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An inquiry into whether the Welsh Government is doing enough to bridge the gap in oral health inequalities and rebuild dentistry in Wales following the COVID-19 pandemic and in the context of rising costs of living.

Evidence provided to Sixth Senedd Health and Social Care Committee

Public Health Wales is pleased to provide this written submission to the Sixth Senedd **Health and Social Care Committee.** The committee is considering wide ranging areas in oral health and dentistry. We would like to focus our response on prevention, oral health improvement programmes and primary care dental services including workforce challenges.

Summary

1. The burden of oral health diseases is high. The oral health of the population cannot be improved through dental services alone. If legislative interventions like the Well-being of Future Generations (Wales) Act 2015, Public Health (Wales) Act 2017, A More Equal Wales: the Socioeconomic Duty, Minimum Pricing Alcohol and population health programmes like Healthy Weight Healthy Wales and Tobacco Control Delivery Plans have significant impacts on reducing the risk factors for non-communicable diseases, they should also contribute towards improvement of oral health of the population.

2. Tackling overconsumption of free sugar has to now be a mainstream public health priority. The burden of tooth decay in the population should reduce if legislative and public health programmes like Healthy Weight Healthy Wales become successful in reducing free sugar consumption in Wales to the level recommended by the UK Scientific Advisory Committee in Nutrition (SACN) i.e. 5% of total energy intake. Wales should lead the way in setting an ambitious target of reducing free sugar consumption below 5% of energy intake as recommended by SACN.

3. Proactive prevention for better oral health should not be seen as the exclusive responsibility of dental services and oral health programmes. Prevention of oral diseases needs to be an integral part of the objectives of relevant population level prevention strategies and programmes both at national and local level. Additionally the barriers and enablers for dental services to be part of co-ordinated, preventive and proactive primary and social care services need to be explored and an action plan formulated to remove barriers.

4. Population oral health improvement programmes like Designed to Smile are important to stop widening of oral health inequalities. Designed to Smile was severely affected by the COVID19 pandemic. Whilst there are challenges in recovery, the focus of all partner organisations and teams involved in this important programme should be on recovering this programme as soon as possible so that children in deprived areas of Wales do not lose out.

5. The COVID19 pandemic has had a substantial impact on delivery of dental care. A long term vision with commitment to radical transformation of the oral health system is required to scale up prevention both inside and outside dental clinical settings. A new dental contract for General Dental Services (GDS) and strengthening of the Community Dental Services so that they are able to address the oral health need of all vulnerable groups in society should be prioritised, but seen as the start of oral health system reform not the end.

6. Oral health and dental transformation will not be possible without investment in workforce planning, training and development, and health and well-being of the workforce. Workforce planning should be need-based with ongoing adjustment to ensure close alignment with oral health and dental services policy, planning, implementation, and motivation and career aspirations of the dental workforce. Unlike the rest of healthcare, dentistry has fallen behind in maximising the benefits of optimal use of skill-mix. All barriers for optimal skill mix use for prevention and NHS dental care delivery should be addressed with some urgency.

7. There is irrefutable evidence from the dental literature as well as surveys conducted as part of the Dental Epidemiology Programme for Wales that oral health inequalities exist, with people living in the most deprived areas bearing the largest burden of dental disease. Oral health inequalities are unfair, unjust and preventable. Hence, reduction in oral health inequalities should be a priority. This would in line with the Well-being of Future Generations (Wales) Act 2015 and A More Equal Wales: the Socioeconomic Duty.

1. Tackling common risk factors of oral health and non-communicable diseases and their underlying social and commercial determinants should improve oral health and non-communicable diseases

Oral diseases present a significant public health problem affecting over 3·5 billion people across the world, with untreated tooth decay being the most prevalent health condition globally.[1] While overall prevalence of tooth decay has decreased in Wales in both adults[2] and children,[3] dental diseases are still highly prevalent and the cumulative effect of oral diseases into adulthood and later into older age remains a significant population health challenge. There is a very strong and consistent association between socioeconomic status (income, occupation and educational level) and the prevalence and severity of oral diseases and conditions. Across the life course, oral diseases and conditions disproportionally affect the poor and vulnerable members of societies.[4]

