Cynulliad Cenedlaethol Cymru | National Assembly for Wales

Y Pwyllgor Plant, Pobl Ifanc ac Addysg | Children, Young People and Education Committee

Y 1,000 diwrnod cyntaf | First 1,000 Days

FTD 24

Ymateb gan: Iechyd Cyhoeddus Cymru

Response from: Public Health Wales

1 Introduction

Public Health Wales welcomes the focus being given to this critical part of the life-course through this Consultation and the opportunity to provide evidence for consideration by the Committee.

The Committee will be aware that the First 1000 Days Collaborative Programme was the first initiative of Cymru Well Wales a cross sectoral partnership of organisations committed to working different to improve health and wellbeing outcomes. A separate response to the Consultation will be provided by Cymru Well Wales and more information on the work being done through the First 1000 Days programme will be provided through that route.

Public Health Wales identified the Early Years as a priority area within its strategic plan in 2014. This prioritisation acknowledged the growing body of international evidence that investment in action in the early years of a child's life would bring life-long benefits[1].

The origins of many of the inequalities in health lie in early childhood and before birth. The early years –from pre-birth to seven years of age – is a critical part of childhood when they grow, develop, play and learn. It is a key factor in determining future health and well-being. There are long lasting and positive effects from early years programmes.

In 2015, Public Health Wales ran the Adverse Childhood Experiences (ACEs) study. ACEs are stressful events occurring in childhood such as suffering neglect and child abuse (physical, sexual and/or emotional) or growing up in a household in which there are adults experiencing alcohol and drug use

problems, mental health conditions, domestic violence or criminal behaviour resulting in incarceration. The Welsh ACE survey, the first of its kind in Wales, collected anonymous information from just over 2000 residents from across Wales (aged 18-69 years) about their adverse experiences during childhood and their current health and lifestyle behaviours. Evidence from the Welsh survey and ACE surveys internationally has demonstrated a strong and cumulative association between exposure to ACEs and the adoption of health harming behaviours such as smoking, excessive alcohol consumption and violence (which are often adopted as coping mechanisms), poor mental health, early diagnosis of chronic disease and high levels of health service use across the life course[1]. Evidence from Wales and internationally has demonstrated a strong and cumulative association between exposure to them and the adoption of health harming behaviours (which are often adopted as inappropriate coping mechanisms) as well as poor mental health across the life course.

International evidence has demonstrated a range of cost effective approaches to preventing and mitigating ACEs. While ACE exposure can happen throughout childhood and have lasting impact across the life course, the critical period of brain development in the first 1000 days can mean that exposure to multiple ACEs in this period is particularly damaging. Evidence demonstrates that ACEs experienced from birth, and even adverse experiences experienced by the mother whilst baby is still in the womb e.g. maternal use of drugs or alcohol and chronic and severe mental stress, matter significantly to children's long-term emotional and psychological health. The stress hormone Cortisol can be passed to the developing foetus in the womb and can have a toxic and detrimental effect upon its brain.

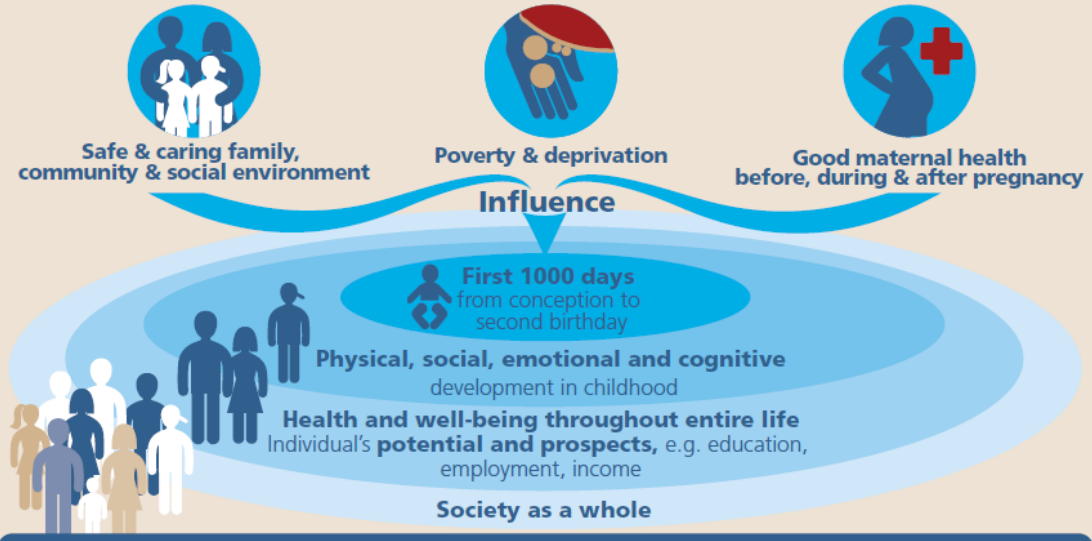
Inequalities are already evident in child health outcomes, such as childhood obesity and oral health at the age of five. The Making a Difference Report published by Public Health Wales in 2016 has highlighted the substantial economic evidence for early intervention in reducing inequalities and in improving outcomes. This work will continue to inform future work within this priority.

We have responded to each of the areas highlighted within the consultation below, outlining the current position in Wales; evidence where it is available on the effectiveness of current programmes and where appropriate making suggestions for future improvement.

