Children and Young People Committee

Inquiry into children's oral health

Examining the effectiveness of the Welsh Government's *Designed to Smile* programme in improving the oral health of children in Wales, particularly in deprived areas.

Evidence from the Minister for Health and Social Services

Purpose

1. This paper outlines the background to the introduction of the *Designed to Smile* oral health programme, provides an update on current developments, and responds to the seven points on which the Committee is seeking views.

Background

2. The Welsh Government is determined to tackle oral health inequalities. Figures show that over 50 per cent of 5 year olds in Wales have experienced tooth decay. In addition, dental epidemiological surveys have indicated an increased severity of dental disease in those children who suffer from the disease. The situation is worst in deprived areas. This is unacceptable when dental decay is avoidable by improving diet and nutrition, and encouraging young children to develop the habit of brushing their teeth twice a day with fluoride toothpaste.

3. There is a widening gap between the oral health of children from the most deprived and the least deprived families in Wales. Under the *Eradicating Child Poverty in Wales - Measuring Success* strategy, the dental targets set are that by 2020 the dental health of 5 and 12 year olds in the most deprived fifth of the population will improve to that presently found in the middle fifth. We believe these targets are realistic if we increase the number of teeth in contact with fluoride

4. Dental decay is a disease of lifestyle with multiple causes. Improvements in oral hygiene and fluoride availability were needed to make progress towards improving oral health and meeting our dental health targets. It was clear more direct and also more innovative methods of delivering preventive care were necessary if advances in child oral health were to be made. In the absence of fluoridation of water supplies in Wales we needed to get more teeth in contact with fluoride via alternative methods. The *Designed to Smile* programme set out to achieve that objective in Wales by targeting young children in areas of greatest need and building on the foundation of the Fissure Sealant programme which had run since 2001/02.

5. From the autumn school term of 2008, *Designed to Smile* was rolled out in two 'super pilot' areas covering the North Wales region and a substantial part of central south Wales. The scheme is targeted and priority given to areas on the basis of deprivation and epidemiological data on oral health provided by the Welsh Oral Health Information Unit (WOHIU).

6. The initial aim was to establish a supervised tooth-brushing scheme, using fluoride toothpaste, for 3 to 5 year-olds. In the longer term the aim was to develop and expand the programme to cover the whole of Wales.

7. *Designed to Smile* is delivered by the Community Dental Service (CDS) who have significant experience of providing oral health promotion. Their additional role in this initiative focuses on the delivery of fluoride supplementation programmes and improving care for children with chronic tooth decay. It is important to highlight that *Designed to Smile* is more than simply teaching children how to brush their teeth. The scheme also delivers direct clinical interventions that have been shown to prevent decay – effectively a fluoride delivery programme.

8. In October 2009 the Welsh Government announced an expansion of the scheme into deprived areas in all parts of Wales. As well as rolling out the scheme beyond the existing pilot areas the additional funding allowed the scheme to be extended from 3 to 5 year-olds to include 6 year old children and a nursery-based programme for the youngest children under the age of three.

The take-up of the *Designed to Smile* programme

9. The WOHIU is responsible for collecting and collating data from the programme. The latest (preliminary) data for supervised toothbrushing programme as of March 2011:

- 61,732 children toothbrushing daily in 920 schools and nurseries across Wales
- 21,143 children aged 6-11 receiving oral health promotion
- 22,374 children aged 0-3 brushing
- An average of 67 children brushing per school
- 137,900 home toothbrushing packs sent out to children between April 2010 and March 2011
- Consent from parents to allow their children to take part averaging 94%

10. Further detail on the take-up of the programme is given in Annex A. The figures in Annex B show the location of schools and nurseries taking part in the ‘super pilot’ areas during the previous reporting period (March 2010), overlaid on to a map classifying local areas according to deprivation scores derived from the Welsh Index of Multiple Deprivation (darker areas = more deprived areas)

Whether investment has delivered improved health outcomes for the most disadvantaged

11. It is too early to confirm whether the *Designed to Smile* programme is delivering improved health outcomes for children. We have evidence of good uptake in the targeted schools but we will have to await the outcome of future

epidemiological surveys of children to establish if dental decay in children in Wales has reduced.

12. However, the preventative interventions used in the scheme are strong and well established. Designed to Smile is very similar to the Childsmile Programme which has been running in disadvantaged communities across Scotland since 2005. Recent studies in Scotland (2009/10) are showing evidence that the prevalence of caries and decay has reduced over time, and the results are particularly evident in the more deprived communities.

Whether the programme is operating consistently across Wales

13. Guidance on the delivery of *Designed to Smile* is set out in Welsh Health Circular (WHC) (2008) 08 and in Ministerial Letter EH/ML/032/09.