Oral diseases are caused by a range of modifiable risk factors, including sugar consumption, tobacco use, alcohol use and poor hygiene, and their underlying social and commercial determinants. Highly prevalent dental diseases cannot be simply treated away by dental services. Frustratingly debate about oral health in the UK and widely around the world are often rather limited with focus on dental services alone. Solutions sought are often limited to expanding or changing existing dental care services without addressing the causes of the dental diseases and their underlying social and commercial determinants.[1]

Corporate activities shape our environments and determine the availability, promotion and pricing of consumables.[5] Stricter regulation and legislation are needed to overcome corporate strategies that threaten and undermine oral health and non-communicable

diseases. There is emerging evidence that tax on sugar sweetened beverages can potentially have impact on reduction in tooth decay.[6] WHO recommends that both children and adults reduce their free-sugar consumption to less than 10% of total energy intake,[7] and the UK Scientific Advisory Committee on Nutrition (SACN) recommended that the average population intake of free sugars should not exceed 5% of total dietary energy for age groups from 2 years upwards.[8] Even in the presence of optimal fluoride exposure for prevention, tooth decay will still develop in presence of free sugars above 10% of individual's total energy intake. Studies have found higher dental caries with sugar intake greater than 10% energy compared with less than 10% energy.[9]

Food consumption, nutrient intake and nutritional status in children in the UK are captured in 2 large national surveys: the Diet and Nutrition Survey of Infants and Young Children (DNSIYC) and the National Diet and Nutrition Survey (NDNS).The DNSIYC and the latest NDNS indicate that children in the UK are exceeding current UK government recommendations for dietary energy, protein, saturated fats and free sugars while not meeting recommendations for dietary fibre.[10]

Tackling overconsumption of free sugar has to now be a mainstream public health priority. Evidence from studies show that, despite the protection offered by fluoride (for example through programmes like Designed to Smile), the relationship between sugars and dental caries remains.[10] The high burden of tooth decay in the population across the life course with disproportionate amount present in people living in deprived areas in Wales cannot be tackled by an individual personal responsibility approach of focussing on educating patients about risk behaviours without considering how social and commercial determinants of health shape these behaviours.

Wales has a good legislative landscape including the Well-being of Future Generations (Wales) Act 2015, Public Health (Wales) Act 2017, A More Equal Wales: the Socioeconomic Duty, to improve health, including oral health, and reduce inequalities. The sustainable approach within the Well-being of Future Generations (Wales) Act 2015 also requires policymakers to take a long-term view so that their decisions do not impact negatively on future generations.

Reduction in smoking prevalence as per Tobacco Control Strategy for Wales[11] and any impact of Minimum Pricing on Alcohol (MPA) in reducing harmful drinking should also contribute towards improving oral health. If many actions included on the Healthy Weight Healthy Wales Strategy[12] and priority action plan were successful in achieving

their objectives, they should also contribute towards oral health improvement. The following objectives are directly relevant for oral health:

- Shaping the food and drink environment towards sustainable and healthier options being easy options,
- Promoting and supporting families to provide the best start in life, from pre-pregnancy to early years
- Enable our education settings to be places where physical and mental health remains a priority
- Removing barriers to reduce diet and health inequalities across the population

It remains to be seen if programmes like Healthy Weight Healthy Wales and legislative interventions like tax on sugar sweetened beverages (SSB) will be successful in reducing sugar consumption amongst all age groups to the level recommended by WHO and even more towards the SACN recommended target. Any national and local research planned to understand the impact of different legislative interventions and Healthy Weight Healthy Wales should include assessment of its impact on free sugar consumption across all age groups in Wales.

2. Population oral health programmes are important to stop widening of oral health inequalities.

Experiencing tooth decay at a young age can not only cause pain and infection, but also disturb sleep, limit ability to focus attention and eat a varied diet, hinder speech development, and negatively affect self-image and mental health[13, 14, 15, 16, 17, 18, 19]. Tooth decay is one of the most common reasons for childhood hospitalisation[20]. It has a lifelong impact as poor childhood dental health is a predictor of poor adult dental health[21]. Yet, in the vast majority of cases, tooth decay is entirely preventable through education, creating conditions for healthy behaviours, and optimal exposure to fluoride.

a) Designed to Smile

In 2015-16, a third of children aged 5 to 6 years in Wales had experience of tooth decay. On average, 10 children out of class of 30 would have tooth decay, with these 10 having 3.6 decayed teeth[22]. Evidence from the Dental Epidemiology Programme for Wales demonstrates that oral health inequalities exist from as early as 3 years of age, and children living in the most deprived areas have the largest burden of dental disease[23]. Even low levels of tooth decay in children should be of concern because tooth decay is a lifelong progressive and cumulative disease.