Investing in Early Years for a Sustainable Future in Wales

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

Early childhood experiences, including before birth, can have a lifelong impact



Children who live in poverty and deprivation are at higher risk of dying early, developing obesity or experiencing ill health

Infants (0-28 days) in the most deprived areas in Wales are **one and a half times more likely** to die compared to those in the least deprived

Less than ¼ (22.5%) of the babies in the most deprived areas in Wales are **exclusively breastfed at 10 days after birth** compared to **nearly ½** (46.8%) of those in the least deprived

Obese children (age 4 - 5) in the most deprived areas in Wales (14.7%) are **two times more** than those in the least deprived (7.3%)

Adverse Childhood Experiences

are associated with

nearly **¼** of current adult smoking

over **⅓** of teenage pregnancies

more than **½** of the violence and drugs use

The Solutions

Investing in Early Years for a Sustainable Future in Wales

Investing in the first 1000 days from conception to the second birthday is cost-effective and has the most potential for action

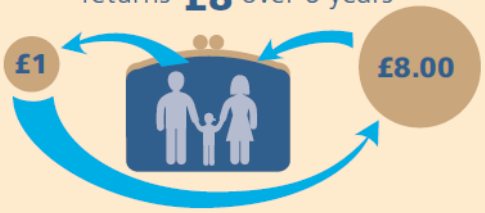
Effective early child development interventions can include:

- support to mothers before & after birth
- breastfeeding and nutrition support
- parenting support
- access to health services and childcare
- access to early education

Investing in universal (accessible to all) interventions along with additional resource proportionate to need for vulnerable children works and it is cost-effective

Every **£1** invested in **early years interventions** returns **£1.30 - £16.80**

Every **£1** invested in **parenting programmes to prevent conduct disorder** returns **£8** over 6 years



from health care, education and criminal justice costs

Investing in **targeted interventions + universal child care + paid parental leave** in Wales

could save **£72 billion** over 20 years

from the costs of social problems

Note: This infographic is part of the 'Making a Difference: Investing in Sustainable Health and Well-being for the People of Wales' report. The methods and sources of information are available in the 'Supporting Evidence' document on the Public Health Wales website. Where possible, latest figures for Wales are presented. Where unavailable, figures for Wales have been estimated from the latest UK/England/other data on unadjusted per capita basis.

1.1 Promote and protect the health and wellbeing of children from pregnancy (for example through positive parenting, high immunisation rates and tackling smoking in pregnancy).

Pregnancy is recognised as an opportunity for intervention. Prospective parents are more receptive to health messages as they want to give their children the best possible start in life.

The NHS is the universal service provider in this critical period. All expectant parents will have access to a midwife who will usually be the primary provider of care, supported where necessary by more specialist services and by primary care practitioners. The Pregnancy and Early Years Surveillance Tool[2] developed by Public Health Wales Observatory in conjunction with Welsh Government and a range of other partners collates and tracks a range of key indicators on child health and wellbeing.

1.1.1 Neural Tube Defects (NTD)

International comparisons by EUROCAT suggest an overall rate of neural tube defects in Europe of 9.1 cases per 10,000 births over approximately the past two decades (in press). In this analysis, Wales has the second highest rate in Europe, at 15.1 cases per 10,000 births (1998 to 2011). These analyses take no account of maternal age and the time periods vary for data submitted by different registers. Different national policies for termination of affected pregnancies and completeness of reporting of cases lost in early pregnancy are also likely to have a significant effect on rates. Despite these caveats, the rates in Wales appear high compared to many other areas of Europe. There are approximately 50 cases of neural tube defects in Wales each year with around nine live births.

Evidence has been available since the early 1991 that taking folic acid before conception and in the early stage of pregnancy could reduce the risk of NTD by 72%. After the guidance was produced there was a slight fall in NTD rates but there has been no further decline. A study published in December 2015 based on data from the Welsh and English Regional Congenital Anomaly Registers found that implementation of a mandatory fortification scheme e.g. flour, such as that adopted in the USA would have resulted in a 21% reduction

[2] http://www.wales.nhs.uk/sitesplus/922/page/84657

in NTDs. The UK-wide Healthy Start Scheme, introduced in 2006, includes the provision of folic acid supplements low-income pregnant women and anyone pregnant under the age of 18 years. Data on uptake in Wales is not available however studies undertaken elsewhere in the UK report the uptake of the supplement via the scheme to be below 10%. There is potential for Wales to consider introduction of mandatory fortification of flour to reduce the rate of NTDs. If similar results were achieved in Wales it could lead to 10 fewer affected pregnancies a year and two fewer live births with an NTD a year.

1.1.2 Smoking in Pregnancy

Wales has one of the highest rates of smoking in pregnancy in the United Kingdom. From 2013 to 2014, Public Health Wales in collaboration with four Health Boards and Stop Smoking Wales carried out a study to evaluate the effectiveness of different service delivery models for smoking cessation support to pregnant women. The study showed that using a specially trained maternity support worker increased the proportion of pregnant women who received quit support by 34%. This approach to support led to 35% (CI 29%-43%) of pregnant smokers setting a quit date and attending at least one treatment session compared with just 1% (CI 0%-3%) with the 'usual care' approach. The cost of implementing this model was estimated at £500 per engaged smoker. The specialist maternity support worker model therefore has the potential to reduce rates of smoking prevalence during pregnancy and improve future health outcomes for mothers and babies across Wales. Implementing the model across Wales is estimated to lead to around 200 avoidable adverse pregnancy outcomes a year, ranging from stillbirth to low birth weight.

