants of health and oral health, i.e. the causes

of the causes.

4.2 Looked after children

Overview

Local authorities are responsible for making sure an Initial Health Assessment (IHA) of physical, emotional and mental health needs is carried out for every child they look after, regardless of where that child lives.⁷ Teeth are checked for any signs of decay or poor oral hygiene. The recommendation by the Government is that all children are seen by a dentist as soon as possible after being accommodated. The statutory health assessment should address: existing arrangements for the child's dental care appropriate to their needs, which must include routine checks of the child's dental health, and treatment and monitoring for identified dental care needs.

To ensure the child's health plan is of high quality, the health assessment should include information held by community dental services and family dentists. The local authority that looks after a child must take all reasonable steps to ensure that the child receives the health care services he or she requires as set out in their health plan. Those services include dental care as well as advice and guidance on personal health care and health promotion issues. It is the responsibility of foster carers and residential care staff to make sure a child attends their health assessment and all dental appointments.

Plymouth children who remain in care are offered Review Health Assessments (RHA), undertaken by specialist Children in Care nurses. Children aged up to five years old have RHAs every six months and those over five years have RHAs annually. Some teenagers decline (recorded in Social Care data as 'abandoned'). At the RHA, the nurse will ask about oral hygiene and check the date of the most recent dental appointment. If a child has not seen a dentist, the nurse will refer them to Plymouth's Dental Access Centre (DAC).

In Plymouth, the Named Nurse records information about dental extractions and significant dental decay if this has been noted on the IHA or RHA paperwork, but this information is reliant upon the detail recorded by the practitioner who sees the child. The Named Nurse is not able to get information about a child's oral health from dentists directly. The Named and Specialist nurses work closely with colleagues in Children's Social Care to ensure that Looked after children (LAC) are offered dental care within recommended timescales.⁸

Once a child is in care, the Foster Carers and Social Workers make every effort to arrange a dental appointment, often with the help of the specialist nurses. Foster Carers have reported waiting lists of up to four years for NHS dentists in Plymouth. LAC can be seen at the DAC for routine examination and treatment. An appointment is usually within four months of the request (sooner if a child is in pain).

The Peninsula Dental School will also see LAC. There are some barriers, though, as four people are seen at a time in a large, open-plan room, and the lack of privacy can cause distress for some children. These are often emotionally vulnerable children who may have depression, or suffer

from needle phobias due to previous abuse (they might have observed parents injecting themselves with drugs). Clinical environments such as dental clinics might also trigger flashbacks to rooms where abuse may have previously occurred.

Local data

For the last four years the number of children and young people in care in Plymouth has been between 391 and 418 (418 at 10 September 2019). 272 children had been in care for a year or more. Plymouth's number of children and young people in care has increased at a faster rate than last year for the South West and England, and over the last four years the increase has been at a much slower pace.

In 2017/18, 213 children and young people (114 males, 99 females) came into the care of the local authority. Of these, 82 were aged 0-4 years, 45 were aged 5-9 years, and 86 were aged of 10-17 years.

Figures collated in April 2019 indicate approximately 82.6% of LAC by Plymouth local authority have been under the care of a dentist. In 2017/18 this figure was 88.7%. Of those who have been in care for a year or more, 72.0% have had a dental appointment in the year from April 2018 to March 2019. By September 2019, this figure was 73.9%.

In April 2019, reasons for non-attendance were collated. These showed six young people declined to see a dentist due to phobias or extreme anxiety. To overcome this, efforts are made to promote oral hygiene and be pro-active regarding dental checks (for example, arranging a domiciliary appointment or introductory visits to a dental surgery).

As of April 2019, 72 LAC in Plymouth had not seen a dentist. Of these, 34 had recently come into care, and there was no record of them having a dentist, or having had a dental check for a number of years. 57 (of the 72 children) were under the age of three years.

Nine LAC are on waiting lists for NHS dentists (April 2019); if children are placed in Plymouth, the Specialist nurses will refer them to the DAC for checks and treatment.

Of the children who had IHAs in the last 12 months, 34 were not registered with a dentist at the time of the IHA (April 2019). This included teenagers who had no recollection of having had any dental checks.

In terms of last dental activity completed on LAC, 189 (69.5%) were within timescales allowed and 59 (21.7%) were outside of timescales when the last activity was completed. A further seven (2.6%) had no dental activity recorded.

Oral health impact

LAC are emotionally vulnerable children and are at risk of extremely poor oral health.⁹ It is becoming increasingly difficult for these children to access dental services in Plymouth for both routine care, and to alleviate pain. Although LAC experience similar health problems as children living in other family environments, they often enter the care system in a poorer state of health than other children because of poverty, abuse and parental neglect.¹⁰ Frequent relocation within the foster care system could also make it more difficult for the children to complete their dental treatment, participate in school-based dental health programmes or obtain on-going preventive care.

Poor oral health in children has a number of effects:

- Pain and infection, such as gum disease or dental abscesses. This can lead to difficulties with eating, speaking, sleeping, playing and socialising with other children.¹¹ Alongside this, oral diseases can have a considerable impact on a child's self-esteem and confidence.¹² Poor oral health in children is also associated with being underweight and a failure to thrive.¹³
- A requirement for treatment with fluoride varnish, fillings, or even dental extraction.
- School attendance may be affected in order for children to attend appointments. Good oral health is an important aspect of overall health status, and can contribute to 'school readiness,' ensuring that all children are able to participate fully in all activities in order to be successful at school. Studies have shown that children with poor oral health have increased school absenteeism, and decreased school performance.^{14,15,16}
- Children who experience early childhood tooth decay are much more likely to develop subsequent problems, including an increased risk of further decay in both their primary and permanent teeth.¹⁷ This is partly because extensive damage to the primary teeth can cause abscesses that harm the permanent teeth developing inside the gums.
- In the case of advanced tooth decay where dental extraction is required, children are more likely to develop orthodontic problems as the premature loss of primary teeth can affect the alignment of permanent teeth.¹⁸

The National Institute for Health and Clinical Excellence (NICE) Public Health Guidelines on Looked after children and young people (2015)¹⁹ raises concerns about:

- Access to dental care. Sometimes children need to travel considerable distances to access a dentist that has the capacity to take them. A LAC or young person may not attend a planned dental check for reasons relating to unplanned placement moves, fear, phobias or confidence issues. Missed appointments result in some dental practices 'de-registering' them (there is no longer 'registration' per se, but practices usually maintain a voluntary list of regular patients which they would routinely see).
- Some dentists are reluctant to embark on a treatment programme if a child is in a short-term placement.
- There are also particular needs around meeting the specialist dental needs of disabled children and young people.

4.3 Children with special educational needs and disabilities

Overview

Children and young people with special educational needs (SEN) have learning difficulties, or disabilities that make it harder for them to learn than most children and young people of the same age. These children and young people may need extra or different help from that given to others. Many children and young people will have SEN of some kind at some time during their education. Children and young people with SEN may need extra help because of a range of needs. These can include communicating and interacting, cognition and learning, social, emotional and mental health difficulties or sensory and/or physical needs.

Many children and young people who have SEN may also have a disability. This can be physical or mental impairment which has a long-term and a substantial adverse effect on their ability to carry out normal day-to-day activities. This may include sensory impairments such as those that affect sight and hearing, and long-term health conditions such as asthma, diabetes or epilepsy.

Evidence suggests that children with additional needs, such as learning disabilities have similar tooth decay experience but are more likely to have their teeth extracted than their healthy peers.^{20,21}

Local data

Plymouth has seven special schools, with pupils ranging in age from two to 19 years. In January 2019, there were 669 pupils (166 girls and 503 boys) attending special schools across the city.

The proportion of SEN pupils is high in Plymouth. In January 2019, there were 6,870 (17.1%) pupils with SEN in Plymouth Schools, compared to 14.9% in England. Of these 6,870 pupils, 1,437 (3.6%) had a statement or Education, Health and Care Plan (EHCP) and 5,433 (13.5%) pupils received SEN support. This compares to 3.1% and 14.9% in England, respectively.

In Plymouth 36.4% (1,231) of primary school pupils have a speech, language and communication need, compared to 30.6% in England (2019).

In 2019, 30.3% (780) secondary school pupils in Plymouth have a social, emotional and mental health need, compared to 19.6% in England.

In Plymouth 25.6% (171) of special school pupils have a severe learning difficulty need, compared to 21.6% in England (2019).

The National Institute for Health and Clinical Excellence (NICE) Public Health guidelines on looked after children and young people (2015) raises concerns about meeting the specialist dental needs of disabled children and young people.

Oral health impact

Surveys show that more decayed teeth remain untreated, and teeth are more frequently extracted in children with a disability.^{22,23,20} In children with mild learning disabilities and children who are partly independent, prevalence of tooth decay is higher.²⁴ It would appear that these children may have fewer dietary restrictions and are therefore at greater risk of developing dental caries.

Studies uniformly report poor standards of oral hygiene and plaque control, and poorer gum health in children with learning disabilities.^{22,23,20,21,24} A high proportion of children in special schools have periodontal (gum) disease.²¹ Gum disease is more severe in children with Down's Syndrome even when a good standard of oral hygiene is maintained.

The oral health impact of children with special education needs and disabilities in Plymouth is not known, therefore more information about this vulnerable group is needed.

4.4 People experiencing homelessness

Overview

The experience of homelessness has a significant negative impact on an individual's oral health and also creates barriers to accessing treatment. Poor oral health is among the most common physical health problems of people experiencing homelessness, and it is shown to have an adverse effect on people's quality of life and ability to move on from homelessness. Supporting people to move on from homelessness means that as a society we all gain from the reduced cost burden of homelessness and from the increased contribution that formerly homeless people have to offer.²⁵

For people experiencing homelessness, commonly reported oral health impacts include toothache, discomfort, ability to relax and feeling ashamed regarding the appearance of their teeth.²⁶ The incidence of many cancers is known to be higher amongst lower socioeconomic groups. Within this low socioeconomic group of men experiencing homelessness, there are also high levels of cancers of the oral cavity.²⁷ With regard to access to dental care, studies have found that people experiencing homelessness often do not access dental services routinely due to fear, cost and difficulty in maintaining appointments.²⁸ Studies also consistently report high clinical need but low perceived need for oral health care.^{29,30,31}

The Healthy Mouths research study into the oral health of 262 people experiencing homelessness in London found that 90% had issues with their mouth since becoming homeless. Particularly common were bleeding gums (56%), holes in teeth (46%) and dental abscesses (26%). 60% had experienced pain in their mouths since they became homeless, 70% reported having lost teeth since they had been homeless and 7% had no teeth at all. 17% lost teeth following acts of violence and 15% of participants pulled out their own teeth.²⁵

High rates of drug and alcohol misuse and smoking tobacco amongst people experiencing homelessness is likely to be damaging oral health. 37% of the Healthy Mouths research study participants had alcohol misuse issues, 33% had drug misuse issues and 78% were current

smokers. The physical impacts of drug and alcohol on oral health were often compounded by declining self-care. Only 35% were able to clean their teeth twice a day and a quarter had not been to the dentist for over five years. 58% were unclear what they were entitled to with NHS dentists, 21% had been completely unable to function in the last year due to oral health issues, and alcohol and drugs were often being used to manage dental pain.²⁵

Local data

In terms of statutory homeless households, in Plymouth the estimated rate is 2.6 (per 1,000 households). This is similar to England (2.4 per 1,000 households) in 2017/18.

The rate of young people experiencing homelessness (aged 16-24) in Plymouth is 0.73 (per 1,000 households). This is higher than England (0.37 per 1,000 households) in 2017/18.

The rate of families experiencing homelessness (households with dependent children or pregnant women) in Plymouth is 1.3 (per 1,000 households). This is lower than England (1.7 per 1,000 households) in 2017/18.

The Plymouth Access to Housing (Path) Rough Sleeper Team evidenced 340 people who were street homeless (2018/19).³²

It was estimated that there were 26 people sleeping rough in Plymouth on a single night street count carried out by the local authority (between October and December 2017). 25 were male, and all but one were aged over 25 years. Plymouth's rate of rough sleeping is 0.23 (per 1,000 households), comparable to 0.20 for England as a whole.

In Plymouth, recent research with 24 men who were staying in a hostel for people experiencing homelessness found that nine (37.5%) had a painful aching in their mouth 'fairly often' or 'very often' in the last year, and 12 people (50%) found it was uncomfortable to eat 'fairly often' or 'very often' in the last year. 12 people (50%) had felt embarrassed and 11 (45.8%) had felt self-conscious about the condition of their mouth 'fairly often' or 'very often' in the last year. All the research participants had some experience of dental decay, with an average of 16.6 teeth affected. On average, participants had 7.8 teeth missing, 6.8 teeth decayed (but not repaired) and 2.1 teeth repaired with fillings.³³

Despite pro-active homelessness prevention work, increasing demand and an increase in the complexity of cases means that numbers of people experiencing homelessness continue to grow in Plymouth. The biggest pressure is the number of households accessing Bed and Breakfast (B&B) temporary accommodation. 55 households were accommodated in B&Bs each month in 2017/18. In the first nine months of 2018, there were 171 individual stays in a B&B. The most common reasons that households are eligible for housing assistance are the presence of dependent children (49%) or that the applicant, or a member of the household are vulnerable as a result of mental illness or disability (27%).³⁴

Oral health impact

The Community Engagement Dental Clinic in Plymouth sees patients who are often affected by homelessness. This includes rough sleepers, hostel residents, those staying with friends or family or in Council accommodation. Patients treated often have very poor oral health which has an effect on their quality of life. Patients can suffer with severe pain from teeth daily and several have resorted to extracting their own teeth. Some patients have missing or decayed teeth at the front of the mouth. They are often very ashamed and embarrassed or very frightened of the dentist due to previous bad experience or a history of abuse/trauma. In section 11.4 we discuss the activity of the Homeless Service at the Community Engagement Dental Clinic.

4.5 People affected by substance misuse

Overview

People who are affected by substance misuse are intoxicated by (or regularly consume and/or depend on) psychoactive substances. This leads to social, psychological, physical or legal problems. This includes problematic use of both legal and illegal drugs (including alcohol when used in combination with other substances). Tobacco is not included when referring to substance misuse.

In England, the percentage of children looked after who were identified as having a substance misuse problem has remained the same since 2016. Of the 52,180 children looked after for at least 12 months (in the year ending 31 March 2018), 4% were identified as having a substance misuse problem. 46% of these received an intervention for their substance misuse problem, down slightly from 50% in 2016.³⁵ Substance misuse is slightly more common in males and is more common in older LAC. 4% of males were identified with a substance misuse problem compared to 3% of females. 10% of 16 to 17 year olds were identified with a substance misuse problem (in the year ending 31 March 2018), compared to 4% of 13 to 15 year olds.

Plymouth has an Alliance contract encompassing all commissioned services for homelessness and substance misuse and operates a whole system approach to people with complex needs. This cohort suffers from more ill health and chronic conditions than the general population and dental health is typically quite poor. The Alliance are providing a number of physical health screening interventions and there are plans to increase the numbers screened and the breadth of interventions available, this includes access to good oral health.

Local data

Alcohol and drug (illegal and prescribed) dependence are important issues for Plymouth. Dependence is commonly associated with mental health problems, homelessness and offending behaviour, and has negative impacts on families and children. In 2017, over 5,500 people in the city aged 18-64 were estimated to be dependent on drugs, and just over 10,000 were predicted to be alcohol dependent.³⁶ Alcohol and drug misuse has important consequences and costs for the city in terms of individual health and wellbeing, family breakdown, social cohesion and crime

and disorder.

Plymouth has a similar level of admission episodes for alcohol-related conditions than nationally (638 per 100,000 population, compared to 634) for 2017/18.

In Plymouth, the estimated prevalence of opiate and/or crack cocaine users was 13.8 (per 1,000 population aged 15-64 years) in 2016/17. This was above the England average (8.9).

The Plymouth survey of Health Visitor caseloads³⁷ showed 3.1% of families (of children aged under five years) live with a parent(s) that misuse drugs (2018). On an electoral ward level this ranged from 0.7% in Plympton Chaddlewood to 6.9% in St. Peter & the Waterfront. In terms of alcohol, 2.2% of families (of children aged under five years) live with a parent(s) that misuses alcohol (2018). This ranged from 0.5% in Compton and Peverell wards to 3.8% in St. Budeaux. Anecdotal evidence from the Public Health Team, Plymouth City Council, suggests that these figures may underreport the true position and so the data should be interpreted with caution.

A total of 4,365 Plymouth secondary schools pupils anonymously completed the health-related behaviour survey (2018). Results showed 21% of pupils aged 12-13 (Year 8) and 14-15 years (Year 10) had an alcoholic drink in the last seven days. This ranged from 11% of Year 8 girls to 30% of Year 10 boys. 9% of pupils responded that they got drunk on at least one day in the last seven days; 3% said they did so on more than one day. 13% of pupils responded that they have experienced sickness (hangover/headache, feeling or being sick) as a result of their drinking in the last 12 months.

In terms of drugs, 37% of Plymouth secondary schools pupils anonymously responded to the health-related behaviour survey (2018) stating they are 'fairly sure' or 'certain' that they know someone who they think takes illegal drugs. This ranged from 21% of Year 8 girls to 55% of Year 10 girls. 19% of pupils have been concerned about the drug use of a friend and 10% of all pupils reported they have taken medicines prescribed for someone else. 9% of pupils responded that they have taken illegal drugs at some point; 4% said they took them during the month before the survey. 2% of pupils responded that they have taken more than one type of illegal drug on the same occasion and 1% of all pupils responded that they have been concerned about their own drug use.

Oral health impact

There is limited local data on the prevalence of oral disease in drug misusers. Available literature demonstrates how, in comparison with the general population, drug misusers tend to have far poorer oral health.³⁸ Research suggests that this could be due to a range of factors including poverty; self-neglect and poor oral hygiene; and a decay-promoting diet (including the intake of methadone syrup).^{39, 40} Drug misusers also display lower utilisation of dental services.⁴¹ Improving dental care for this vulnerable group presents various challenges, given the high rates of dental disease and poor access to dental services.

There is an increased level of dental decay, tooth erosion, gum disease and oral cancer in people who misuse alcohol. When alcohol is used in conjunction with tobacco, the risk of developing oral cancer increases by a factor of 38.^{42,43} Socio-economic differences in drinking patterns are complex as unemployed people, as well as those on high incomes are most likely to drink above recommended levels and also to binge drink. The rate of alcohol-related mortality in England and Wales has increased significantly in recent years, and is substantially greater for men aged 25-49 years from more disadvantaged socio-economic groups.

The Healthy Mouths research study into the oral health of people experiencing homelessness showed 33% have experienced drug misuse issues, and 48% were current or past drug users.²⁵ Using drugs, particularly when smoked, can have a damaging effect on oral health, for example cannabis use increases the risk of decay and gum disease.⁴⁴ Alcohol and drugs were commonly used in an attempt to manage oral health issues. 27% of participants used alcohol to help them deal with dental pain and 28% have used drugs. This may be contributing to continued drug and alcohol misuse.

4.6 People who smoke

Overview

Tobacco use is a risk factor in most forms of oral disease. All forms of tobacco increase the risk of oral cancer by a factor of three, and there is evidence that exposure to second hand smoke also increases the risk. Tobacco also contributes to poor wound healing in the mouth and increases the severity of gum (periodontal) disease which leads to premature tooth loss.

Inequalities exist in the prevalence of smoking with a higher rate for those living in the most deprived areas compared to the rest of the population. There are also differences in smoking prevalence by occupation with a higher rate for routine and manual workers.

The Healthy Mouths research study into the oral health of people experiencing homelessness showed 78% were current smokers.²⁵ This was significantly higher than the general population where 17% were tobacco smokers. Of those who reported that they were not current smokers, over half had been smokers in the past.

Tackling tobacco in Plymouth

Tobacco use is a major cause of preventable illness and premature death in Plymouth. As with other cities, Plymouth experiences stark inequalities with rates in different neighbourhoods varying from around 6% to 35%. Plymouth's approach to tackling complex social health issues like tobacco is to work in various ways broadly aimed at reducing the demand and controlling the supply. This involves enabling people to cut down and stop smoking through provision of behavioural and pharmacological stop smoking support and the promotion of switching from smoking to vaping, promotion of campaigns such as Stoptober and disrupting the supply of cheap and illegal tobacco through enforcement of Trading Standards laws.

Local data

Smoking prevalence in Plymouth adults was estimated to be 19.4% (2017/18) which was higher than the England average (17.2%). Over the last five years Plymouth's smoking prevalence has dropped from 21.6%. The decrease over this time period is similar to England.

In Plymouth, 17.0% of people aged 18+ were self-reported smokers (Annual Population Survey, 2018). This compares to 14.4% for England and 13.9% for the South West.

