No Health Without Oral Health

How Oral Health contributes to Public Health Priorities in Scotland

March 2019

This paper has been prepared by the Consultants in Dental Public Health and Chief Administrative Dental Officers Group in Scotland as part of the Public Health Reform Programme.

Table of Contents

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Over the last decade significant improvements in oral health have been achieved through a range of evidence informed interventions delivered by multi-disciplinary teams of dental and oral health care professionals in partnership with a range of multi-agency and Third Sector partners. We must now use the Public Health Priorities to focus our efforts to tackle the continuing health challenges our Nation faces.

Vibrant, healthy and safe places and communities	• We can tackle inequalities in oral health by working with communities, Third Sector organisations and other agencies as key collaborators for oral health improvement. Initiatives such as the Community Challenge Fund outlined in the 2018 Scottish Government Oral Health Improvement Plan will allow this to be achieved.
Flourish in our early years	• We need to build on the progress made in the Childsmile programme through multi disciplinary and multi -agency working and aim that dental general anaesthetics no longer remain the single biggest reason for elective admission to hospital in children.
Good mental wellbeing	• We must recognise the growing burden and impact of poor mental wellbeing on our population. Addressing the oral causes of psychological distress in vulnerable populations including those who are homeless and in prison will continue to be a priority.
Reduce the use of and harm from alcohol, tobacco and other drugs	• We should continue to address risk factors for oral cancer such as tobacco and alcohol in primary care through brief intervention and referral to specialist services. The dental and oral health profession voice is important in supporting healthy policy changes.
Sustainable, inclusive economy with equality of outcomes	• We need to support individuals to get into and remain in the workforce through prevention and treatment of oral diseases. NHS dental and oral health services need to adapt to the changing needs of our population through sustainable models of care.
Eat well, have a healthy weight and are physically active	• We must address excess sugar intake and poor diet as a common risk across many diseases, including ensuring common, consistent and evidence based behaviour change messaging. Dental and oral health professionals should continue to advocate for action and support developments of healthy public policy.

Work to improve the oral health of the Scottish population requires action which is underpinned by the principles of Public Health; reducing inequalities, focus on prevention, empowering people and local communities and being evidence informed.

1.0 Executive Summary

This report has been produced by the Consultants in Dental Public Health (CsDPH) and Chief Administrative Dental Officers (CADO) Group in Scotland as part of the Public Health Reform Programme. This paper outlines the successes in oral health and outlines the challenges to be faced in the years ahead. These challenges require continued effort of dental and oral health professionals working in partnership with individuals, communities, Local Authority Third and Independent Sector partners. The importance of adopting a public health approach: reducing inequalities, focus on prevention, empowering people and local communities and being evidence informed is essential. The CsDPH&CADO group endorse the recently published Public Health Priorities for Scotland and welcome the opportunity these priorities bring to refocus efforts on improving oral heath for the Scottish population.

Good oral health is recognised by the World Health Organisation as an important component of general health and wellbeing. The relationship between oral health and general health is well documented, with oral disease and non-communicable chronic diseases sharing many common risk factors, most notably poverty, diet, smoking and alcohol use.

In 2005, over half (55%) of Scottish Primary 1 children exhibited signs of obvious dental decay experience, and NHS dental registration rates were low with 49% of adults and 66% of children registered with an NHS dentist. Now, 13 years on a very different landscape in oral health exists, with significant improvements in a number of areas together with a number of emerging challenges. The latest figures from the National Dental Inspection Programme show that 71% of Primary 1 and 77% of Primary 7 children show no signs of obvious dental decay experience. With latest figures for NHS dental registration standing at 94% of adults and 94% of children being registered.

Despite wide scale improvements in child oral health a number of challenges persist, these include:

- General anaesthesia for dental extractions remains the single biggest reason for elective admission to hospital for children, with nearly 8000 procedures annually resulting in a cost of around £5million,
- The gap in obvious dental decay experience between those in SIMD 1 and SIMD 5 remains clear, at a 30% differential for Primary 1 children and 21% in Primary 7 children,
- For those children in SIMD1, by Primary 1 44% will have obvious dental decay experience.

The Scottish Health Survey (SHS) 2017 gathered data from adults across Scotland about their oral health indicating that:

- 11% of adults had experienced pain from their teeth or mouth,
- 27% felt they were in need of treatment,
- 23% reported significant difficulties in accessing care such as physical access issues, cost of treatment, travel and difficulty in getting appropriate appointments.

Cancer of the head and neck continues to present a challenge to the health of the population. Based on 2016 incidence it is the 6th most common cancer in Scotland for all adults and contributes around 4% of all cancers. There are wide inequalities in head and neck cancer – with the greatest burden found amongst those from the poorest communities. Smoking and alcohol consumption are the

main risk factors for head and neck cancer, with human papilloma virus (HPV) increasingly associated with oropharyngeal cancer – which is the fastest rising cancer in Scotland over the most recent decade.