1.1.3 Parenting Support

There is a strong international evidence base for the effectiveness of parenting support interventions in improving a whole range of outcomes for children.[2,3] However, uptake of parenting support, particularly the more intensive evidence based programmes can be sub-optimal. There is some evidence that there is a stigma associated with targeted parenting support and it is likely that increased population impact might be achieved through a more universal approach to all parents which then offers more intensive

support according to parent need for support. (A proportionate universalism approach)

A universal population approach to parenting has been tested in Ireland using the Triple P programme. The Triple P – Positive Parenting Programme (Triple P) is a multi-level, public health approach to parenting.
It was implemented in Longford and Westmeath by the Longford Westmeath Parenting Partnership (LWPP). The programme delivers support to all parents of children aged 3-7 through four modes of delivery: a universal media strategy, seminars, workshops and groups. The Parenting Study used a quasi-experimental (pre-test – post-test within-groups) design to evaluate child and parent outcomes associated with participation in Triple P.

The Population Study used a quasi-experimental (non-randomised between-groups) design, with treatment and comparison areas, to analyse the population-level impact of Triple P. There was a population-level impact on children's emotional and behavioural problems, parental distress, parental discipline and parents' relationships with their children, and also the number of children categorised as 'borderline/abnormal' for emotional and behavioural problems[4].

Testing a similar approach, potentially implemented through our existing Flying Start and Families First programmes may have benefits in Wales.

1.1.4 Immunisation

The WHO considers that immunisation is the most effective public health intervention after clean water. Pregnant women in Wales are actively offered immunisation against influenza (flu) and pertussis (whooping cough). Flu vaccination is safe and effective and reduces both the incidence of flu and its complications in pregnant women, including reducing foetal loss. It also protects the infant during the first six months of life. Pertussis vaccination in pregnancy was introduced in 2012 in response to a national increase in cases and deaths in young infants. The UK was the first country to vaccinate against pertussis in pregnancy, and cases of pertussis in infants born to vaccinated mothers have reduced by over 90% as a result. Maternal rubella infection and congenital rubella syndrome have been eliminated in Wales through the MMR programme, with no cases in the last 10 years, and so

screening in pregnancy for rubella antigen ceased in Wales in 2016. Uptake of flu and whooping cough vaccines among pregnant women is high in Wales, 75.6% and 72.4% respectively in 2015/16. Efforts to further improve infant and pregnancy vaccination uptake will continue.

Many diseases which were once common causes of childhood disability and deaths in Wales, including polio, whooping cough, diphtheria and measles, have been largely eliminated though immunisation. Other infant diseases, including pneumococcal disease, Hib and meningococcal group C meningitis have been reduced to low levels by programmes introduced in the last 15 years, with several new programmes in the last few years. Children from two years of age have been offered nasal spray flu vaccine since 2013, and rotavirus vaccine was also added then. In 2015 Wales, along with the rest of the UK, became the first country in the world to routinely offer the meningococcal group B (MenB) vaccine to all infants.

In 2015/16, uptake of all established routine vaccinations in one year old children was over 95% in Wales for the eighth consecutive year, and in two year old infants vaccine national uptake ranged from 94.7% to 97.0%. This was 0.1-0.8% lower than the previous year, and mirrors falls in vaccine uptake in older children over the last two years.

The safety and effectiveness of immunisation programmes is kept under constant review. The MenC vaccine programme has reduced cases of meningococcal group C meningitis and septicaemia by over 90%. Following introduction of the rotavirus immunisation programme in Wales in 2013 there has been an 88% reduction in confirmed rotavirus infections in children aged younger than one year, and also a reduction in older unimmunised cohorts demonstrating 'herd protection'. The children's nasal spray flu programme has significantly reduced GP attendances and hospital admissions for flu in pilot programme areas not only in children but also in adults, a trend seen in Scotland and Northern Ireland which fully implemented flu vaccination for all children age 2-11 years in 2014/15. Similar benefits are expected in Wales when the programme is fully implemented in 2019/20.

The need for new vaccine programmes is regularly reviewed, and Public Health Wales participates in the UK Joint Committee for Vaccination and Immunisation. Public Health Wales will continue to work with HBs and

practices to maintain uptake of infant immunisations above the 95% target. Over the last year PHW has worked with WG and NHS partners to support the role of health visitors and clarify actions they can take to follow up children missing immunisation, and also define responsibilities in Flying Start programmes. NICE considered evidence that such follow up activities involving uptake of MMR vaccine were cost saving. We will monitor the ongoing impact of these interventions.

1.1.5 Parent and Infant Mental Health

Parental mental health can have a significant impact on children's health and development, even relatively mild or moderate mental health problems can impact on a parent's ability to parent, particularly their ability to develop a strong bond and ensure optimal attachment to the infant.

Currently, maternal mental health is discussed routinely in pregnancy but the focus is on identifying those with a diagnosis of a serious mental health problem rather than establishing general well-being. Routine assessment of mental wellbeing in line with NICE guidance should be a core part of early ante-natal assessment.

