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**For Action by:**
Chief Executives, Local Health Boards

**Action required by:**
Immediate – as outlined from page 2 onward

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**Re-focussing of the Designed to Smile child oral health improvement programme. :**

## Summary

Designed to Smile (D2S) is a targeted national programme designed to improve the dental health of young children in Wales. This Welsh Health Circular (WHC) describes the evidence based refocus of Designed to Smile to build on the achievements of this national programme and to ensure continued progress and improvement in the future.

It replaces WHC(2008)008 which introduced D2S as two “super pilots”, and the subsequent Ministerial Letter (EH/ML/032/09) which built on the initial programme and ensured programme delivery throughout Wales.

D2S is making a real impact on the dental health of young children in Wales and we are seeing reducing levels of tooth decay. A Public Health Wales Consultant in Dental Public Health and a Specialist in Public Health are working closely with Welsh Government to support programme delivery. There is increasing evidence that children who are decay free by 5 will have far less decay throughout their life time than children who have decay before the age of 5.

Tooth decay in young children is very largely preventable, but many children in Wales continue to be affected by this disease. Decay is mainly prevented by:

- Tooth-brushing at night with family fluoride toothpaste (1450ppm of fluoride) and at least one other time in the day;
- Restricting sugary foods and drinks to mealtimes, and reducing the overall amount of sugar consumed;
- All children accessing dental care by the age of 1 year; and
- Routine attendance at a dental practice where the dental team can provide preventive care and advice.

D2S is a targeted population programme to reduce tooth decay in young children. The background to D2S is described in the Appendix on page 12.

The overarching aim of Designed to Smile is to keep children decay free**.**

## Action required

Health Boards and their Community Dental Services (CDS) are asked to follow the required actions in this WHC to continue the effective delivery of D2S. Actions are detailed in sections 2 to 6 inclusive: In summary CDS and D2S teams will

- Liaise with Welsh Oral Health Information Unit (WOHIU) to identify target settings.

- Focus primarily on children aged 0-5 years, although school based tooth bushing can continue up to and including year 2 children.
- Proactively engage with general dental practice teams to support practice delivery of evidence based prevention for children.
- Work closely with Health Visitors as part of the Healthy Child Wales Programme
- Provide consistent and evidence informed training to identified groups including student health visitors.
- Follow advice as provided in the updated How to Guide which supports teams to deliver the programme efficiently and safely.
- No longer deliver fissure sealants as part of D2S.
- No longer provide screening as part of their D2S work in schools.
- Provide data as required to support programme monitoring.
- CDS Clinical Directors will review D2S team capacity to deliver the refocused programme.

## 1. Emerging evidence to support a refocus of D2S

Evidence is emerging which supports a refocus of D2S to ensure it continues to deliver for those children who are most at risk of tooth decay. This evidence includes:

### 1.1 Epidemiology and research

(i) Dental Epidemiology Survey of 3 year olds

In 2015 Cardiff University published results of the first dental epidemiological survey of 3 year olds in Wales (2013-14).

The survey showed that 14.5 % of 3 year olds had at least one tooth affected by tooth decay. There were clear links with social deprivation with over 20% of 3 year olds in the most deprived areas having experience of tooth decay.

More importantly the 3 year olds with at least one tooth affected by decay each had about 3 teeth decayed. Comparison of data from this survey of 3 year olds with data from recent dental epidemiological surveys of 5 year old children in Wales have highlighted that in some areas, much of the dental caries present at age 5 has already developed by age 3.

These results show a need for a greater focus on the very youngest children.

(ii) Results of seal or varnish trial

*Seal or Varnish? (SoV) trial: A randomised controlled trial to measure the relative cost and effectiveness of pit and fissure sealants and fluoride varnish in preventing dental decay.*

Cardiff University led a National Institute for Health Research study into the relative effectiveness of fissure sealing or fluoride varnish as a means to prevent tooth decay in a publicly funded and population delivered programme. The CDS in Cardiff and

Vale University Health Board and Cwm Taf University Health Board participated in the research.

The results show that while fissure sealant is a clinically effective preventive intervention within an individual patient care plan, there is now evidence that its' cost effectiveness within a population public health programme offers less return on investment.

Therefore fissure sealants per se will no longer be included in the D2S programme. Nor will they be provided as a stand alone care provision by the CDS in school settings. The resources and time released will be redirected to expand primary prevention, daily brushing and fluoride varnish application in early years.