Overall 18.3% of all Plymouth GP patient referrals to Derriford Hospital were smokers (during the three-year period 2013/14 to 2015/16). This ranged from 9.3% in Plympton St Mary to 26.6% in Devonport. On a deprivation group basis this ranged from 10.9% in the least deprived group to 26.7% in the most deprived group.⁴⁵

A total of 4,365 Plymouth secondary school pupils anonymously completed the health-related behaviour survey (2018). Results showed 21% of secondary pupils (aged 12-13, Year 8) and 14-15 years, Year 10) reported that they have smoked in the past or smoke now. This ranged from 12% of Year 8 girls and Year 8 boys to 35% of Year 10 girls. 5% of pupils responded that they usually smoke at least one cigarette a week and 7% of pupils responded that they have smoked in the last seven days. 37% of 939 smokers responded that they want to give up smoking; 20% said that they don't want to give it up. 13% of smokers responded that they would like help to give up smoking; 54% said they don't want any help. 48% of smokers think they will succeed in giving up smoking; 18% were not sure if they will. 35% of pupils reported at least one person smokes on most days indoors in their home and 20% reported that more than one person does.

The survey of Plymouth Health Visitor caseloads³⁷ showed that 2,151 (19.7%) of families (with children aged under five years) have one or more parents that smoke (2018). On an electoral ward basis this ranged from 6.1% in Plympton St. Mary to 33.8% in St. Peter & the Waterfront. On a deprivation group basis this ranged from 157 (6.9%) in the least deprived group to 864 (32.2%) in the most deprived group. This equates to more than a four-fold variation.

Oral health impact

Smoking is linked to a wide variety of oral health problems including staining of teeth, bad breath, impaired taste, tartar (hardened dental plaque), failure of dental implants, oral cancer, oral mucosal disease, tooth decay and slower wound healing.²⁵

The prevalence rates and severity of periodontal disease increases in relation to the number of cigarettes consumed and years of smoking^{46,47,48} and stopping smoking leads to a lower risk of periodontal disease.⁴⁹ Studies have shown that smoking may account for more than half of the cases of periodontitis among adults.⁴⁸

Rates of smoking in Plymouth are higher among specific groups of people such as those who live in more deprived areas, those in routine and manual occupations, and those who have never worked. Smoking is an important cause of ill health and a reason for the differences in life

expectancy within the city.

4.7 Asylum seekers and refugees

Overview

Asylum seekers and refugees are at risk of experiencing oral health problems and complex issues. Health problems may be experienced as a result of poor living conditions, lack of health care, persecution or torture in their country of origin. Psychological and mental health needs including depression, anxiety, panic attacks and agoraphobia may be experienced as a consequence of previous life events as well as conditions faced after arriving in the UK, such as isolation, poverty, hostility and racism. Furthermore refugees and asylum seekers may experience difficulties in expressing health needs and accessing and navigating unfamiliar services and support.

It is reported that asylum seekers and refugees experience poor oral health due to a complex range of factors including underdeveloped health care systems in their country of origin, difficult migration trajectories and poor oral health behaviours and practices.⁵⁰

There is a growing body of evidence highlighting the difficulties that asylum seekers and refugees face in accessing health care services in host countries. These include a lack of understanding of health care structures and functions, difficulty in meeting transport costs, a perception of discrimination relating to race and immigration status and language barriers.⁵¹

Local data

Plymouth has been a designated asylum dispersal area since 2000. Additionally between November 2014 and August 2016 the city participated in the Afghan Locally Employed Staff Relocation Scheme and is currently receiving refugees through the Syrian Vulnerable Person Resettlement Scheme. Plymouth also participates in the Vulnerable Family Refugee Resettlement Scheme. The commitment by Plymouth is to receive 200 such people by March 2020; 150 people through the Syrian Vulnerable Persons Resettlement Scheme and 50 people through the Vulnerable Children's Scheme. So far, 174 people have been resettled. Plymouth is participating in the first year of the government-backed Global Refugee Resettlement Scheme. The new scheme is an amalgamation of the above two schemes and broadens geographical focus beyond the Middle East and North Africa region to allow the UK to be better placed to swiftly respond to international crises. In all, the scheme will see 5,000 refugees resettled nationally. Plymouth is officially designated as a City of Sanctuary and the local authority's involvement in the scheme reflects this continuing commitment.

In September 2019 there were 347 asylum seekers in Plymouth. In terms of refugees, we do not know how many people stay in the city once they receive a positive decision on their right to remain, as resident's status is not tracked. Currently there are approximately 10-15 asylum seekers that are granted right to remain every month, however we do not know from this how many of these people stay and settle in Plymouth or move elsewhere in the UK.

In Plymouth, there were 11 children looked after by the local authority (2018), who were unaccompanied asylum-seeking children (UASC). This compares to eight in 2017 and seven in 2016.

People from refugee and asylum seeker communities are experiencing a number of challenges in accessing dental health care services in the city. In Plymouth, an Asylum Seekers and Refugee (ASR) Health Screening Programme has been operational since 2000, and is currently delivered by Livewell South West and funded through the Clinical Commissioning Group (CCG). It provides health screening for all Home Office notified arrivals. This includes a physical examination, full health and wellbeing screening, mental health assessment, health promotion screening, immunisation history, chest x-ray where indicated and referral to primary care for all individuals not registered with a GP. People don't currently receive an oral health assessment as part of this programme. The Health Screening Programme is not commissioned to provide ongoing or extended support to access and engage with health care services.

Dental health issues were reported by 30.1% of the people seen by the ASR Health Screening Programme between April 2016 and March 2019.

Table 3: ASR Health Screening Programme data, April 2016 to March 2019

	Apr 2016 - Mar 17	Apr 2017 - Mar 18	Apr 2018 - Mar 19
Total no. of asylum seekers seen	188	192	237
No. under 18 years	37	47	48
No. over 18 years	151	147	186
No. with dental problems	52	42	92

Between April 2016 and March 2017, dental health problems were reported by 27.7% of individuals seen by the ASR Health Screening Programme. This increased to 38.8% (April 2018 to March 2019).

The following issues have been identified in consultation with staff from the ASR Health Screening Programme, indicating that asylum seekers and refugees encounter a number of challenges around accessing dental care:

- An HC2 certificate entitles people to full help with health costs and is necessary to access free NHS dental treatment. The process for obtaining this is complex and lengthy. This can delay access to dental and other health care.
- Where dental health care needs are identified as part of health screening people are referred to the Dental Access Centre (DAC). To secure an appointment at the DAC it is necessary to telephone the service between 8.30AM and 9.00AM. It is often necessary to ring on a number of consecutive days. Many asylum seekers and refugees do not have access to a telephone and do not have adequate spoken English to communicate by telephone.
- Most asylum seekers and refugees accessing the DAC will require support to find the facility and to complete the required paperwork. This is often provided by the ASR Health Screening staff or the Red Cross support services.

- Many people accessing DAC services will require interpretation and translation services. This can take some time to arrange.
- The DAC provides dental treatment to relieve dental pain. Many people require long-term treatment and care and are advised to join the NHS dental waiting list. This can involve a considerable wait, often when the person is experiencing ongoing pain and discomfort. People may not understand this process and may not be able to read and comprehend written correspondence relating to further registration and appointments. They may not receive postal mail due to changing address whilst on the waiting list. Details about the dental waiting list are discussed in section nine.
- To-date staff from the ASR Health Screening Programme have assisted people (often outside contracted activity and normal working hours) to access dental health care. This includes securing appointments at the DAC, providing interpretation and translation, and identifying potential dental practices/dentists for ongoing treatment and care.
- A local dental practice in the city has provided dental care to a number of people seen by the ASR Programme. Staff from the ASR Programme maintain regular contact with the dental practice to access further treatment places when available. Staff have also made links with other dental practices in Plymouth in efforts to secure further treatment places.

Oral health impact

Dental problems are commonly reported amongst refugees and asylum seekers. Oral health is often neglected as a result of the challenging circumstances people have experienced. Health services have a duty to serve the needs of the local population, including asylum seekers (Faculty of Public Health, 2008). However, accessing dental care can be a challenge due to language barriers and a lack of understanding over entitlements and charges for NHS dental care.

When people are resettled in industrialised countries, evidence shows that they have a greater burden of oral disease than the most deprived population groups in their new communities and their oral health needs are mainly unmet. Asylum seekers and refugees usually rate their own oral health as being poor.⁵⁰

4.8 Gypsy, Roma and Travelling communities

Overview

The term 'traveller' or 'gypsy' refers to 'persons who wander or travel for the purpose of making or seeking their livelihood (not persons who move from place to place without any connection between their movements and their means of livelihood)' and includes those who live permanently or temporarily in settled housing. There are many different socio-cultural groups within this broad definition, including Romany Gypsies, Irish Travellers, Scottish Travellers and Eastern European Roma Communities.

Evidence from studies reveals that social exclusion and marginalisation from mainstream society have led some Gypsy, Roma or Travelling families to experience poor health when compared to other minority ethnic groups in the UK.^{52,53,54}

Barriers to accessing healthcare do include mobile lifestyles,⁵⁵ however this does not account for poor health in settled Travellers. Cultural barriers include normalisation of ill health and pride in self-reliance.⁵⁶

Providers of healthcare have traditionally struggled to engage with Traveller Communities, as there exists a fundamental mistrust of health services and healthcare personnel by the communities.⁵⁷ Decreased trust leads to reduced utilisation of services, poor health behaviours and reduced quality of care.⁵⁸ There can be strong trans-generational beliefs within the community and fear and experiences of previous generations can still resonate and inhibit current patients from taking advantage of treatments offered to them. It is particularly difficult to establish a substantive professional relationship with patients of the community when they are seen solely during urgent appointments. This is further hindered by the significant issues of dental phobia and pain. Limited health knowledge can mean the Traveller Community see little benefit in primary prevention or treating disease which is not causing pain.

Young people from the Travelling Community leave school at an average age of 12.6 years, in comparison to the UK average of 16.4 years.⁵⁹ Lower levels of education mean that simple tasks such as telling the time for attending appointments, reading health instructions for medications or signing consent forms can be difficult, and this is further complicated by the fact that many parents within the community will not be able to help. It is estimated that up to 90% of people in the community are illiterate.⁶⁰

Local data

The total number of Traveller caravans in England in January 2019 was 22,662. This compares to 22,946 (January 2018). In Plymouth, there were 40 (January 2019) and 44 (January 2018).

In England, the number of Travelling Showpeople caravans counted in January 2019 was 2,592. This compares to 2,859 (January 2018). This remains lower than the 3,159 caravans counted in January 2015 (the highest total count recorded). In Plymouth, there were 22 Travelling Showpeople caravans (January 2019) compared to 20 (January 2018) and 30 (January 2015).

The 2011 Census showed there were 54,895 Gypsy or Irish Travellers in England. In Plymouth, there were 153. On an electoral ward basis, this ranged from one in Plymstock Radford to 20 in Sutton and Mount Gould.

In England, the School Census (January 2019) showed there were 27,632 Gypsy/Roma pupils and 6,392 Traveller of Irish Heritage pupils. In Plymouth, there were 26 Gypsy/Roma pupils and 13 Traveller of Irish Heritage pupils.

Oral health impact

There is no local data on the prevalence of oral disease in Gypsy, Roma and Travelling communities, therefore this is an area for development.

There is limited data from other areas on the prevalence of oral disease in Gypsy, Roma and Travelling communities. However, as this is a socially deprived group, it seems reasonable to assume that disease levels will be high. A small study undertaken in East Hertfordshire confirmed high levels of unmet need, low dental registration and very little use of preventive services, only attending when in pain.⁶¹ Control of their travelling was the major factor determining access to education and health services.

These vulnerable communities are likely to have poor health in comparison to the national average. They may struggle to access urgent and routine dental care because of social, educational and cultural barriers.

4.9 Adults with long-term health conditions

Overview

A long-term condition is any medical condition that cannot currently be cured, but can be managed with the use of medication and/or other therapies. Common long-term conditions include diabetes, chronic obstructive pulmonary disease (COPD), chronic heart failure and osteoporosis.

This section focuses on the oral health of adults with long-term health problems, including epilepsy and diabetes. Section 4.10 looks at adults with disabilities and 4.12 looks at dementia.

Currently approximately 70% of the health spend in England is on 30% of the population who have long-term conditions. It is estimated that over 15 million children, adults and older people in England live with at least one long-term condition. This figure is set to increase to around 18 million by 2025. People with long-term conditions are high users of health services as they account for 55% of all GP appointments, 68% of all hospital and A&E appointments and 77% of all inpatient bed days.⁶²

A number of people with long-term conditions have medical conditions which limit their ability to maintain good oral hygiene, wear dentures; and complicate the provision of dental care. These include those suffering from bleeding disorders such as haemophilia, patients with cardiovascular disease and individuals who are immune compromised.⁶³ For these groups of patients, the prevention of oral diseases will reduce the need for complex oral healthcare and help to safeguard general health.

Around 90% of people living with diabetes will have type 2 diabetes, and around 10% will have type 1.⁶⁴ Type 2 diabetes is often influenced by lifestyle and initial treatment frequently focusses on eating well and moving more.

For the average person living with epilepsy, their oral hygiene is as good as in the general population. However, epilepsy often means living with recurrent dental injuries (broken or lost teeth) or oral health side effects from medication, such as gum disease. The unpredictable nature of seizures combined with side effects from some medications can add to the long-term impact of epilepsy. Issues range from experiencing seizures in the dental chair to the stigma associated with dental injuries. Research has shown epileptic seizures to be the most common medical incident in the dental surgery, as stress is often a trigger for seizures. Dental injuries rate as the third most common non-fatal seizure related injury after head injuries and burns and scalds. Studies into dental care also showed injuries to their front teeth attributed to the traditional practice of forcing spoons and other hard objects into the mouth during seizures. For people with epilepsy many other problems persist such as dry mouth (xerostomia), broken teeth due to jaw clenching, plus sores on the tongue and inside of the mouth caused by biting during a seizure.⁶⁵

Local data

Overall life expectancy in Plymouth is 80.9 years (2014-16). For males it is 78.6 years and 82.8 years for females (2013-15). In comparison, the proportion of life spent with 'disability free' health for males in Plymouth was 76.5% (compared to the England average of 79.3%). For females in Plymouth this is 70.9%, compared to the England average of 75.4%. Disability-free life expectancy in Plymouth is also significantly lower than the England average for both males and females. Disability-free life expectancy in males in Plymouth is 2.9 years lower and 3.9 years lower in females than the England average.⁶⁶

The prevalence of diabetes in Plymouth was 6.5% in 2016/17; a value lower than the England average (6.7%). Over the last eight years the prevalence in Plymouth has increased in line with England.⁶⁷

Oral health impact

There is a growing body of evidence to support a reciprocal relationship between poor general health and poor oral health. This includes a greater risk of developing tooth decay one year after being diagnosed with cognitive impairment.⁶⁸ There is a positive association between pneumonias and poor oral health⁶⁹ and there are associations between coronary heart disease, stroke, peripheral vascular disease and oral health.⁷⁰ There is also a two-way relationship between diabetes and periodontal (gum) disease, meaning that having either condition can make a person more likely to experience the other condition and can make it more difficult to control the other condition through treatment.^{71,72} Therefore patients with diabetes and gum disease (periodontitis) would benefit from regular oral care.⁷³ Given that periodontal diseases constitute a major risk factor in the development of type 2 diabetes (the prevalence of which is increasing), consideration for the economic impact of these conditions should also be considered.

4.10 Adults with disabilities

Overview

This section looks at the oral health of adults with disabilities, including learning disabilities. For people with profound and multiple learning disabilities, good oral health care is very important to the health, dignity, self-esteem, social integration and quality of life. People with multiple learning disabilities experience more problems with their oral health than the general population for a number of reasons. These may include oral and facial developmental abnormalities, various medical conditions, the effects of medication and the consequences of challenging behaviour. Poor oral hygiene further exacerbates these inherent problems.

People with a learning disability have a right to equal standards of health and care as the general population. However, there is evidence that they experience poorer general and oral health, have unmet health needs and have a lower uptake of screening services.^{74,75,76} The impact of oral conditions on an individual's quality of life can be profound.⁷⁷ Poor oral health may add an additional burden whereas good oral health has holistic benefits in that it can improve general health, dignity, self-esteem, social integration and quality of life.⁷⁸ Furthermore, those people with oral and facial developmental abnormalities may have additional needs requiring special care.^{79, 80}

Local data

In Plymouth, 0.6% of registered patients are diagnosed with learning disabilities (2017/18). This is higher than the England figure (0.5%).

In Plymouth, the rate of adults (age 18 and above) with a learning disability getting long-term support from the local authority is 4.4 (per 1,000 population). This is higher than for England (3.4 (per 1,000 population) in 2017/18).

According to the 2011 Census, 10.0% of Plymouth residents reported having a long-term health problem or disability that limits their day-to-day activities a lot and has lasted, or is expected to last, at least 12 months (including problems related to old age). The national value was 8.3%.

The 2011 Census revealed 46.0% of Plymouth residents reported their general health as 'very good'; this increased to 79.5% when also including those who reported their health as 'good'. In England, 81.4% of people reported their general health as either 'very good' or 'good'. Plymouth's combined value is therefore nearly two percentage points lower than the national average.

In 2018, the Plymouth City Survey of 2,296 people (from a random sample of over 8,000 households and a response rate of 28%) showed a total of 13.1% (299) respondents reported that their day-to-day activities were 'limited a lot' because of a health problem or disability (which has lasted, or is expected to last at least 12 months). A further 18.7% (425) people reported their activities were 'limited a little'.

At present there is no national or local data on the oral health needs of adults with learning disabilities (as data about learning disabilities is not reported in the national adult dental health survey). Therefore this is an area for development.

Oral health impact

Individuals with learning disabilities generally experience more oral disease and have fewer teeth than the general population. Physical access to dental services is a major barrier for a large number of people with learning disabilities.⁸¹ There may also be significant costs in terms of physical effort, emotional effort and financial outlay to gain access to oral care.⁷⁹

Many people with a learning disability are often in lower socioeconomic groups.⁸² People with intellectual disabilities have been found to have poorer oral hygiene, more gum disease and more untreated tooth decay than the general population.⁸³ They also have greater unmet dental needs⁸⁴ as they have more difficulty in accessing dental care.⁸⁵ Furthermore, when oral diseases are treated they are more likely to have resulted in extractions than fillings, crowns and bridges, particularly for people living in residential care.⁸⁶

An increased risk of oral health problems is evident among people with learning disabilities for a number of reasons. Some congenital conditions and syndromes may adversely affect dental development and compromise oral health. When people's ability to care for themselves is reduced, their diet and exposure to fluoride may not be under their personal control.

4.1 | Older people

Overview

The population is ageing. There are currently 9.7 million people aged 65+ in the UK. This number is projected to increase by nearly 30% by 2020, to 12.5 million. The number of people aged 85+ has doubled in the past decade and the percentage of people dying before 65 has remained constant for the past 20 years. An ageing population is putting pressure on health and care services. Plymouth has the same proportion of those aged 75+ as the national figure of 8.1%.

A number of vulnerable older people have medical conditions which limit their ability to maintain good oral hygiene, wear dentures and complicate the provision of dental care. As people age, they are likely to live with a range of complex co-existing medical conditions, dependent on multiple factors, which may predispose them to loss of independence, disability and frailty. The reciprocal relationship between oral health and independence shows that people are able to stay independent for longer, or recover from episodes of crisis or frailty, if they are able to eat and drink properly and take part fully in life.⁸⁷

Many older patients suffer from chronic long-term conditions such as diabetes and Alzheimer's disease which increase the risk of developing periodontal diseases,⁸⁸ leading to tooth loss and loss of oral function. Reduced manual dexterity due to conditions such as rheumatoid arthritis, may limit the ability of patients to adequately control oral hygiene, also increasing this risk.⁸⁹ A range of medications decrease salivary flow, causing an uncomfortable, dry mouth, which makes denture-wearing more difficult and increases the risk of developing tooth decay and periodontal diseases. Medications such as calcium channel blocking agents for cardiovascular problems are also linked to enlargement of gingival tissues,⁹⁰ making it more difficult to limit the build-up of

plaque.

It is estimated there are more than 400,000 adults living in UK care homes and the majority of those 75+ are suffering from tooth decay, compared to 40% of people 75+ who don't live in residential care.⁹¹

Cancer incidence increases with age and one fifth of oral cancer cases diagnosed in the UK occur in people aged 75+. This proportion is lower in males (15%) than females (29%). The 50-74 age group contributes around seven in 10 male oral cancer cases, and around six in 10 female cases. Almost three-quarters (74%) of oral cancer deaths in the UK in 2012 were in people aged 60+.⁹²

Local data

There are 98 care homes in Plymouth. Of these, 38 are older person's residential homes (with 1,186 registered beds), 19 are older person's nursing homes (with 1,031 registered beds), 35 are learning disability specialist homes (with 270 registered beds) and six are mental health specialist homes (with 93 registered beds).

