

Right Start

Pre-school children's oral health
improvement strategy 2018 — 2021



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Introduction

Oral health has an important role in the general health and wellbeing of individuals. Poor oral health can affect the ability of children and young people to sleep, eat, speak, play and socialise with other children. Other impacts include pain, infections, poor diet, and impaired nutrition and growth. When children are not healthy this affects their ability to learn, thrive and develop. To benefit fully from education, children need to enter school ready to learn, to be healthy and prepared emotionally, behaviourally and socially.

Tackling oral health is complex and inextricably bound up with issues of culture, lifestyle and deprivation. Therefore the success of this strategy will depend on the involvement of everyone responsible for delivering general health and wellbeing services to children, young people and families. Reducing dental decay will require a whole system approach including national and local policy development, organisational change, community development, legalisation (e.g. sugar tax), advocacy, access to primary dental care, education and oral health improvement.

This Oral Health Improvement Strategy focuses on preschool children and the 0 – 5 workforce with the ethos of giving every child the best start in life. The strategy will use both whole population and behaviour change approaches in an attempt to address some of the common risk factors associated with poor oral health. The actions involve upstream, midstream and downstream interventions based on the best available evidence that use both targeted and universal approaches. These are weighted towards communication, culture and behaviour change, twice daily use of fluoride toothpaste, attendance at the dentist where a proactive preventive approach is taken, including the use of fluoride varnishing.

Background

The Health and Wellbeing Board identified poor oral health of children under the age of five as a priority in 2013. In 2012/13 approximately five in ten (50%) five year olds living in Oldham had experience of dental decay. The latest Public Dental Health Epidemiology Programme for England, oral health survey of five-year-old children (2016/17) living in Oldham shows that dental decay levels have decreased significantly to three in ten (34.8%).

Oral health has an important role in general health and wellbeing of children. Poor oral health can affect the ability of children to sleep, eat, speak, play and socialise with other children. Other impacts include pain, infections, poor diet, and impaired nutrition and growth which affect the ability of the child to learn, thrive and develop. To benefit fully from education children need to be healthy and ready to learn.

The two main oral diseases, dental decay and periodontal disease, share the same risk factors as other chronic diseases and conditions, such as heart disease, cancer, strokes, diabetes and obesity.

A life-course approach to chronic disease development highlights the importance of early childhood factors in the development of chronic ill-health, including oral diseases.

Oral health among children aged five years attending mainstream schools is a useful indicator to measure the impact of interventions to improve general health and wellbeing (including parenting, weaning and feeding practices, and nutrition) and school readiness. This metric is currently measured every two years and is commissioned by local authorities as a statutory requirement.

Oral health inequality remains a key challenge across Oldham with children living in lower income and socially disadvantaged groups experiencing disproportionately higher levels of oral health disease. Levels of general decay and incisor caries are also higher in some ethnic minority populations, but especially Pakistani and Bangladeshi heritage children.

Roles and responsibilities

The Health and Social Care Act 2012 redistributed resources and responsibilities previously held by Primary Care Trusts. Since April 2013 the roles and responsibilities of Local Authorities, NHS England and Public Health England (PHE) in relation to oral health and care are:

Local Authorities (LA) have responsibility for improving oral health in the population and there is a Public Health Outcomes Framework measure that relates to this (dental decay among five year olds). They are therefore responsible for commissioning actions and programmes to tackle poor oral health and reduce inequalities. Some of these may involve services provided and commissioned by the LA such as Health Visiting and School Nursing Services. In addition LAs are responsible for monitoring general and oral health and undertaking health needs assessments relating to oral health. This responsibility is supported by the PHE Dental Public Health Epidemiology Programme which facilitates national surveys of a variety of population groups and aims to provide estimates of oral health at local authority level. This programme usually requires LAs to commission local fieldworkers to undertake local surveys according to a national protocol.

NHS England - in Greater Manchester the Health and Social Care Partnership (H&SCP) dental commissioners are responsible for commissioning all primary, specialist and hospital preventive and clinical care for oral conditions in Greater Manchester. This covers general dental practices, access centres, and community dental services for primary care, a range of providers for specialist care and dental and general hospitals for inpatient and outpatient care.

Public Health England (PHE) has a responsibility to provide high level expertise on oral health to support and add value to LAs and NHS England teams. For example, in Greater Manchester, PHE facilitates and supports the GM Oral Improvement Leadership Network.

Contextual evidence

The latest survey of five year old children in England (2016/17) shows that the level of dental decay has decreased. In 2014/15 five in ten (50.9%) children aged five experienced dental decay with an average of 2.4 teeth affected. In 2016/17 this reduced to three in ten (34.8%) with an average of 1.4 teeth affected (Appendix 1). It is important to acknowledge that the survey sample was much smaller than previous years and this could affect how well our sample reflects the five year old population in Oldham.