A number of oral health improvement programmes have been developed to support the oral health needs of specific population groups deemed to be at high risk of dental disease. These highly successful programmes use evidence informed interventions and multi-agency partnerships and continue to strive to improve population oral health:

- Childsmile-delivers interventions to improve the oral health of children, with universal and targeted components such as nursery and early Primary School toothbrushing, fluoride varnish application and practice based health advice,
- Caring for Smiles- supports routine oral care in residential care settings for older adults by training social care staff to perform oral care and make links with local dental teams,
- Smile4Life- works to address the oral health needs of the homeless population through a multidisciplinary and multiagency team approach,
- Mouth Matters- focuses on improving the oral health of the prison population through supporting peer mentorship and health coaching interventions,
- Adults with Additional Care Needs- provides advice and support to those who require additional support to maintain their oral health and their carers.

The new Public Health Priorities provides a helpful framework for where we need to focus our attention to address the challenges faced in the future. These key areas are outlined in Table 1 below.

Table 1 Future Focus for Improving Oral Health in Scotland

Vibrant, healthy and safe places and communities	•We can tackle inequalities in oral health by working with communities, Third Sector organisations and other agencies as key collaborators for oral health improvement. Initiatives such as the Community Challenge Fund outlined in the 2018 Scottish Government Oral Health Improvement Plan will allow this to be achieved.
Flourish in our early years	•We need to build on the progress made in the Childsmile programme through multi disciplinary and multi -agency working and aim that dental general anaesthetics no longer remain the single biggest reason for elective admission to hospital in children.
Good mental wellbeing	•We must recognise the growing burden and impact of poor mental wellbeing on our population. Addressing the oral causes of psychological distress in vulnerable populations including those who are homeless and in prison will continue to be a priority.
Reduce the use of and harm from alcohol, tobacco and other drugs	•We should continue to address risk factors for oral cancer such as tobacco and alcohol in primary care through brief intervention and referral to specialist services. The dental and oral health profession voice is important in supporting healthy policy changes.
Sustainable, inclusive economy with equality of outcomes	•We need to support individuals to get into and remain in the workforce through prevention and treatment of oral diseases. NHS dental and oral health services need to adapt to the changing needs of our population through sustainable models of care.
Eat well, have a healthy weight and are physically active	•We must address excess sugar intake and poor diet as a common risk across many diseases, including ensuring common, consistent and evidence based behaviour change messaging. Dental and oral health professionals should continue to advocate for action and support developments of healthy public policy.

2.0 Introduction

This report has been produced by the Consultants in Dental Public Health (CsDPH) and Chief Administrative Dental Officers (CADO) Group in Scotland as part of the Public Health Reform Programme. This paper outlines the successes in oral health and outlines the challenges to be faced in the years ahead. These challenges require continued effort of dental and oral health professionals working in partnership with individuals, communities, Local Authority Third and Independent Sector partners. The importance of adopting a public health approach: reducing inequalities, focus on prevention, empowering people and local communities and being evidence informed is essential. The CsDPH&CADO group endorse the newly published Public Health Priorities for Scotland and welcome the opportunity these priorities bring to refocus efforts on improving oral heath for the Scottish population.

Scotland's Public Health Priorities:

1. Live in vibrant, healthy and safe places and communities
2. Flourish in our early years
3. Have good mental wellbeing
4. Reduce the use of and harm from alcohol, tobacco and other drugs
5. Have a sustainable, inclusive economy with equality of outcomes for all
6. Eat well, have a healthy weight and are physically active

Good oral health is recognised by the World Health Organisation as an important component of general health and wellbeing[1] and has a place within the Public Health Priorities outlined above. The relationship between oral health and general health is well documented, with oral disease and non-communicable chronic diseases sharing many common risk factors, most notably poverty, diet, smoking and alcohol use[2]. Consequently, investing time and expertise in collaboration with the wider health community on the common risk factor approach helps address dental as well as general health issues. This is clearly reflected in the Public Health Priorities document and demonstrates the place dental public health has within a wider public health workforce and the significant contribution dental and oral health professionals can make to address the health challenges of our population.

In the last 15 years oral health and access to NHS dental services has seen significant improvements and this has been achieved by collaborative working with a range of partners both within and beyond the health service. The dental and oral health workforce includes primary care dental teams, the Public Dental Service, who deliver many of the oral health improvement programmes, the hospital dental service and oral health professionals working in health improvement teams. This workforce has collaborated with partners working in Health and Social Care, Education, Third and Independent Sector colleagues to bring about these improvements. Whilst it is important to reflect on and celebrate success it is important to recognise that significant challenges still remain and consideration needs to be given to key areas of priority for future focus.

3.0 Is oral health a concern for Public Health?

In 2005, the Scottish Government published An Action Plan for Improving Oral Health and Modernising NHS Dental Services in Scotland[3]. This was against a backdrop of poor oral health in both children and adults. Indeed, at that time over half (55%) of Scottish Primary 1 children exhibited signs of obvious dental decay experience, and NHS dental registration rates were low with 66% of children and 49% of adults registered. Bold steps were taken to improve the oral health of the Scottish population including the development and implementation of the Childsmile programme, with work streams being developed for other priority groups such as older adults living in care homes (Caring for Smiles), those who are experiencing homelessness (Smile4Life) and those in prison (Mouth Matters). A number of policy measures were also implemented to improve access to NHS dental care across the country.