There is no Plymouth data available from the 2015/16 oral health survey of older people (aged 65+) who live in their own homes in the community.

In Plymouth, the average health status score of adults (aged 65+) was 0.72, which is similar to the England average of 0.76 (GP Patient Survey) in 2016-17. The trend in health-related quality for life for older people in Plymouth follows a similar trend to England.

In 2018, the Plymouth City Survey of 2,296 people (from a random sample of over 8,000 households and a response rate of 28%) showed a total of 15.0% of respondents were aged 65-74 years and 13.0% aged 75+. Of these respondents, 58.2% and 47.9% respectively, reported that they were in 'good/very good health.' This compares to 12.6% of 65-74 year olds and 14.6% aged 75+ reporting 'bad/very bad health.'

A total of 20.3% of respondents to the Plymouth City Survey (2018) aged 65-74, reported their day-to-day activities were 'limited a lot' because of a health problem or disability (which has lasted, or is expected to last at least 12 months). A further 26.7% reported they were 'limited a little.' For residents aged 75+, 31.2% reported their day-to-day activities were 'limited a lot' because of a health problem or disability. A further 39.9% reported they were 'limited a little.'

At 5.3%, Plymouth is higher than the England average (5.2%) for older people living alone: percentage of households occupied by a single person aged 65+ (Census 2011). Many older people live at home and rely on support from carers for their meals and daily care. Often oral health becomes neglected and dental care can prove challenging as those who are housebound are reliant on domiciliary dental care.

Older people in residential and nursing care generally have poorer oral health than the general population. Though all residents should have an oral health assessment when they move into a

care home or hospital,⁹³ local data is not currently available to determine if oral health assessments are being undertaken and whether residents are accessing regular dental care. Therefore this is an area for development.

Oral health impact

The three main oral diseases are tooth decay (dental caries), gum (periodontal) disease and oral cancer. Whereas tooth decay tends to be a problem in the general population, gum disease is more prevalent in the older population. The burden of oral disease, and its impact on the general health of older people is considerable, particularly in terms of tooth loss, tooth decay, periodontal diseases, dry mouth and oral cancer.

Poor oral health has a disproportionate impact on the quality of lives of older people, compounded by socioeconomic and psychological factors. The resulting pain, discomfort, difficulties in eating, and sleepless nights can lead to increased agitation, anxiety, confusion, malnutrition and dehydration. Poor oral health can reduce self-esteem, adding to the problems of loneliness and isolation in a population already on the margins of society.

A group known as the ‘heavy metal generation’ (aged between 50 and 85 years) who have experienced a lifetime of high levels of disease, which has been treated by fillings, and other complex restorations such as crowns, will have challenging needs as they age.⁹⁴ This has important service implications for the future, related to the continued maintenance and advanced restorative care amongst a group of adults who are likely to be increasingly frail, and with perhaps complex medical history and difficulties accessing dental services.

With age many adults experience receding gums which exposes the tooth root surfaces. These exposed roots are vulnerable to decay which can be challenging to treat.⁹⁵ Added to this is the effect of many medicines often prescribed for older adults, which can reduce the protective effects of saliva in the mouth. Consequently, adults with previously healthy teeth may experience a gradual increase in decay. This situation adds to the dental care challenge posed by an ageing population who are retaining natural teeth. In many cases the results of past complex treatment may become increasingly difficult to maintain.⁹⁵

Evidence shows that poor oral health in older people can lead to pain and discomfort,^{96,97} which can lead to mood and behaviour changes, particularly in people who cannot communicate their experience.^{98,99} Poor oral health can lead to speech problems and reduced ability to smile and communicate freely,^{100,101} problems chewing and swallowing which limit food choices and can lead to impaired nutritional status,^{102,103} and therefore a poor quality of life.^{97,100,101,104,105} Poor oral health can also reduce self-confidence,^{96,103,104} and increase social isolation^{102,106} by impairing wellbeing and mood,^{103,104} which can bring about poor general health and premature mortality.²²⁻²⁵

Systemic problems can also have an effect on oral health, for example, many older people suffer from progressive neurocognitive impairing illnesses like Parkinson’s disease, which can cause difficulties in controlling and retaining dentures.

There are problems around the inconsistent delivery of oral health care by care home providers.¹⁰⁷ Not all care homes include oral health care as part of their care plans, and there is a lack of staff training in the provision of personal oral care. Older people may become more vulnerable if they move into a care home or have a period of time in hospital, as they will be reliant on staff to help them maintain their oral health.

Dental disease and its consequences can impose a significant financial burden to an individual and society. In the UK, the costs of maintaining teeth, especially for adults in later life, who frequently have heavily restored teeth, appears to be rising.¹⁰⁸ Alongside this, fluctuations in socioeconomic circumstances may have a significant impact on oral health, where patients may delay consultation and treatment during economic downturns. This burden, and the subsequent costs will increase, as more and more people retain their teeth later and later into life.

4.12 People living with dementia

Overview

Access to good dental services is important to both the health and quality of life of people with dementia. The Alzheimer's Society estimates 80% of care home residents have dementia or severe memory problems.¹⁰⁹ Poor dental health can lead to other health complications, as well as being distressing for residents, which can lead to pain-related behaviours that staff may struggle to respond to. Both pain and infection can worsen the confusion associated with dementia. Arranging dental care, especially more complex procedures for people with dementia in care homes, can be challenging.

Local data

In England, there are 446,548 recorded dementia diagnoses (all ages). This is a recorded prevalence of 0.8% (2017/18). In Plymouth, there are 1,928 (0.7%) people with a dementia diagnosis (all ages, recorded on GP practice registers as a proportion of patients registered).

For people aged 65+ the recorded prevalence of dementia is 4.3% in England (Dec 2018). In Plymouth, the rate is 3.5% (over 65+, recorded on GP practice registers as a proportion of patients registered).

In England, the estimated dementia diagnosis rate of people aged 65+ is 68.7% (2019). This has increased from 67.5% in 2018. In Plymouth, the rate has decreased from 57.3% in 2018 to 56.3% (2019).

In Plymouth, the rate of newly diagnosed dementia registrations is 8.2 (per 1,000 patients registered with GP practice) in 2017/18. This is lower than the England average (11.1). This indicator is a proxy for an incidence rate and should therefore be considered as experimental. Dementia patients, by nature of their age, are a fluid population.

Oral health impact

Maintaining oral health for people with dementia can be challenging. As dementia progresses, a person living with dementia may lose the ability to clean their teeth, stop understanding that their teeth need to be kept clean, or lose interest in doing so. Carers may need to take over this task. There may come a time when the person living with dementia is unable to say that they are experiencing pain or discomfort in their mouth or teeth. They will need to rely on other people to notice and interpret their behaviour and to arrange a visit to the dentist if necessary. People living with dementia are also likely to have increased problems with bruxism (grinding teeth), chewing and swallowing and denture wearing.¹¹⁰

5. Oral health in Plymouth

5.1 Background

This section describes the oral health of three, five and twelve year old children, children attending special schools and adults surveyed as part of the Public Health England (PHE) National Dental Epidemiology Programme (NDEP). We also look at the oral health behaviours of secondary school pupils and oral cancer incidence in the city. It is more difficult to obtain consent from parents of children from less affluent families (who are also at higher risk of dental caries). As a consequence, surveys based on positive consent may underestimate disease levels in the population.

PHE coordinates the NDEP, which surveys the oral health of children and some groups of adults on an annual basis as part of a rolling programme. These surveys provide data which is reported at local authority level. Every ten years, the Office for National Statistics (ONS) and a group of universities have conducted a national survey of the dental health of adults (from 1968 to 2009) and children (from 1973 to 2013). These surveys also gather information about people's perceptions of their oral health and their experience of dental care; however, they do not provide information at a local authority level.

5.2 Three year old children

Findings from PHE's 2013 NDEP survey of three year old children in England, showed 11.7% had experience of obvious dental decay (caries), having one or more teeth that were decayed to dentinal level extracted or filled because of caries. In Plymouth, the percentage of decay was 6.0%.

At age three most children have all 20 primary teeth. In England, the mean number of teeth of those children affected by decay (decayed, missing or filled teeth) was 3.08 teeth. Plymouth's figure was similar at 3.07.

Overall, 88.3% of three year olds in England (whose parents gave consent for participation in the survey) were free from visually obvious dental decay. This compares to 93.9% in Plymouth.

Survey data was collected that allowed for investigation into a specific type of caries called early childhood caries (ECC). This is an aggressive form of decay that affects upper incisors and can be rapid and extensive in attack. It is associated with long-term bottle use with sugar-sweetened drinks, especially when these are given overnight or for long periods of the day. Overall, the prevalence of ECC in England was 3.9% and 1.7% in Plymouth.

In Plymouth, like many areas, the sample size of the three year olds survey was small. Nationally, a total of 53,640 clinical examinations were included in the final analysis and 191 in Plymouth. This represented 8.1% of the population of this age cohort in England, and 6.4% in Plymouth.

This survey only applied to children attending state or privately funded nurseries, nursery classes

attached to schools and playgroups. It was not possible to include children who were not attending such sites and the possibility for bias from this is acknowledged, but could not be measured. Nationally, the actual number examined was also less than the drawn sample; loss of subjects occurred through failure of those with parental responsibility to provide consent, absence from the care setting on the day of examination, and unwillingness of the child to permit to examination. No national survey since 2013 has been undertaken for this age group.

The proportion of the three year old population who have decay experience is used as a proxy for prevalence. Caution is needed in the interpretation of this data due to very wide confidence intervals for this age group, and small sample sizes. Given this, and the limitations of how far those children examined represent the whole three year old population, restricts the validity and therefore the utility of the data. Caution is needed in their application to locality planning and prioritisation and evaluation of health improvement interventions.

5.3 Five year old children

PHE's 2017 NDEP survey of five year old children (who attended mainstream, state-funded schools in England) involved 134 out of 152 local authorities. From the drawn sample 58.9% of children were examined. In Plymouth, 88.1% of the sample was examined. The sample size of the five year old survey was higher than for three year olds.

Overall, 76.7% of five year old children in England (whose parents gave consent for participation in this survey) had no experience of obvious dental decay. This compares to 78.6% in Plymouth.

Five year old children have 20 primary teeth. Among the 23.3% of children in England with some experience of obvious decay (prevalence), the average number of teeth that were decayed, missing or filled was 3.4. This compares to 21.4% of children in Plymouth with some experience of obvious decay (prevalence) and 3.6 teeth on average were decayed, missing or filled.

The major component of the decayed, missing or filled teeth in this age group is obvious, untreated dental decay. On average, five year old children in England had 0.6 teeth with untreated decay into dentine and in Plymouth the figure was 0.5.

The proportion of children who had dental decay affecting one or more of their incisor (front) teeth was also surveyed. This type of decay is usually associated with long-term bottle use with sugar-sweetened drinks, especially when these are given overnight or for long periods during the day. Overall, the prevalence of incisor decay in England was 5.1% and 2.6% in Plymouth.

The 2009 NHS Plymouth survey of five year old children included data collected from 59 of the 69 state Infant and Primary schools in Plymouth. The data collected described the oral health status of 1,195 five year old children. The survey used positive consent and the participation rate was 39.6%. The proportion of children with some experience of decay was 29.1%. Within the 43 Plymouth neighbourhoods in 2009, there was considerable variation, from 6.7% in Elburton & Dunstone to 56% in Barne Barton. This represented an 8-fold difference.

Overall in 2009, children (with some experience of decay) living in the least deprived areas of the city had an average 2.9 teeth affected by decay, whereas children living in the most deprived areas had an average of 3.3 teeth affected by decay.

The care index is a measure used to describe the degree of treatment by filling as a proportion of overall decay experience. It can be used to assess the availability and uptake of dental treatment, and to some extent can be illustrative of the treatment decisions of dentists. Overall, the proportion of five year old children with decay receiving treatment for decay was 11%.

Calculations were made to take account of the number of five year olds who may have participated if positive consent was not required and the likelihood that those children who did not participate were more likely to have had tooth decay than those who did participate. These calculations showed that the actual proportion of five year olds with some experience of decay was around 33.7%, with an average of 3.5 teeth affected in these children, and 12.5% of the decay receiving treatment.

5.4 Twelve year old children

PHE's 2009 NDEP survey of 12 year old children provides a similar indicative picture of this age group. The survey provides information on the caries prevalence and severity of 12 year olds resident England, attending state schools. This survey recorded the oral health status of permanent (adult) teeth.

Nationally, a total of 89,442 clinical examinations were included in the final analysis and 260 in Plymouth. This represented 74.1% of the population of this age cohort in England, and 80.0% in Plymouth.

By the age of 12, children usually have between 20 and 28 permanent teeth. At a national level 33.4% of pupils were found to have experience of caries, having one or more permanent teeth which were decayed to dentinal level, extracted or filled because of caries. The prevalence of decay was higher in Plymouth (34.7%) than the national average.

The average number of decayed, missing (due to decay) and filled teeth among 12 year old children with decay experience was 2.32, in the former Plymouth PCT (Primary Care Trust) area. This was above the national average of 2.21.

The care index trends for 12 year olds in the former Plymouth PCT were 55.6%. This was above the national average (47.2%). The care index is the proportion of teeth with caries that have been filled. It gives an indication of the restorative care received by children with decay, by dentists. It is derived by taking the number of filled teeth and dividing by the total number of decayed, missing and filled teeth and converting to a percentage. In using this care index data, care should be taken in making assumptions about the extent or the quality of clinical care available. The higher the care index the more fillings have been undertaken.

5.5 Children attending special schools

Findings from PHE's 2014 national dental epidemiology survey of five year old children attending special schools showed, 22.5% of children in England had experience of obvious dental decay (caries), having one or more teeth that were decayed to dentinal level, extracted or filled because of caries.

For 12 year olds, findings from PHE's 2014 national dental epidemiology survey of children attending special schools in England showed 29.2% of children had experience of obvious dental decay (caries), having one or more teeth that were decayed to dentinal level, extracted or filled because of caries. In Plymouth, only two pupils received a plaque and sepsis assessment, therefore data is not available.

Overall, 22% of the five year old children in the survey of special schools in England (whose parents gave consent for their participation) had experienced dental decay. On average, these children had 3.90 primary teeth that were obviously decayed, missing or filled. The average number of decayed, missing or filled teeth in the whole sample was 0.88. In Plymouth, no children aged five years had a plaque and sepsis assessment.

Among the 12 year old children in special schools in England (whose parents gave consent for their participation in the survey), 29% had experienced dental decay. On average, these children had 2.37 permanent teeth that were obviously decayed, missing or filled. The average number of decayed, missing or filled teeth in the whole sample (including the 71% who were decay free) was 0.69.¹¹¹

5.6 Oral health behaviours of secondary school pupils

The Plymouth schools' health-related behaviour survey of mainstream secondary (Year 8 and 10) and special school pupils (Year 6 to Year 14) was carried out by the Schools Health Education Unit (SHEU) in 2018. 4,365 mainstream secondary school pupils and 197 special school pupils took part in the survey.

Brushing teeth twice a day is recommended to prevent or control gingivitis (gum inflammation) and periodontal (gum) disease. Brushing with a fluoride toothpaste is recommended to control dental decay.¹¹²

All secondary school pupils surveyed (2018) were asked 'How many times did you clean your teeth yesterday?' 2,304 (74.8%) of all Year 8 and 10 pupils living in Plymouth reported brushing their teeth 'twice' (2018). A further 211 (6.9%) pupils brushed their teeth 'three or more times' (2018). This compares with 523 (17.0%) of pupils brushing 'once'. A further 42 (1.4%) of pupils didn't brush their teeth at all.

All Plymouth special school pupils surveyed in 2018 were asked 'How many times do you usually clean your teeth each day.' 88 (45.6%) of all pupils revealed they brushed their teeth 'twice a day'

and 72 (37.3%) pupils 'once a day'. This compares with 33 (17.1%) of pupils brushing their teeth 'less than once a day.'

The National Institute for Health and Clinical Excellence (NICE) guideline recommends that children have an oral health check-up at least once a year, and more frequently if they are assessed as being at increased risk of oral health problems, which can develop rapidly in children.¹¹³

All secondary school pupils surveyed (2018) were asked 'How long ago did you last visit the dentist?' 733 (25.1%) of all mainstream Year 8 and 10 pupils living in Plymouth reported visiting the dentist in the 'past month.' A further 917 (29.8%) visited in the 'past three months.' This compares with 108 (3.5%) of pupils reporting visiting 'more than a year ago.' A further 538 (17.5%) of pupils 'couldn't remember' and 30 (1.0%) reported they have 'never been.'

The results of the Plymouth special schools' health-related behaviour survey (2018) showed that 131 (67.2%) of all pupils visited the dentist 'at least once a year.' This compares with 30 (15.4%) pupils that did not.

Eating foods which contain sugar, especially on a frequent basis, can lead to dental decay. It is recommended that children aged four to six years old consume no more than the equivalent of five sugar cubes a day, and people over 11 years old consume no more than the equivalent of seven sugar cubes a day (in their food). Processed and manufactured foods and drinks such as sweets, soft drinks, cakes, biscuits, pastries, jams and sugary breakfast cereals tend to contain the most sugars. It is recommended that people reduce the amount of processed and manufactured foods which they consume and that people drink plain water rather than fizzy drinks, fruit juice and squashes containing sugar.

The Plymouth secondary schools health-related behaviour survey (2018) revealed the products Year 8 and 10 pupils ate for breakfast. The results revealed 2.8% ate 'chocolate bars/sweets,' 2.8% 'cakes/pastries/biscuits/muffins,' 6.1% 'breakfast bars,' 34.4% 'cereal,' 20.7% 'toast/bread/bagels/croissants' and 3.9% 'yoghurt.'

All secondary school pupils were asked 'How much water did you drink yesterday?' Only counting plain water and not including tea, coffee, squash-type drinks or fizzy drinks. The results revealed 12.2% had 'nothing,' 30.6% had 'one or two cups,' 25.9% had 'three to five cups,' 19.8% had 'about a litre (six cups),' 7.9% had 'about two litres (12 cups)' and 3.7% had 'more than two litres.'

Tooth decay can be prevented or minimised by adherence to an appropriate diet, which includes ensuring that consumption of sugars represents no more than 5% of total dietary energy.¹¹⁴ The PHE report 'Sugar reduction: The evidence for action' (2015) notes: 'Consumption of sugar and sugar-sweetened drinks is particularly high in school-age children. It also tends to be highest among the most disadvantaged who also experience a higher prevalence of tooth decay and obesity and its health consequences.' Unfortunately, it is also the case that people who are poorer or more disadvantaged may face difficulty in adhering to recommended healthy eating approaches.¹¹⁵

5.7 Survey of adults

There is little information available on the oral health of adults in Plymouth at present. The Adult Dental Health Survey was carried out most recently in England in 2009; however, this survey does not gather information at local authority level.

A survey of the oral health of mildly dependent older people living in supported housing in England was carried out in 2016. However, the results for Plymouth are not available as there were fewer than 15 survey participants. The national findings showed:¹¹⁶

- 9% of participants reported having oral pain on the day of the examination
- 9% reported having discomfort when eating often or very often
- 27% had none of their own teeth
- 42% had a functional dentition (as they had 21 or more of their own teeth)
- 3% of participants were considered to be in urgent need for dental care
- 5% needed dental care provided in their home
- 59% were able to attend a general dental practice (GDP) with no restrictions
- 35% could only receive dental treatment in a downstairs surgery or one accessed by a lift
- 34% reported they have not seen a dentist within the last two years
- 7% reported they can't find an NHS dentist
- 13% said it's difficult to get to and from the dentist
- 7% reported they can't afford NHS charges

Poorer oral health tended to be found among participants who were older and those who reported an increased length of time since their 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 reduced cognitive recall and those with a lower level of education also tended to have worse oral health.¹¹⁶

5.8 Oral cancer

Oral cancer is one of the more serious oral conditions, comprising of a group of cancers including cancer of the lip, tongue, mouth and the airways. In the last 30 years, there has been a 30% increase in the incidence of oral cancer in England.¹¹⁷ The risk factors which contribute to oral cancer are tobacco, diet and nutrition, alcohol, sunlight, human papillomavirus (HPV) and immunosuppression. 91% of oral cancers in the UK are linked to lifestyle factors including smoking, alcohol and infections. Smoking is the main avoidable risk factor for oral cancer and is linked to 65% of oral cancer cases.⁹² Oral cancer is now being increasingly seen in young adults, and has been attributed to increasing rates of infection with HPV, reflecting changes in oral sexual behaviour.