The only survey data that is available to explore dental decay rates amongst three year olds was published back in 2013. The survey found that 30% of this age group attending child care establishments in Oldham had experience of dental decay. This was above the Greater Manchester (20%), North West (14%) and England (12%) averages. On average three year olds in Oldham had 1.8 teeth that were decayed, missing or filled. West Oldham had the highest proportion (45%) of children affected by dental decay (Appendix 1).

In some cases dental decay occurring in the first two or three years of life affects the smooth surfaces of upper front teeth and can affect many other teeth as well. This type of decay (early childhood caries) occurs more often in some ethnic groups and is usually associated with long term use of a baby bottle containing sugared drinks, especially if given at night (NICE Public Health Guidance, 2008 ; Department of Health, 2011 and Public Health England, 2014). The 2013 survey found that 14% of three year olds had early childhood caries which was higher than the Greater Manchester 8% and England 4% averages (DPHEP, 2013). Higher proportions of children from Pakistani and Bangladeshi heritage groups experienced early childhood caries.

Dental extractions are the most common single reason for hospital admissions for young children aged 5 to 9 years of age in England. In Oldham, there were 360 children and young people aged between 0 to 19 years admitted to hospital for dental extractions in 2016/17. Of these, over 70% were for decay. The numbers were highest in the 5 to 9 year age group (156 admissions). The total cost to the Oldham health economy is almost £360,000; approximately £1,000 per case. Consideration must also be given to the lost time from school, sleepless nights for many children, time off work that parents/carers experience and the stress this brings to many vulnerable families, being caused by a largely preventable disease.

¹ Public Health England Dental Public Health Epidemiological Programme (DPHEP) survey (2016/17) www.nwph.net/dentalhealth

Targets

Changes in the proportion of five year old children free from dental decay is a useful indicator to measure the impact of interventions to reduce poverty improve health, including parenting, weaning and feeding. It can give early warning of improvements or deterioration of health in the population of pre-school children.

Our ambition is to reduce the prevalence of dental decay by 10 percentage points amongst five year olds by 2021. This is an ambitious but, if achieved, could bring oral health in line with the England average.

Oral health improvement strategy for Oldham

The Strategy

Oral health improvement interventions can be aimed at the whole population and at specific groups or individuals at risk of dental decay. This strategy uses proportionate universalism which focuses on integrating oral health improvement activity at scale and intensity, but proportionate to the level of disadvantage. Applying this approach to pre-school children and families means that a combination of both universal and targeted activities are required alongside more specialist oral health improvement activity.

To implement the strategy will require embedding oral health improvement activity across the Right Start Service and School Nursing as well as the wider public health workforce (e.g. education, health and social care and community pharmacy) and settings. Those pre-school children and families who are most at risk of experiencing dental decay (e.g. looked after children, children living in poverty and children who are inpatients) should receive additional support through collaboration.

This is an ambitious plan but if achieved, could have a significant impact on prevalence and severity of oral health disease amongst preschool children in Oldham. The activities identified in the strategy are based on the best available evidence which uses both targeted and universal approaches. These are weighted towards communications, culture and behaviour change, reducing amount and frequency of sugar, twice daily use of fluoride toothpaste, and attendance at the dentist where a proactive preventive approach is taken, including the use of fluoride varnishing.

Ambition and Aim

- The ambition is to reduce the proportion of five year old children experiencing dental decay from 34.8% to 23% by 2021.
- The aim of this strategy is to support coordinated activity across Oldham to improve oral health, reduce oral health inequalities and lay solid foundations for good oral health amongst preschool children and their families.

Objectives

The objectives of the strategy are set out below, reflect the recommendations made in 'Commissioning Better Oral Health' (published in June 2014 by Public Health England Appendix 2) and NICE guidance.

Establish a culture that supports good oral health across Oldham

- Increase the knowledge and skills of district and cluster teams to support oral health improvement initiatives across localities.
- Promote oral health improvement / preventative treatment across key stakeholders through a multi-disciplinary annual event.

Increase attendance at dentists where a preventive treatment can take place including fluoride varnishing

- Promote the importance of preschool children attending the dentist for preventive treatment including fluoride varnishing, through oral health education.
- Encourage parents / carers to regularly visit the dentist from an early age through health visiting, early years settings and Baby Teeth Do Matter.

Changing the culture so that there is a reduction in the use of feeding bottles containing sugared drinks, especially at night.

- Introduction of healthier food and drink policies in preschool settings to create a health promoting environment.
- Use Public Health England Change 4 Life / Sugar Swaps campaign to target preschool children and families at risk of oral health disease.
- Targeted bottle-to-feeder cup programme from 6 months onwards to encourage parents to wean babies off bottles through health visiting.
- Use volunteer peer (lay) oral health workers targeting families with preschool children to reduce sugar consumption and promote good oral health practices.
- Provide training / resources for the early years' workforce to challenge parents and carers where children have bottles past the age of 12 months and advise about risk, safe drinks and transfer to cups.