The Healthy Child Wales surveillance programme includes routine assessment of 'attachment' and infant mental health; which if fully implemented should offer opportunities for early intervention using evidence based interventions. It is not clear currently whether the full range of interventions to address poor attachment are in place in each local area. There has been investment in perinatal mental health services which is to be welcomed, however, this is likely to support only the most serious of cases and further investment and a more co-ordinated and strategic approach is needed. Public Health Wales is working with the Together for Children and Young people Programme and the First 1000 Days Programme, to identify actions to address this important area and considers this area as the greatest priority for action.

1.1.6 Stillbirth and Neonatal Deaths

There were 697,852 live births in England and Wales in 2015, an increase of 0.4% from 2014. In 2015, the stillbirth rate decreased to 4.5 per 1,000 total births, the lowest rate since 1992. This equates to 1:200 of UK births are stillborn. In Wales, the stillbirth rate in 2015 was 4.7 per 1,000 total births,

down from 5.2 in 2014. Due to the small number of stillbirths in Wales, the stillbirth rate is more prone to random fluctuations. MBRRACE-UK report is a stark reminder of the tragically avoidable burden of stillbirth for families living in the UK. Among the world's 35 richest nations, the UKs stillbirth rate is the third highest – over one-and-a-half times greater than in neighbouring countries like Denmark, Norway, and Finland. Or, to put it another way, of the nine British families who each day must face the devastating loss of their baby, three would instead be celebrating a healthy live-born child if they'd been living in any of several neighbouring Scandinavian countries. Please follow the link for the latest MBRACCE report on perinatal mortality in the UK[3]

In February 2013, the Health and Social Care Committee of the National Assembly for Wales held a One Day Inquiry into Stillbirths in Wales. This remains an open enquiry. The Governments response to this report was that the nine recommendations would inform the work of the National Stillbirth Working Group. The multidisciplinary Maternity Network and the National Stillbirth Working Group, chaired by the Chief Nursing Officer for Wales, Professor Jean White, have been developing work streams based the nine recommendations to tackle patient safety in reducing stillbirth in Wales, year on year, by raising public awareness.

In March 2017 a National Campaign will launch at the 1000 Lives National Learning Conference. The campaign is designed to increase public awareness of risk associated with stillbirth.

Future work includes developing a national framework of review and investigation following the loss of a baby by developing an Integrated Care Bundle. This will be an All Wales concise document to include all legal requirements for care and investigation for women and families. Accompanying this is scoping work to establish what good bereavement care looks like to formulate a recommendation to Welsh Government of the requirements for Health Boards.

[3] MBRRACE-UK-PMS-Report-2014.

1.1.7 Ante-natal screening

Antenatal screening is undertaken to detect defined serious conditions present in either the mother or baby that are likely to have an adverse effect on the health of either and for which an effective intervention is available and warranted. Antenatal Screening Wales hosts the antenatal screening clinical network and is responsible for establishing policies, standards and protocols and the health boards are responsible for delivering the service. Having agreed standards across Wales ensures there is equity of access and service for our pregnant population. All women resident in Wales should be offered screening in every pregnancy for blood group and antibodies, hepatitis B, syphilis, HIV, Down's Syndrome, early pregnancy ultrasound scan (dating) and fetal anomaly ultrasound scan. Antenatal screening for sickle cell disease and thalassaemia should be offered to all pregnant women at increased risk of having a child affected by one of the conditions.

It is important to review the evidence base for screening programmes and in line with England and Scotland antenatal screening for rubella ceased to be offered in Wales from October 2016 due to the success of the MMR vaccination campaign.

1.1.8 Breastfeeding

The UK has one of the most entrenched bottle feeding cultures in the world, and despite overwhelming evidence that breastfeeding saves lives, improves health and cuts costs, there continues to be a general belief that formula milk is almost as good as breast milk.[4] Wales like the rest of the UK, has some of the lowest breastfeeding rates in the world and these have not changed significantly in more than a decade despite our best efforts. A different approach is needed which helps to create a society where breastfeeding is seen as the norm. This involves a move away from interventions which focus solely on breastfeeding being the responsibility of the woman, to a more societal approach to ensure population level improvement. This requires a concerted effort by society as a whole to enable mothers to breast feed wherever they choose to do so.

[4] UNICEF UK Call to Action 2016

Currently strategic action focuses on acute and community settings achieving UNICEF UK Baby Friendly status. Across Wales there is a variable picture within and across Health Boards and for those that have achieved positive results, sufficient resource is needed to sustainably maintain and progress beyond the set of minimum standards.

A recent in-depth, comprehensive review of breast feeding showed that the health benefits are substantial, lasting well beyond the period of breastfeeding and affecting high and low-income populations alike[5,6]. Evidence indicates that the biggest improvements in breastfeeding rates come when a multi-faceted approach is taken that considers the parents' whole journey from pregnancy to new parenthood. Sensitive conversations during pregnancy, skilled support in the immediate post-birth period, ongoing guidance and social support are all needed to enable mothers to feel confident and breastfeed successfully for as long as they wish. In addition, the wider community needs to welcome and support breastfeeding. Supporting women to make better informed choices about how they feed their infant in the first 6 months of life remains a priority for Public Health Wales. We are working closely with academic partners; infant feeding leads within Health Boards and the third sector to develop a renewed approach to improving breastfeeding rates that draws on the best available international evidence and where necessary develops innovative solutions supported by evaluation. Ultimately, our collective success is judged on whether we have made any improvements in the outcomes for mothers, infants and families.

1.2 Deliver improved child health outcomes across Wales (for example prevention of obesity and the promotion of health-enhancing behaviours for every child such as eating a well-balanced diet, playing actively, and having an appropriate weight and height for their age and general health).