In England, 65% of hospital admissions (2014/15) for oral cancer and 64% of deaths (2014) due to oral cancer, were attributed to smoking.¹¹⁸ Oral cancer registration is therefore a direct measure of smoking-related harm. Given the high proportion of these registrations that are due

to smoking, a reduction in the prevalence of smoking would reduce the incidence of oral cancer. *Towards a Smokefree Generation: A Tobacco Control Plan for England (2017)* states that tobacco use remains one of the most significant public health challenges and that smoking is the single biggest cause of inequalities in death rates between the richest and poorest in our communities.¹¹⁹

The age-standardised incidence rate for oral cancer in Plymouth (2015-17) is 19.9 per 100,000 population, which is significantly higher than the England rate (14.6) and regional rate (12.9). It is well established that oral cancer incidence is strongly associated with deprivation.

Nationally, oral cancer mortality rates have increased by 20% for males and 19% for females (between 2003-2005 and 2012-2014).¹²⁰ Five year survival rates are 56%. In Plymouth, the mortality rate from oral cancer is 6.4 per 100,000 population (2015-17). This compares to the England average of 4.6.

The risk among cigarette smokers is estimated to be 10 times that of non-smokers. More intense use of tobacco increases the risk, while ceasing to smoke for 10 years or more, reduces it to almost the same as that of non-smokers.¹²¹

Oral cancer generally carries a poor prognosis, and it is the most costly cancer to treat.¹²² Early diagnosis substantially increases survival rates of this type of cancer, boosting chances of survival from 50% to 90%.¹²³ Therefore regular visits to a dentist are crucial for screening for early signs of oral cancer and in highlighting mouth cancer risk factors.

As with dental decay and periodontal disease, there is a marked association between oral cancer and socioeconomic status. The risks of developing oral cancer are higher in those of low socioeconomic status, even after taking risk factors like tobacco use and alcohol use into account.^{124,125}

The Annual Population Survey (2018) shows Plymouth has a similar level of adult smokers to the England average (17.0% compared with 14.4%).

Given that HPV is associated with many oropharyngeal cancers and some mouth cancers, it is hoped that the HPV vaccination programme delivered to girls in Year 8, and primarily aimed at cervical cancer, will also protect against these. The level of immunisations in Plymouth is 86.6% (2017/18). This is similar to the public health outcomes target 86.9% and World Health Organisation (WHO) target (90.0%). The HPV vaccination programme will be available to Year 8 boys (in addition to girls) from September 2019.¹²⁶

6. Current oral health improvement programmes in Plymouth

Plymouth has a range of oral health improvement programmes, as well as dental services in primary care and secondary care settings, which are described in this section. Waiting lists and challenges around access to dental services are described in section nine and the activity taking place in these programmes and services are described in sections 10-12.

Oral health improvement programmes

There are a number of methods for reducing tooth decay and supporting vulnerable people with the aim of reducing oral health inequalities. These can be broken down into national and local campaigns.

National programmes/campaigns

Public Health England's document 'Delivering Better Oral Health: an evidence-based toolkit for prevention'¹¹² provides guidance to dental teams on oral health assessments, age-appropriate preventive advice, and the use of toothpaste with high concentrations of fluoride. The government's proposals to introduce a preventive care pathway approach to NHS dentistry will also support children and their parents to follow advice.¹²⁷ Both initiatives should encourage dentists to identify children at high caries risk, who can be recommended a fluoride mouth rinse, fissure sealant or fluoride varnish to strengthen enamel and make it resistant to decay.

Plymouth City Council's oral health improvement plans

In 2016, Plymouth City Council (PCC) agreed to the establishment of a Child Poverty Action plan (CPAP) for the three year period 2016-19. This three-year action plan had four areas of focus. One of these was oral health improvement (OHI) in children aged 0-16 years. To enable the OHI element of the CPAP to be taken forward, a Strategic Group was formed. This group is attended by the strategic oral health leads from a number of partner organisations in the city (i.e. Peninsula Dental Social Enterprise (PDSE), Livewell Southwest, Well Connected, and Plymouth City Council). A new CPAP has recently been developed by PCC for the three-year period 2019-22. As before, there are four areas of focus. One of these areas is health and one of the two priorities for this health component is to continue to deliver the OHI programme for children. In other words, oral health improvement remains a priority for Plymouth City Council's CPAP.

There are a number of OHI initiatives currently being delivered in Plymouth which support the CPAP. These include:

- **Fluoride varnish scheme**
Healthy Smiles for Plymouth is a preventative project currently operating in 24 primary schools in the city. It is delivered by the Livewell Southwest's Community Dental service.

Fluoride varnish application is offered to children in Reception and Year 1 and applied by specially trained Dental Health Educator Nurses twice each academic year. The children also receive a free goody bag containing a toothbrush, toothpaste and information on oral health as well as how to find a dentist. Alongside the fluoride varnish application an oral health prevention programme is delivered to the children in Reception, Year 1, Year 3 and Year 6 as well as to the parents of the children having the Fluoride Varnish applied by the Dental Health Educators. A total of 2,095 children were offered fluoride varnish applications and 1,287 applications were given (2018/19).

- **Supervised tooth brushing scheme (brushing clubs)**

This involves the delivery of training and support to early year's settings (schools and nurseries) to establish daily supervised toothbrushing sessions and routine. The settings are also provided with resources to support the programme (for example toothbrushes, fluoride toothpaste and two-minute timers). From September 2019, this scheme has been commissioned by NHS England to roll out across the most deprived 50% of areas of Devon. Many of the participating early year's settings are located in Plymouth. Well Connected (an oral health improvement charity) provides this scheme in the Plymouth area, in conjunction with the PDSE.

- **Dental Check by One**

Dental Check by One is a national campaign launched in 2017 by the British Society of Paediatric Dentistry (BSPD), in partnership with the Office of the Chief Dental Officer for England. The aim is to ensure all children see a dentist and their parents receive preventive advice by their first birthday. Due to the challenges in access to NHS dentistry in the South West, this campaign has been developed into a multi-stranded oral health promotion initiative, embedded into the Healthy Child Programme, called First Dental Steps. This will involve maximising the role of health and social care professionals involved in early year's care, in improving oral health. The initiative is being piloted across six sites including Plymouth. Health Visitors will be trained as 'Oral Health Champions,' enhancing their ability and confidence in providing families with evidence-based oral health advice on when to attend the dentist, diet, feeding regimes, oral hygiene practices and signposting to local dental services. In addition, they will distribute toothbrushing packs to vulnerable families who receive Universal Plus or Universal Partnership Plus tiers of support. A direct care pathway will be set up, enabling Health Visitors to refer those families at high risk of developing tooth decay to community dental services, where they can access specialist preventative advice and treatment. The First Dental Steps programme will roll-out from January 2020 and is expected to reach around 900 Plymouth children with toothbrushing packs. Training will be provided for around 88 Health Visitors in Plymouth who will have contact with around 9,000 children aged 0-2 years old in Plymouth.

- **Open Wide and Step Inside**

This is a 15-minute animated film which tells the story of Geoffrey the Giant and his visit to meet Daisy the Dentist. It delivers oral health education in primary schools in a different and creative way, using a cartoon animation and a cast of fun characters to engage children about oral health prevention advice. An important part of the programme is to support teachers to deliver key oral health messages throughout the year as part of the

Key Stage 1 national curriculum, using specially designed teacher resources from the animation. This ensures children get the best advice about looking after their own teeth for life as part of their early year's education. The programme is delivered in primary school settings and a range of resource materials are provided to support classroom teaching.

- **Skills for Life**

This service allows schools to access a new range of class-based learning programmes, from Foundation Stage to Secondary. In 2019/20 health education will be part of the new statutory Relationships and Sex Education curriculum. The Skills for Life programmes will include aspects of oral health as part of the core Primary offer. However, a bespoke service will also be developed in consultation with schools, and detailed oral health programmes will be offered here. These will aim to build on the programmes already delivered successfully in the mobile classroom.

- **Dental Buddy training**

This is a fun and interactive session, delivered in primary schools to provide children with information and knowledge to increase their understanding of the importance of their own oral health. They are encouraged to share this information more broadly within the school through activities such as assemblies and displays.

- **Dental Champion training**

This is a two-hour workshop to raise the profile of oral health for members of the public and health professionals alike. This interactive, hands-on session provides an overview of oral health, the importance of prevention and encourages participants to share key oral health messages with others.

- **Dental Ambassador training**

This is a six-week programme, aimed at adults and young people with learning disabilities, to increase knowledge and awareness of their own oral health and share information with others using a peer-to-peer approach. A range of inclusive teaching materials have been developed to aid understanding and engagement.

- **Teeth on tour**

This is a box of oral health themed resources which community-based organisations can borrow for a two week period. The aim is to encourage and help organisations to deliver oral health themed activities using fun resources and materials which encourage conversation, play and story-telling.

- **Integrated Professional Engagement projects - Bachelor of Dental Surgery (BDS) and Dental Therapy and Hygiene (DTH) students**

Integrated Professional Engagement is an embedded feature of the curriculum of the University of Plymouth Peninsula Dental School, which enables undergraduate dental and therapy students to work with groups in the community to address particular societal needs. From October to April each year, groups of 8-9 students work on one of ten projects in the community. They include local schools, early year's settings, elderly groups

(such as Age UK and the Salvation Army), and charities dealing with vulnerable members of society, such as the homeless and people recovering from addiction. Students hold educational sessions on services available in PDSE and other NHS services, address psychological issues (particularly with the homeless), provide dental packs, or more direct forms of community treatment such as fluoride teeth varnishing clubs.

Water fluoridation

There are no community fluoridation schemes in operation in the area. Therefore the water supply contains naturally occurring levels of fluoride that are below the optimum for oral health.

7. Primary care dental services

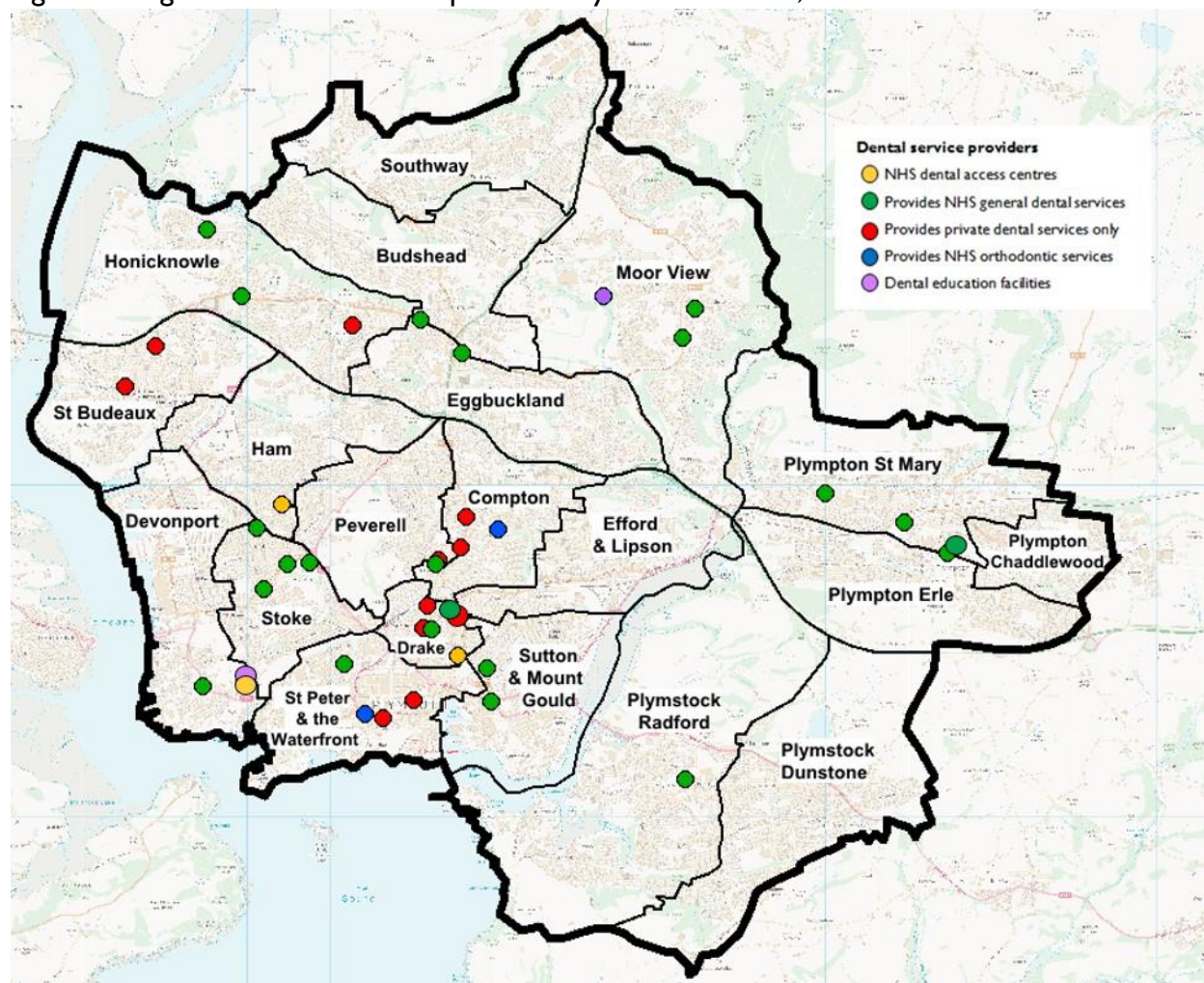
7.1 Background

In this section we describe the current providers of primary dental care in Plymouth, including general dental practices (GDPs), community dental services, the Peninsula Dental Social Enterprise (PDSE) and domiciliary care.

7.2 Dental service providers

Primary care dental services in Plymouth include GDPs, which may provide NHS or private dental services, orthodontic practices which may provide NHS services, NHS dental access centres and dental education facilities. These are described in the following sections and are shown in Figure 4 below.

Figure 4: Registered dental service providers by electoral ward, 2019



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The highest number of dental service providers are located in the wards of Drake (six) and St Peter & the Waterfront (four). In comparison, four wards have no dental provision (Budshead, Efford & Lipson, Plympton Chaddlewood, Plymstock Dunstone and Southway).

7.3 General dental practices

There are 22 general dental practices (GDPs) in Plymouth which provide some NHS dental care. This includes one provider delivering dental care from two practices. There are 10 dental practices which only provide private dental care and two orthodontic practices which provide some NHS services.

Figure 4 shows the ward of Stoke features four NHS general dental service providers. In comparison, eight wards have no NHS general dental service providers (Budshead, Compton, Efford & Lipson, Ham, Plympton Chaddlewood, Plymstock Dunstone, Southway and St. Budeaux).

There are 11 providers of private-only dental services in the city. These are located across six wards, with three such providers in Drake (Figure 4).

7.4 Community dental services

The Plymouth Community Dental Service Ltd (PCDS) Dental Access Centre, run by Livewell Southwest, provides in-hours appointments for patients with an urgent dental need who do not have access to an NHS dentist. This service is for patients in need of relief from acute dental pain; acute infection; and bleeding or have a facial swelling or experienced a facial trauma. This includes dental care for people within the city who cannot access care from a general dentist, such as those with specialist needs (i.e. children with high needs and patients with complex medical conditions). Patients have their pain dealt with and are advised to sign onto the NHS waiting list for a dentist if they have not already done so.

Access to urgent dental care would normally be expected to be available within 24 hours of making contact with the service. Appointments are provided at the Dental Access Centre or at one of the dental practices across Plymouth who are contracted to hold daily urgent care appointments for people without a dentist.

There is no postcode restriction to this element of the service and therefore patients could be local to the area/out of area or holidaymakers. Due to the high volume experienced by the service, a triage process is in place to prioritise need for the appointments provided each day.

PCDS offers:

- Treatment for people with additional needs.
- Urgent treatment for patients who are in pain and do not have a regular dentist (no postcode limitation)
- Routine dental care for children

- Treatment for those with a dental phobia
- Minor Oral Surgery

There are three PCDS locations:

- The Dental Access Centre (Seventrees) at Greenbank
- One surgery site at the Cumberland Centre
- Scott Dental Access Centre (Scott Business Park)

The Dental Helpline team manage out-of-hours urgent care appointments for patients in Plymouth who do not have access to a regular dentist. This provides patients with access to telephone advice and information on the management of dental problems on weekday evenings, including signposting for dental emergencies and assistance getting a dental appointment for an urgent condition, and access to urgent dental clinics in Plymouth at weekends and on bank holidays.

Only those cases with a significant urgent dental care, such as rapid facial swelling, uncontrolled bleeding or facial trauma, would be expected to be treated at Emergency Departments.

7.5 Peninsula Dental Social Enterprise

Overview

Over the last five years Peninsula Dental Social Enterprise (CIC) has been committed to improving dental health in the South West through treatment, education, community engagement and training.

Together in partnership with Health Education England and the NHS, students from the University of Plymouth studying for a career in dental health (as a dentist, dental nurse, hygienist or therapist), provide NHS dental treatment to patients across the Peninsula.

Throughout its four Dental Educational Facilities, PDSE provides over 5,000 people a year access to NHS dental treatment. In addition it provides awareness of oral health in the wider community, focusing on groups such as school children, the elderly, parents, those with specific conditions, people with special needs, substance misusers and the homeless.¹²⁸

PDSE provides an extensive range of dental treatments, the majority of which are carried out by dental students under the supervision of qualified Dentists, Hygiene Therapists and Hygienists.

PDSE operates access routes through self-referral and community engagement activities, with the aim of reaching all areas of the local community. All patients receive a triage assessment appointment, in order to assess their treatment needs and to determine their suitability for student treatment. Following this, each adult patient is provided with one course of treatment which aims to get the patient dentally fit, before being discharged and advised to seek alternative dental care provision. This ensures students have access to patients with suitable treatment needs

and to maximise our reach in the community.

Referrals out of the school are minimised due to the availability of clinical specialists, however orthodontics, patients requiring general anaesthesia and/or maxillofacial services are referred outside as these services are not currently provided by PDSE.

General services provided are:

- A full range of primary care dental services aligned to NHS dental practice.
- Community engagement.
- Oral health education and improvement services.

Specialist services

Academic staff provide direct care to patients at the PDSE. The sessions can be observed by students for teaching purposes and are led by specialist and consultant level staff. Internal referrals are made when:

- The patient's treatment need or history is too complex for students to manage
- Where treatment has run into technical difficulties
- The treatment needs to be completed in a short time period

In addition to this, staff provide consultant opinions and assessments to aid student treatment planning and to advise on complex cases. Specialist support is specifically for teaching purposes and to facilitate the dental care of students' dental patients; it is not commissioned as an NHS specialist referral service for the wider population.

Specialist interest, Specialist and/or Consultant level services provided are:

- Restorative dentistry (endodontics, periodontics, prosthodontics)
- Minor oral surgery
- Dental public health
- Paediatric dentistry
- Inhalational sedation

Students

There were 331 students on the BDS (Bachelor of Dental Surgery) programme (2017-2018). This has enabled PDSE to operate clinics five-days a week across its four Dental Educational Facilities (DEFs) and provide a wide range of dental treatments across Devon and Cornwall. The BSc (Hons) Dental Therapy and Dental Hygiene (DTH) programme has now completed the second full final year with a total of 44 students. 2018 saw 98% of students graduating. In 2019, the intake on this programme will increase, enabling further capacity to provide more treatment across the Peninsula.

PDSE currently has two trainee apprentice Dental Nurses completing their studies in partnership

with Cornwall College. The trainees are based at Devonport DEF and provide nursing support to a team of PDSE clinicians.

Homeless service: Community Engagement Dental Clinic

A homeless clinic was established in 2018 in conjunction with Devonport Life House and supported by Well Connected. The clinic is specifically aimed at providing dental access for people experiencing homelessness across the city. The treatment is provided by a qualified dentist and referrals for this service are made through local residential homeless centres on a frequent basis. This has been very successful in its first year.

The service is constantly evolving based on existing literature, primary research with people experiencing homelessness, healthcare professionals, academics, staff caring for homeless people (which includes among others involvement of homeless people in service development) and the growing experience of PDSE staff in working with homeless people. The service is currently being evaluated.

Due to funding limitations, the PDSE service to people experiencing homelessness currently operates half a day per week. However, taking into account the high need for dental care among homeless people and their difficulty in accessing NHS dental services, there is a need to expand the service.

7.6 Domiciliary dental care

For some people access to oral health care services is only achievable through the provision of domiciliary care, as people with long-term and/or progressive medical condition; mental illness, dementia, or increasing frailty are not always able to travel to a dental surgery. The dental care is carried out in an environment where the patient is resident and normally includes residential units, nursing homes, day centres and the patient's own home. Domiciliary care is limited to simple treatments.

Domiciliary NHS dental care in Plymouth and the surrounding area is provided by Fore Street Dental Practice, Ivybridge, which has been contracted to do so since June 2012. The provider is required to deliver 600 to 700 courses of treatment for 500 to 600 patients (with between 1,500 to 2,000 Units of Dental Activity (UDAs) being delivered each year). The provider is not required to visit specific residential or nursing homes but, within their capacity, they visit patients who are unable to leave their home due to physical or mental limitations.