Increasing preschool children's exposure to fluoride

- Targeted and timely provision of free toothbrushes and toothpaste (via health visitors at all assessments) across Oldham and wider Right Start Team as part of on-going interventions.

Increase the numbers of children who are brushing their teeth twice a day, and particularly before bed

- Promote toothbrushing guidance to providers of childcare services (including child minders) in the private and voluntary sector as best practice.
- Use GM social marketing methods to promote tooth brushing messages within a range of settings.
- Train early years workforce to support parents to establish and maintain twice daily toothbrushing at home.

Social marketing programmes to promote oral health and uptake of dental services among preschool children and families

- Use media, literature and social marketing campaigns to promote the importance of good oral health. This will include localised campaigns focused on:

o National Smile Month

o The Big Brush (local campaign)

o Sugar reduction/sugar swaps (Change 4 Life)

o Prolonged bottle use/promote water (local campaign)



Embed oral health improvement into health, early year programmes/ services and within public policies to reduce oral health inequalities

- Review and maintain standards for local food, drink and snacks policies in a range of settings, including nurseries and children's centres (e.g. healthy eating award).

- Ensure all public services promote oral health by:

o Encouraging and supporting breastfeeding

- o Making plain drinking water freely available, offering a choice of food, drinks and snacks (including from vending machines) that support good oral health and a healthier diet (for example, that are sugar-free or low in sugar and keeping these to mealtimes).**

o Introducing healthy eating policies

o Encouraging multi-disciplinary annual oral health event

Integrate oral health improvement across professional groups, agencies, voluntary and community delivering care to families of preschool children

- Oral health training across the wider children's workforce in health, social care and education workforce – ensure messages are consistent.
- Oral health improvement key performance indicators within health and social care service specifications.
- Integrate oral health improvement policies across children and young people policies and programmes.



Evaluation

The oral health improvement interventions selected in this strategy have been based upon the evidence base, what is culturally appropriate and what is possible within the available resources.

The strategy will use the following health outcomes to measure the overarching strategic outcomes:

- Change in tooth decay levels in the five year old population
- Reduction in decay rates in most disadvantaged groups in Oldham
- Reduced hospital tooth extractions in 5 – 9 year olds
- The application of fluoride varnish by General Dental Practices 2 to 16 year olds

To measure the intermediate outcomes will require both quantitative and qualitative methods to understand:

- Parents / carers change in oral health knowledge and self-efficacy
- Health and Social Care professionals change in oral health knowledge and health literacy
- Change in reported toothbrushing behaviour because of toothbrushing schemes
- Change in food choice in early years settings
- Change in the number of CYP workforce incorporating oral health messages into work programmes
- Change in reported use of fluoridated toothpaste due to toothpaste distribution scheme

To demonstrate the short term outcomes the strategy will use the following outcomes.

- Number (%) of early year settings delivering supervised toothbrushing programme
- Number (%) of early years workforce receiving oral health training per year
- Number (%) of early years settings achieving the Healthy Eating Award
- Number of children at 6 – 8 week contact receiving a free toothbrush and fluoride toothpaste containing at least 1350ppmF and a free flow feeder cup

Appendix 1

Decayed, missing or filled teeth index (dmft)

The decayed, missing or filled teeth index (DMFT for adult teeth and dmft for first teeth) is commonly used as an average measure of severity of decay within a population. It represents the number of obviously decayed and untreated (DT, dt) teeth, missing due to extraction because of decay (MT, mt) and filled teeth (FT, ft) in an individual's mouth and the average value for a population. The lower the DMFT / dmft value, the better the dental health of the individual or population. Prevalence of decay is shown as a percentage of the population who have one or more decayed, missing or filled teeth.

Prevalence and severity of dental decay in three year old children (2013)

The dental disease process starts early and reflects the impact of programmes designed to improve parenting, child weaning, feeding and living conditions. The state of young children's teeth is a useful indicator of the impact of interventions to reduce poverty, improve health, including parenting, weaning and feeding. It can give early warning of improvements or deterioration of health in the population of pre-school children.

In some cases dental decay occurring in the first two or three years of life affects the smooth surfaces of upper front teeth and can affect many other teeth as well. This type of decay (early childhood caries) is found among specific ethnic groups and is usually associated with long term use of a baby bottle containing sugared drinks, especially if given at night (NICE Public Health Guidance, 2008; Department of Health, 2011 and Public Health England, 2014). The only survey data that is available to explore dental decay rates amongst three year olds was published back in 2013. The survey found that 14% of three year olds had early childhood caries which was higher than the Greater Manchester 8% and England 4% averages (DPHEP, 2013). The survey found that higher proportions of children affected with early childhood caries were from Pakistani and Bangladeshi heritage groups.

The Dental Public Health epidemiology programme (DPHEP) oral health survey of three year children (2013) found that 30% of this age group attending child care establishments in Oldham had experience of dental decay (Figure 1). This was above the Greater Manchester (20%), North West (14%) and England (12%) averages.

