4. Antenatal Care and Childbirth

4. Antenatal Care and Childbirth

This section of the report sets out the evidence for promoting health during pregnancy to ensure that the mother has the best chance of producing a healthy baby.

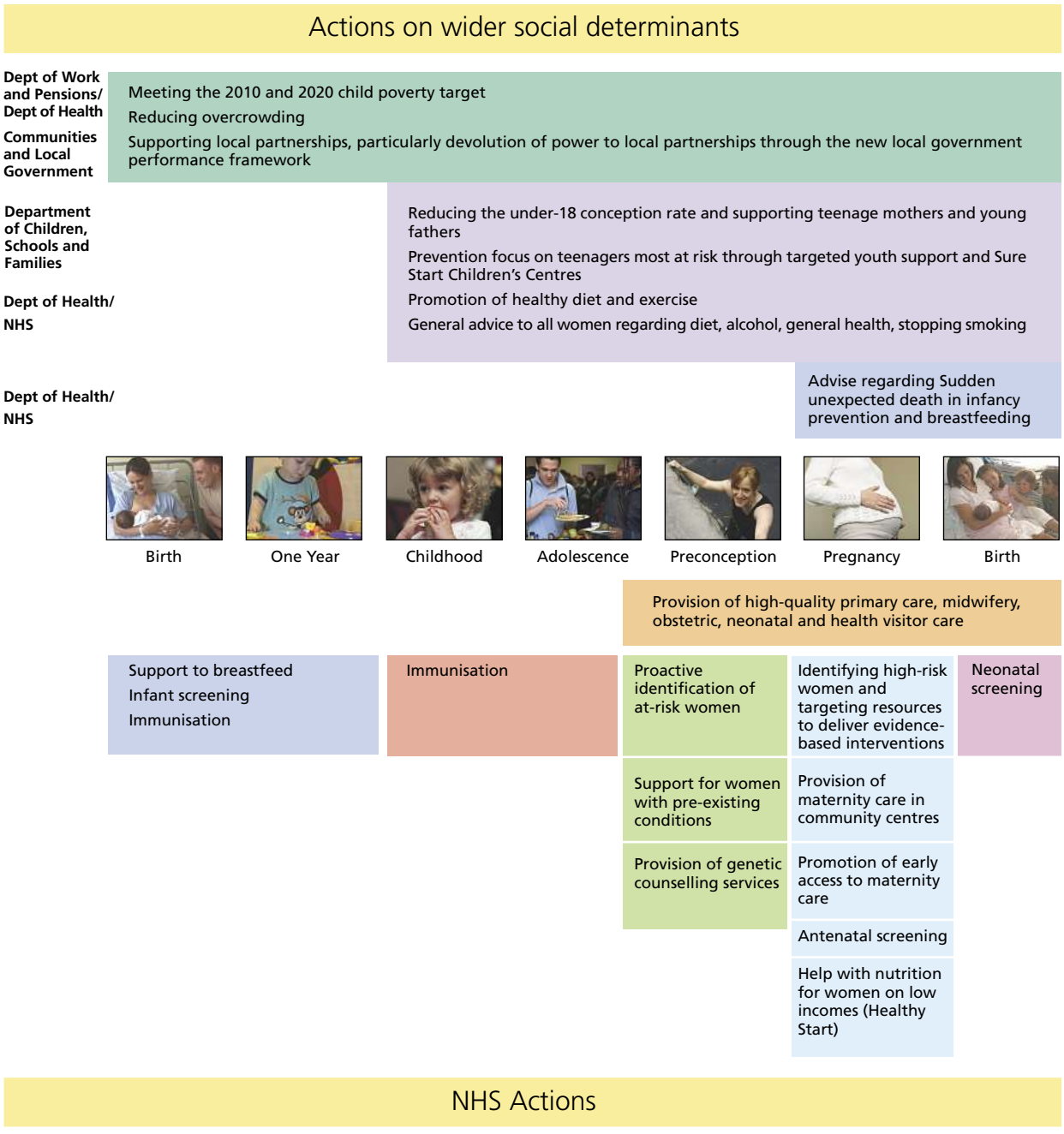
4.1 Creating the best start to life

Health is strongly influenced by a range of environmental and social factors, and these are directly related to the health and wellbeing of the newborn baby. As illustrated in Figure 2.8 in Chapter 2, we know that there are marked differences in infant mortality between social groupings. There are also higher infant mortality rates in the babies of mothers born in Pakistan or the Caribbean. Improving overall family income is one factor which significantly improves health. Figure 4.1 illustrates the range of actions that can be taken to reduce the inequality in infant mortality and improve the health of mothers and their babies.