8. Secondary care dental services

Overview

University Hospitals Plymouth (UHP) NHS Trust provides specialist dental care at Derriford Hospital for people living in a wide geographic area which includes all of Plymouth City Council (PCC) area and some of Devon County Council and Cornwall Council areas. More than half of the people who receive dental care at UHP NHS Trust live in the PCC area. In some instances, patients from outside this catchment can choose to access specialist dental care at UHP NHS Trust, if they have been referred via Choose and Book. All of UHP NHS Trust's specialist dental care provision is contracted through the Payment by Results system, based upon tariffs for specific patient visits or treatments which take into account the complexity of the patient's healthcare needs.¹²⁹ UHP NHS Trust mainly provides specialist dental care in three specialty areas: Maxillofacial Surgery, Orthodontics and Restorative Dentistry. It also hosts some Paediatric and Special Care Dentistry provision.

Maxillofacial surgery

This specialty team provides oral surgery, trauma, oncology for people with head and neck cancers and other cancers which have an impact upon receiving dental care, oral medicine, treatment for temporomandibular joint dysfunction, treatment for people with jaw damage relating to radiotherapy or bisphosphonate medicines, and treatment for some people with bleeding disorders (when their medical circumstances are particularly complicated). This specialty team has a multidisciplinary clinic for oral lesions or 'lumps,' with dedicated general radiologist and microbiologist and works with the Orthodontic team for orthognathic surgery (surgery to reposition the jaws). Some patients are seen at the request of the Emergency Department, for trauma, pain or abscesses, including out-of-hours. The clinical team comprises (WTE): 3 consultants, 1.9 staff grade doctors and dentists and 10.18 doctors and dentists in specialty training.

Orthodontics

The Orthodontic team provides orthodontic assessment and treatment for patients who are going to have orthognathic surgery, and people who have congenitally missing teeth. This team also has a multidisciplinary cleft lip and palate clinic, which includes psychology and speech therapy, alongside a team in Bristol. Specialist orthodontic treatment is also provided for people meeting the eligibility criteria of Index of Orthodontic Treatment Need (IOTN) level 4 or 5. This has been raised to manage service pressures in response to staffing levels. The clinical team comprises (WTE): 0.92 consultants, 0.15 staff grade dentists and 0.6 dentists in specialty training.

Restorative dentistry

This team provides restorative dentistry (repair and replacement of damaged or missing teeth) for patients referred internally within UHP NHS Trust. These patients include people awaiting cardiac valve surgery and oncology patients (head and neck cancers and other cancers which have an impact upon receiving dental care), patients who have experienced trauma and people who have congenitally missing teeth or craniofacial problems, including cleft lip and palate.

This team has not had a consultant for over two years due to retirement and subsequent problems with recruitment to this vacancy. Currently the Restorative team has 0.54 WTE staff grade dentists. Consequently, the team is unable to accept external referrals from general dentists for restorative treatment which the general dentist feels unable to provide themselves. All patients referred for treatments such as root canal treatment, dentures, periodontal (gum) treatment and implants are redirected to a team at Musgrove Park Hospital in Taunton, Somerset.

Paediatric and special care dentistry

UHP NHS Trust is contracted to provide three general anaesthetic sessions per month for paediatric and adult special care patients who require comprehensive dental care. UHP NHS Trust provides theatre time, equipment, a dental nurse, and hosts a clinical team from Livewell Southwest's community dental service, which plans and delivers the treatment.

9. Dental waiting list

9.1 Background

Access in Cornwall had historically been difficult and a dental helpline was set up to help manage the demand with a waiting list. In 2013, NHS England extended this service, provided by Access Dental, to enable all patients in Devon and Cornwall to be assisted in finding an NHS dentist. When there are no spaces available for immediate access to a routine appointment with a dentist, the helpline team manages the waiting list and works with practices to ensure people on the list are offered a dentist, as soon as places are available in their preferred area. The dental helpline is advertised widely in the community.

The most recent figures reveal 14,369 people on the dental waiting list in Plymouth (of which 78.6% (11,299) are adults and 21.4% (3,070) are children (as at 1 October 2019).

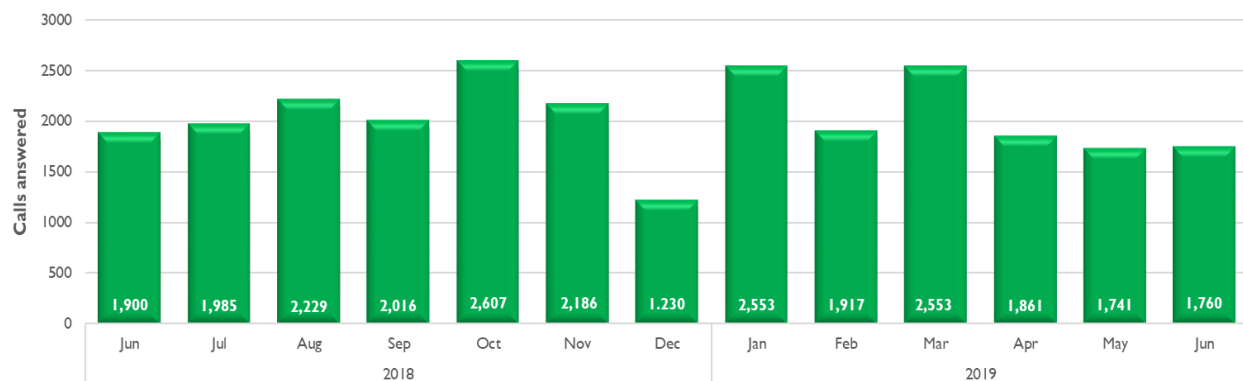
The following dental waiting list analysis has been completed for July 2018 to June 2019, specifically examining the number of patients who have been added to the list; the number allocated to a practice; the average waiting time for those patients allocated to a dentist in that month; and the total number of patients who have been waiting for a dentist.

Table 4: Plymouth dental waiting list data, July 2018 to June 2019

	Patients added to waiting list	Patients allocated to a practice	Total no. of patients on list	Average waiting time for patients allocated during the month (days)
July 2018	669	323	11,188	527
August 2018	633	272	11,638	479
September 2018	629	466	11,828	608
October 2018	165	672	12,418	524
November 2018	401	586	12,663	685
December 2018	296	340	12,631	557
January 2019	663	296	13,024	590
February 2019	529	496	13,099	639
March 2019	508	308	13,242	589
April 2019	519	326	13,568	658
May 2019	620	398	13,574	761
June 2019	124	142	13,909	669
Total	5,726	4,625	-	-

In the 12 months (between July 2018 and June 2019), the number of people on the waiting list for a dentist in Plymouth increased from 11,188 to 13,909; an increase of 2,721 people (24.3%). During the same period, the dental helpline has handled over 26,500 calls from patients who were looking for a NHS dentist (across Devon and Cornwall). Figure 5 provides a breakdown of the calls received each month.

Figure 5: Breakdown of the Dental Helpline calls answered, per month (2018/19)



Whilst the waiting list for a dentist has increased in all areas of Devon and Cornwall, the area of greatest increase is in Plymouth. The increased number of patients waiting for an NHS dentist demonstrates an increase in demand, with more than 5,700 being added to the list in the last 12 months (between July 2018 and June 2019), whilst only 4,600 patients were allocated to a NHS dentist in the same period.

In 2017, a list cleansing exercise was undertaken to ensure that all of those patients waiting were still valid and that their preferences remained the same. This exercise had a limited impact on the numbers on the waiting list with only a small percentage being removed as they no longer needed to be on the list. This is slightly at odds with the feedback we receive from practices which are allocated a list of patients. They report that a large number of the patients they try and contact have either found another NHS dentist; moved area; do not wish to see an NHS dentist on a regular basis; or cannot be contacted on the details given. In order to improve the conversion rate from waiting list to appointment, the helpline writes to patients in Plymouth to advise them that they have been allocated to a practice and to make contact with that practice within two weeks to arrange an appointment.

As of 29 May 2019, there were 12,593 Plymouth residents (adults and children) on the dental waiting list. The following sections shows the analysis by electoral ward and deprivation group.

9.2 Analysis by electoral ward

On an electoral ward basis, Table 5 shows the number of people on the dental waiting list ranged from 249 people (2.0%) in Plympton Chaddlewood to 1,145 (9.1%) in St. Peter & the Waterfront.

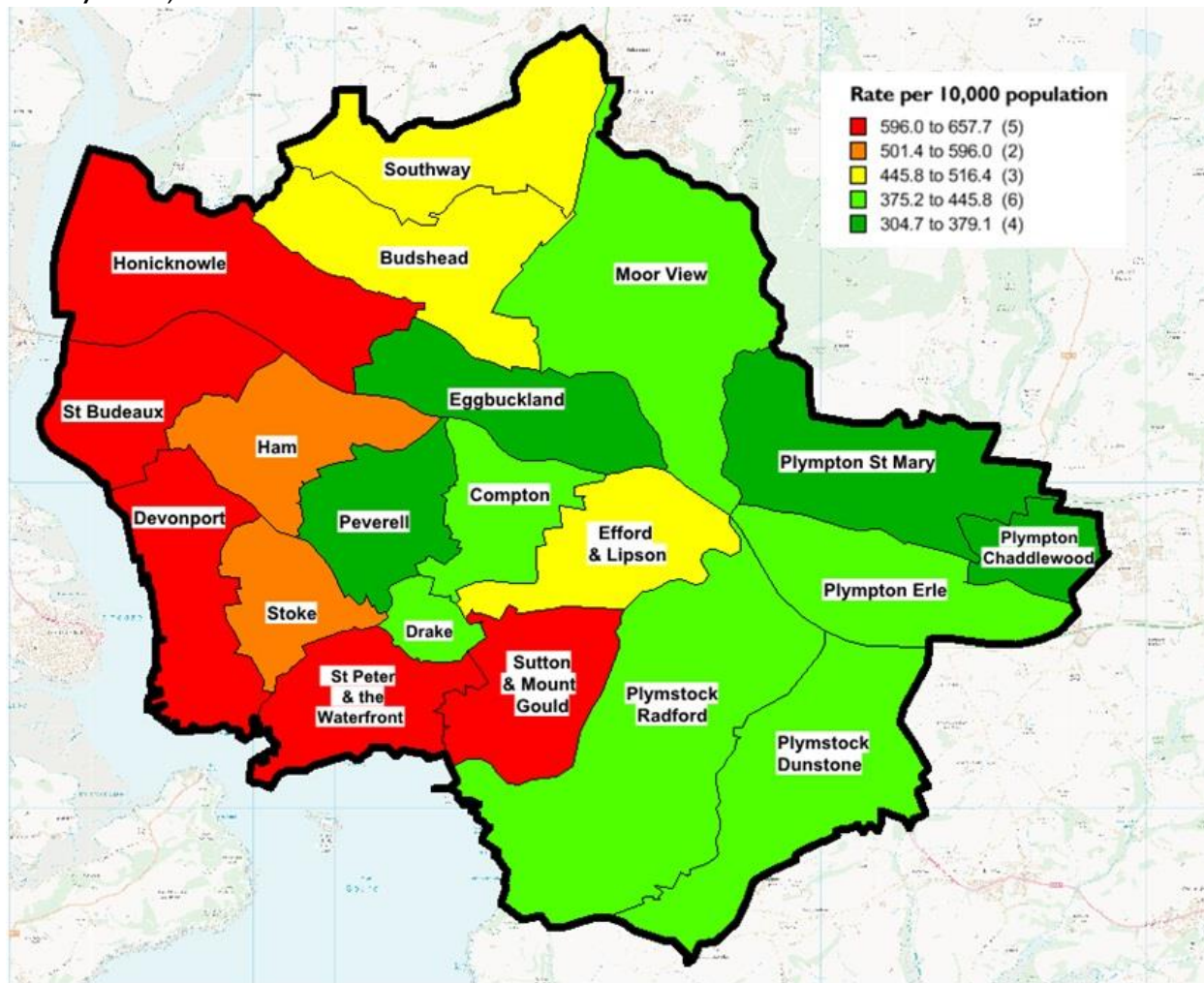
Table 5: People on the NHS dental waiting list (adults and children), by electoral ward (as at 29 May 2019)

Electoral ward	No.	%	Rate
Budshead	586	4.7	449.8
Compton	482	3.8	379.1
Devonport	993	7.9	587.8
Drake	454	3.6	425.6
Efford & Lipson	731	5.8	501.4
Eggbuckland	450	3.6	343.8
Ham	732	5.8	517.8
Honicknowle	848	6.7	600.7
Moor View	490	3.9	397.1
Peeverell	481	3.8	344.2
Plympton Chaddlewood	249	2.0	314.9
Plympton Erle	385	3.1	435.9
Plympton St. Mary	388	3.1	304.7
Plymstock Dunstone	488	3.9	405.3
Plymstock Radford	553	4.4	422.0
Southway	630	5.0	473.7
St. Budeaux	830	6.6	596.0
St. Peter & the Waterfront	1,145	9.1	657.7
Stoke	761	6.0	548.4
Sutton & Mount Gould	917	7.3	636.5
Plymouth	12,593	100.0	478.7

No. = number; percentages (%) calculated using Plymouth totals; rate per 10,000 population (all ages). The five highest percentages and rates are colour-coded red, the five lowest are colour-coded green.

The rate of people on the dental waiting list was 478.7 (per 10,000 population). On an electoral ward basis this ranged from 304.7 (per 10,000) in Plympton St. Mary to 657.7 (per 10,000) in St. Peter & the Waterfront (Table 5). The highest electoral ward rate was more than double the lowest rate.

Figure 6: Rate of population (per 10,000) on the NHS dental waiting list, by electoral ward (as at 29 May 2019)



Looking at Figure 6, the highest rate of people on the dental waiting list are in the wards to the west of the city with an additional pocket located central southeast.

9.3 Analysis by deprivation group

On a deprivation group basis, Table 6 shows this ranged from 1,606 people (12.8%) in the 'lower middle' group to 3,403 people (27.0%) in the most deprived group.

Table 6: People on the NHS dental waiting list (adults and children), by deprivation group (as at 29 May 2019)

IMD 2015 deprivation group	No.	%	Cmltv %	Rate
Most deprived	3,403	27.0	27.0	663.0
Upper middle	3,294	26.2	53.2	529.7
Middle	2,165	17.2	70.4	461.9
Lower middle	1,606	12.8	83.1	371.9
Least deprived	2,125	16.9	100.0	357.1
Plymouth	12,593	100.0	-	478.7

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 population (all ages). The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

Plymouth residents living in the most deprived and upper middle groups in Plymouth accounted for 53.2% of those on the NHS dental waiting list.

Figure 7: Rate of population (per 10,000) on the NHS dental waiting list, by deprivation group, (as at 29 May 2019)

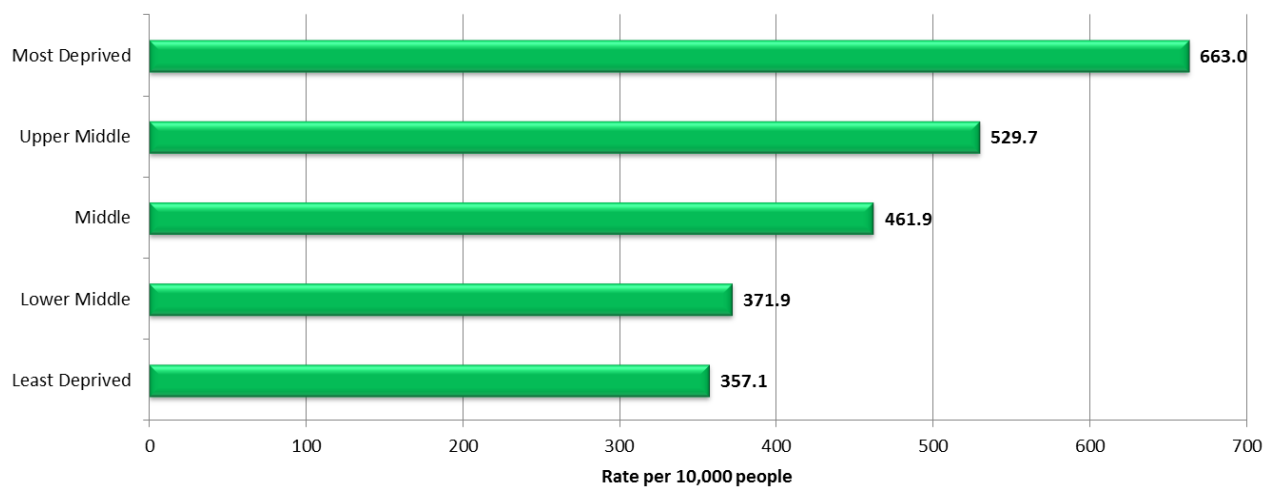


Table 6 and Figure 7 show that on a deprivation group level, the rate of people on the NHS dental waiting list ranged from 357.1 (per 10,000) in the least deprived group to 663.0 (per 10,000) in the most deprived group. The highest deprivation group rate was almost double the lowest rate.

10. Access to primary dental care

10.1 Background

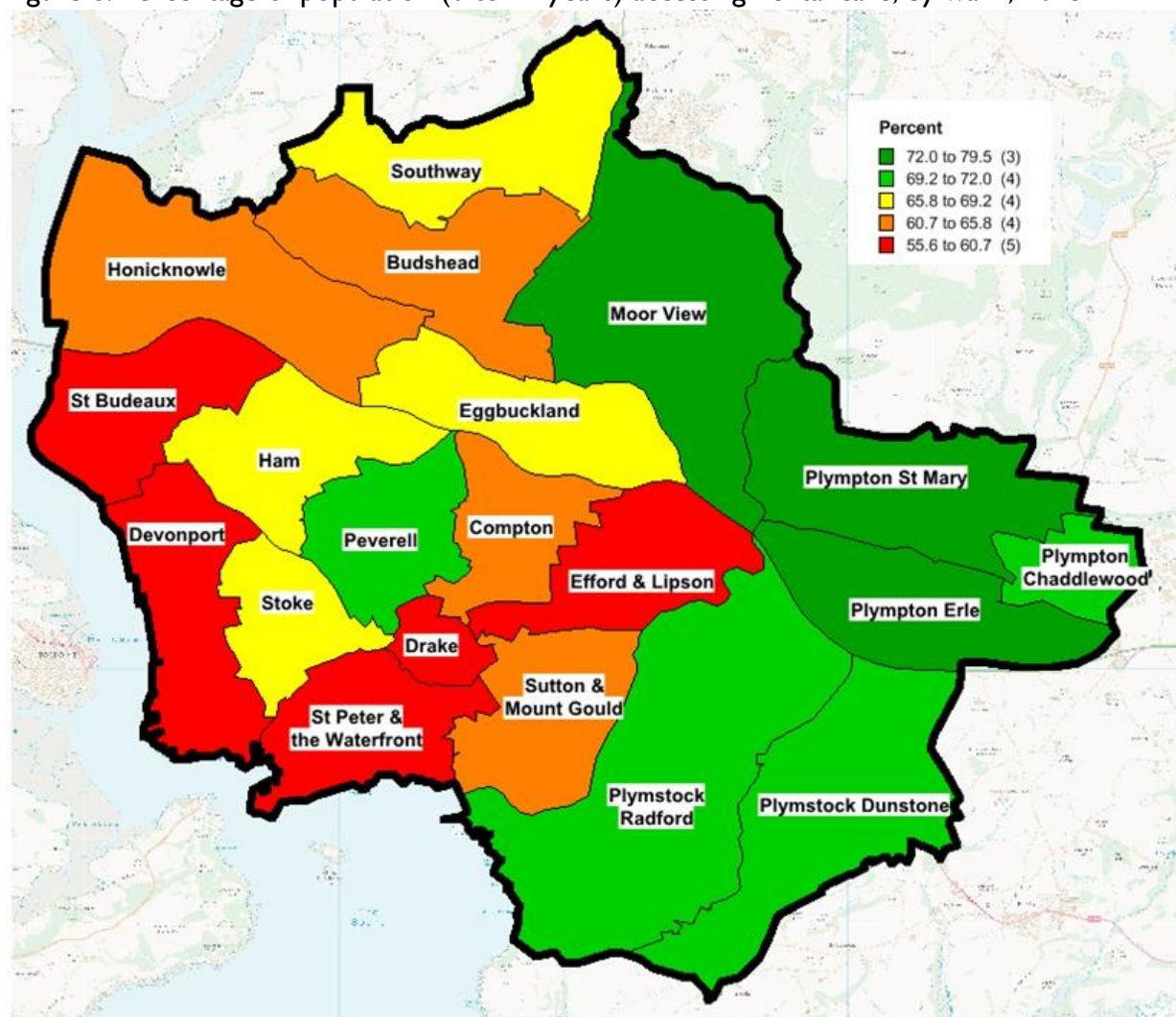
This section describes the proportion of people living in Plymouth wards who accessed primary dental care in the two-year period (2014 to 2016). NHS primary dental care includes NHS dental care at general dental practices (GDPs) and in community dental services, including the urgent dental service (anywhere in England), although it is likely that most people access dental care relatively close to their home or workplace.