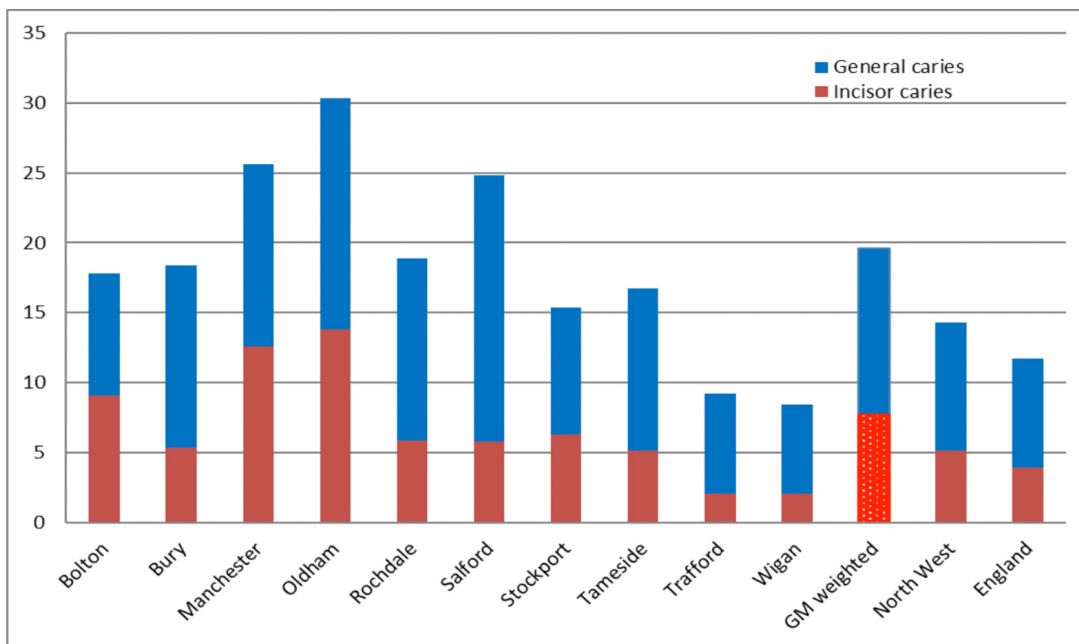


Figure 1: The proportion of 3 year olds in Oldham compared to Greater Manchester Local Authorities with general and incisor caries (2013)

On average, three year olds in Oldham had 1.08 teeth that were decayed, missing or filled. This was above the both the North West 0.48 and England 0.36 average. West Oldham had the highest proportion (45%) of children affected with an average of 2 teeth per child (figure 2). Saddleworth and Lees was the only district where the proportion of children affected by decay was below the North West and England average.

In Oldham, 14% of three year olds had early childhood caries which was higher than both Greater Manchester 8% and England 4% average (Figure 2). The largest proportion of the Oldham population with EEC was in West Oldham with 23%.

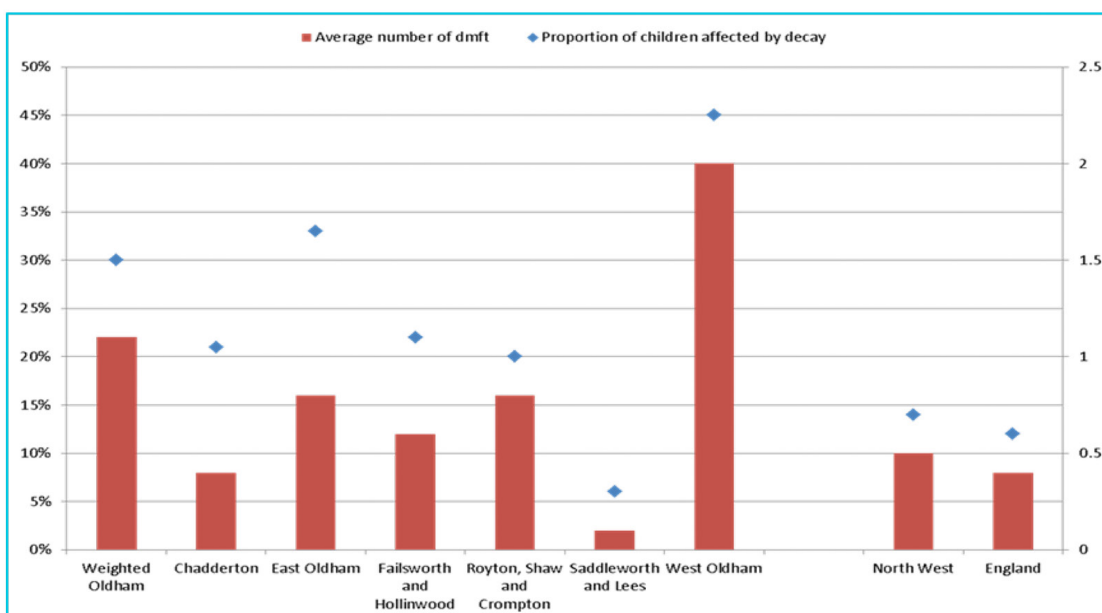


Figure 2: General Caries among 3 year olds in Oldham – by District Partnership

The proportion of children affected by general decay and early childhood caries is higher in Pakistani and Bangladeshi heritage groups in Oldham (Figure 3). Ethnicity has been demonstrated to be associated with poor dental health status. Nationally, children from all ethnic minority groups, but especially Pakistani and Bangladeshi heritage groups, were less likely to have ever visited the dentist. Of those who had attended, this was more likely to have been a visit for dental problems rather than preventive practices.