Designed to Smile (D2S) is a national programme to prevent dental caries in young children in Wales using evidence-based, cost-effective methods. It is overseen by NHS

Wales Community Dental Services and delivered in partnership with health and education services[24]. It was launched in 2009. It includes:

a) A preventative programme for children from birth involving a wide range of professionals, including health visitors and other early years services. The aims are to help start good habits early by giving advice to families with young children, providing toothbrushes and fluoride toothpaste, and encouraging regular attendance to a dental practice. This element of Designed to Smile is aligned to the Healthy Child Wales programme and its approach to provision of universal and enhanced support.
b) A preventative programme for Nursery and Primary School children involving the delivery of nursery and school-based toothbrushing and fluoride varnish programmes for children to help protect teeth against decay. These aspects of Designed to Smile are targeted to more deprived areas of Wales, with approximately 60% of nurseries and schools invited to participate. Children up to and including Year 2 (6-7 year olds) are included in the provision[25].

Designed to Smile staff across Wales were extremely valued in the NHS Covid-19 response. They were fully redeployed and had key roles in the community testing units and vaccination centres. Those that had returned from redeployment in September 2021 were returned to Covid-19 roles for the Omicron response. This meant that early attempts to restart Designed to Smile faltered in the latter half of 2021, but began again at pace in Spring 2022.

Prior to the pandemic, approximately 90,000 children were participating in daily supervised toothbrushing at 1200 nurseries and schools, and 45,000 children were receiving fluoride varnish applications at nursery or school[26]. Whilst there are multiple and varied challenges in recovering this programme to the pre-pandemic level and ensuring targeting of available resources, the focus of all partner organisations and teams involved in this important programme should be on recovering this programme as soon as possible so that oral health and oral health inequalities do not worsen.

b) Gwên am Byth

A survey of care home residents in Wales in 2010-11 highlighted high levels of poor oral hygiene and dental disease[27]. The Gwên am Byth national programme to improve oral health for older people living in care homes was established as a result. Overseen by the NHS Wales Community Dental Services, it has the aims that in participating care homes:

- an up-to-date mouth care policy is in place;
- staff are trained in mouth care (including at induction) and the home keeps a register of training;
- residents have a mouth care assessment at appropriate intervals to identify any changes that will impact on their oral health;
- the assessment leads to an individual care plan, designed to support routine good oral hygiene that is reviewed on a regular basis; and
- care homes are aware of how to ensure timely access to appropriate dental care

and treatment when required.

Gwên am Byth activity was severely impacted by COVID-19 restrictions, but has seen a good recovery. In 2021-2022, 299 care homes were participating fully in the programme and 199 were partially participating. In comparison, in 2019-2020, 310 care homes were participating fully and 124 were partially participating[28]. It must be noted that this programme does not deliver domiciliary dental care.

3. Dental services reform must ensure dental access based on need and delivery of dental care focussed on patient outcomes

a) General Dental Services

NHS dental services were probably the most affected primary care service during the pandemic because a significant proportion of dentistry involves aerosol generating procedures. Strict infection prevention and control measures were needed to reduce the risk of transmission in dental settings. The impact of the COVID19 pandemic on overall access can be seen in Figure 1 (12 months access for children) and Figure 2 (24 months access for adults) with signs of recovery in the latter months.