14. The CDS in the two pilot areas carried out research, prepared resources, and developed a detailed project management approach to the delivery of the programme. The pilots established an all-Wales procurement framework and developed a wide range of resources to support the delivery of the project including Welsh language materials. This paid significant dividends when the scheme was rolled out to the rest of Wales. *Designed to Smile* has built up a very strong brand image including a website http://www.designedtosmile.co.uk/ .

15. One of the benefits of using CDS teams is that they have local knowledge and retain a degree of flexibility in responding to localised need. However, the National Forum, made up of all *Designed to Smile* teams, Public Health Wales and Welsh Government, is key to the development and sharing of best practice, and for maintaining and building the easily recognisable national brand. The National Forum also provides the opportunity for standardisation of operating manuals, guidance and protocols at an all-Wales level.

How effective has the expansion of the programme been

16. When the announcement of the expansion of the programme was made in October 2009 it was acknowledged it would take time for the CDSs in some parts of Wales to get the scheme fully implemented. Staged implementation and funding was therefore introduced with resources only being fully allocated from 2010/11. The aim was that by the end of 2010/11 the expanded and enhanced *Designed to Smile* scheme would be up and running in areas of need across Wales.

17. The fact the scheme was initially rolled out in pilot areas also means implementation has been more advanced in some areas. In addition the capacity and staffing of the CDS in different parts of Wales at the time of the scheme's expansion has had a bearing.

18. However, all areas have moved beyond the start-up and implementation phase and are now delivering the programme, with some expansion still occurring in relation to 0-3 age children. As this group are not in full time

education they are potentially harder to target so additional work has been required to establish links with health visitors and others in health and social services who work with children.

19. Often in the past oral health promotion and treatment has taken a piecemeal approach. *Designed to Smile* has provided the opportunity for a National and consistent approach to be introduced in collaboration with other service teams.

Whether the programme addresses the needs of all groups of children

20. Tooth decay is more widespread and more severe in children from disadvantaged communities. *Designed to Smile* is therefore a targeted programme and is not aimed at all children in Wales. The scheme focuses on the areas where the need is greatest by taking into account the level of decayed missing filled teeth (dmft) in Dental Planning Areas and deprivation by Lower Layer Super Output Areas.

21. There is, however, flexibility within the programme and the CDS are well placed to provide input on local need. This allows the inclusion of main stream schools and other establishments such as Special Education Units to be included which may not automatically fall within the scope of the programme.

The extent to which the programme has been integrated into wider local and national initiatives

22. Although *Designed to Smile* should be seen as a preventive programme first and an education programme second there is a need to link it with other Health Promotion programmes at both national and local level. A strength of the programme is its emphasis on strong linkage and partnership working between health and other agencies and services i.e. education.

23. We wish to see all local *Designed to Smile* programmes overseen by local steering groups whose membership bases are broadly drawn to help ensure that the scheme is not delivered in isolation of other health promotion initiatives. It is the membership of local steering groups together with the CDS *Designed to Smile* teams that will feed into the National Forum. Steering groups have already been established in some areas and work is progressing to strengthen working relationships. This is an area which will be developed in the next phase of delivering *Designed to Smile* and as it becomes fully integrated into other national and local initiatives.

24. The second stage evaluation of the pilot programme (December 2010) included investigation into how well schools felt *Designed to Smile* fitted with their curriculum and other health promotion programmes, and the overall impact of the scheme. In a survey of 298 schools taking part in ‘super pilot’ areas:

- 91% of head teachers felt that the scheme fitted well or very well with their overall school curriculum;
- 95% felt it fitted well or very well with their wider health initiatives; and
- 92% felt the scheme was a positive or very positive experience for the school as a whole.

Implications for paediatric dentistry including the strengthened role of the CDS in children's public health

25. Designed to Smile has established an all-Wales preventative programme which sees more children than ever before exposed to the clinically proven benefits of fluoride on a daily basis. The additional funding provided to Local Health Boards (LHBs) has enabled the CDS to provide oral health care and promotion in areas where dental services have not always been accessed or easily available.

26. The Welsh Government has demonstrated its determination to see a strengthening of salaried CDS in all areas of Wales through a coordinated approach to delivery. In some areas of Wales the CDS has, in the past, lacked investment. This trend has been reversed and has seen the development of a stronger CDS so we have a better mix of dental services available in Wales. This will help ensure the most vulnerable people in our society have better access to care.