Public Health Wales has responsibility, in partnership with Health Boards, for delivering the Child Measurement Programme in Wales. This provides surveillance of weight for children as they start school aged 4 – 5 years of age. The most recent findings indicate that just over seven in every ten Welsh children have a healthy weight. This is an area in which there are significant inequalities with reception-age children living in areas of higher deprivation significantly more likely to be obese. The local authority area

with the highest prevalence of obesity at this age is Merthyr Tydfil with 14.7% of children aged 4-5 being obese. This is more than double that of the local authority area with the lowest prevalence – the Vale of Glamorgan at 7.3%. Across the last three years there appears to have been a significant increase in the prevalence of overweight or obesity in reception year in Hywel Dda UHB (26.4% to 30.1%), and a significant fall in Cardiff and Vale UHB (23.7% to 20.9%) but we are not yet able to say whether this is a longer term trend. Unfortunately Wales compares unfavourable to England with 26.2% of children in Wales are overweight or obese, compared to 21.9% in England in this age group.

1.2.1 10 Steps to a Healthy Weight

In response to the findings of the Child Measurement Programme Public Health Wales reviewed the scientific evidence for the factors which were associated with healthy weight/overweight in children. These have been used to develop the 10 Steps to a Healthy Weight. The intention of the 10 Steps is to align action across Wales to encourage all agencies that have a role to play to support action on one or more of the 10 Steps.

Public Health Wales has also been working with parents to identify how best to motivate them to support their children to be a healthy weight when they start school. This has lead to the Every Child programme which will be launched shortly. Every Child will include a range of programmes relating to child health in the Early Years rather than just a focus on overweight and obesity. One strand will be 'Every Child ... a Healthy Weight' which incorporates the 10 Steps.

Public Health Wales has also been disseminating information about the 10 Steps to professionals and partner organisations and undertaking a series of evidence reviews so that we can encourage and support effective action on each of the 10 Steps.

Public Health Wales has also reviewed the impact of the Change for Life programme in Wales and has found little evidence of any impact on outcomes at a population level. We have proposed that the Every Child Programme becomes the umbrella initiative within Wales, supported by a programme of social marketing that is linked more directly to wider programmes of work in Wales.

1.2.2 Oral Health

Tooth decay (dental caries) is a preventable disease caused by the breakdown of sugars by bacteria existing in the plaque around teeth. The disease process can begin as soon as baby teeth appear in the mouth, and childhood caries affects 14.5% of 3 year old children in Wales, rising to 20.2% in the most disadvantaged areas[7]. Child dental health surveys in Wales show that a large proportion of the decay found at age 5 is already present by age 3[8]. The immediate impacts of decay are distress, pain and an increased risk of infection, and longer term poor oral health can negatively affect well-being, quality of life, daily activities, speech, self-esteem, school attendance and performance[9, 10, 11, 12, 13]. The ability to eat a well-balanced diet, and subsequently growth and development can be affected[14, 15]. Treatment for severe caries is one of the most common reasons for childhood hospitalisation, with 7855 children in Wales having a dental general anaesthetic operation in 2014/15[16].

Childhood oral health is a predictor of oral health throughout adulthood[17]. The impact of poor oral health increases with age[18], and may affect quality of life[19], and social and economic well-being[20], as well as impacting on other health conditions[21, 22].

The Welsh Government funded Designed to Smile programme, which is a national childhood oral health improvement programme, targets children in the most deprived postcodes. It was launched in January 2009 as a pilot and rolled out in 2011. In Wales, we have seen a 12% reduction in the prevalence of caries amongst five-year olds between 2008 and 2015, the first significant improvement since the surveys began[23]. This improvement has happened across the social gradient, showing that childhood oral health inequalities are not widening. The Designed to Smile programme is beginning a re-focus in 2017, to strengthen the interventions aimed at the first 1000 days in order to realise the benefits to this population.

Improving family oral health and reducing the transmission of bacteria to a baby's mouth is one of the actions that can contribute to prevention. Bacterial colonisation frequently occurs due to parents passing on mouth bacteria to their child through sharing of spoons, dummies etc. Improving a mother's oral health in pregnancy and in the post-natal period can reduce

her bacterial load[24]. Welsh Government policy to offer women free NHS dental care from pregnancy through to 12 months after birth can enable improvement of the oral health of mothers, and therefore have a positive effect on their baby. Also, the policy enables establishment of a relationship between the mother and child with a dental practice. Welsh Government policy to provide free NHS dental care to all children under 18 years of age enables universal coverage of young children to receive evidence-based preventive services from birth.

Delivering fluoride to teeth and promoting good oral hygiene is a second key strand in prevention. Designed to Smile complements NHS dental practice care, by providing preventive interventions aimed at young children and their families in targeted areas. When a baby is six months of age, families receive a toothbrushing pack from their health visitor. This is timed at when the first baby teeth usually appear, to promote the establishment of good toothbrushing habits i.e. parents brushing their children's teeth with fluoride toothpaste. For children in some Flying Start areas, additional toothbrushing packs are regularly provided at the home visits. Provision of toothbrushing packs has shown to be effective at preventing dental caries and to give a good return on investment[25, 26].

Once children enter nursery, those living in targeted areas can participate in the Designed to Smile supervised toothbrushing and fluoride varnish programmes. These interventions are clinically effective and have demonstrated a good return on investment[27, 28,].