Figure 1: Number of children who received NHS dental care in the previous 12 months up to and including the month shown

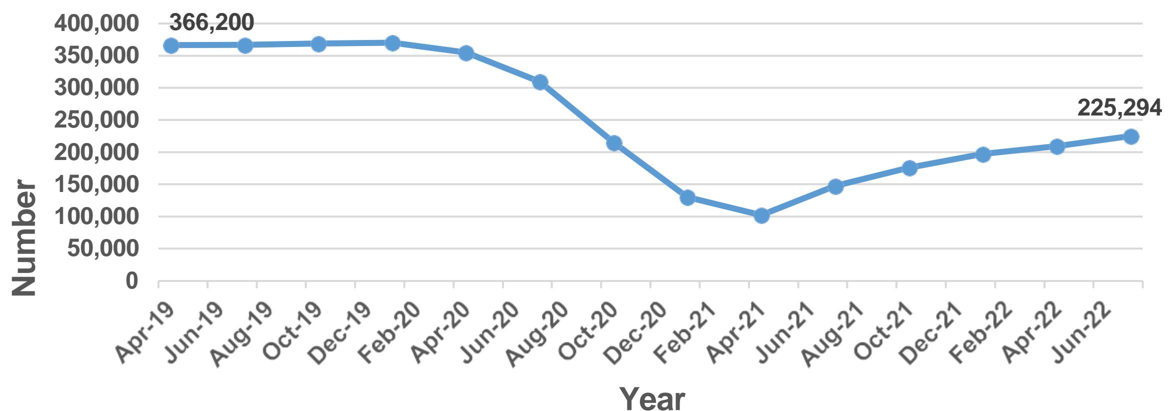


Figure 2: Number of adults who received NHS dental care in the previous 24 months up to and including the month shown

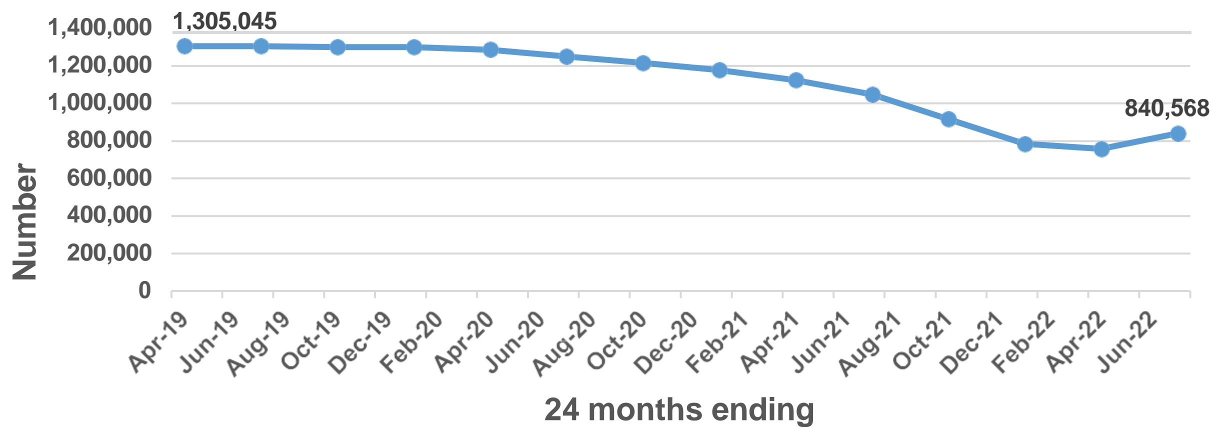


Table 1 shows the level of Band II and Band III treatments that were delivered by NHS General Dental Services in Wales in 2019/20 and how that compares to same treatment bands delivered during pandemic years 2020/21 and 2021/22.

Table 1: Number of Band II and Band III course of treatments delivered by NHS General Dental Services in Wales

Courses of Treatment	2019/20	2020/21	2021/22
Band II	569418	134681	219377
Band III	98443	22363	36372
Total Band II and III	**667861**	**157044**	**255749**

Source: StatsWales

It is clear from the level of treatment delivery during 20/21 and 21/22 compared to pre-pandemic year that there is a significant 'treatment back log' in General Dental Services (GDS) in Wales. A similar situation exists in other UK countries. The COVID-19 pandemic has exacerbated socioeconomic and ethnic inequalities and will undoubtedly worsen oral health inequalities.

It can be expected from Figures 1 and 2 that the GDS in Wales will be able to deliver more dental care in 2022/23 than they did in the last financial year. Regardless of the level of recovery during 2022/23, with the 'treatment back log' from the pandemic, there will be ongoing need for prioritisation of dental access and care for those who are vulnerable, have dental need and thus will benefit the most over patients who have no dental disease and low risk but request regular 'check-up'.