Now, 13 years on from the publication of that plan a very different landscape in oral health exists. The latest figures from the National Dental Inspection Programme (2017 and 2018)[4,5] show that 71% of Primary 1 and 77% of Primary 7 children show no signs of obvious dental decay experience. This has been a significant improvement from the 2005 position of 51% and 53% respectively (Figure 1 and 2). The number and severity of teeth affected by dental decay has also improved with the average number of teeth affected dropping from 2.36 to 1.14 in Primary 1 children over the same period, and from 1.29 to 0.49 in Primary 7 children [4,5].

Figure 1: Trends in the percentage of P1 children with no obvious dental decay experience in Scotland: 1988-2018 (Source NDIP 2018)

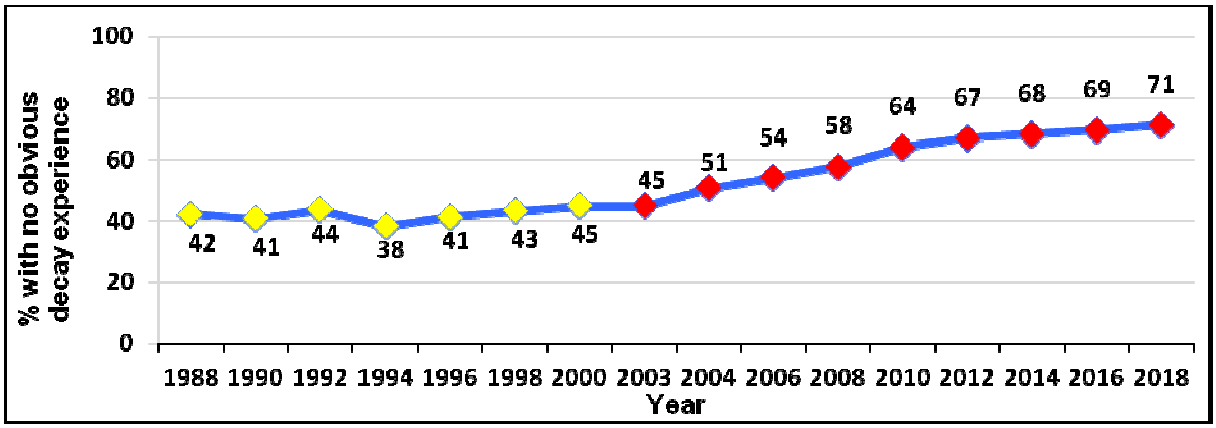
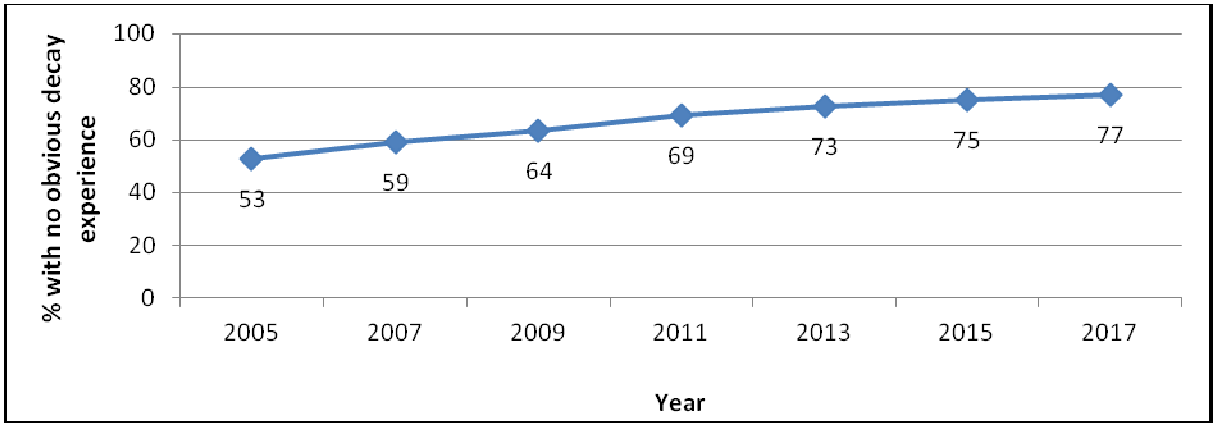


Figure 2: Trends in the percentage of P7 children with no obvious dental decay experience in Scotland: 2005-2017 (Source NDIP 2017)



Despite these wide scale improvements in child oral health a number of challenges still exist. Oral health demonstrates inequalities based on deprivation. Dental extractions remain the single biggest reason for elective admission to hospital for children, with over 8000 procedures annually[6]. This results in a cost of around £5million and 8000 lost days from school or nursery[6]. Whilst the action taken to improve oral health in children has not widened inequalities, the gap between those in SIMD 1 and SIMD 5 remains clear, at a 30% differential for Primary 1 children and 21% in Primary 7 children (Figures 3 and 4)[4,5]. These figures also illustrate that for those children in SIMD1, by Primary 1, 44% will have obvious dental decay experience. This is a significant burden of disease in those living in the most deprived areas in Scotland and represents a significant challenge for the future[4].