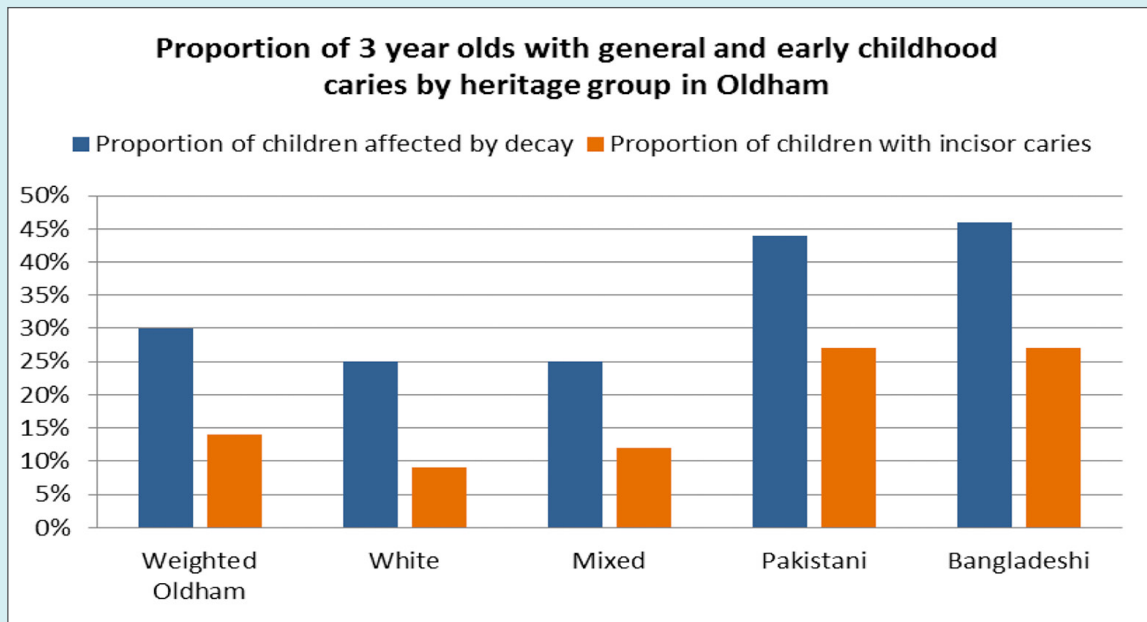


Figure 3: Proportion of Oldham 3 year olds with general and incisor caries by heritage group

Prevalence and severity of dental decay in five year old children in Oldham (2016-17)

The latest Public Dental Health Epidemiology Programme for England, oral health survey of five-year-old children (2016/17) was the fourth national survey undertaken using the same methodology. Comparing the results from the four surveys from 2007-08, 2011-12, 2014-15 and 2016-17 shows that dental decay levels in Oldham have decreased.

The current survey estimates that three in ten (34.8%) children aged five in Oldham have decayed, missing or filled teeth (d3mft) with an average of 1.4 teeth affected (see Figure 4 below). This was above the England average (0.8) but similar to the Northwest rate (1.3).