1.2.3 Healthy Start Vitamins

The UK-wide government welfare scheme Healthy Start includes the provision of Healthy Start vitamins to improve the health of low-income families. Pregnant women and children from six months to four years (unless they are having 500ml or more of infant formula daily) from low income families are eligible to receive free Healthy Start vitamins. Healthy Start women vitamin supplements containing folic acid and vitamin C and D and the children vitamins containing vitamin A, C and D are specifically designed to meet the Department of Health recommendations.

Despite studies to encourage beneficiaries to take the recommended daily vitamin allowance and the widespread availability of Healthy Start vitamins, uptake has been reported to be below 10% in many areas. Data on uptake in Wales is not available however a recent audit has indicated that the volume of vitamins for children ordered in Wales would only reach 4% of those eligible.

This would suggest that the scheme is not reaching those at risk and that the potential population impact is not being realised. Public Health Wales is currently reviewing the potential for further work in Wales to assess the impact of the scheme on improving health outcomes and reducing inequalities amongst those eligible.

1.2.4 Newborn Screening Programmes

To improve health outcomes for children who have a disease or condition that cannot be prevented needs to be identified early to enable the disease or condition to be managed.

The aim of newborn bloodspot screening is to identify rare, but serious diseases, which respond to early intervention to reduce risk of death and/or disability. In Wales the conditions screened for are congenital hypothyroidism, cystic fibrosis, sickle cell disorders, and six inherited metabolic disorders. A small sample of blood is taken from the baby's heel on day 5 to 8 of life. The programme is managed by Public Health Wales and the sample is taken as part of routine postnatal care. There have been significant improvements in the quality and timeliness of the samples but there is further improvement needed to meet the high standards set by the programme

Newborn Hearing Screening Wales aims to identify babies with significant hearing impairment which is of sufficient severity to cause or potentially cause a disability. Finding out early means that support can be offered before there is a problem identified. The programme performs to a very high standard with 99.5% of babies screened. Uptake is not affected by deprivation which means the this programme addressed inequity in our population and ensure that all of the babies affected are identified

1.3 Tackle child health inequalities, with a specific focus on child poverty and disabled children.

Inequalities in child health and wellbeing outcomes are well documented and to date there has not been the progress that we would have wished in reducing the health gap between the most and least disadvantaged communities and families.

The Tackling Poverty Programmes have some evidence of impact among families but this lacks the scale that is needed to deliver impact at a population level. We have considered how the current programmes of work could be adapted or further developed to achieve greater population and family impact as part of our work in developing the First 1000 Days; Early Years and ACE programmes of work.

The association between poverty and poorer outcomes is well described but the mechanisms through which poverty impacts on poor outcomes are less well understood. Clearly, in some cases, simple material disadvantage has an impact; this is most likely in the provision of a healthy diet; for many families it is much more difficult to provide a healthy diet and ensuring that children receive some food is the priority.

In other situations, it is more complex, poverty and disadvantage do not always lead to poorer outcomes, it is important that we understand why some families have the personal assets to overcome these challenges and others find it more difficult. The work on Adverse Childhood Experiences is helping to provide an explanation for one of the mechanisms through which poverty and disadvantage might lead to longer term inequalities. The interventions and actions that are required to prevent or mitigate the impact of ACEs are less well understood but will be a focus on Public Health Wales work with its partners over the coming years.

We have also reflected on the approach taken in targeting interventions at key population groups, largely defined by place. While the rates of poorer outcomes are higher in certain populations; individuals and families with the same level of disadvantage will also be present outside of those communities and often in larger numbers. Targeting of support such as the Flying Start Programme at geographical communities has the potential to create a

different sort of inequality, where families in high need do not get the same access to support because they live in the wrong area.

Evidence suggests that universal service provision should be the starting point for action to address inequalities. In the first 1000 days of life the universal service is the NHS through its midwifery and health visiting services. While we would not advocate that all action needs to be delivered by health professionals, they are uniquely placed to identify need for additional support and to co-ordinate care.

Currently, the Healthy Child Wales programme is being implemented and Health Boards are challenged to resource the minimum universal contacts and assessment. Enabling Health Visitors and Midwives to make additional visits (enhanced universal provision) can often result in early intervention and prevent problems developing. Outside of Flying Start areas this kind of enhanced universal service is not possible within current resources. We would propose that Flying Start and similar programmes would have a greater impact at population level if the additional NHS services funded through these programmes were flexible enough to provide more intensive preventative interventions to all families where this level of need has been identified regardless of where they live.

It is difficult to measure the impact of programmes and initiatives designed to improve outcomes if insufficient focus has been given to evaluation from the outset or where evaluation approaches have not included a comparison group. This has been a challenge with the Flying Start Programme. Analysis of immunisation uptake, an outcome measure for Flying Start services, found that national differences in uptake between the most and least deprived area had narrowed since the introduction of the service, although official data show similar improvement in areas receiving usual care.[29] The other weakness of many of the programme evaluations is that data on which children and families have received what intervention or service is not available in a sufficiently standardised way to draw conclusions. We would wish to see a greater emphasis given to rigorous evaluation mechanisms as part of any new policy or programme.

1.4 Reduce child deaths and injury prevention, particularly in the most deprived parts of Wales where infant mortality is much higher than the least deprived.

Article 6 of the UN convention on the Rights of the Child states that all children and young people have the right to survive and the right to develop and that Governments should work to prevent the deaths of children and young people.