Figure 3: Change between 2008 and 2018 in the percentage of P1 children in Scotland with no obvious dental decay experience; by SIMD quintile (Source NDIP 2018)

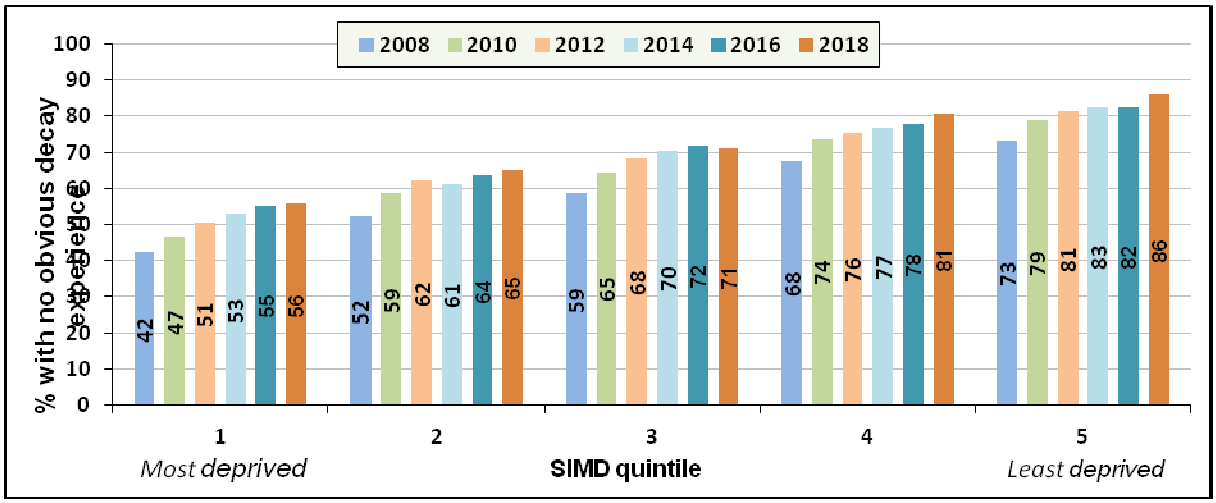
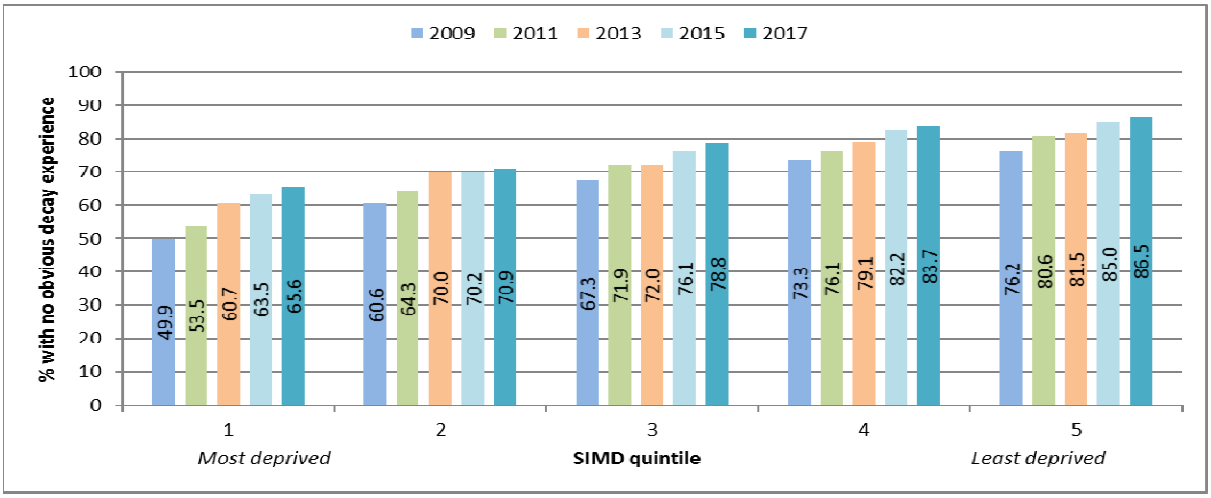


Figure 4: Change between 2009 and 2017 in the percentage of P7 children in Scotland with no obvious dental decay experience; by SIMD quintile (Source NDIP 2017)



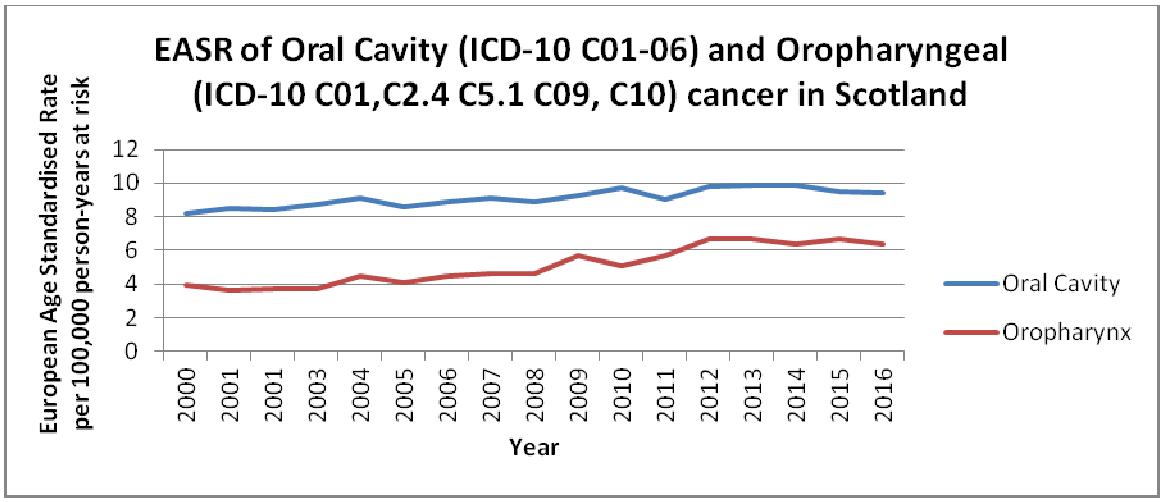
The Scottish Health Survey (SHS) 2017 gathered data from adults across Scotland about their oral health[7]. This self-reported, representative sample showed that 11% of adults had experienced pain from their teeth or mouth in the month prior to completing the survey, 27% felt they were in need of treatment and 25% had noticed bleeding from their gums occasionally or often. This snapshot of data indicates that a significant proportion of the adult population experience dental problems on an ongoing basis.