Additional capacity will need to be created within primary care to meet the oral health and dental care need of the population and also to move towards a system where primary care dental services are able to work with other health and care services locally to ensure proactive, preventive and co-ordinated care.

In 2018, the Welsh Government document 'Oral Health and Dental Services response to A Healthier Wales'[29] argued for a needs-based approach to the provision of NHS dentistry across Wales:

a) Increasing access to new patients with higher needs;
b) Adopting a preventive approach to care for all;
c) Extending the use of 'skill-mix' as part of the Prudent Health agenda; and
d) Prompting patients to attend according to need.

These align well with the WHO resolution on oral health at the 74th World Health Assembly in 2021.[30] The resolution recommends a shift from the traditional curative approach towards a preventive approach that includes promotion of oral health within the family, schools and workplaces, and includes timely, comprehensive and inclusive care within the primary health-care system. The resolution affirms that oral health should be firmly embedded within the non-communicable disease agenda. A recent Lancet publication has also highlighted the need to move from a 'cure' to a 'care' culture, which focuses on prevention over simple interventionist approaches.[31]

In the past, there has been too much focus and reliance on designing a new dental contract to deliver treatments, and unrealistic expectation placed on a new dental contract to improve oral health and reduce demand for dental care. There was no associated planning for prevention from clinical settings or the wider population level to reduce the burden of disease in the population. Previous new dental contract introductions in 1990 and 2006 also did not take account of variation in oral health needs of population in different areas and did not encourage local innovation in service commissioning or service provision.

Proposed primary care dental services reform by Welsh Government to replace the current Units of Dental Activity (UDA) based model is a step in the right direction and an opportunity to create a learning oral health care system in Wales. The prevailing idea that one highly prescriptive dental contract (like the Units of Dental Activity based contract) or a particular service model being suitable for all parts of Wales with different levels of population need, demand and workforce challenges is unrealistic.

b) Community Dental Services

The NHS Wales Community Dental Services provide dental care for the most vulnerable groups in society and deliver key dental public health programmes like Designed to Smile, Gwen Am Byth and the Dental Epidemiology Programme. Community Dental Services' role is well described in a Welsh Health Circular.[32]

The Community Dental Services (CDS) in Wales have been impacted by the COVID19 pandemic and long term workforce and infrastructure issues. Many staff from the CDS,

including Designed to Smile, were redeployed long-term to various COVID19 response roles.

There seems to be variation between health boards in their capacity to meet the dental care needs of vulnerable groups in society. CDS have reported difficulty in recruiting and retaining specialists in special care dentistry. It is important to ensure inequalities do not widen due to lack of capacity within the CDS in Wales. Information systems will need to improve to understand the service need, demand and current provision for different vulnerable groups and workforce needed to provide prevention and dental care for these vulnerable groups in society.

c) Integrated service planning for better oral health

Transformation of primary dental care will need ongoing national and local innovation, evaluation and improvement. Hence, the much talked about new NHS dental contract for dental practices should be the start of transforming primary dental care in Wales, not the end. The new General Dental Services model can have positive or negative impact on the CDS and specialist dental services delivered within primary care or secondary care settings. Integrated dental services planning will be important and information systems with analytical support for primary care teams need to be in place so that impact of the GDS service model on the CDS and specialist services can be monitored.

Although concepts for integrating basic oral health care in wider primary health care exist, they have not gained widespread traction, which further contributes to the challenge of providing access to even preventive basic oral health care to a significant proportion of the population who do not or cannot access dental practices. We have an opportunity to change this in Wales. Prevention of oral diseases needs to be part of the objectives of wider population level prevention strategies and programmes at national and local level. Barriers and enablers for dental services to be part of co-ordinated primary and social care service planning at cluster, pan cluster or wider footprint needs to be explored and barriers removed. Proactive prevention for better oral health should not be seen as just dental services' responsibility and in fact as argued previously, a significant proportion of prevention for better oral health should happen outside dental clinical settings.

d) Evidence based dental care

Dental services transformation should also include improvement in delivery of evidence based dental care within dental services. In terms of prevention, this means

implementation of *Delivering Better Oral Health: an evidence based toolkit* which has recently been updated. Health Education and Improvement Wales (HEIW) delivers a number of continuing professional development (CPD) courses and Quality Improvement support mechanisms to dental teams to support them in implementation of evidence based dental care. There are early signs that fluoride varnish application, an evidence based intervention to protect teeth from tooth decay, is now delivered for most patients attending the GDS across all Health Boards in Wales.