There are numerous programmes and processes within Wales which have an interest in ensuring that child deaths are reported and reviewed. These include the Child Death Review Programme, All Wales Perinatal Survey, morbidity and mortality meetings in health boards and MBRRACE-UK (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK). There would be benefit in co-ordinating and rationalising these. There are also multi-agency processes including PRUDiC (Procedural response to unexpected deaths in childhood) and child practice reviews.

The Child Death Review Programme produce thematic reviews on deaths of children between 0-18 years and identifies evidence-based opportunities for prevention. Many of the past reviews are relevant to the first 1,000 days including those on meningitis and drowning. However, the thematic review on Sudden Unexpected Death in Infancy (see http://www.wales.nhs.uk/sitesplus/888/page/84342 for thematic reviews) may be the most pertinent, and includes evidence of the impact of factors such as smoking in pregnancy and smoking and alcohol in families with very young children that are associated with these tragic deaths.

The statutory function of the Local Safeguarding Children Boards Regulations 2006 in England includes the responsibility to collect and analyse information about every child death with a view to identifying public health or safety concerns and putting in place procedures for prevention. Similar regulations do not exist in Wales but would be of benefit by enabling sharing of information.

Although there are many programmes working in this area, improved co-ordination would

- avoid duplication of effort
- allow for better shared learning
- identify overlap and gaps

to maximise opportunities for prevention of future child deaths.

1.4.1 Injuries

Information on unintentional injuries to children aged 0 – 2 years of age is not readily available. Generally injuries to children in this age group will occur within the home. Analysis of UK death registration data from 1980 – 2010 found that 31% of deaths in children aged 1 – 4 years of age were from unintentional injuries.

Public Health Wales recognises that co-ordination to prevent unintentional injuries among children in Wales has been very limited.

1.5 Support effective child development and emotional and social well-being – specifically interventions that are delivered outside the health service which can help to detect and address developmental delays.

Many of the interventions which have the potential to improve outcomes can be delivered by non-specialist services and these may often be best placed to support families if they have already established a relationship with that family. The following, is a list of evidence based interventions that focus on improving the parent child relationship and are associated with better outcomes. None of these require specialist professionals to provide them:

- Responsiveness from the parent or adult to a child; responding to what a child does immediately after it takes place such as smiling back at a child
- Sensitivity and emotional warmth
- Household routines, reduced chaos
- Shared reading and talking to children
- Authoritative but not harsh discipline, setting clear and consistent boundaries

There needs to be a whole system approach at a local level where all local services whether they are in the statutory or voluntary sector understand the evidence; understand how improvements can be made; understand their contribution and that of other agencies and are supported by a common measurement system.

Our work with Cymru Well Wales and the First 1000 Days programme has highlighted that there is often a great deal of activity around the first 1000 days in any local area but the connections and links between services is very limited. They do not function as a collective system.

1.6 Focus on improving learning and speech and language development through the home learning environment and access to early years' provision (including childminders, preschools and day nurseries).

Language development requires relatively simple action by parents and other adults, in talking to children from birth; reading together and learning songs and nursery rhymes etc. This work can be supported by early years provision such a nurseries and play groups, particularly to support those families which may struggle to provide consistent interaction for children. We are aware that the work in Bridgend through Flying Start has made a significant difference to language development by working with early years provision. Ensuring that learning such as this is shared and adopted across Wales would help to ensure a population level impact across Wales.

1.6.1 Newborn Hearing Screening

Newborn hearing screening is offered to identify babies with a significant hearing loss that will impact on early language development. The sooner that interventions can be in place the better the outcomes are for language and development of the child.

In the annual report published for April 2014-March 2015 showed that 99.9% eligible babies were identified for screening and 99.5% were tested.

The mean age of babies identified with a significant hearing loss was 9.7 weeks with mean age of hearing aid fitting 15.9 weeks. This means that of the 1.3 per 1000 babies screened identified with a hearing loss that these

babies have early access to amplification and early support for speech and language development.

1.7 Reduce the adverse impact on the child of psychosocial issues such as poor parenting, disruptive family relationships, domestic violence, mental health issues and substance misuse through effective safeguarding.

Research tells us that relationships with caring, responsive adults and early positive experiences promote a child's healthy development. Significant stress from ongoing hardship or threat disrupts the biological foundations of learning, behaviour, and health, with lifelong consequences. Providing the right ingredients for healthy development, including where necessary protective factors that can counterbalance the ill effects of adversity, from preconception onwards produces the best outcomes for children.

1.7.1 Safeguarding Children

The Welsh Government has legislated to enable effective safeguarding. The Social Services and Well-being (Wales) Act 2014 established multiagency Regional Safeguarding Boards to work together to safeguard people across Wales. The same Act established the National Independent Safeguarding Board to provide support and advice to Safeguarding Boards in Wales with a view to ensuring that they are effective, to report on the adequacy and effectiveness of arrangements to safeguard children and adults in Wales, and to make recommendations to the Welsh Ministers as to how those arrangements could be improved.

The NHS in Wales is committed to protecting and safeguarding the welfare of children and young people. As a result of the universal nature of the provision of health services health professionals are often the first to be aware that families are experiencing difficulties in looking after their children. In his report, Safeguarding and Protecting Children in NHS Wales (Cardiff University, 2010), Professor Sir Mansel Aylward identified the need for robust monitoring and evaluation in order to improve and develop services. This led to the following recommendation:

'Evaluation of the efficiency and efficacy of child protection and safeguarding arrangements and interventions must rest on outcome-based monitoring. This is an area that requires further attention. Consideration should be given to the inauguration of a National outcomes development and quality assurance group to establish standards, to set tangible objectives and to drive improvement on an all-Wales basis.'