Access to dental care for the general population was a significant problem when the 2005 Dental Action Plan was published; many initiatives were put in place to respond to this. These included, grants to purchase or expand dental practices, increases in the number of allowances available to NHS dental practices, increase in the number of dental undergraduate students, overseas recruitment drives and expansion of dental therapist training. This has been highly successful with the 2018 Oral Health Improvement Plan noting that access to care was not a significant ongoing concern[8]. This is supported by the latest NHS dental registration figures which demonstrate that 94% of children and 94% of adults living in Scotland are registered with an NHS dentist[9]. However, following what has been a relatively stable period within the dental labour market, there does now appear to be signals of challenge in recruitment and retention of dentists within remote and rural areas which brings with it the potential to cause challenges to access to NHS dental care in remote and rural areas. This is despite recent workforce reports which estimate that the supply of dentists is forecast to exceed the number required to maintain current registration rates[10]. However, it is noted that the 2018 workforce report has indicated that there is considerable uncertainty over inflows into the dental labour from mainly non UK sources. The remote and rural Health Boards are conscious that they in particular, are affected when there are reductions in available dental workforce and due to the relatively small number of providers often working in small practices loss of even one individual can have significant impact on service provision for the population the practice/service serves. It is also noted the challenges with remote and rural recruitment and retention are long standing and require sustained efforts and initiatives to address. In addition data from the SHS indicated that whilst 72% of adults reported having been to the dentist in the last year, 23% reported significant difficulties in accessing care such as physical access issues, cost of treatment and travel and difficulty in getting appropriate appointments[7]. Whilst the improvements in access to NHS

dental services are significant, there are still some individuals and areas which continue to face ongoing challenges.

Cancer of the head and neck continues to present a challenge to the health of the population. Recent data suggest that based on 2016 incidence it is the 6th most common cancer in Scotland for all adults (4th for males, 8th for females) and contributes around 4% of all cancers[11]. The European Age Standardised Rate (EASR) for incidence of oral cavity cancers has shown a slight upward trend over the years since 2000, similarly cancer of the oropharynx have show this increase (Figure 5)[12].

Figure 5: EASR of Oral Cavity and Oropharyngeal Cancer 2000-2016 in Scotland (Source ISD Cancer Statistics)



1. Due to overlap in ICD codes between oral cavity and oropharyngeal cancers some cases may be double counted in the above graph

There are wide inequalities in head and neck cancer – with the greatest burden found amongst those from the poorest communities[13]. Smoking and alcohol consumption are the main risk factors for head and neck cancer, with human papilloma virus (HPV) increasingly associated with oropharyngeal cancer – which is related to oropharyngeal cancer becoming the fastest rising cancer in Scotland in the most recent decade [14,15].

There are also a number of emerging issues on the horizon including the challenges of caring for a larger population of older adults. This has significant implications for dental care as more adults are living longer and retaining their teeth, indeed the Scottish Health Survey reported that 28% of adults aged 75 and over had more than 20 teeth[7]. This is often in tandem with multiple long term conditions and poly-pharmacy which may present challenges in maintaining the oral health of the individual and also in provision of dental care. The 2018 Scottish Government Oral Health Improvement Plan (OHIP) recognises that the current system of dental care needs to adapt and move to a more preventive focused pathway[8]. Therefore, significant work must be undertaken to design, test and implement such a system moving forward.