Figure 4.2 (page 34) is a 'scarf' chart, which enables us to see the impact of preventive work with mothers and families on the gap in infant mortality. As well as social policy interventions, also required are targeted sexual health promotion and ready access to contraceptive services for young people (to prevent unwanted teenage pregnancies) and health promotion in pregnancy (such as nutritional and Stop Smoking advice).

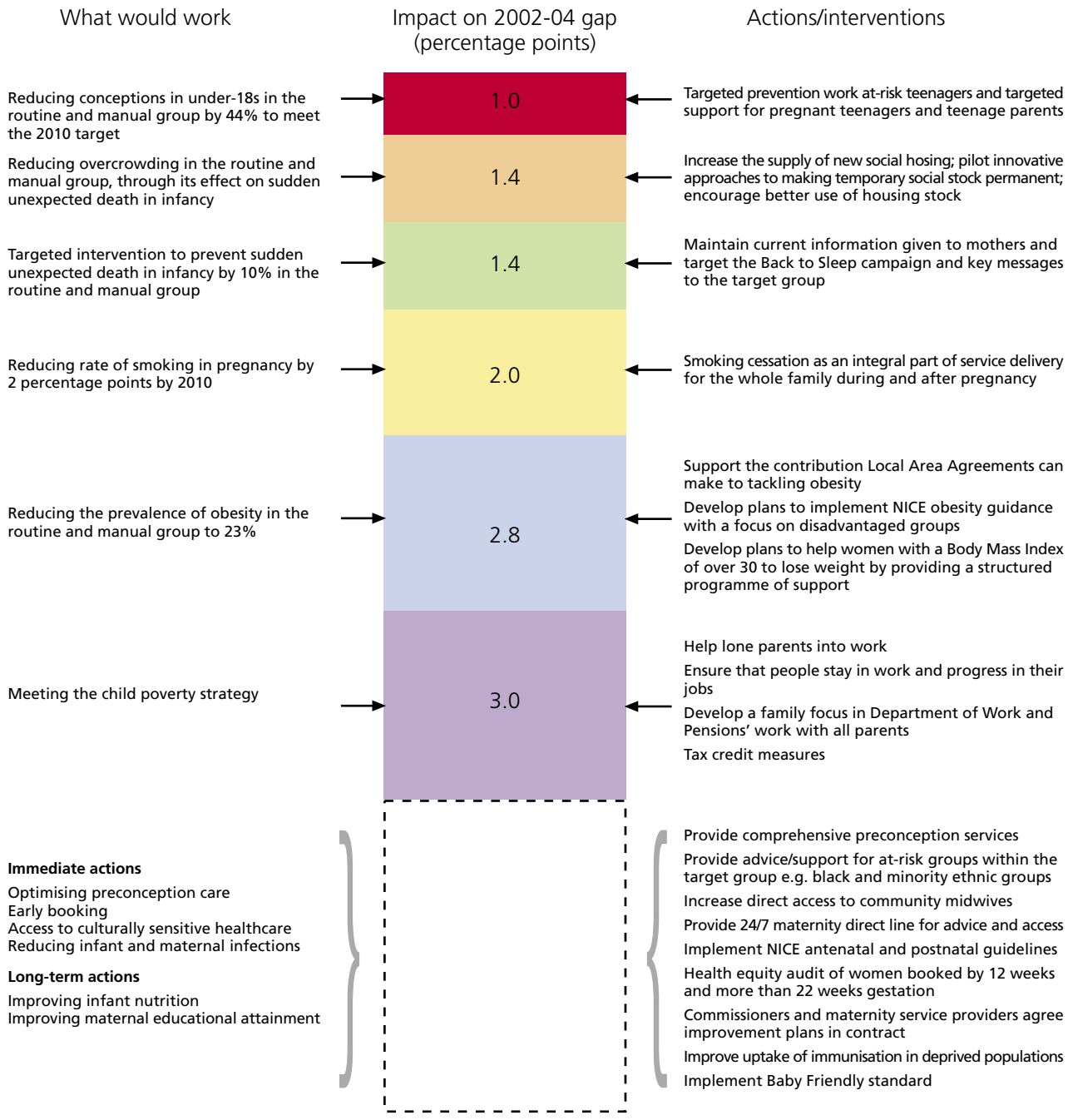
Progress in all of these areas can be monitored using routine data sources, for example, those set out in Table 4.1 (page 35).