This is also a time to stop delivering unnecessary and ineffective treatments/practice. The following are three examples:

1. Practice of standardised six monthly check-up for everyone has been challenged by NICE guidance for many years in favour of risk and needs based tailored approach for each patient[33] but yet an argument for 6 monthly 'check-up' for all persists. A public survey[34] showed that 66.9% of NHS (and mixed) dental service users reported that they would be happy to be seen less frequently (e.g. every 12 months) if a detailed assessment deemed them to be at low risk of developing dental disease.

2. A UK trial showed overall no clinical benefit of regular 6 monthly or 12 monthly scale and polish (teeth cleaning). [35]

3. The UK National Screening Committee has reviewed screening for oral cancer and oral cancer screening of UK population is not recommended.[36, 37, 38] Hence, oral cancer screening should not be used as a reason for continuation of 6 monthly check-up of all dental patients. The focus should be on re-orientating dental services so that the sub-population with risk factors have easy access to dental and medical assessment for early diagnosis and treatment and also delivery of prevention through clinical settings and referral to available support services like Help Me Quit to address risk factors.

It should be noted that some patients do value long established above practices even when they do not need them. Hence, changes in policy and clinical practices will require ongoing engagement and input from the public and dental patients, and effective communication with the public.

5. Relentless focus on reducing in oral health inequalities is needed

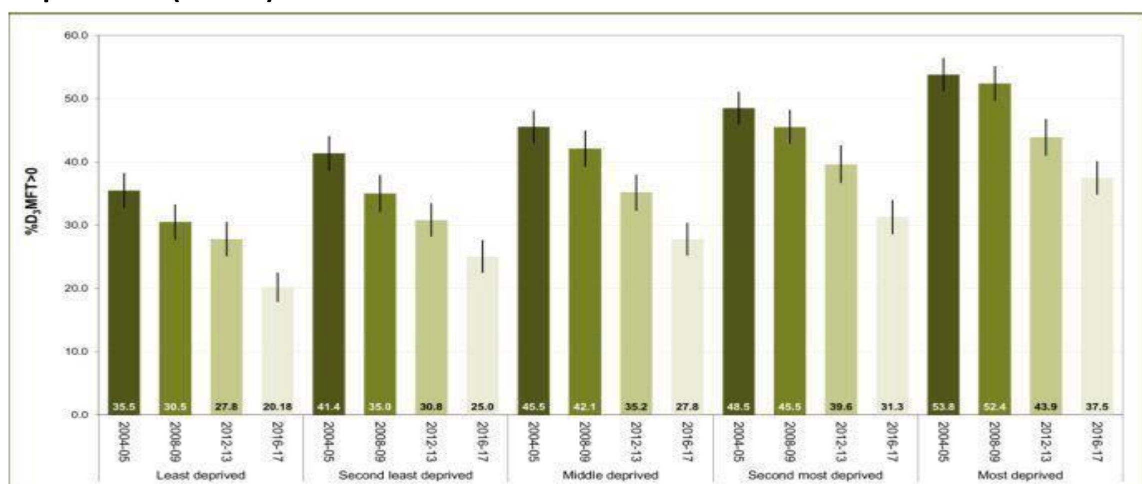
The Socioeconomic Duty, and the Well-being of Future Generations (Wales) Act 2015, both place a requirement on public bodies to take action to enable those facing socio-economic disadvantage to fulfil their potential. Oral health and oral health inequalities should be included in all relevant health and social care policies and programmes at

national level and further at local level during development of implementation plans and delivery.

As mentioned previously there is irrefutable evidence from the dental literature as well as the Dental Epidemiology programme for Wales that oral health inequalities exist with people living in the most deprived areas bearing the largest burden of dental disease.[22, 23] Although dental charges in Wales are much lower than in England, the cost of living crisis is likely to impact on those who just miss out on exemption from NHS dental charges and it may worsen oral health inequalities. It is unknown what proportion of patients who usually use private dental care are now seeking NHS dental care.