4.0 What have we achieved so far?

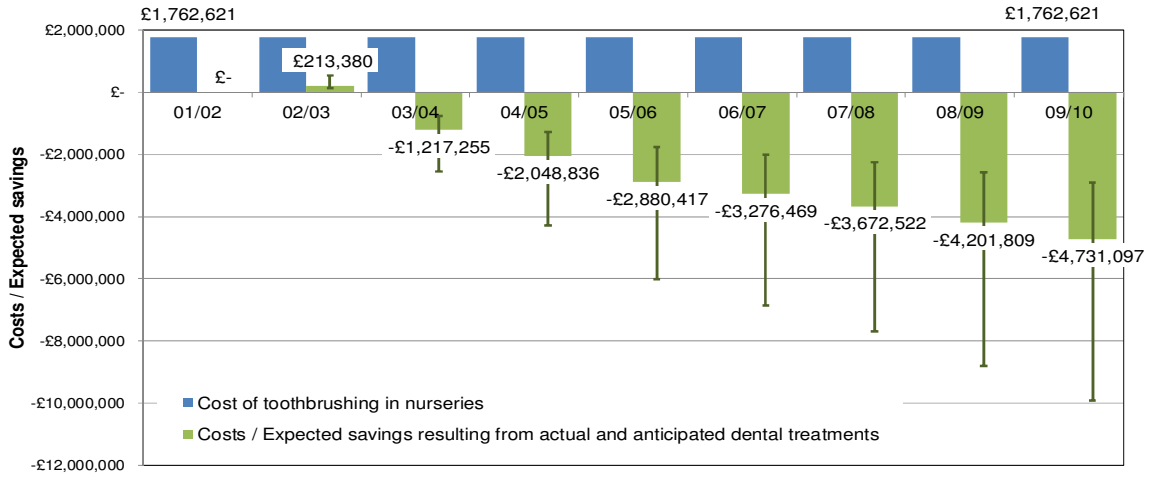
Many of the improvements in oral health over the past decade have been the result of significant investment in the oral health of key priority groups and joint working with health and social care professionals, Local Authorities and the Third and Independent sector. These Priority Groups include children (Childsmile), older adults (Caring for Smiles), those who are homeless (Smile4Life) and those in prison (Mouth Matters) and adults with additional support needs (Open Wide). The key activities and achievements of these programmes are outlined here.

4.1 Childsmile

The national oral health improvement programme for children has a number of universal and targeted components which are delivered across Scotland by a diverse and enthusiastic workforce. Every child in Scotland has the opportunity to benefit from Childsmile, from the toothbrushing packs and free flow drinking cups handed out by Health Visitors to all children and the universal supervised toothbrushing programme being offered in nursery schools. The targeted components include provision of fluoride varnish in priority nurseries and schools, and the extension of toothbrushing into some primary schools. Members of the dental team are encouraged to provide evidence informed diet and toothbrushing advice and clinical prevention such as fluoride varnish in practice. Dental Health Support Workers are involved in supporting families to access dental care.

Through the comprehensive Childsmile programme, research has been able to demonstrate cost savings associated with spending on prevention activities. Within three years the nursery tooth brushing programme was shown to have recouped its annual expenditure through savings on actual and anticipated dental treatments (Figure 6)[16]. The programme also continues to contribute to the evidence base establishing the efficacy of fluoride as an effective prevention measure. The Protecting Teeth @ Three Trial is studying what the added benefit of nursery fluoride varnish application is when combined with a comprehensive oral health prevention programme (provision of toothbrushing packs and supervised toothbrushing) the results of which will be reported in due course[17].

Figure 6: Cost of nursery toothbrushing programme and costs/expected savings resulting from actual and anticipated dental treatments in comparison with 2001/02 dental treatment costs. (Source: Childsmile[16])



4.2 Caring for Smiles

The aim of the Caring for Smiles programme is to deliver oral health training to staff in care homes for dependent older people and to support staff to undertake good daily oral care. By 2016, 94% of care homes in Scotland had participated in the programme since its launch in 2010, with almost 40,000 care staff members trained[18]. A suite of resources has been published by NHS Health Scotland to support the programme, including guides for trainers, carers, care homes, and friends and families.

Work has been undertaken with NHS Education Scotland (NES) to develop a credit-rated training award, which commenced in 2014. Since then, almost 2,000 care home staff have completed the foundation level, with 80 going on to undertake intermediate training.

National collaborations with organisations such as the Care Inspectorate, Scottish Social Services Council, Scottish Care and Alzheimer's Scotland has also been undertaken. This has helped to raise awareness of the importance of good oral health for dependent older people. The Care Inspectorate recently undertook an Inspection Focus Area on dementia and oral health[19]. The results have shown that oral care is the litmus test for a good care home[19].

Over the years, local teams have responded to additional requests for training from hospital staff, care at home providers, adult day centres, family carer groups and local authorities, thus extending the reach of the programme. These links will form a helpful foundation to address the requirements of the new SG OHIP, which has a focus on meeting the needs of the ageing population.

4.3 Smile4Life

Smile4Life is the Scottish Oral Health Improvement Homelessness Programme, which aims to develop, implement and evaluate oral health prevention programmes for those who are experiencing homelessness. In 2011, Smile4Life published a needs assessment of over 800 people experiencing homelessness and found that oral health was poor (98% had experienced dental decay), services were usually accessed when in pain or in an emergency (68%) and a high proportion had severe dental anxiety (20%)[20]. Following this a comprehensive resource, based on behaviour change principles was developed to support those working with people experiencing homelessness to provide oral health preventive advice.

In addition, the Smile4Life team have continued to work with multiple partner agencies to encourage knowledge exchange and share practice to improve services for those experiencing homelessness. This has included a reflexive mapping exercise which facilitated dialogue between different services and service users. The expertise of those involved in Smile4Life has been used to contribute to local policy to prevent homelessness. A steering group has been developed within NES to steer the educational development of those working with this population, encourage partnership working and support the improvement of oral care for people experiencing homelessness.