Figure 4.1 Delivery of interventions to reduce health inequalities in infant mortality



Source: Implementation Plan for Reducing Health Inequalities in Infant mortality: A Good Practice Guide, Department of Health, 2007

Figure 4.2 Identifiable actions to reduce the 2002-04 gap in infant mortality



Source: Implementation Plan for Reducing Health Inequalities in Infant Mortality: A Good Practice Guide, Department of Health, 2007

Table 4.1 Useful routine data items to enable local monitoring of progress in infant and maternal health

TYPE OF DATA	SOURCE OF DATA	AVAILABILITY
Demographic data		
Deprivation	Public Health Observatory	Yes
Ethnicity	Trust	Yes
Maternal age at birth	Trust/Office of National Statistics	Yes
Child poverty rates	Regional/Department of Work and Pensions	Yes
Health service data		
Maternal Body Mass Index at booking	Trust	Yes
Maternal smoking status at booking, by age	Trust and quarterly report sent to Primary Care Trust	Yes
Teenage conception rates (under 18)	Office of National Statistics	Yes
Percentage of women who have received a health and social care needs assessment by the 12th week of pregnancy	Trust	Yes
Antenatal screening uptake	Trust (Clinical Negligence Scheme for Trusts (CNST) level 2) and Primary Care Trust	Yes
Breastfeeding initiation and continuation rates	(1) Quarterly report by Primary Care Trust at trust level (2) Only ones who have baby-friendly commitment at trust level	(1) Yes (2) Yes for some trusts
Infant immunisation uptake	Primary Care Trust	Yes
Infant deaths as a consequence of a serious untoward incident	Trust (National Patient Safety Agency), CEMACH	Yes
Outcome data		
Proportion of births that are very low birthweight (less than 1,500 g)	Office of National Statistics	Yes
Proportion of births that are low birthweight (less than 2,500 g)	Office of National Statistics	Yes
Proportion of babies born before 37 completed weeks	Child health system in trust	Yes
Proportion of births to mothers aged under 20	Office of National Statistics	Yes
Proportion of babies who have a safeguarding plan from protection	Safeguarding board	Yes
Overall Infant Mortality Rate and IMR in disadvantaged groups	Public Health Observatory	Yes
Neonatal and post neonatal mortality rates	Office of National Statistics	Yes
Cause of death	Trust	Yes

Households Below Average Income (HBAI) publication available on the Department of Work and Pensions website at www.dwp.gov.uk/asd/hbai.asp

Source: Implementation Plan for Reducing Health Inequalities in Infant Mortality: A Good Practice Guide, Department of Health, 2007

4.2 Smoking in pregnancy

Smoking is one of the main reasons for the gap in life expectancy between rich and poor (NICE, 2008), and smoking is one of the few potentially preventable factors associated with low birth weight, very preterm birth (less than 32 weeks) and perinatal death (Lumley et al, 2004).

Women who smoke during pregnancy have a substantially higher risk of spontaneous abortion (miscarriage) than those who do not smoke. Smoking can also cause complications in pregnancy and labour, including ectopic pregnancy, bleeding during pregnancy, premature detachment of the placenta and premature rupture of the membranes (National Institute for Health and Clinical Excellence, 2008). The health risks for babies are related to the number of cigarettes smoked. Smoking in pregnancy increases infant mortality by about 40% and more than 25% of the risk of sudden unexpected death in infancy is due to smoking.