27. An objective of the *One Wales a*greement was to build up the CDS in Wales and refocus efforts towards public health. *Designed to Smile* has revitalised the CDS in parts of Wales where it was in decline. In addition to improved resources and equipment, as a direct result of the programme the CDS have employed new staff in the following areas:

- South-East Wales pilot area (Cardiff & Vale; Cwm Taf): 33 new staff members
- North Wales pilot area (Betsi Cadwaladr): 18 new staff members
- Newer areas (Aneurin Bevan; Hywel Dda; Abertawe Bro Morgannwg; Powys): 30 new staff members
- Total: 81 new staff members

(N.B. Data as of March 2011 - not necessarily Whole Time Equivalents).

Future action

28. Our Programme for Government published in September 2011 includes as a key action the implementation of the *Designed to Smile* programme to improve the oral health of children. This is supported by the Welsh Government through funding to LHBs of £3.7 million per year.

29. In addition we are developing a National Oral Health Plan for Wales. Oral Health is an important part of general health, and the Plan will stress the need for prevention of poor oral health as well as treatment of disease. There will be a particular focus on those groups who have persistently high levels

of disease, such as children under 5, and those whose general health makes them more vulnerable to oral ill health. The plan will clearly align oral health with public health through links with smoking, alcohol consumption and child nutrition. An integral part of the Plan's delivery will be the *Designed to Smile* programme.

30. There is some further development and refinement of the programme to undertake. Increasing the targeting of children aged 0-3 and strengthening the links with other programmes such as Health Schools and Flying Start to ensure consistent action and messages. However, the successes of *Designed to Smile* are already clear and I am confident the programme will deliver the much needed improvements in the oral health of the children in our most vulnerable communities.

Lesley Griffiths AM
Minister for Health and Social Services
October 2011

Annex A

Preliminary monitoring data for April 2010 - March 2011

Take-up

- Across Wales a total of 1,223 settings (i.e. schools and nurseries) were targeted during the reporting period, with 954 settings brushing and a further 35 settings agreeing to take part but deferring to a later date. Equating to a Wales wide participation rate of **80.9%**.
- Setting participation rate (including those who deferred) ranged from 94.9% in Abertawe Bro Morgannwg University Health Board area to 75.8% in Hywel Dda.
- An **additional 439** settings across Wales were taking part in the supervised tooth-brushing programme during this reporting period when compared with April 2009-March 2010, where a total of 515 schools and nurseries were taking part.
- The increases are more dramatic for non-pilot areas, who were setting up the programme during the previous reporting period i.e. recruiting and training staff, locating premises, networking with schools, nurseries and wider health promotion personnel, etc.

Activity

- Reported frequency of toothbrushing per week, was as follows for the six reporting Health Board areas (N.B. Cardiff &Vale reports include Cwm Taf):
    - Cardiff and Vale University 4.89
    - Betsi Cadwaladr 4.58
    - Aneurin Bevan 4.85
    - Hwyel Dda 5.00
    - Powys 3.94
    - Abetawe Bro Morgannwg University 4.56

N.B. this data is based on a selection of classes taking part. It is also important to point out that 3 schools in Swansea were brushing 10 times per week, i.e. twice a day, 5 times a week.

- The total number of children brushing has **increased by 31,290** between this reporting period and the 2009-10 period. In 2009-10 the total number of children brushing was 30,442.

Participation

- Across Wales 93 schools have declined to take part in the scheme during April 2010 – March 2011. The highest numbers of refusals were reported by Cardiff and the Vale University Health Board and Aneurin Bevan Health Board with 51 and 21 refusals respectively. Reasons included staffing issues, wanting to observe other schools before taking part or in the case of one school no reason was provided.
- The total number of children eligible for inclusion across Wales in the toothbrushing programme were 66,060; with parents/guardians providing consent for 62,028 children and **61,732** actually brushing during the period.

- The child participation rate for the toothbrushing programme in 2010-11 was **93.4%.**

The wider programme

- A total of **137,898** home packs were distributed across 1,053 settings (N.B. this includes 99 settings which were not yet taking part in the toothbrushing programme).
- Across Wales 6,265 and 3,514 parents took part in group and one to one Oral Health Educator sessions respectively.
- 73,667 children received wider oral health education sessions.
- **5,113** school personnel were trained in the implementation of toothbrushing. 4,383 school and 739 primary care personnel took part in wider oral health education sessions.
- **3,666** Quality Assessments were carried out, 303 required remedial action and for one setting the scheme was suspended for a short period.
- **6,996** children received fissure sealants and an additional 361 received fluoride varnish; this latter element of the programme has only just started.

Annex B

Location of schools taking part in the super pilot areas during the reporting period to March 2010, overlaid with local areas of deprivation