In response the Chief Nursing Officer for Wales, Professor Jean White, established the NHS Wales Safeguarding Network which first met in October 2013. The Network was established to provide a vital bridge between strategies and arrangements at local level and national policy developments to support NHS Wales Health Boards and Trusts in discharging their responsibilities for safeguarding people. The membership of the Network includes the Designated Professionals and National Role GP of the National Safeguarding Team, Public Health Wales, Executive Leads for safeguarding in Health Boards and Trusts, Assistant/Associate Directors of Nursing, with safeguarding responsibilities in Health Boards and Trusts, Named Professionals for safeguarding in Boards and Trusts and Health Board GP Safeguarding Leads. Senior Medical and Senior Nursing Officers Welsh Government are included as observers. The Network has a work plan through which it develops and agrees national standards, policy and practice guidelines relevant to safeguarding, and promotes best practice. Member organisations contribute to All Wales audits of safeguarding practice. The Network shares the learning from multiagency safeguarding reviews, domestic homicide reviews and relevant research. It supports systems and processes to ensure the agreed guidance on safeguarding training is delivered across NHS Wales. It provides oversight of barriers, where progress in safeguarding people have been recognised, and collaborates on solutions.

It must be remembered that neglect is by far the most prevalent form of child maltreatment. Severe neglect appears to be at least as great a threat to health and development as physical abuse—possibly even greater. When compared with children who have suffered physical abuse, young children who experience chronic neglect exhibit more serious cognitive impairments, attention problems, language deficits, educational difficulties, behavioural difficulties, and problems with peer interaction as they get older.

Initiatives such as Flying Start and Families First have ensured a focus and additional support and investment for some of Wales' most vulnerable children in the crucial early stages of development however there remains work to be done to integrate neglect more fully into the Welsh Government's overall approach to the early years. In 2013 Welsh Government funded a twin-phased two-year project from Action for Children – Gweithredu drs Blant and NSPCC (Cymru/Wales) to scope, with partners, key areas for multiagency action to tackle child neglect. The Welsh Neglect Project report strongly promotes the idea of an All Wales Child Neglect protocol that will clearly embed a shared responsibility for identifying and tackling neglect, including the use of evidence-based assessment tools, the role of preventive services in addressing neglect, training and reviews, information sharing and referral processes, and designated neglect specialists in key agencies. This has yet to be delivered.

1.7.2 Adverse Childhood Experiences

In order to tackle ACEs at a population level, Public Health Wales has work through *Cymru Well Wales* is taking a whole-system approach to preventing and mitigating their ongoing effects. International evidence has demonstrated a range of cost effective approaches to preventing and mitigating the effects of ACEs, some of which are currently being trialled within Wales. For example, the programme of work for Early Intervention and Prevention with the Police, the work with Primary Care to routinely enquire about ACEs and the work with schools to develop an ACE informed whole school approach.

The *ACE Prevention and Support Hub* is being established to drive the achievement of the collective vision for Wales as a world leader in ACE-free childhoods. It will help create the environment for change, enable and support individuals, communities and organisations to achieve their local ambitions around the ACEs agenda. It will do this by:

- Bringing the voice of affected children and families to the table to co-design solutions that will work for them
- Providing targeted evidence about what different organisations can do differently to help prevent and mitigate ACEs

- Training professionals to be experts in ACEs for their organisations and using a workforce development model to support them to grow their internal and external networks to change practice
- Pulling learning from individuals, organisations and the wider system and sharing it through a range of action learning sets and communities of practice
- Driving change and system transformation at local and national levels.

The ACE Prevention and Support Hub will commence operation in April 2017. The proposal is for an initial three year transformation funding in order to support organisations to change their ways of working that we collectively believe is required to support, sustain and embed changes in policy and practice across Wales. The long term success of the approach will depend upon buy in from organisations, networks and agencies to embed the changes and continue the new ways of working beyond the three years. The office of the Future Generations Commissioner can support this long term change.

The Hub will work alongside existing networks and programmes through bringing into the team people for relevant agencies, organisations and networks that are doing work in the ACE prevention space already or could deliver rapid change in practice by bringing an ACE lens to services and programmes in their system/sector. Working through and alongside these system "activators" the Hub staff will support local system level change through innovative test and learn pilots, awareness raising, training, facilitation, action learning, evaluation and innovation support. In addition the Hub will deliver a dedicated ACE prevention and support website, a social media presence around how to prevent ACEs and respond if you have experienced them together with telephone support help lines for both the public and professionals (utilising existing help lines such as the Samaritans and NSPCC).

2 Conclusions

Public Health Wales welcomes that this critical period of child development is gaining greater attention and focus. There are a number of positive policy initiatives and programmes on which to build. However, when the strength

of the international evidence base for action in this area is considered and the potential from emerging research in genetics and neuroscience is considered we have not yet fully grasped the potential or invested sufficient resources in prevention to achieve improved population outcomes. Failure to invest in prevention in the First 1000 Days will result in long term costs to Health and Social Care, Criminal Justice Agencies, Education and out of work benefits in addition to the impact on children and families.

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