The proportion of people who accessed NHS primary dental care varies for children (0-14 years), young people and working age adults (15-64 years), and older people (65+). Children were most likely to access primary dental care (67.1% of the child population) whilst 51.9% of young people and working age adults and 46.0% of older people, accessed primary dental care.

More deprived areas with more transient populations were associated with a lower proportion of access to NHS primary dental care. Less deprived wards with more static populations were associated with higher proportions of access to NHS primary dental care. NHS dental care access figures are not available in detail after 2016, and private dental access figures are unavailable. Therefore, the full picture of dental care access across the city is not known. The percentage of NHS dental access could potentially be lower in areas where more people are able to afford or are willing to pay for private dental care. Alternatively, they may be higher in areas where more people have been able to travel to an NHS dental care provider to maintain attendance long-term and avoid issues with long waiting lists.

10.2 Children (aged 0-14 years)

Figure 8: Percentage of population (0 to 14 years) accessing dental care, by ward, 2015



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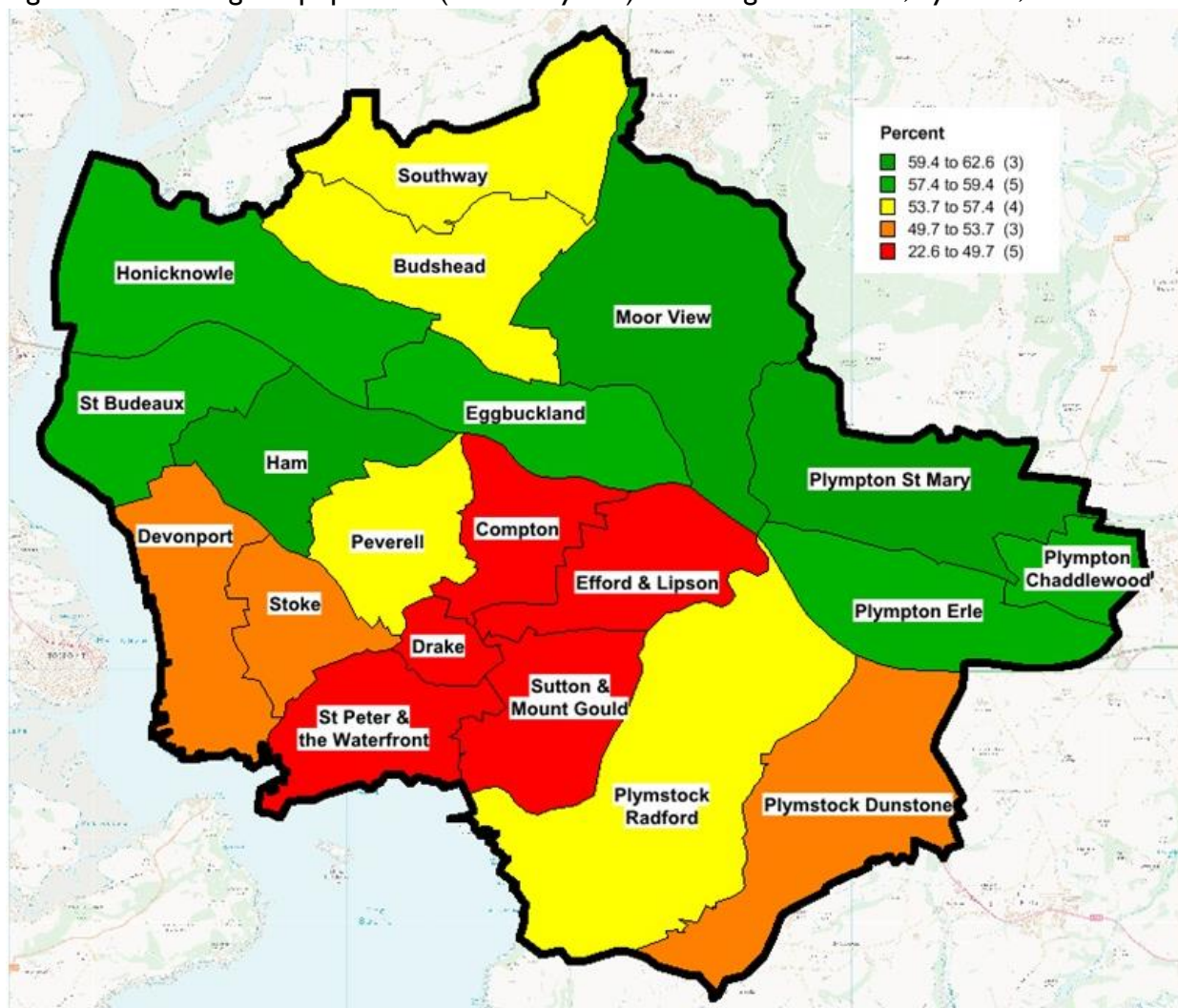
The proportion of children accessing primary dental care was lowest in St Peter & the Waterfront (55.6%), Drake, Devonport, Efford & Lipson and St Budeaux. These areas are characterised by significant levels of deprivation and transient populations. Lower proportions of children in these wards accessing primary dental care could be the result of long waiting lists to access, families having limited capacity to access private care or to travel for NHS care, or possibly not seeking dental care until problems develop.

The proportion of children accessing primary dental care was highest in Plympton Erle (79.5%), Plympton St Mary, Moor View, and Plympton Chaddlewood. These areas are characterised by relatively low levels of deprivation and more static populations. Higher proportions of children in these wards accessing primary dental care may be due to families actively seeking registration for check-ups (as part of family routine) prior to problems developing, being better able to apply

oral health advice to minimise dental decay and avoid problems, or able to travel to access NHS dental care.

10.3 Young people and working age adults (aged 15-64 years)

Figure 9: Percentage of population (15 to 64 years) accessing dental care, by ward, 2015



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The proportion of adults accessing primary dental care was lowest in Drake (22.6%), St Peter & the Waterfront, Sutton & Mount Gould, Compton and Efford & Lipson. The adult population in these areas includes transient populations such as students and young people living in rented accommodation who may have precarious incomes. This suggests that most people, including students, living in these areas were not accessing NHS dental care in Plymouth or elsewhere in country, although they may have been accessing private dental care.

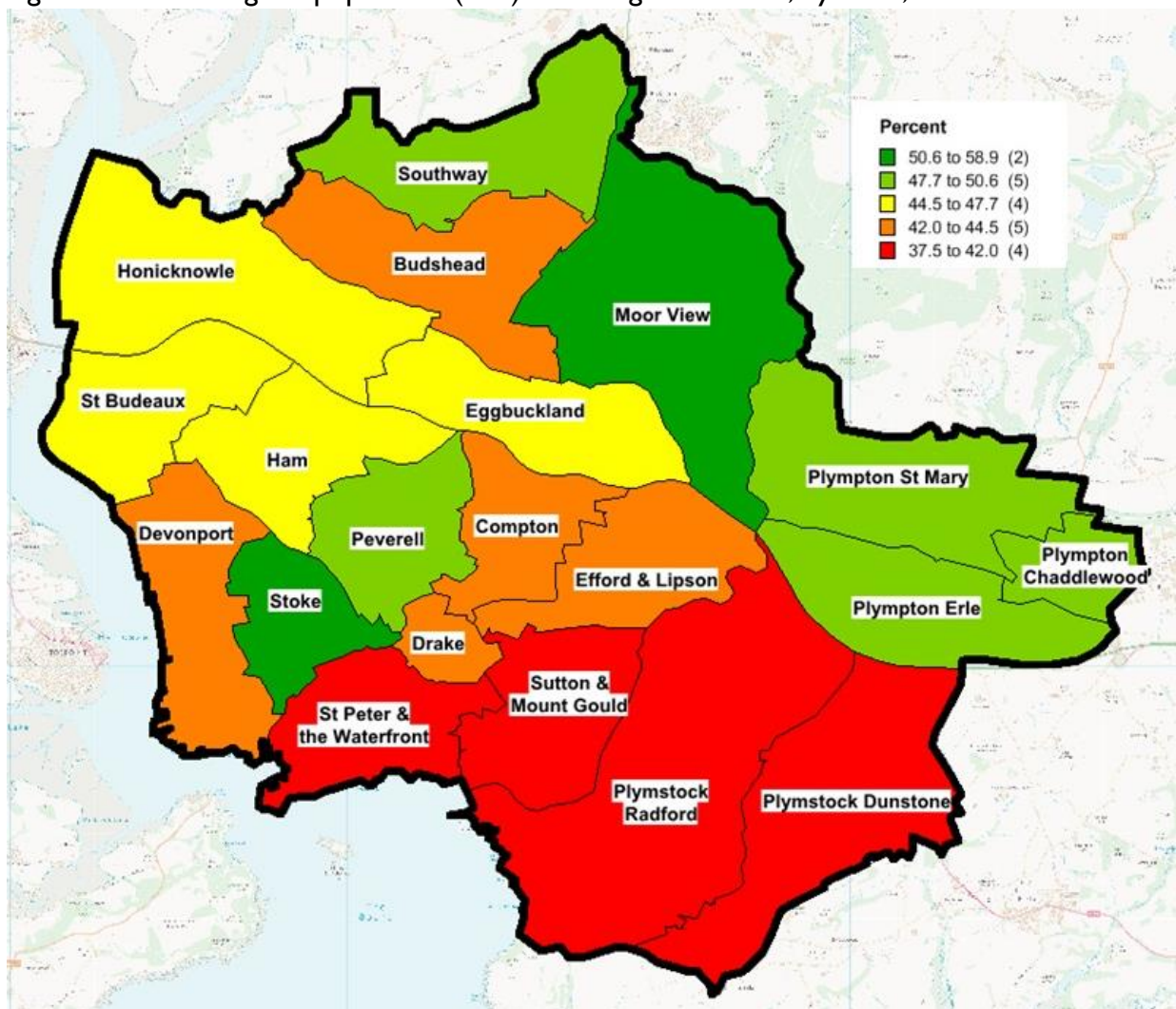
The majority of Plymouth’s private-only dental practices are located in Compton, Drake and St Peter & the Waterfront wards. Some of the least deprived areas also had relatively low levels of

access, suggesting that working age adults in these areas may have been accessing private dental services, in addition to, or instead of, accessing NHS dental services.

The proportion of adults accessing primary dental care was highest in Plympton St Mary (62.6%), Moor View, Ham and Honicknowle. It is possible that this reflects a relatively static population, meaning that people have avoided a long wait to join a new dental practice.

10.4 Older adults (aged 65+)

Figure 10: Percentage of population (65+) accessing dental care, by ward, 2015



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The proportion of older adults accessing primary dental care was lowest in Plymstock Dunstone (37.5%), Plymstock Radford, Sutton & Mount Gould, and St Peter & the Waterfront. These wards have very different levels of deprivation and contrasting proportions of adults over 85 years; which are relatively high in Plymstock Dunstone and Plymstock Radford. This pattern of lower

access may reflect the distribution of frail older people, perhaps living in nursing or residential care homes and people living with medical conditions and impairments which make it difficult to access dental services. In less deprived areas, it may also reflect use of private dental practices by older people who are in relatively good health.

The proportion of older adults accessing primary dental care was highest Moor View (58.9%), Stoke and Plympton Chaddlewood. Again, these wards have different levels of deprivation and Plympton Chaddlewood has a relatively small total adult population. This pattern of greater access reflects a population of older people who have lived in the same area for a long time, and who are well enough to continue to attend the same NHS dental practice.

10.5 Waiting times for specialist dental services in secondary care

The waiting times for specialist dental services in secondary care are based on data for all patients seen at University Hospitals Plymouth NHS Trust between 1 January 2016 and 31 August 2019.

Maxillofacial Surgery

For Maxillofacial Surgery, there is an average wait of four weeks from referral for a first outpatient appointment, and ten weeks from first attendance until first follow-up appointment. For patients who require in-patient treatment, the average wait is 14 weeks from the referral date.

Orthodontics

For Orthodontics, there is an average wait of ten weeks from referral for a first outpatient appointment, and 12 weeks from first attendance until first follow-up appointment. For patients who require in-patient treatment, the average wait is 26 weeks from the referral date.

Restorative Dentistry

For Restorative Dentistry, there is an average wait of five weeks from referral for a first outpatient appointment, and nine weeks from first attendance until first follow-up appointment. For patients who require in-patient treatment, the average wait is 13 weeks from the referral date.

10.6 Healthwatch

Healthwatch Plymouth (HWP) holds drop-in engagement sessions at various public places around Plymouth, including the Dental Access Centre (Seventrees). HWP also obtains feedback directly from the public. When people who are seeking dental care contact HWP, they are signposted to the DAC via the dental helpline (or directly if the person reports needing urgent care), or to PDSE where appropriate.

Regarding dental care and oral health, HWP usually receives enquiries about how to access routine or urgent NHS dental care. People also raise issues to HWP about their experiences of accessing dental care, including queries about the cost of treatment, and concerns about treatment decisions and the quality of care received.

A number of underlying issues were thought to lead to these enquiries, including:

- A general assumption amongst the public that 'NHS dentists' work under similar arrangements to NHS GPs, including the long-term registration of patients
- Lower awareness of dental workforce issues than GP workforce issues
- Perceived reluctance of dental practices to take on NHS dental care
- Perceptions of a different range and level of quality of dental care being provided via NHS and private arrangements

Problems with access to routine dental care are perceived to lead to increased pressure on the DAC to provide urgent dental care. Whilst this is not thought to be preventing the DAC from working with people who require Special Care Dentistry, it was felt that the DAC had reached its capacity and that any further pressures might affect the DAC team's ability to deliver to all patients at all sites.

The oral health improvement work underway in schools and nurseries was considered to be valuable for children's health in Plymouth. HWP has worked with an oral health educator, supporting oral health work with people experiencing homelessness and people in sheltered accommodation. HWP is currently working with Plymouth City Council on a project with care homes called 'Something somebody told me.' HWP has visited two large care homes in the area recently as part of this project. Both had domiciliary NHS dental support from a dental practice and were happy with the arrangements in place. However, inferences can't be drawn to the care home sector overall.

A draft of this document has been shared with a representative from HWP and was considered to reflect the general situation experienced by Plymouth residents. It was suggested by the HWP representative that local and national communications efforts should be made to help people to understand dental workforce issues and NHS working arrangements for dentists.

11. Primary care dental services activity

11.1 Background

This section looks at the activity of dental practices providing NHS dental care, the Peninsula Dental School Enterprise (PDSE) and domiciliary dental care. The activity of the community dental service, in terms of referrals, child dental extractions under general anaesthetic (GA) and urgent care are also discussed. NHS activity in primary dental care is measured in various ways. In general dental practices (GDPs), NHS activity is mainly measured in Units of Dental Activity (UDAs). PDSE and the community dental service gather their own activity data relating to the number of patients seen and the treatments provided. The community dental service also records data on the number of referrals received. Domiciliary dental care activity is monitored by NHS England through a variety of measures.

11.2 NHS dental practice activity

Historically, access to NHS dental services has been difficult both nationally and locally with parts of the South and South West of England having the greatest challenges. Access to NHS dental services in Plymouth has been difficult with an insufficient number of NHS places available to meet the level of demand from the public for dental services. Following the organisational changes within the NHS in 2013, the responsibility for the commissioning of NHS dental services transferred from Primary Care Trusts to NHS England.

Current Position

Since the introduction of the present NHS dental contract in April 2006, there had been a steady rise in the number of patients in Plymouth who have been able to access NHS dental services. However, there has been a downward trend and reduction in numbers accessing NHS dental services in Plymouth over the past year. The total number of patients accessing NHS dental services in Plymouth has declined from 134,806 (51.4% of the population) in January 2018 to 130,696 in January 2019 (49.8% of the population). This is a decrease of 4,110 patients (3.0%) over the past year. The percentage of the child population of Plymouth accessing NHS dental services (60.1%) compares favourably when viewed against the access rate for England (58.3%). However the access rate of the adult population of Plymouth (49.2%) is below the access rate for England (50.9%).

Commissioned dental activity

In 2017/18, NHS England commissioned 395,598 units of dental activity (UDAs) from Plymouth providers of NHS GDPs. The total number of UDAs actually delivered by providers in 2017/18 was 313,479, which is a short-fall of 82,119 UDAs. In planning, we average three UDAs per patient (per annum), therefore, if this short-fall had been delivered, it is estimated that 27,000

additional patients would have been able to access an NHS dentist in Plymouth.

In 2018/19, 357,075 UDAs were commissioned in Plymouth. This number does not include a number of non-recurrent reductions which have already been made to contracts this year, totalling 56,911 UDAs. The reductions have been made on the request of the providers, due to the difficulties they are experiencing in recruiting. There are currently an estimated 13 full-time vacancies for dentists in NHS practices across the city. A small number of non-recurrent increases (7,000 UDAs in total) have been made to contracts which have the capacity to deliver additional activity in 2018/19.

In addition to this commissioned activity, there are six Foundation Dentists (FDs) working in practices across the city. Each FD delivers approximately 1,785 UDAs per annum, which equates to approximately 600 patients. The Peninsula Dental School also provides one-off courses of treatment to patients who do not have an NHS dentist. These patients are allocated by the Dental Helpline team and treated by dental students under supervision.

NHS dental activity for adult and child patients by ward, 2014-16

Overview

This section summarises dental activity patterns for adults and children by ward, based on data from the two-year period (2014-16). Dental activity information describes the type of dental care people receive, including check-ups and preventive care, such as fluoride varnish applications (Band 1); routine dental treatment including fillings, extractions, root canal treatment (Band 2); advanced dental treatment including laboratory-made items such as crowns and dentures (Band 3); and urgent dental care.

Dental activity information is provided for children (under 18 years) and for adults. Consequently, this information is not directly comparable with information about the proportion of people accessing primary dental care, which is provided for different age ranges. However, access to primary dental care and the adult and child population size of an electoral ward, are both likely to be linked to absolute numbers of people receiving all types of dental care.

Dental activity is likely to be influenced by deprivation, with people experiencing more deprivation being likely to experience more dental disease, and to require more dental treatments such as extractions or fillings, and to receive more urgent dental care. The age distribution of the adult and child population of each ward will also influence dental activity. For example, older adults are more likely to require a denture than younger adults.

Children (Under 18 years)

The number of children having a check-up but no treatment (Band 1) was highest in Plympton St Mary, Peverell and Plymstock Radford, despite Plympton St Mary and Plymstock Radford having child populations which were around the median for Plymouth wards. The number of children

having a check-up only was lowest in Drake ward (which had a particularly small child population), and St Peter & the Waterfront (which had a relatively high child population).

The number of children receiving treatment, including fillings, extractions or having any routine treatment (Band 2) or receiving urgent care was highest in Honicknowle, Devonport (for fillings, Band 2 activity and urgent care) and Ham (for extractions). It was also disproportionately high in St Budeaux, especially given that this ward's child population was below the median.

The proportion of children receiving urgent care (2014-16) was highest in St Budeaux (13.5%), Drake (10.1%), Ham (9.5%) and Honicknowle (9.5%). The proportion was lowest in Compton (6.1%), Plymstock Radford (6.3%), Peverell (6.4%) and St Peter & the Waterfront (6.4%).

The number of children receiving fluoride varnish applications at a dental practice (to help prevent dental decay) was highest in Moor View; a ward with a child population below the median for Plymouth wards. The number of children receiving fluoride varnish applications at a dental practice was also relatively high in Southway, Devonport and St Budeaux. This was consistent with Southway and Devonport having had the largest child populations, although the child population of St Budeaux was below the median.

Adults (18+)

The number of adults having a check-up but no treatment (Band 1) was highest in Plympton St Mary, Peverell and Moor View, despite Plympton St Mary and Moor View having had adult populations slightly below the median. The number of adults having a check-up only was by far the lowest in Drake ward, which also had an adult population slightly below the median for all Plymouth wards. Drake ward was likely to be an outlier due to its large student population.

The number of adults receiving fillings was highest in Moor View, Honicknowle and Devonport, despite the adult population of Moor View having been slightly below the median. This was lowest in Drake ward, which also had an adult population slightly below the median. The number of adults having dentures made was highest in St Peter & the Waterfront, Devonport and Moor View, despite Moor View ward having an adult population below the median. The number of adults having dentures made was lowest in Plympton Chaddlewood, which had the smallest adult population.

The number of adults having extractions or urgent care was highest in St Peter & the Waterfront and Honicknowle, which had adult populations around the median, and Devonport, which had a relatively large adult population. This was lowest in Plympton Chaddlewood, which had the smallest adult population. The proportion of adults receiving urgent care (2014-16) was the highest by far in St Peter & the Waterfront (21.2%) and was also relatively high in Honicknowle (16.6%) and Ham (15.9%). The proportion was lowest in Plymstock Dunstone (9.8%).