4.4 Mouth Matters

The Scottish Oral Health Improvement Prison Programme (SOHIPP) looks to develop and take forward oral health improvement for prisoners, this includes the work carried out as part of Mouth Matters and the Oral Health and Psychosocial Needs Assessment of Prisoners. Those involved in SOHIPP have strong links with those involved in the Scottish Prison Service and there is ongoing support for the work to improve oral health of the prison population. Mouth Matters is a comprehensive resource designed to address the poor oral health of the prison population. It aims not only to improve knowledge of oral health but also support changes in oral health behaviour over six modules. It is delivered in conjunction with prison staff. Mouth Matters is now offered as a peer oral health mentoring programme which results in an SVQ level 5 qualification. Mouth Matters peer oral health mentoring is part of the Scottish Prison Service's strategy for smoke free prisons[21].

Another, programme within Mouth Matters is a health coaching intervention named PePSCOT. This is an intensive six month programme of training to become a peer coach which results in a Royal Society of Public Health Level 2 Health Improvement Award and an internationally recognised Certificate in Coaching. Two cohorts have now gone through this programme, evaluation of the first cohort has shown increased tooth brushing self-efficacy, self-esteem, better self-assessed health and reduced stress. The Oral Health and Psychosocial Needs Assessments of Prisoners, last carried out in 2011, is being repeated in 2018 across the prison estate. It is hoped a clear picture of the current needs of the prison population can be identified[22].

4.5 Open Wide

A national oral health improvement group for adults with additional care needs has been established more recently. This work focuses on the age group 16-64, i.e. those between the ages covered by Childsmile and Caring for Smiles, and is aimed at adults who need some help with their daily oral care. This will potentially target a wide variety of adults, and discussions are ongoing to define the groupings which may be included. Notwithstanding this, work is progressing to develop a Guide for Trainers in conjunction with NHS Scotland called "Open Wide" and this was launched in March 2019.

5.0 What should we focus on in the future?

Poor oral health is almost entirely amenable to prevention and demonstrates clear social patterning. The key factors in the prevention of dental decay are the restriction (quantity and frequency) of sugar intake, the use of fluoride, and other clinical preventive measures. High quality evidence exists establishing the efficacy of fluoride as a preventive measure[23].

We have strong evidence based clinical guidance relating to dentistry in Scotland from the Scottish Dental Clinical Effectiveness Programme (SDCEP)[24]. Examples of guidelines produced include Prevention and Treatment of Dental Decay in Children, which supports the preventive activities provided in Childsmile, and the Prevention and Treatment of Periodontal Disease in Primary Care, which exhibits many links to wider systemic diseases including diabetes[25]. Priority group work continues to extend the use of evidence informed interventions in other population groups, such as Caring for Smiles (for dependent older adults), Smile4Life (for those experiencing homelessness) and Mouth Matters (for the prison population).

There is evidence of an association between oropharyngeal cancer and HPV which is highly relevant given the recent announcement of gender-neutral vaccination for HPV in adolescents. Despite this, improving secondary prevention through early detection remains important as the impact of reducing increased trends through vaccination may take decades to be realised. The need to focus on addressing tobacco and excessive alcohol use must continue to be a priority and with the social patterning of this grouping of cancers a focus on tackling these issues should focus on those living in areas of deprivation.

Improvements in oral health have significant potential to contribute to the public health priorities outlined at the start of this document. In the following paragraphs each priority and its relevance to oral health is recognised.

5.1 Vibrant, healthy and safe places and communities

The difference in the presence of obvious dental decay experience between Primary 1 children living in SIMD1 and SIMD5 is 30%. Nearly half (44%) of P1 children in living SIMD1 have a largely preventable disease, which is measured at a level where intervention is required[4].

There is a significant ongoing challenge with oral health inequalities and this must be a continued focus for work in oral health. We continue to see significant differences in disease levels based on deprivation. A key partner in tackling inequalities are the individuals, communities and places affected by deprivation and it manifestations. Dentistry must look forward, and as part of the OHIP a Community Challenge Fund is being developed to explore how communities can be empowered to improve their oral health[8]. We must continue to deliver on the preventive programmes that have contributed to the improvements in oral health seen in recent years but a renewed focus on innovative and creative thinking working with local communities and third sector organisations will be of prime importance to begin to address inequalities at a community level.

5.2 Flourish in our early years

Dental general anaesthetic (for tooth extraction) remains the single biggest cause of elective admission to hospital in children. This equates to around 8000 episodes of care in hospitals each year to treat a largely preventable condition[6].

There has been a clear focus on improving child oral health, and significant progress made through the introduction of the Childsmile programme. Despite this, dental general anaesthetics remain the single biggest reason for elective admission to hospital for children. This burden of disease results in significant pain, infection and time lost from school for thousands of children each year. Maintaining the momentum and progress already made by the Childsmile programme, whilst fostering links with wider health and social care services will be imperative to cement the progress already made. Growing understanding of the impact of poverty and Adverse Childhood Experiences (ACEs) on future health embeds the importance of considering the wider environment around a child and how health and social care services can support the whole family in their health journey. Exploring the

role of the Dental Health Support Worker in the network of support offered to families will be a key consideration moving forward.

5.3 Good mental wellbeing

In 2011, the Scottish Oral Health Improvement Prison Programme demonstrated that 11% of the prison population found their lives less satisfying because of problems with their mouth. A quarter found it difficult to relax and had discomfort when eating. Oral health status was shown to impact upon psychological functioning[22].