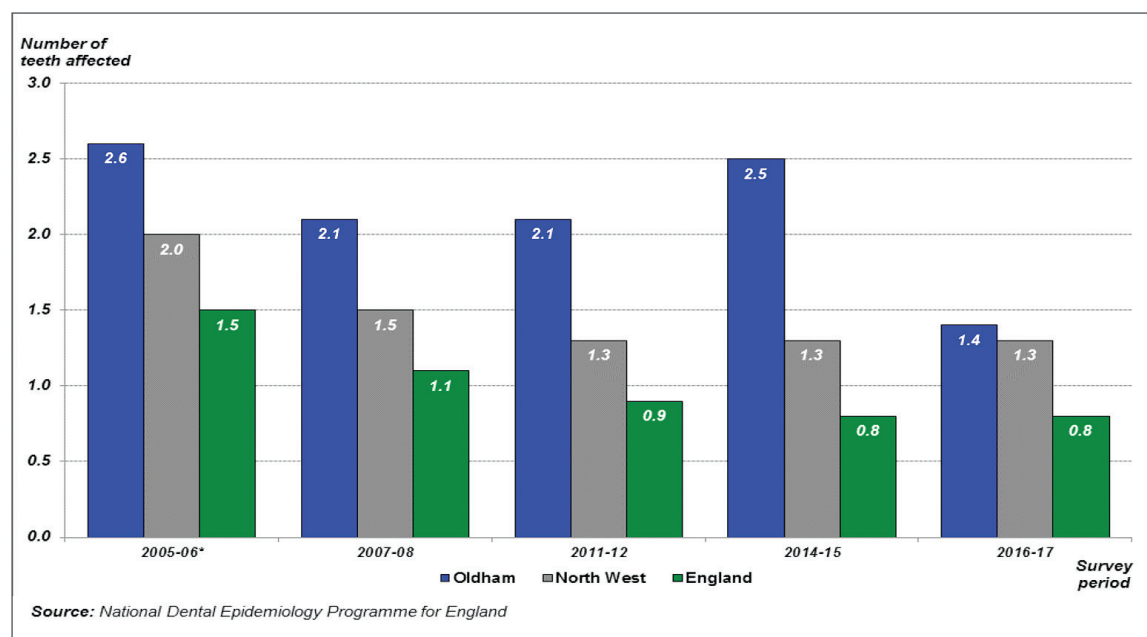


Figure 4: Decayed, missing and filled teeth (dmft) in Oldham five year olds compared to the North West of England (2005 to 2017)

Figure 5a below shows that amongst GM LAs Oldham (34.8%) had the fourth lowest proportion of children with d3mft, falling by 16.1 percentage points – almost equalling the North West average. The proportion of 5 year olds Oldham with incisor caries halved from 20.8% in 2014/15 to 10.3% in 2016/17 but still twice the England average (5.1%).

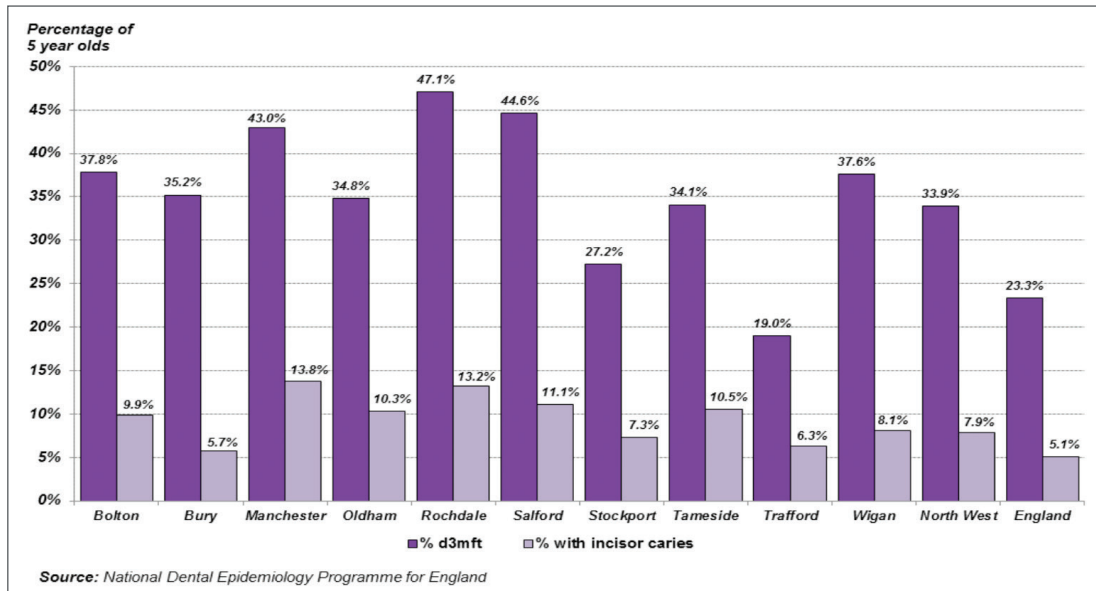


Figure 5a: Percentage of five year olds across Greater Manchester Authorities with one or more decayed, missing or filled teeth (dmft) including % of incisor caries compared to North west of England 2016 –17.

Figure 5b below offers a more longitudinal view of performance with regards to the proportion of 5 year olds with d3mft. In the first three surveys shown Oldham's rate was characteristically around 50%. Indeed, from 2007-08 (48.8%) to 2016-17 (34.8%) Oldham recorded the greatest change amongst GM LAs in the proportion of 5 year olds with dmft, falling by 14.0 percentage points – from 2014-15 to 2016-17 the rate dropped by 16.1 percentage points. Whilst Oldham currently still has some way to go to match the England average (23.3%) it is now almost on a par with the North West average (33.9%).