An example of the improvements in dental health in children but ongoing high burden of disease across deprivation quintiles and the inequalities present has been demonstrated in Figure 3 below.[3]

Figure 3: Percentage of 12 year old children with decay experience by quintile of deprivation (WIMD) from 2004-2017



Source: Welsh Oral Health Information Unit, Cardiff University

A public survey prior to the COVID19 pandemic shows that self-reported oral health is poorer in deprived areas (Fig 4) where reported sugary and drink consumption (Figure 5), and smoking prevalence is higher[39] while use of regular dental care is lower (Figure 6). 25.9% and 30.9% of adults living in the most deprived and next deprived quintile areas respectively reported that they have not had a dental 'check-up' for more than three years (Figure 6).

Figure 4: Self-reported oral health by deprivation

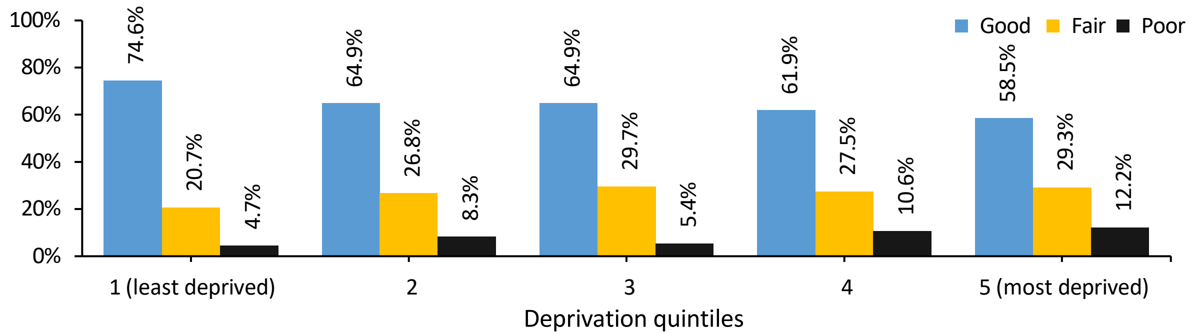


Figure 5: Consumption of sugary foods and drink by deprivation

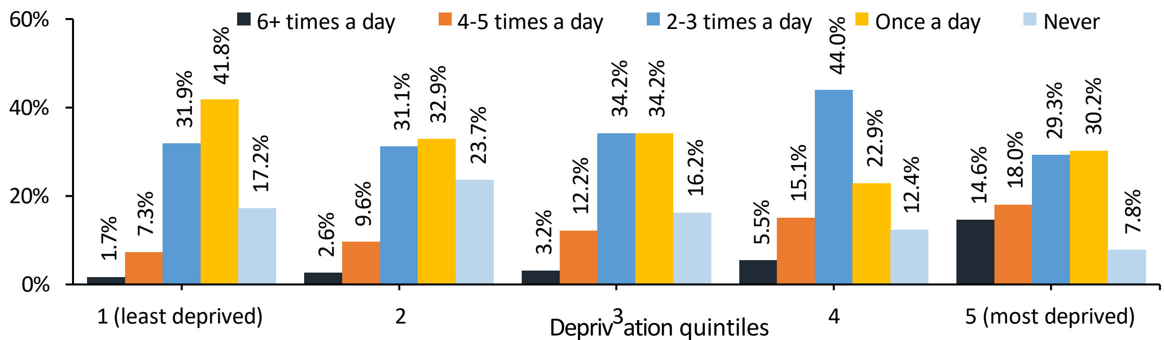
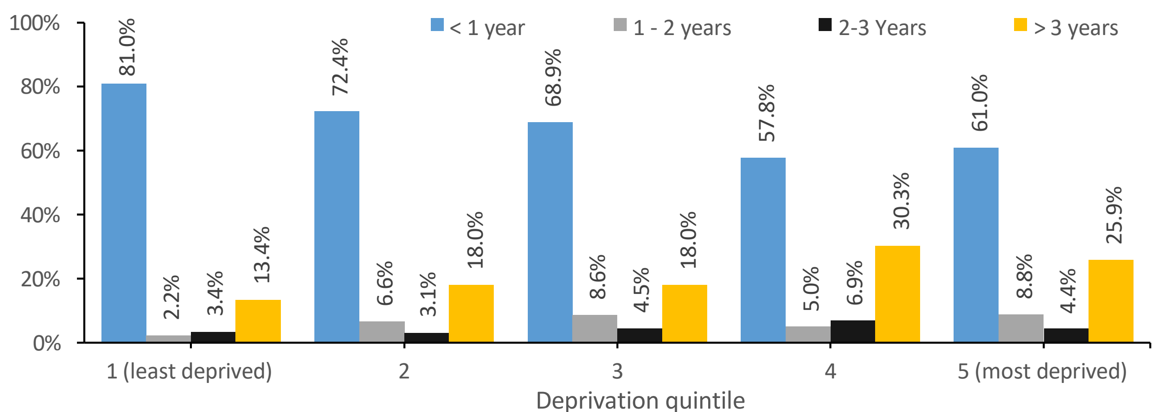