Adult patients' exemption status by ward, 2014-16

Context

Adults may be exempt from paying for their NHS dental care for a number of reasons, including pregnancy and maternity, educational status (for 18 year olds) or receipt of certain benefits or a partial exemption certificate. Children under 18 years old are always exempt from NHS dental care costs.

Proportion of adult NHS patients claiming exemption, by ward

In 2014-16, the highest proportion of adult NHS patients claiming exemption was in St Peter & the Waterfront (49.8%), Devonport (45.7%) and Honicknowle (44.7%). The lowest proportion of adult NHS patients claiming exemption was in Plympton St Mary (18.8%), Peverell (22.3%) and Plymstock Dunstone (22.6%).

11.3 Community dental service activity

Overview

This section looks at the analysis of community dental service activity including referrals, child dental extractions under general anaesthetic (GA) and urgent care.

11.3.1 Analysis of referrals

In 2018/19, there were 2,186 referrals to the PCDS Access Centre. A total of 1,615 (73.9%) of these referrals came from dental practices located in the postcode areas covering the Plymouth local authority area.

Minor Oral Surgery

Minor Oral Surgery (MOS) is provided as a one-off course of treatment for a patient, under sedation. This is often the extraction of one or more teeth where this is slightly more complex for a general dental practice (GDP) to undertake however do not require a GA. Patients are referred to PCDS access centre for treatment by their GDP. In 2018/19, there were 1,244 referrals for MOS.

Dental phobia

An individual may have a dental phobia for any dental treatment to be undertaken. Jointly working alongside GDPs, patients can be referred into the service for phobic treatment by our specialist

dentist with the use of sedation to provide the course of treatment required. Phobic patients have an examination assessment undertaken by their GDP and referred to PCDS for treatment. In 2018/19, there were 78 phobic referrals to the PCDS Access Centre.

Routine children

PCDS provides dental care for children under the age of 16. In 2018/19, there were 145 routine child referrals to the PCDS Access Centre.

Adults who are referred for Special Care Dentistry

Special Care Dentistry is a dental specialty which supports adults who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability, or a combination of these factors.¹³⁰ Special Care Dentistry is provided in GDPs, community dental services and in some hospitals (such as dental hospitals). Community dental services often provided much of the Special Care Dentistry which is not provided in GDPs. In 2018/19, there were 98 special care adult referrals to the PCDS access centre.

Children who are referred for Paediatric Dentistry special care

Paediatric Dentistry is a specialty which supports children who cannot be managed by a general dental practitioner due to extensive oral disease, developmental disorders of the teeth and mouth, being too young or too anxious to accept routine dental care, or because special care is required as a result of intellectual, medical, physical, social, psychological or emotional impairments or disabilities. Dentists providing Paediatric Dentistry may also support children who are looked after by the local authority and children with special educational needs. In 2018/19, there were 23 special care child referrals to the PCDS Access Centre.

General anaesthetic

Some children may be too young or anxious, or in too much pain to manage having dental extractions completed in the dental surgery. In these situations, the Community Dental Service may provide the dental extractions under GA in a hospital setting. For some children and adults with special care requirements, the community dental service may provide comprehensive dental care (examination and treatments including scaling teeth, fillings and extractions) under GA. In 2018/19, there were 608 GA referrals to the PCDS Access Centre.

Special care patients

Special care patients are divided into Levels 1, 2 and 3 (as defined in Table 7). PCDS Access Centre have a number of Level 1 special care patients. Factors for this include the low volume of

GDPs in the local area where people can register. The PCDS Access Centre would see these patients for a final course of treatment to make them dentally fit, and advise them to sign up with an NHS dentist/join the waiting list. Many of these patients could have been with the service for a number of years, but due to the new case mix criteria, they no longer fit the eligibility, and therefore result in a Level 1 grading. The service wishes to reduce the number of Level 1 patients to enable the dentists to focus more on treating more complex cases referred by GDPs (at Level 2 and Level 3).

Table 7: NHS England guidance for Special Care Dentistry, case mix criteria, 2015

Complexity score	Total case mix score	Ability	Examples
Level 1	0	No issues	Healthy patient, suitable for dentist completing foundation year
Level 2	1-9	Some issues	Some complexity, suitable for dentist completing foundation year
Level 3	10-19	Moderate issues	Moderate complexity: procedural and/or patient complexity requiring a clinician with enhanced skills or experience or additional equipment
Level 4	20-60	Severe or extreme issues	Extreme complexity: suitable for specialist or consultant care or treatment under their guidance

A total of 1,769 special care patients were registered with the PCDS Access Centre (as at May 2019). Of these, 94 (5.3%) were Level 1 patients, 986 (55.7%) were Level 2 and 689 (38.9%) were Level 3.

In terms of Plymouth, a total of 1,538 special care patients registered live in the PL1 to PL9 postcode areas. Of these 87 (5.7%) of patients are Level 1, 858 (55.8%) are Level 2 and 593 (38.6%) are Level 3.

11.3.2 Child dental extractions under general anaesthetic

Overview

Despite reductions in the prevalence of the disease over the past forty years, substantial inequalities remain. Children from more deprived communities tend to experience more disease.¹³¹ They are far more likely to have extensive tooth decay and signs of sepsis than their peers and are at greater risk of more extreme interventions, such as extractions under GA.¹³²

Children with tooth decay not diagnosed early and treated appropriately by primary care dentists (for example through the use of fluoride varnish or fillings), may be referred to hospital for specialist care. If their teeth are too badly damaged to be restored, it will be necessary to extract them.

Extractions in the 12-16 year age group will result in the loss of mainly permanent/adult teeth. Extractions in the 0-4 year age group will be of primary (baby/milk) teeth, whilst extractions in those aged 5-11 years will be of mixed dentition.

The extraction of teeth under GA due to tooth decay is the most frequent reason for hospital admission in children aged 5-9 years in England. A child in England has a tooth removed in hospital every 10 minutes due to tooth decay. As well as causing problems with eating, sleeping and smiling, it is estimated that around 60,000 days are missed from school during the year.¹³³ The cost of admissions for extractions to the NHS is around £35 million.¹³⁴

GA is often given to children undergoing multiple tooth extractions to reduce pain and anxiety (as they may be frightened of the procedure or find it difficult to sit still). Owing to safety concerns, the Department of Health (2000) recommended that patients undergoing GA should have access to critical care facilities. As such, dental extractions of this nature have since been restricted to a hospital setting.

In addition to the health consequences of a GA there are also psychological impacts for both the child and their family. These include missing school/work days, prolonged periods of pain, and anxiety/apprehension about the procedure or about future dental treatment.

No assumptions can be made about the method of anaesthesia provided for these procedures but it is likely that the majority of episodes involve GA.

A total of 623 Plymouth-resident children aged 16 years and under had a dental extraction under GA at Derriford Hospital in 2018/19. Between them, these children had a total of 3,557 teeth removed. The commonest age at which to have these extractions is age six.

Of the 623 children having a dental extraction under GA, 48 (7.7%) had one tooth removed, 575 (92.3%) had more than one tooth removed, and one child had a total of 16 teeth removed (2018/19).

Expert knowledge suggests that it is rare for a child to have only one decayed tooth. Even with just one extraction there will often be further disease, i.e. other teeth with a degree of decay or teeth particularly susceptible to additional decay.

Looking at the 0-4 year old age group, the highest number of teeth extracted was 14. A total of 21 children had six or more teeth extracted, whilst seven children had ten or more.

With regards to the 5-11 year old age group, the highest number of teeth extracted was 16. A total of 217 children had six or more teeth extracted, whilst 45 children had ten or more.

In terms of the 12-16 year old age group, the highest number of teeth extracted was 12. A total of 11 children had six or more teeth extracted, whilst one child had ten teeth or more.

In 2014/15, a total of 714 Plymouth-resident children aged 16 years and under had teeth extracted under GA. The number decreased to 646 in 2015/16 and then increased to 713 in 2016/17. The 2017/18 figures revealed a decrease to 652 children, before reducing further to 623 in 2018/19.

Table 8: Number and rate (per 10,000 0-16 year olds) of dental extractions under GA in children aged 16 years and under, 2014/15 to 2018/19

	All extractions (one or more teeth)				
	2014/15	2015/16	2016/17	2017/18	2018/19
No.	714	646	713	652	623
Rate	144.1	130.4	143.9	131.6	125.4

During the 12 months 2017/18, National guidelines were implemented by University Hospitals Plymouth NHS Trust relating to the extraction of children's teeth under GA. As a result, the number of children treated in each operating session has reduced from ten to nine per session. This change alone has resulted in at least 120 fewer children per year having extractions under GA in 2017/18 and 2018/19 (compared to 2016/17). In addition to this, for reasons related to increased use of 'pre-meds' on more challenging patients, it has only been possible to treat eight children in some operating sessions.

Table 9: Total number of teeth extracted under GA from children aged 16 years and under, 2014/15 to 2018/19

	Number of teeth extracted					Total
	2014/15	2015/16	2016/17	2017/18	2018/19	
No.	3,305	3,147	3,624	3,217	3,557	16,850
Average	4.6	4.9	5.1	4.9	5.6	5.0

Looking at Table 9, the number of teeth extracted under GA from children aged 16 years and under in 2018/19 (3,557) is the second highest figure in the last five years. In total, 16,850 teeth have been extracted under GA in the last five years.

Though the number of Plymouth-resident children (aged 16 years and under) having teeth extracted under GA has decreased (Table 8), the average number of teeth extracted per child has increased from 4.6 in 2014/15 to 5.6 in 2018/19 (Table 9).

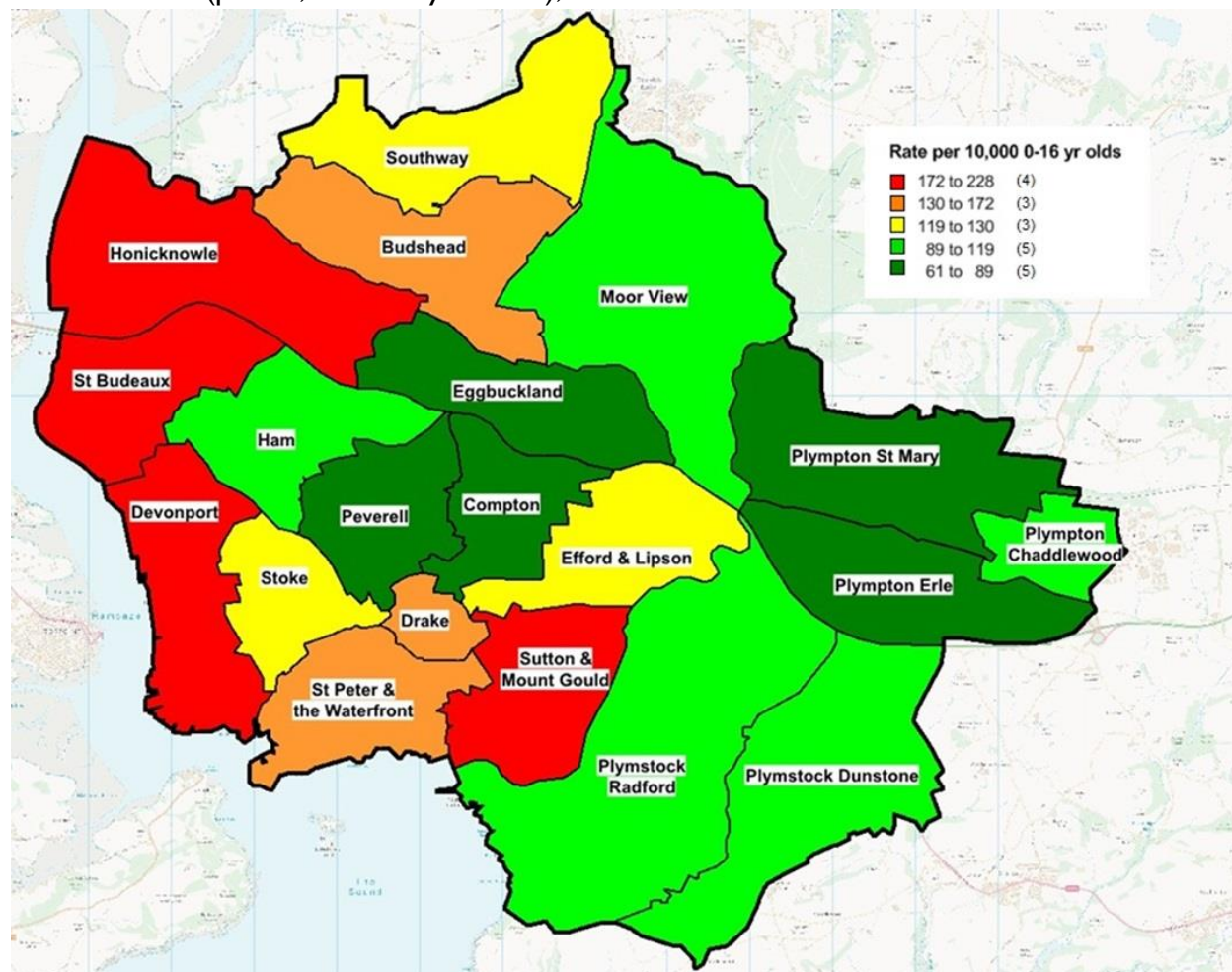
Results by electoral by ward

This section shows the results for dental extractions under GA in children (aged 16 years and under) for Plymouth's 20 electoral wards.

A total of 623 Plymouth-resident children aged 16 and under had teeth extracted under GA in 2018/19. On an electoral ward basis this ranged from nine children (1.4%) in Drake to 84 children (13.5%) in Devonport.

The rate of children having teeth extracted under GA was 125.4 (per 10,000 children aged 16 years and under). On an electoral ward basis this ranged from 61.2 (per 10,000) in Peverell to 227.1 (per 10,000) in Devonport. The highest electoral ward rate was almost four times higher than the lowest rate.

Figure 11: Rate of all dental extractions under GA from children aged 16 years and under, by electoral ward (per 10,000 0-16 year olds), 2018/19



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Looking at Figure 11, the highest rates of extractions are evident in the wards to the west of the city with an additional pocket located central southeast.

The ward with the biggest decrease in rate (getting better) between 2017/18 and 2018/19 was Ham (from 222.9 to 102.1 per 10,000 0-16 year olds). In comparison, the ward with the biggest increase in rate (getting worse) between 2017/18 and 2018/19 was Drake (from 81.7 to 129.5 per 10,000 0-16 year olds)

Looking at the last five years, Peverell ward has steadily decreased (become better) between 2014/15 and 2018/19 (from 85.7 to 61.2 per 10,000 0-16 year olds). In comparison, Sutton & Mount Gould has steadily increased rates (become worse) between 2014/15 and 2018/19 (from 126.2 to 196.6 per 10,000 0-16 year olds).

Results by deprivation group

Results for individual wards are based on relatively small numbers of children and as such can be subject to considerable annual fluctuation. The 39 Plymouth neighbourhoods have therefore been grouped into five categories based on their levels of material deprivation (following IMD 2015 analysis carried out by Plymouth City Council's Public Health Team). The results for these groups are shown in this section.

Table 10: Dental extractions under GA from children aged 16 years and under by deprivation group, 2018/19

IMD 2015 deprivation group	All extractions (one or more teeth)			
	No.	%	Cmltv %	Rate
Most deprived	214	34.3	34.3	191.7
Upper middle	193	31.0	65.3	162.5
Middle	65	10.4	75.8	98.3
Lower middle	57	9.1	84.9	66.2
Least deprived	94	15.1	100.0	82.4
Plymouth	623	100.0	-	125.4

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 children aged 0-16 years. The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

Looking at Table 10, a total of 623 Plymouth-resident children had aged 16 years and under had teeth extracted under GA in 2018/19. On a deprivation group basis this ranged from 57 children (9.1%) in the 'lower middle' group to 214 children (34.3%) in the most deprived group.

Children aged 16 and under residing in the most deprived and 'upper middle' groups in Plymouth accounted for 65.3% of those having tooth extractions under GA.

The rate of children having teeth extracted under GA was 125.4 (per 10,000 children aged 16 years and under). On a deprivation group basis this ranged from 66.2 (per 10,000) in the 'lower middle' group to 191.7 (per 10,000) in the most deprived group. The highest deprivation group rate was almost treble the lowest rate.

The group with the biggest decrease in rate (getting better) between 2017/18 and 2018/19 was the 'lower middle' group (from 101.8 to 66.2 per 10,000 0-16 year olds). In comparison, the group with the biggest increase in rate (getting worse) between 2017/18 and 2018/19 was the most deprived group (from 81.6 to 82.4 per 10,000 0-16 year olds).

The cost of dental extractions under general anaesthetic

It is of concern that such high numbers of teeth are being extracted from children due to tooth decay. It is costly not only for the NHS, but it also has a high impact on families. Treatment under GA can be a traumatic experience for the child and their carers, carries a risk of life threatening complications, and is disruptive in terms of time taken off school and work.

The GA procedure costs in England have been estimated around £865 (although expert opinion suggests that the total cost of a child's journey is probably in excess of £1,000).

In Plymouth 623 children aged 16 years and under had teeth removed under GA in 2018/19. Therefore the total annual cost of this activity was likely to be approximately £540,625.00. This is for a disease which, in theory, is entirely preventable.

11.3.3 Urgent care

Access to urgent care is a priority for the relief of pain and for accidental damage. This section looks at urgent dental care appointment enquiries, cases and activity by electoral ward, deprivation group and age.

One in four (25%) of the adult population in the South West reported that they only went to the dentist when they had a problem.¹³⁵ Patients' use of urgent care services is more complex than just a failure to access preventive or routine care, and a range of services should be available to meet the needs of patients who choose to access dental services in different ways.

Research indicates that dental access centres (DACs) are offering treatment to a different population of patients from that seen in neighbouring 'high street' practices. Patients attending DACs were younger and from more disadvantaged backgrounds. They had worse oral health, experienced more frequent episodes of dental pain, were more likely to be dentally anxious and had different attitudes to dental health than their 'high street' counterparts.¹³⁶ It is important that access to urgent care is offered to patients when they need it and to enable different sectors of the population to access dental services in different ways.

Enquiries

Table 11: PCDS enquiries for urgent dental care appointments, by month, April 2018 to March 2019

Month	No. of enquiries	No. of appointments provided	% of appointments provided
Apr 2018	1,479	352	23.8
May 2018	1,588	374	23.6
Jun 2018	1,543	355	23.0
Jul 2018	1,711	366	21.4
Aug 2018	1,876	392	20.9
Sep 2018	1,592	357	22.4
Oct 2018	2,042	490	24.0
Nov 2018	2,059	461	22.4
Dec 2018	1,409	333	23.6
Jan 2019	1,462	387	26.5
Feb 2019	1,560	306	19.6
Mar 2019	1,741	339	19.5
Total	20,062	4,512	22.5

No. = number; percentages (%) calculated using totals. The highest number and percentage is colour-coded green, the lowest is colour-coded red.

Table 11 shows 20,062 enquiries were made to the PCDS for urgent dental care appointments in 2018/19. From these enquiries a total of 4,512 appointments were provided (22.5%).

The highest number of enquiries in 2018/19, took place in November 2018 (2,059), compared to 1,409 in December 2018. In October 2018, 490 urgent dental care appointments were provided, compared with 306 in February 2019.

Cases

A total of 3,015 patients were in contact with PCDS urgent dental care service for treatment in 2018/19. Of these, 2,713 (90.0%) were Plymouth-resident and 302 (10.0%) were from out of area/invalid postcodes.

The rate of Plymouth-resident urgent dental care patients was 125.6 (per 10,000 population aged 16+). The rate of patients seen once was 110.9, twice was 12.6 and three or more times was 2.1 (per 10,000).

Activity by electoral ward

Looking at Table 12, a total of 2,713 Plymouth-resident adults were in contact with the PCDS urgent dental service for treatment in 2018/19. On an electoral ward basis this ranged from 37 patients (1.4%) in Plympton Chaddlewood to 324 (11.9%) in St Peter and the Waterfront.

Table 12: PCDS urgent dental treatment patients in contact with the service (age 16+), by electoral ward, April 2018 to March 2019

Electoral ward	No.	%	Rate
Budshead	106	3.9	101.8
Compton	90	3.3	83.9
Devonport	251	9.3	188.0
Drake	152	5.6	151.8
Efford and Lipson	212	7.8	179.4
Eggbuckland	83	3.1	77.7
Ham	158	5.8	141.6
Honicknowle	168	6.2	149.8
Moor View	80	2.9	76.9
Peverell	78	2.9	68.8
Plympton Chaddlewood	37	1.4	59.2
Plympton Erle	55	2.0	75.6
Plympton St Mary	60	2.2	57.1
Plymstock Dunstone	78	2.9	77.5
Plymstock Radford	81	3.0	76.1
Southway	119	4.4	112.8
St Budeaux	192	7.1	178.4
St Peter and the Waterfront	324	11.9	214.2
Stoke	164	6.0	140.0
Sutton and Mount Gould	225	8.3	188.2
Plymouth	2,713	100	125.6

No. = number; percentages (%) calculated using Plymouth totals; rate per 10,000 people aged 16+. The five highest percentages and rates are colour-coded red, the five lowest are colour-coded green.