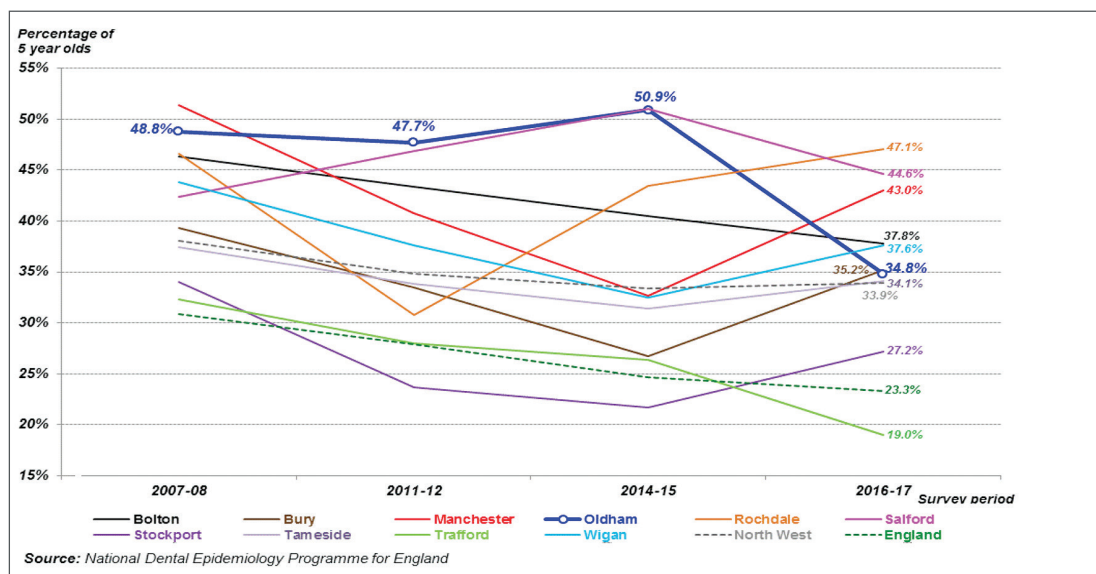


Figure 5 b Percentage of five year olds across Greater Manchester Authorities with one or more decayed, missing or filled teeth (dmft) including % of incisor caries compared to North west of England 2007–08 to 2016 –17

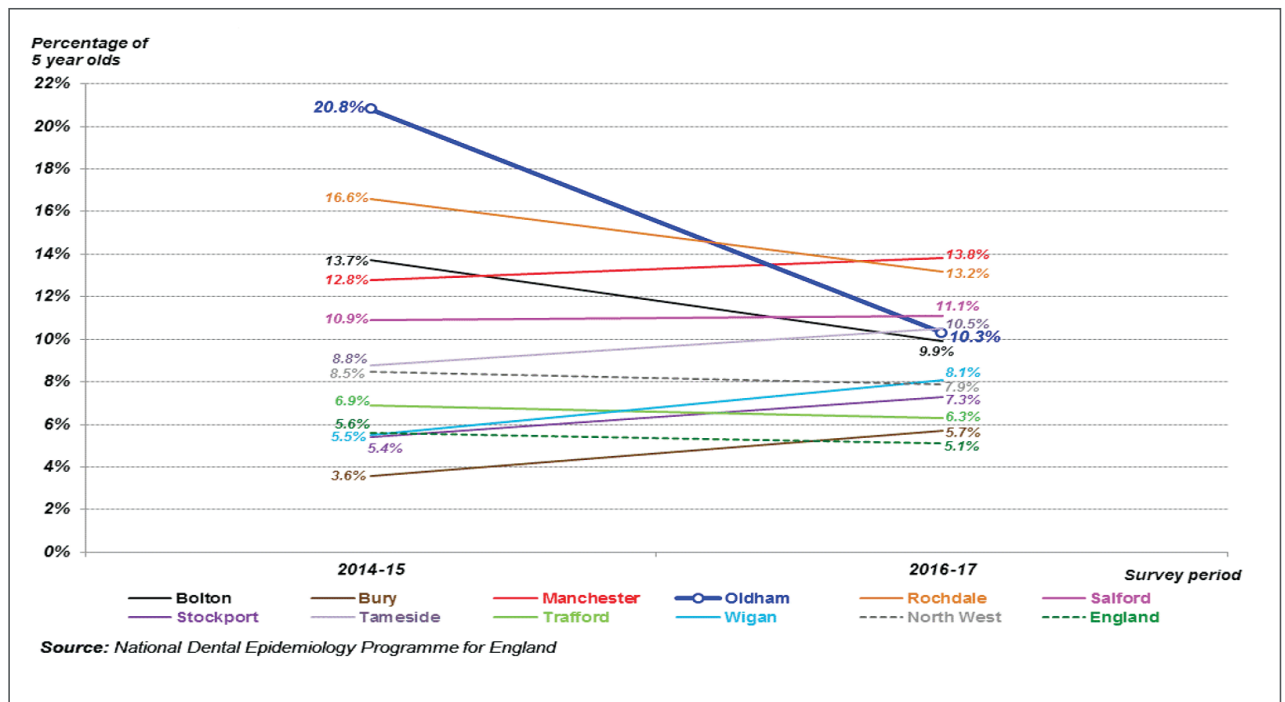


Figure 5 c Percentage of five year olds across ten Greater Manchester Authorities with one or more decayed, missing or filled teeth (dmft) including % of incisor caries) compared to North west of England 2014–15 to 2016 –17