(iii) Lift the Lip

The "Lift the Lip" programme has been used in Australia and New Zealand since 2009. It is used primarily by child health nurses who support parents of babies and very young children. The programme aims include:

- encourage parents to regularly check their child's teeth for signs of tooth decay and demonstrate how to do this;
- provide individual oral health advice and highlight individual risk of dental caries; and
- promote dental attendance at an early age.

The programme has been generally well received in both Australia and New Zealand, and there are some encouraging results of the potential to deliver its' aims. It has been researched by a Consultant in Dental Public Health in Public Health Wales with a view to testing elements of the programme in Wales.

## 1.2 Experience of programme delivery and feedback

(i) Oral Health Education

Evidence shows that oral health education is effective on a personalised basis as part of contact with a health care professional and in conjunction with fluoride delivery.

However, the evidence base which underpins delivery of oral health education in a population programme has become clearer over the lifetime of D2S. It is now evident that oral health education delivered as a stand alone classroom activity does not improve population dental health.

Oral health education to children in a classroom setting must be linked with fluoride delivery (as either tooth-brushing or fluoride varnish application) and will only be included when introducing these components of D2S to a class.

(ii) General Dental Practice team involvement

To date, D2S has been delivered by teams working within the CDS. Dental teams working in general dental practice have been informed about the programme, but until now have had little involvement and have not been actively engaged in supporting delivery to children who attend the practice. In Wales the majority of children attend general dental practice. In the 24 months to March 2016 1.7 million patients (54.9 %of the population) were seen by a general dental practitioner. This included 65% of children (patients under 18 on the date of acceptance for treatment). In the period April 2015 to March 2016 a total of 285,858 Courses of Treatment were provided to children (this does not include children seen by the CDS in Wales).

In future D2S teams will actively engage with general dental practitioners and their teams, up-skilling them to provide evidence informed preventive advice and intervention for children; supporting with resources as appropriate for early years patients at risk. These resources will include toothbrushes and fluoride toothpaste. In addition the Consultant in Dental Public Health and the Postgraduate Dental Education Wales Deanery will work with D2S teams to develop training and education resources to support practice teams. These will be tested by general dental practice teams and refined to ensure they are useful and effective.

(iii) Professional experience

The dental professionals who deliver D2S have extensive practical experience of delivering a preventive programme in community settings which has helped to shape and inform the programme over the past 8 years. They have highlighted the need for consistent delivery throughout Wales and the value of a “Once for Wales” approach to underpin the refocus.

### 1.3 Further alignment with WG priorities and policy

The Welsh Government’s Programme for Government *Taking Wales Forward 2016-21* acknowledges that new ways of working are required to meet the challenges of the next five years. It recognises that improving health and well-being underpins Welsh Government ambitions.

Improving oral health and effective preventive dental services will contribute to wider policy: in the first 1000 days of life; to better achieve school readiness and attendance of young children; to increase employability of young adults; well-being; positive behaviour change; and hygiene and nutrition.

(i) <u>The Healthy Child Wales Programme – and a focus on the first 1000 days</u>

There is consistent evidence to suggest that an investment in early years significantly improves health, social and educational development and long term outcomes.

The implementation of the Healthy Child Wales Programme provides an opportunity for Health Visitors (generic and Flying Start) and primary care dental teams to work more closely together, to further strengthen their links and foster a consistent

approach across Wales. This aligns with Welsh Government policy and responds to evidence about the dental health of 3 year olds:
http://gov.wales/topics/health/publications/health/reports/healthy-child/?lang=en

As part of HCWP, all children in Wales will be offered structured visits from a health visitor which provide ideal opportunities to discuss weaning, nutrition, tooth-brushing and dental attendance. Health Visitors will also encourage all children to attend a general dental practice by the age of 1, and look at the child's teeth as part of "Lift the Lip". Health Visitors are aiming to record their findings, and liaise as necessary with D2S teams to support dental care access for young children.

## 2. Practical elements of refocussing D2S

(i) Targeting

We expect CDS to liaise with the Welsh Oral Health Information Unit (WOHIU) who will identify settings in areas of social deprivation and inform a targeted programme delivery. Key targets will be settings in areas of social deprivation, but particularly the most deprived, second most deprived and third most deprived quintiles. Children with decay are found in less deprived groups but these are more likely to be identified by general dental practitioners.

Many children with special educational needs (SEN) attend main stream nursery and school and will be able to benefit from inclusion in the D2S programme.

In addition the D2S programme can be offered to children age 0-5 who attend nurseries and schools which cater specifically for children with SEN *regardless of classification in Welsh Index of Multiple Deprivation identification of social deprivation.*

The D2S lead Consultant in Dental Public Health will provide clarification if required.