The rate of patients in contact with the PCDS urgent dental service for treatment was 125.6 (per

10,000 population age 16+). On an electoral ward basis this ranged from 57.1 (per 10,000) in Plympton St Mary to 214.2 (per 10,000) in St Peter and the Waterfront. The highest electoral ward rate was almost four times higher than the lowest rate.

Activity by deprivation group

A total of 805 (29.7%) of PCDS urgent dental treatment patients in contact with the service, live in the most deprived area of Plymouth. This compares to 270 (10.0%) living in the 'lower middle' group.

Patients residing in the most deprived and 'upper middle' groups in the city accounted for 58.5% of all Plymouth patients' contact with the urgent dental treatment service.

The rate of patients in contact with the urgent dental service for treatment was 125.6 (per 10,000 population age 16+). On a deprivation group basis this ranged from 65.7 (per 10,000) in the least deprived area to 198.2 (per 10,000) in the most deprived area. (Table 13). The number of patients living in the highest deprivation group was almost treble the lowest.

Table 13: Urgent dental treatment patients in contact with the service (16+), by deprivation group, April 2018 to March 2019

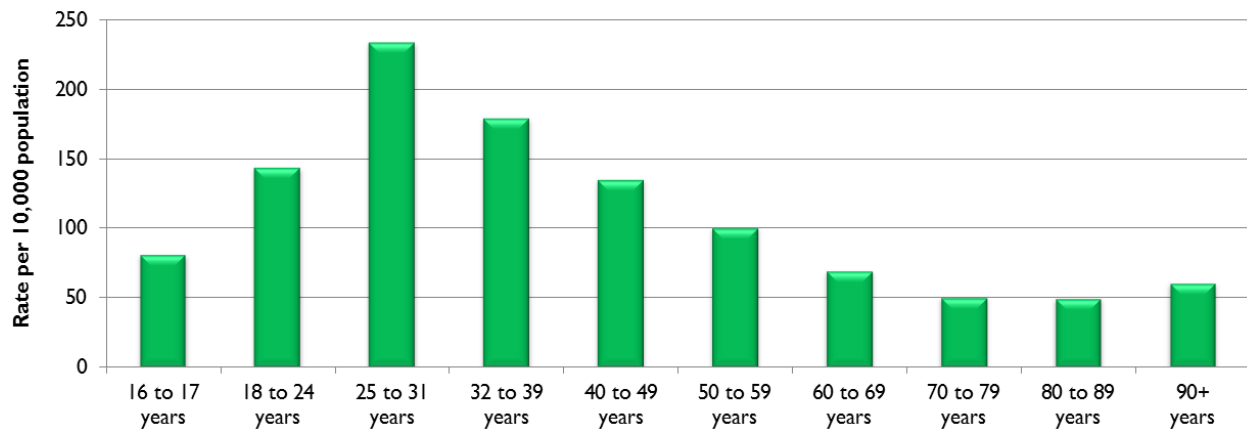
Neighbourhood deprivation group	No.	%	Cmltv %	Rate
Most deprived	805	29.7	29.7	198.2
Upper middle	783	28.9	58.5	153.9
Middle	535	19.7	78.3	131.5
Lower middle	270	10.0	88.2	77.1
Least deprived	320	11.8	100.0	65.7
Plymouth	2,713	100.0	-	125.6

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 people aged 16+. The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

Activity by age group

602 Plymouth-resident patients aged 25 to 31 were in contact with the PCDS for urgent dental service treatment (22.2%). 40.9% of all patients were aged 16 to 31.

Figure 12: Rate of Plymouth-resident urgent dental treatment patients in contact with the service, by age group, per 10,000 population, April 2018 to March 2019



The rate of patient aged 25 to 31 years in contact for urgent dental service treatment was 234.5 per 10,000 population. The 25 to 31 age group rate was almost five times higher the 80 to 89 age group rate (49.7 per 10,000 population).

NHS urgent support

For the last two academic years, PDSE has provided additional capacity to the Dental Access Centre in Plymouth. Since then, over 500 patients have been treated for urgent dental care. This service has been delivered by both students and PDSE employed dentists, giving the students a broader experience of urgent care dentistry whilst providing support for the local NHS.

11.4 Peninsula Dental Social Enterprise activity

This section looks at the following PDSE activity:

- Patients seen by location, electoral ward and deprivation group
- Urgent dental care appointment enquiries, cases and activity by electoral ward, deprivation group and age
- Dental student activity
- Paediatric clinical activity

Patients seen by location

A total of 1,246 Plymouth patients were seen by the PDSE Dental Educational Facilities (DEF) in 2018/19. Table 14 shows the Devonport DEF saw the highest number of patients (1,017). The Derriford and Devonport DEFs combined saw 96.0% (1,196) of Plymouth patients, with 4.0% (50) patients travelling to Exeter or Truro.

The rate of Plymouth patients seen by all DEFs was 47.4 (per 10,000 population). This ranged from 38.7 (per 10,000) at Devonport to 0.8 (per 10,000) at Truro.

Table 14: Number of Plymouth patients (all ages) seen by PDSE DEF, academic year 2018/19

PDSE DEF	No.	%	Cmltv %	Rate
Devonport	1,017	81.6	81.6	38.7
Derriford	179	14.4	96.0	6.8
Exeter	29	2.3	98.3	1.1
Truro	21	1.7	100.0	0.8
Total	1,246	100.0	-	47.4

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 population. The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

Patients seen by electoral ward

Table 15: Number of patients (all ages) seen by PDSE Devonport and Derriford DEF, by ward, academic year 2018/19

Ward	Devonport			Derriford		
	No.	%	Rate	No.	%	Rate
Budshead	53	5.2	40.7	9	5.0	6.9
Compton	40	3.9	31.5	5	2.8	3.9
Devonport	127	12.5	75.2	21	11.7	12.4
Drake	37	3.6	34.7	9	5.0	8.4
Efford & Lipson	56	5.5	38.4	11	6.1	7.5
Eggbuckland	36	3.5	27.5	11	6.1	8.4
Ham	60	5.9	42.4	8	4.5	5.7
Honicknowle	60	5.9	42.5	12	6.7	8.5
Moor View	34	3.3	27.6	7	3.9	5.7
Peverell	40	3.9	28.6	5	2.8	3.6
Plympton Chaddlewood	18	1.8	22.8	3	1.7	3.8
Plympton Erle	23	2.3	26.0	7	3.9	7.9
Plympton St. Mary	29	2.9	22.8	6	3.4	4.7
Plymstock Dunstone	36	3.5	29.9	10	5.6	8.3
Plymstock Radford	38	3.7	29.0	6	3.4	4.6
Southway	44	4.3	33.1	12	6.7	9.0
St. Budeaux	69	6.8	49.5	5	2.8	3.6
St. Peter & the Waterfront	106	10.4	60.9	20	11.2	11.5
Stoke	55	5.4	39.6	5	2.8	3.6
Sutton & Mount Gould	56	5.5	38.9	7	3.9	4.9
Plymouth	1,017	100	38.7	179	100	6.8

No. = number; percentages (%) calculated using Plymouth totals; rate per 10,000 population. The five highest percentages and rates are colour-coded red, the five lowest are colour-coded green.

On an electoral ward basis Table 15 shows the number of patients seen by Devonport DEF ranged from 18 (1.8%) in Plympton Chaddlewood to 127 (12.5%) in Devonport.

The rate of patients seen by Devonport DEF on an electoral ward basis ranged from 22.8 (per 10,000 population) in Plympton Chaddlewood and Plympton St. Mary to 75.2 (per 10,000 in Devonport). The highest electoral ward rate was over three times higher than the lowest rate.

Patients seen by deprivation group

Table 16: Number of patients (all ages) seen by PDSE Devonport and Derriford DEF, by deprivation group, academic year 2018/19

IMD 2015 deprivation group	Devonport				Derriford			
	No.	%	Cmltv %	Rate	No.	%	Cmltv %	Rate
Most deprived	320	31.5	31.5	62.3	55	30.7	30.7	10.7
Upper middle	266	26.2	57.6	42.8	36	20.1	50.8	5.8
Middle	149	14.7	72.3	31.8	28	15.6	66.5	6.0
Lower middle	124	12.2	84.5	28.7	30	16.8	83.2	6.9
Least deprived	158	15.5	100.0	26.6	30	16.8	100.0	5.0
Plymouth	1,017	100	-	38.7	179	100	-	6.8

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 population. The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

The rate of Plymouth patients seen by Devonport DEF was 38.7 (per 10,000 population). On a deprivation group basis this ranged from 26.6 (per 10,000) in the least deprived area to 62.3 (per 10,000) in the most deprived area. The highest deprivation group rate was more than double the lowest rate.

Dental student activity

Special service care is provided at tier two and three in the following disciplines with funding from the NHS Area Team:

- Periodontology
- Prosthetics
- Endodontics
- Conservation
- Minor oral surgery
- Paediatric
- Special care

Table 17 shows a breakdown of consultant and specialist level care. At present NHS funding supports level two and level three clinical services to prevent patients (who are being treated by PDSE dental students) from being referred out of the school to local intermediate and tertiary services. PDSE does not accept referrals from other primary dental care providers for specialist dental care.

Table 17: Number of patients treated by Bachelor of Dental Surgery (BDS) and Dental Therapy and Hygiene (DTH) students, by procedure, 2017/18

Procedure	Y1 BDS	Y2 BDS	Y3 BDS	Y4 BDS	Y5 BDS	Y1 DTH	Y2 DTH	Y3 DTH
Examination	186	688	529	979	984	36	223	212
Scale and polish	164	770	777	1,478	1,142	34	299	711
Fillings	53	470	965	2,078	2,820	3	212	400
Acrylic denture	-	9	55	237	173	-	-	-
Extractions	5	69	236	718	681	-	-	29
Urgent care	-	11	130	220	982	-	8	10

Source: Plymouth University Peninsula School of Dentistry & Peninsula Dental Social Enterprise CIC Clinical Activity Report 2017/18

Paediatric clinical activity

2017/18 saw an increase of over 1,000 paediatric appointments (in comparison to the previous year), with over 3,000 appointments attended in the academic year. Unlike adults, PDSE do not hold waiting lists for children, instead ensuring that they are offered an appointment at the next available clinic.¹²⁸

Table 18: Number of paediatric patients by age group, 2017/18

	No. of patients	No. of appointments	No. of clinical items provided
0-12 years	1,118	2,666	11,842
13-18 years	290	736	4,221
Total	1,408	3,402	16,063

Homeless service: Community Engagement Dental Clinic

The PDSE community clinic has been running at Devonport DEF since January 2018. It initially ran half-a-day per week for six months, increasing to a full-day a week in August 2018. The clinic provides dental care to some of the most vulnerable adult groups living in the Plymouth area, such as those that are homeless or insecurely housed. For these groups accessing NHS dental care would be extremely difficult, either due to the logistics or cost of travelling to the appointment, or for whom multiple other complex needs make it difficult to organise and attend appointments.

The high level of untreated dental disease seen in this vulnerable group has a profound impact on people's quality of life and self-esteem. Many people who have attended the clinic had previously experienced dental pain for many years, as well as suffering acute embarrassment and shame due to missing and decayed anterior teeth. This can have an impact on their recovery and ability to engage with employment opportunities and society.

The PDSE community clinic is achieving an excellent rate of attendance by working closely with community groups who support patients to attend appointments. Currently the clinic works with outreach GP practices, the Salvation Army, Harbour and the PAUSE programme for women. The community clinic strives to continue to develop their service to reach a wider range of vulnerable people.

A total of 65 patients were seen by the clinic (January 2018 to August 2019). Everyone on the waiting list has been seen and the clinic is now taking patients as needed. 32 Treatment Plans have been completed.

Of the 65 patients seen, 78.5% (51) were male and 21.5% (14) female. Admissions come from Devonport Lifehouse (69%), Outreach GP (8%), Shekinah (8%), Winter night shelter (8%), Harbour (3%), internal PDSE referrals (3%), and PAUSE (2%).

A total of 467 clinic appointments (381.5 hours clinical time) were offered (January 2018 to August 2019). 82% (382) of appointments were attended (316.5 hours clinical time). 18% (85) appointments were missed equating to 65 hours of clinical time lost through non-attendance.

The average number of appointments attended per patient was 5.5 (4.5 hours clinical time). In terms of missed appointments, 1.2 appointments were missed per patient which equates to 0.9 hours lost time per patient (January 2018 to August 2019).

A total of 174 extraction treatments took place at the clinic (January 2018 to August 2019). This is an average of three extractions per patient (Table 19).

Table 19: Community Engagement Dental Clinic treatment, January 2018 to August 2019

Treatment	No	Average per patient (to nearest whole number)
Extractions	174	3
Fillings	144	2
OHI	79	2
Full exam	64	1
Urgent treatment	40	1
S&P	30	1
Completed treatment	32	1
Periodontal treatment	23	0
Partial dentures	28	1
Full dentures	15	0
Recalls	11	0
Root canal	3	0
Denture additions/re-lines	3	0
Crowns	1	0

11.5 Domiciliary dental care

NHS England reports that the domiciliary dental care provider covering the Plymouth area is meeting its commissioning parameters.

12. Secondary care dental service activity

12.1 University Hospitals Plymouth (UHP) activity

Maxillofacial surgery

There were 11,678 new or follow-up outpatient attendances for Maxillofacial Surgery in 2018/19, of which 615 were children (under 18 years old). There were 396 new patients and 1,954 follow-up patients on the waiting list for Maxillofacial Surgery outpatient appointments at the time of writing.

Orthodontics

There were 6,424 new or follow-up outpatient attendances for Orthodontics in 2018/19, of which 4,733 were children (under 18 years old). There were 123 new patients and 1,667 follow-up patients on the waiting list for Orthodontic outpatient appointments at the time of writing.

Restorative dentistry

There were 1,050 new or follow-up outpatient attendances for Restorative Dentistry in 2018/19, of which 20 were children (under 18 years old). There were 15 new patients and 292 follow-up patients on the waiting list for Restorative Dentistry outpatient appointments at the time of writing.

Paediatric and special care dentistry

This is provided in conjunction with the community dental service and details are in section 11.3.2.

Comprehensive dental care under GA

The total number of episodes of GA for comprehensive dental care for adults and children in financial year 2017/18 was 48.

12.2 Provision of dental extractions in secondary dental care

Some of the specialist dental care provided at UHP includes dental extractions. This section looks at data extracted from the Hospital Episode Statistics dataset which records inpatient care figures and day-case care for UHP. This database provides details about admission of patients (age 17+) for extraction of teeth (finished consultant episodes [FCE] for all diagnosis codes). The data

covers the five year period 2014/15 to 2018/19.

In some instances the data is an under-estimation of the number of episodes, as the Community Dental Service may provide the extraction service under GA, hosted at UHP's hospital premises, but the episodes may not be included in hospital data recording. Codes for hospital episode statistics are not input directly by staff from the Maxillofacial Surgery department. It is possible that different coding protocols are applied and this could explain some of the variation.

Results by electoral ward

There were a total of 1,706 hospital episodes for dental extractions in the five year period 2014/15 to 2018/19 (Table 20). On an electoral ward basis, this ranged from 43 (2.5%) in Plympton Chaddlewood to 178 (10.4%) in Devonport.

Devonport ward had the highest total rate of hospital episodes (134.9 per 10,000 population aged 17+) for 2014/15 to 2018/19. This compares with 45.1 for Drake.

Table 20: Number, percentage and rate of hospital episodes for dental extractions (FCEs for extractions, all diagnosis codes) per 10,000 population age 17+, by electoral ward, 2014/15 to 2018/19

Ward	No.	%	Rate
Budshead	97	5.7	94.3
Compton	72	4.2	68.2
Devonport	178	10.4	134.9
Drake	45	2.6	45.1
Efford & Lipson	105	6.2	90.0
Eggbuckland	54	3.2	51.3
Ham	115	6.7	104.5
Honicknowle	127	7.4	114.9
Moor View	66	3.9	64.1
Peverell	71	4.2	63.4
Plympton Chaddlewood	43	2.5	69.7
Plympton Erle	57	3.3	79.2
Plympton St. Mary	61	3.6	58.8
Plymstock Dunstone	60	3.5	60.4
Plymstock Radford	81	4.7	77.0
Southway	72	4.2	69.2
St. Budeaux	95	5.6	89.5
St. Peter & the Waterfront	126	7.4	83.8
Stoke	85	5.0	73.3
Sutton & Mount Gould	96	5.6	81.3
Plymouth	1,706	100.0	79.9

No. = number; percentages (%) calculated using Plymouth totals; rate per 10,000 aged 17+. The five highest percentages and rates are colour-coded red, the five lowest are colour-coded green.

Results by deprivation group

Table 21: Number, percentage and rate of hospital episodes for dental extractions (FCEs for extraction, all diagnosis codes) per 10,000 population age 17+, by deprivation group, 2014/15 to 2018/19

IMD 2015 deprivation group	No.	%	Cmltv %	Rate
Most deprived	416	24.4	24.4	103.6
Upper middle	483	28.3	52.7	96.0
Middle	271	15.9	68.6	67.3
Lower middle	226	13.2	81.8	65.4
Least deprived	310	18.2	100.0	64.5
Plymouth	1,706	100.0	-	79.9

No. = number; percentages (%) calculated using Plymouth totals; Cmltv % = cumulative percentage; rate per 10,000 population aged 17+. The highest percentage and rate is colour-coded red, the lowest is colour-coded green.

There were a total of 1,706 hospital episodes for dental extractions in the five year period 2014/15 to 2018/19. On a deprivation level, this ranged from 226 (13.2%) in the 'lower middle' group to 483 (28.3%) in the 'upper middle' group.

Hospital episodes of those residing in the most deprived and 'upper middle' groups in Plymouth accounted for 52.7% of dental extractions (2014/15 to 2018/19).

The rate of hospital episodes for dental extractions (FCEs for extractions, all diagnosis) was 79.9 (per 10,000 population aged 17+) for the five year period 2014/15 to 2018/19. This ranged from 64.5 (per 10,000) in the least deprived group to 103.6 (per 10,000) in the most deprived.

13. Evidence of what works

Key guidance to support local authorities to meet the needs of their local population are listed below:

- Evidence-based interventions and advice on how dental health professionals can improve and maintain the oral and general health of their patients
<https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention>
- Delivering better oral health: an evidence-based toolkit for prevention
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/605266/Delivering_better_oral_health.pdf
- Oral health: local authorities and partners
<https://www.nice.org.uk/guidance/ph55>
- Oral health promotion in the community
<https://www.nice.org.uk/guidance/qs139>
- Improving oral health: a toolkit to support commissioning of supervised toothbrushing programmes in early years and school settings
<https://www.gov.uk/government/publications/improving-oral-health-supervised-tooth-brushing-programme-toolkit>
- Tackling poor oral health in children: local government's public health role
<https://www.local.gov.uk/tackling-poor-oral-health-children-local-governments-public-health-role>
- Oral health improvement for children and young people
<https://www.gov.uk/government/publications/improving-oral-health-an-evidence-informed-toolkit-for-local-authorities>
- Oral care and people with learning disabilities
<https://www.gov.uk/government/publications/oral-care-and-people-with-learning-disabilities/oral-care-and-people-with-learning-disabilities>
- Oral health for vulnerable older people
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738722/CBOH_VOP_V16_Final_WO_links.pdf
- Oral health for adults in care homes
<https://www.nice.org.uk/guidance/ng48/chapter/Recommendations#general-dental-practices-and-community-dental-services>

- Oral health of homeless people
<https://dentistry.dundee.ac.uk/sites/dentistry.dundee.ac.uk/files/Smile4lifeGuideforTrainers.pdf>
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14. Conclusions

Summary

Good oral health is not evenly distributed in Plymouth. People living in the more deprived areas of Plymouth experience more health impacts from poor oral health. They are more likely to need urgent dental care visits and more likely to require a general anaesthetic for dental extractions. This comes at a large cost to individuals, families and the NHS, despite tooth decay being a preventable disease. Although there are a number of primary and secondary dental services in Plymouth, waiting list and access data suggest that many people, especially those living in more deprived areas, are experiencing lengthy delays when they try to access routine NHS dental care.

There are many effective ways to keep people's teeth and mouths healthy. Plymouth has a number of oral health improvement programmes in place, particularly for children and young people. Plymouth's population would benefit from additional oral health improvement activity for people of all ages who are at increased risk of poor oral health, to reduce their experience of oral health problems in the future. People in Plymouth would also benefit from increased access to routine and urgent NHS dental care to manage existing dental problems before those problems impact upon everyday life.

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