In a world where poor mental health has a growing burden and impact, we must recognise the wider societal influences on poor mental health and take steps to address this. This includes ensuring that individuals are empowered to take control over their mental and physical health. Ensuring parity of access for all groups in society to services and enabling our workforce to support the needs of patients. Ongoing work with groups known to have poorer mental health, including those in prison and those who are homeless through the Smile4Life and Mouth Matters programmes allows dental professionals to acknowledge and address contributing oral causes of psychological distress. Dental teams need to be confident in asking about mental health concerns and recognising the impact poor mental health, and the subsequent treatment, may have on oral health.

5.4 Reduce the use of and harm from alcohol, tobacco and other drugs

In the 2015/16 Scottish Adult Oral Health Survey, 15% of routine attenders at dental practices reported alcohol intakes considered "risky". Around a similar number were current smokers (13.7%)[26].

As previously mentioned oral cancer has been shown to have several modifiable risk factors including smoking and alcohol and dental services have an important role in prevention and early detection[8]. The 2018 OHIP outlines the potential role general dental practitioners could play in providing brief intervention and robust referral pathways when faced with otherwise healthy individuals who smoke or drink to harmful levels and may not seek care from a medical practitioner.

5.5 Sustainable, inclusive economy with equality of outcomes

18% of adults living in SIMD1 areas reported in the Scottish Health Survey of being food insecure; that is feeling that they would run out of food due to a lack of money or resources[7].

Oral health services have multiple roles in supporting a sustainable, inclusive economy. Not only do dental practices and the NHS act as employers within local communities but also as a service supporting individuals to remain in work through appropriate care. In work carried out in the prison

and homeless population in Scotland, poor oral appearance has been shown to affect self-esteem and acts as a limiting factor in an individual's ability to form interactions with others[22]. We must recognise the financial burden associated with dental care, especially for those in work who struggle financially. Prevention of oral diseases and early intervention is essential to minimise the impact on individuals and support them to live healthy lives. As we adjust to changes in demography and changing patterns in oral health, dental and oral health services, must consider how they are to be sustainable into the future. Delivering a stable and effective service will require a willingness to adapt and change our models of care. Additionally we must recognise our environmental impact and how we can minimise this.

5.6 Eat well, have a healthy weight and are physically active

Whilst 90% of adults reported that they brush their teeth as a measure to prevent poor oral health, only 24% had considered limiting their intake of sugar containing food a drinks for the same purpose[7]. This showed a strong correlation with deprivation; with only 15% of those living in SIMD 1 areas having considered limiting sugar compared to 33% of those living in SIMD 5 areas [7].

High sugar intake and poor diet represent a significant common risk for many chronic diseases. Not only does it have significant implications for oral health, but for general health including diabetes and cardiovascular disease. Whilst there is a need to use policy measures to address the complex environment in relation to food and drink consumption patterns, ensuring common messaging and adoption of approaches routed in behaviour change theory is also important for all working in health and social care professions to support behaviour change in this area. Dental and oral health care professionals will see a high proportion of "healthy" individuals, who may not otherwise seek health care, and therefore this presents a unique opportunity to provide routine screening and identification of risk factors at an early stage and provide evidence based behaviour change advice. Dental and oral health care professionals are also ideally placed to be advocates for policy options which have the potential to improve health.

6.0 Conclusions

As is demonstrated in the previous sections, oral health has and will continue to be a priority within Scotland. The publication of the 2018 Oral Health Improvement Plan reasserts the Scottish Governments commitment to improving the oral health of the Scottish population. The improvements in oral health are to be celebrated but the persisting inequalities still need tackling. The opportunities for the dental and oral health workforce to contribute to addressing Scotland's Public Health Priorities are clear.

The Consultants in Dental Public Health and Chief Administrative Dental Officers Group are committed to ensuring that everyone can benefit from good oral health and we recognise that to achieve this aim we need to continue to work together with local communities, dental and oral health professionals, wider health and social care professionals, partner agencies and Third and

Independent Sector Organisations at local, regional and National level. To do this we must all harness the principles which underpin the Public Health Priorities to give a strong and clear direction on how we can move forward.

- Reducing inequalities- inequalities must be a driving force behind everything we do
- Empowering people and communities- Embracing realistic dentistry and encouraging shared decision making will allow people to take control of their oral health. Local Communities are our best partners in improving health and reducing inequalities.
- Collaboration and engagement- collective action, across common risks has the opportunity to provide increased benefit to all
- Prevention and early intervention-Ultimately we should always aim to prevent disease from occurring and identify and treat what we can at an early stage
- Fairness, equity and equality- Agreeing that health and oral health is a fundamental right and should not be determined by virtue of who you are.
- Intelligence, evidence and innovation- Evidence informed intervention, supported by high quality health data allows our profession to be forward thinking and innovative. Robust training and education and the use of quality improvement methodologies will empower the whole team to improve patient care.

Underlying all of the current and emerging challenges is a significant level of oral health inequality within our society. Action can, and must be taken to harness existing momentum and build new and innovative actions to address this key issue. It is important that the progress made by the successful priority group programmes is continued to ensure that improvements in oral health are consolidated and maintained. Using a common risk factor approach, and recognising the clear cross cutting issues which affect dentistry, oral health and general health will be key. Indeed, the OHIP states that "The Scottish Government will ensure that Public Health Scotland, recognises dentistry and improving oral health as a priority"[8].

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