Older children with special educational needs can be supported by the CDS oral health promotion services as part of the health board oral health strategy rather than D2S.

(ii) A focus on children age 0-5

We expect D2S teams to primarily focus delivery on children age 0-5. Key actions will include:

- Continue to work with Flying Start nurseries and other pre-school settings identified as targeted sites to deliver a fluoride tooth-brushing programme to children age 0-3;
- Develop a consistent approach to working with health visitors to align with Healthy Child Wales Programme (supported with specialist Dental Public Health advice);
- Develop all Wales training resources for student health and social care professionals (supported with specialist Dental Public Health advice);

- Continue to deliver a fluoride tooth-brushing programme to children in local authority nurseries and schools-the primary focus is children up to the age of 6;
- Deliver a fluoride varnish programme to children aged 3-5 in local authority nurseries and schools; and
- Oral health training to teaching/supervisory staff at programme initiation and to maintain programme delivery.

(iii) Engaging with general dental practice teams

Active engagement between D2S teams and general dental practice teams is required - particularly to identify and reach children with decay in less deprived communities.

General dental practice teams will:

- Encourage every child in Wales to have their teeth brushed with family fluoride toothpaste last thing before bed, and on at least one other occasion during the day;
- Provide children with evidence based preventive care (including fluoride varnish), and their parents/people with parental responsibility with evidence based preventive advice which complies with '*Delivering Better Oral Health: an evidence-based toolkit for prevention'* and is appropriate for health literacy levels;
- Identify children at risk of decay or who repeatedly fail to attend, and link with other health and care professionals; and
- Establish a pattern of regular attendance for children.

Working with a representative group of D2S team members, the Consultant in Dental Public Health, Public Health Wales will lead development and testing of an all-Wales approach to engaging with general dental practice teams. This will facilitate close working between D2S teams and practices in their health board area.

D2S teams may provide practices with resources such as toothbrushes, toothpaste, fluoride varnish and written information for parents. These are primarily for children with caries or at risk of developing caries, and those living in areas of social deprivation. Provision of these resources will adhere to criteria outlined in the *How to Guide*, and be audited. (The *How to Guide* is primarily for D2S teams, and supports safe and effective delivery of D2S. It can be accessed at this link: http://www.designedtosmile.co.uk/fluoride_varnish_new3.html)

We want to see health board support and encouragement for this new way of working. Health board NHS contracts with general dental practitioners should reflect the need to provide open access and care for young children in line with the principles of *Taking oral health improvement and dental services forward in Wales:* http://gov.wales/topics/health/professionals/dental/?lang=en

(iv) Working with Health Visitors

D2S teams should offer input to training courses for student Health Visitors, and post-graduation training as appropriate.

As part of the Healthy Child Wales Programme, Health Visitors will strongly encourage parents of children with decay, or at high risk of decay, to take their child promptly to a general dental practitioner. All parents should be encouraged to take their children for dental care by the age of 1.

Children with pain or signs of infection due to decay who cannot access a general dental practitioner, or who are very unlikely to be taken to a general dental practice, can be referred by the Health Visitor to the D2S team for care as per *WHC/2016/005: The Role of the Community Dental Services and Services for Vulnerable People*. When appropriate this cohort of children will be actively transferred to the GDS in line with WHC/2016/005: http://gov.wales/docs/dhss/publications/160202whc005en.pdf

This type of care is likely to be provided via direct access to a dental hygienist or therapist and subsequent advice / fluoride varnish application from a suitably trained dental nurse.

D2S may provide health visitors with packs containing toothbrush and fluoride tooth paste to give to socially disadvantaged families. This provision should be audited.

## 3. Releasing capacity and resources

(i) Fissure Sealant programme

Fissure sealants are provided to children aged 6 and over. Whilst it is a valuable component of individual patient care, the emerging evidence does not support its cost effectiveness or return on investment within a population public health programme such as D2S.

Children accessing care in general dental practices and CDS clinics should have this intervention within preventive clinical pathways as per guidance in the current version of *Delivering Better Oral Health*.

Termination of the fissure sealant programme in school settings will release capacity in D2S clinical teams (including dental therapists and hygienists). Their skills and experience may be redeployed in the CDS, including caring for children who are referred as part of Healthy Child Wales Programme.

(ii) Provision for children age 6 and over

D2S will focus primarily on children age 0-5. For the elements of D2S delivered in schools, D2S resources will not be used beyond school year 2. The D2S lead Consultant in Dental Public Health will provide clarification if required.

The reduced input to older age group children will free up D2S team time to engage with general dental practice teams and other health and social care professionals.