Figure 6: Frequency of routine dental check-ups by deprivation



6. Workforce challenges must be addressed to ensure sustainability of NHS Dentistry

Matching and forecasting the need, demand and supply of healthcare workers are complex activities in any context. It is even more complex following Brexit, the impact of COVID19 pandemic on the dental workforce, and the complexities of dental and wider primary care transformation in Wales. However, dental workforce situational

analysis is needed to address the issues of educating, training, recruiting, distributing, retaining, motivating and managing the overall oral health and dental care workforce in Wales. This also includes improving the knowledge about the impacts of Brexit, the pandemic, ongoing changes in NHS dentistry and career aspirations of current and future workforce.

Implementing workforce strategies in a flexible manner, based on careful monitoring, is key to responding to changing needs and dynamic context. Any dental workforce plan that is linked to oral health and dental service improvement should not be regarded as a "one-off" creation that is not open to adaption and change; rather, it must be tested and revised as and when necessary. Ongoing monitoring of workforce situation is essential to adjust interventions to changing contextual factors.

Oral health of the population has been improving over many decades. Despite this, there remains substantive areas of oral health inequality as highlighted in the previous section. This suggests that developing a needs-based workforce planning model is essential, particularly if the objectives of the Future Generations Act were to be delivered. Innovative incentives and service models may need to be tested to attract different dental team members to work in different areas in Wales.

A recent study suggests that many patients who attended NHS dental practices prior to COVID19 pandemic were assessed as having low risk with no need for dental care.[40] Given this and the lag between the start of training and the provision of supply in the dental profession, it is important to take a needs-based approach to workforce planning in order to increase the level of prevention, provide appropriate service provision and reduce future health inequalities.

Prudent Healthcare argues for the greater use of 'skill-mix'. In NHS Dentistry, this is limited by the legal confines of the current contract, as Dental Therapists and Dental Hygienists are not allowed to open an NHS treatment plan. This is in contrast to the position taken by their regulator (General Dental Council), who allows them to provide examinations and undertake treatment (e.g. Dental Therapists can provide fillings) within their scope of practice. Equally, their current supply is limited.

Future workforce planning that places a focus on prevention, increasing access and the reduction of inequality must account for the potential for expansion of these roles. In 2021, a study showed no difference between dental therapists and dentists in the care of patients within an NHS service context over a 15 month period.[41] This adds to the evidence base for their use.[42], [43] Dental Therapists are also now integrated into the Dental Epidemiological Programme for Wales, where they undertake examinations as part of the oral health surveillance function within Public Health Wales. Their training

time of three years as opposed to five years for a dentist, could dramatically increase supply of workforce in shorter timeframe, increase both the level of prevention and service provision, whilst concomitantly addressing the call from the World Health Organisation.[30]

Overall there is good public support for greater use of skill mix in NHS dentistry in Wales.[33] However, further work is needed because there seems to be a still significant proportion of public who would want their dental care to be exclusively delivered by a dentist.

Table2: NHS (and mixed) dental service users' response to being seen and treated by a trained member of the dental team other than a dentist

	Percentage in agreement
Yes, happy to be seen and treated by a trained dental team member other than a dentist	48%
Yes, happy to be seen and treated by a trained dental team member other than a dentist if they could rebook with a dentist if they were unhappy	20%
No, I would want everything I need to be done by a dentist or Not sure	32%

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