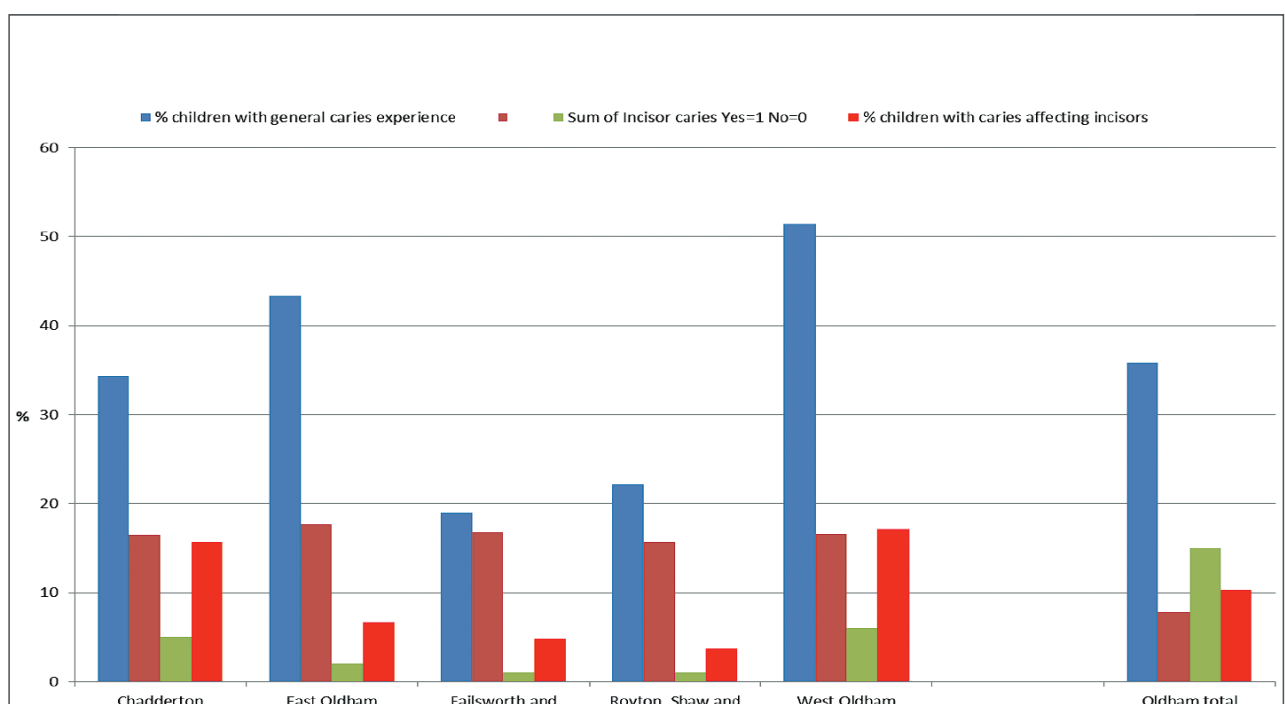


Figure 5 d Proportion of five year old children affected by general and incisor caries by district partnerships 2017

This was the second survey to include proportion of children who had dental decay affecting one or more of their incisor (front) teeth. This measure is useful as it indicates where children have been affected by a particular type of caries. 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.

Incisor decay across Oldham has decreased from 20.8% in 2014/15 to 10.3%. This still remains above the North West 7.9% and England average of 5.1%. Across Oldham, there was marked geographic variation between District Partnerships with West Oldham 17% and Chadderton 15% experiencing higher levels (figure 5d). This type of decay is closely linked with specific health behaviours which are influenced by local cultural norms. Children with incisor decay are likely to have more teeth affected than is the case for general decay, so tackling this problem may lead to relatively higher benefits.

Where children with tooth decay are not diagnosed early and treated appropriately by primary care dentists (e.g. through the use of fluoride varnishing or fillings), they may be referred to hospital for specialist care. If the teeth are too badly damaged to be restored, it will be necessary to extract them. General anaesthetic is often given to children undergoing multiple tooth extractions to reduce pain and anxiety. This is restricted to hospital settings as there is access to critical care facilities owing to safety concerns with young children.

Dental decay is the most common reason for hospital admissions for children aged 5 to 9 years of age in England in 2016/17, in Oldham, there were 360 children and young people age 0 to 19 years admitted to hospital for dental extractions. The number of admissions was highest in the 5 to 9 year age group (156). The cost to the Oldham health economy is almost £360,000; approximately £1,000 per case. Consideration must also be given to the lost time at school, sleepless nights for many children, time off work that parents/carers experience and the stress this brings to many vulnerable families, being caused by a largely preventable disease.



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