(iii) School screening

In 2014, Welsh Government published the *All Wales Community Dental Service (CDS) school dental screening/inspection protocol:* http://gov.wales/topics/health/professionals/dental/publication/information/school-dental-screening/?lang=en

There will be no place for school screening as part of D2S and the protocol will be revised to reflect this.

## 4. Effective and Efficient Delivery

D2S is largely delivered by dental care professionals who work to their scope of practice and in line with prudent healthcare principles. Local clinical leadership is provided by the CDS Clinical Director (or other designated dentist) supported by Consultants in Dental Public Health. We expect this pattern of delivery to continue and to see the CDS review staff roles to ensure all are working towards using their full scope of practice.

Effective and efficient delivery will include:

- a review of the evidence base and the *How to Guide* to align with the refocus of D2S;
- a review of the D2S website to align with the refocus and ensure it is applicable to general dental practice teams;
- a review of all D2S printed resources to ensure they remain fit for purpose; and
- learning from relevant programmes elsewhere in the UK and globally.

In addition:

- home packs will be provided only to:
  - children participating in D2S tooth-brushing or fluoride varnish programmes in pre-school and schools;
  - children receiving them on an individual basis from a healthcare professional;
- D2S teams will engage with health, teaching and social care professionals and the third sector through events such as:
  - teacher training,
  - student courses,
  - continuing professional development events,
  - conferences,
  - school governors meetings;
- Articles for websites and publications;
- In the past D2S teams have supported public events such as National Smile Month and school based events. The D2S “brand” is now well known and we believe there is limited value in this type of activity. Therefore we do not expect D2S teams to provide input to public events. However D2S teams can support the Royal Welsh Show and the National Eisteddfod if they have the capacity and only as part of a health board stand.

Any resources and capacity released by programme change must be used effectively. The *How to Guide* will provide additional clarification, but this may include:

- Provision of toothbrushes/fluoride toothpaste and printed information for Health Visitors to provide to socially disadvantaged children in their care;
- Provision of toothbrushes/toothpaste/fluoride varnish and printed information to general dental practice teams who actively engage with local D2S teams. CDS will maintain a record of resources provided. Data from NHS Business Service Authority Dental Services will be used to review application of fluoride varnish for children attending the practice;
- Employment of dental team members (particularly therapists and/or hygienists) to provide surgery based care (fixed or mobile) for children referred to the CDS by Health Visitors as part of the Health Child Wales Programme.
- Follow up preventive care and advice for children (primarily age 0-5) who have had carious teeth extracted under General Anaesthetic.

## 5. Workforce and Leadership

D2S has developed sound leadership at team, local and national level. We expect D2S to be an integral agenda item on relevant local groups and recognize that health boards may also want to retain a local D2S steering group,

CDS Clinical Directors will continue to retain overall accountability for local delivery, and can seek advice from the Consultant in Dental Public Health, Public Health Wales, as required. Clinical Directors will understand the evidence base and the principles which underpin this public health programme.

Health boards and CDS Clinical Directors will need to review D2S capacity to ensure staff can deliver new elements of the programme. Working with general dental practice teams and Health Visitors as part of the Healthy Child Wales Programme requires less focus on term time working.

We would expect to see health boards engage locally with primary care clusters as part of the wider D2S agenda to address child nutrition.

The refocus is an opportunity to review leadership at the national level.

A National Steering Group will be established to:

- Provide leadership;
- Oversee and guide the programme;
- Review the evidence base;
- Lead the review of the *How to Guide*, resources and the website;
- Ensure consistent D2S team training across Wales;
- Review model job descriptions and job titles for D2S personnel in line with recent work undertaken on dentist job roles and titles by Workforce Solutions NHS Wales Shared Services Partnership; and

- Horizon scan and discuss plans for population oral health improvement action in other age and vulnerable groups.

The group will be Chaired and organised by the D2S lead Consultant in Dental Public Health, Public Health Wales and the core membership will include representatives from: Welsh Government; Welsh Oral Health Information Unit; the CDS; D2S operational managers; and Health Child Wales Programme. Other Health and Teaching professionals will be invited as appropriate. All patient safety incidents will be reported locally through Datix but will also be reported to the Chair of the National Steering Group.

The D2S National Forum will transition into an annual learning event to share best practice, experience and learning, achievements and challenges. Representatives from the wider health and teaching professions will be invited. The learning event will be arranged by D2S teams, and health board CDS will take turns to arrange the event (possibly working collaboratively with neighbouring health boards).

The D2S operational managers group will continue to meet at least twice a year. Meetings will be chaired by the Specialist in Public Health, Welsh Oral Health Information Unit, with input as appropriate from the Consultant in Dental Public Health, Public Health Wales, the Deputy Chief Dental Officer and others invited as necessary. The group's primary role will be to discuss operational issues, activity monitoring and team development requirements, as well as collaborate on national project work to support the refocus.

D2S team members require appropriate training (including General Dental Council verifiable Continuing Professional Development) to ensure they understand evidence based prevention, nutrition, teaching and communication techniques and principles of Making Every Contact Count (MECC). This will be particularly relevant as D2S teams extend their work to include general dental practice teams. A range of organisations are well placed to provide training and these include Postgraduate Dental Education Wales Deanery, Public Health Wales, professional organisations and locally available experts. Local training will be arranged by D2S teams and their CDS, and will be in line with guidance from the National Steering Group.

A range of D2S team roles, job titles and job descriptions have developed since D2S was first introduced. CDS Clinical Directors will review the composition of their D2S teams to enable them to respond to changing requirements. They will be supported in this by using information from the National Steering Group as it becomes available.

## 6. Monitoring and Reporting

We want to reduce the burden of data collected for monitoring of D2S whilst ensuring WOHIU, Public Health Wales and health board teams have sufficient data to evaluate and report impact.

The National Steering Group will lead a review of data collection to agree and develop robust measures and identify what data collection components should be retained and any gaps in measurement that need to be considered and improved.

## 7. Resource Allocation.

The 2017-18 funding for the D2S programme was included in Health Board Revenue Allocations issued on 20 December 2016.

The Cabinet Secretary for Health Well-being and Sport has agreed funding allocated for *Designed to Smile* remains ring-fenced and is specifically for the delivery of the programme. Expenditure incurred must be directly related to the development and delivery of the programme.

## Appendix

## Background to Designed to Smile and delivery prior to this WHC

WHC (2008) 008 (14th March 2008) : Designed to Smile – A National Child Oral Health Improvement Programme. Promoting Better Oral Health and Delivering a Fluoride Supplementation Programme.

EH/ML/032/09: Expansion of Designed to Smile – a national oral health improvement programme.

D2S has been delivered throughout Wales since 2009, following large scale piloting in 2008 by Community Dental Services in North Wales and Cardiff - the "super pilots". Community Dental Service (CDS) D2S teams deliver the programme in targeted settings including Flying Start Nurseries, nursery / reception classes and some primary school settings. CDS Clinical Directors are accountable for programme delivery and it is underpinned by the expertise of Dental Public Health academics, Consultants and Specialists.

The programme is based on sound evidence and its primary aim is to get children's teeth into contact with fluoride. This is achieved by daily setting based tooth-brushing with optimally fluoridated toothpaste and application of fluoride varnish. The programme includes the former Fissure Sealant programme, and oral health education / promotion to key groups including children who take part in the programme, their teachers / classroom assistants and parents / people with parental responsibility. D2S teams work closely with other Health Professionals including Health Visitors, student Health Visitors, community dieticians, and with the Welsh Network of Healthy School Schemes. The programme is quality assured by the D2S teams using an all Wales process.

Health boards have local steering groups to ensure effective local delivery, while a national focus is provided through an annual D2S National Forum. Welsh Government provides funding and a central steer to promote consistent delivery and to align the programme with emerging evidence and policy.

The programme has a well developed website which includes sections for the public, parents, teachers and dental professionals. Delivery is supported by a range of resources including consent forms, parental and professional information.

From the outset D2S has been monitored by the Welsh Oral Health Information Unit, and evaluated by Cardiff University School of Dentistry Dental Public Health Unit in a series of research projects. A national programme will inevitably have some problems with delivery to every targeted setting, but monitoring has shown the programme is delivered efficiently, and evaluation reports have identified widespread acceptability to parents and teachers. All monitoring and evaluation reports can be access on the D2S website.

In Wales, a series of epidemiological studies provide information about the dental health of young children. Studies of children age 3, 5 and 12 years have been published since the start of D2S. They can be accessed at this link:

http://www.cardiff.ac.uk/research/explore/research-units/welsh-oral-health-information-unit

In April 2016 Welsh Government published “Children's oral health in Wales - something to smile about” which reported a 12% reduction, in the level of dental decay amongst five year olds in Wales between 2008 and 2015: http://gov.wales/docs/phhs/publications/160503smileen.pdf

The report noted*:* ***This reduction is the first significant and sustained improvement in levels of dental caries experienced by children in Wales since records began.*** *The 12% reduction corresponds with the introduction of Designed to Smile, a national oral health promotion programme which began in 2009.*