Women under the age of 35 are more likely to smoke during pregnancy. Nationally, this is a particular problem in teenagers, 45% of whom smoke during their pregnancy. Smoking levels in women in Devon are similar to the national average. There is some evidence to suggest that in the period immediately prior to conception, the levels of smoking in Devon are around 25% (similar to national data). However, rates vary considerably across Devon. Smoking rates on delivery are highest in teenagers (34%) and women 20-24 (24%) - around twice the rate of older women.

References

Lumley, J., Oliver S., Chamberlain, C. and Oakley, L. (2004). Interventions for promoting smoking cessation during pregnancy. Cochrane Database of Systematic Reviews 2004 Issue 4. Available from: http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD001055/frame.html

National institute for Health and Clinical Excellence – Public Health Guidance 10 (2008). Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities. Available from: http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11925

4.3 Folic acid and vitamin supplements

Pregnant women will benefit from the addition of folic acid to their diet in the first 12 weeks of pregnancy, and vitamin D supplementation reduces the risk of the baby developing rickets (weak bones due to vitamin D deficiency).

Folic acid supplements reduce the risk to the foetus of Neural Tube Defects (NTDs), such as anencephaly and spina bifida. Up to 50% of pregnancies are unplanned, so many women do not start taking folic acid supplements until they realise they are pregnant. Foods fortified with folic acid include breakfast cereals and yeast extract. Those rich in folate include peas, beans, lentils and orange juice (NICE, 2008; Lumley et al, 2001).

A recent survey of the knowledge and attitudes of low-income women to folic acid supplements showed that many did not understand either the serious nature of Neural Tube Defects or the role of folic acid supplements in prevention (NICE, 2008).

Vitamin D is created in the body when sunlight falls on the skin. For those women whose skin is less likely to be exposed to the sun, particularly in the United Kingdom during winter months, supplementation of the diet with vitamin D is recommended. Women and children of South Asian, African, Caribbean and Middle Eastern descent, and those who remain covered when outside, are at greatest risk. However, some white women living at the most southerly latitudes of the United Kingdom are also at risk (NICE, 2008).

During pregnancy, lack of vitamin D may adversely affect foetal bone mineralisation and accumulation of infant vitamin D stores for their early months of life (NICE, 2008; Lumley et al, 2001).

References

Lumley, J., Watson, L., Watson, M. and Bower, C. (2001). Periconceptional supplementation with folate and/or multivitamins for preventing neural tube defects

Cochrane Database of Systematic Reviews (2001) Issue 3. Available from: http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD001056/frame.html

National Institute for Health and Clinical Excellence – Public Health Guidance 11 (2008)

Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households. Available from: http://www.nice.org.uk/nicemedia/pdf/PH011guidanceword.doc

4.4 Meeting the needs of women during pregnancy and childbirth

Effective health and social care at the earliest stage in life is crucial for improving the long-term health of the population. Information and support in preparing for pregnancy, continuity, safety of care and parenting skills are important, especially for the more vulnerable. If the national ambition is to ensure that children grow up in the best environment, this means driving up the quality of services for parents, their children and young people at the 'universal' level, while at the same time doing more to reduce the inequalities that still persist in health and wellbeing outcomes.

The "National Framework for Children, Young People and Maternity Services" (Department of Health/Department of Children, Schools and Families, 2008) and "Maternity Matters: Choice, Access and Continuity of Care in a Safe Service" (Department of Health, 2007) set out the delivery framework for providing safe, high-quality maternity care for all women. The framework introduced a new national choice guarantee for women making it easier for them to access maternity services. The framework outlines the options of a home birth in local facilities under the care of a midwife, or birth under the care of a consultant when appropriate, and states that by the end of 2009, all women will have choice over the type of antenatal care they receive, place of birth and postnatal care. "Healthy Lives, Brighter Futures", the strategy for children and young people's health (Department of Health/Department of Children, Schools and Families, March 2009) further supports this framework by identifying further requirements for a high-quality maternity service. The recommendations include:

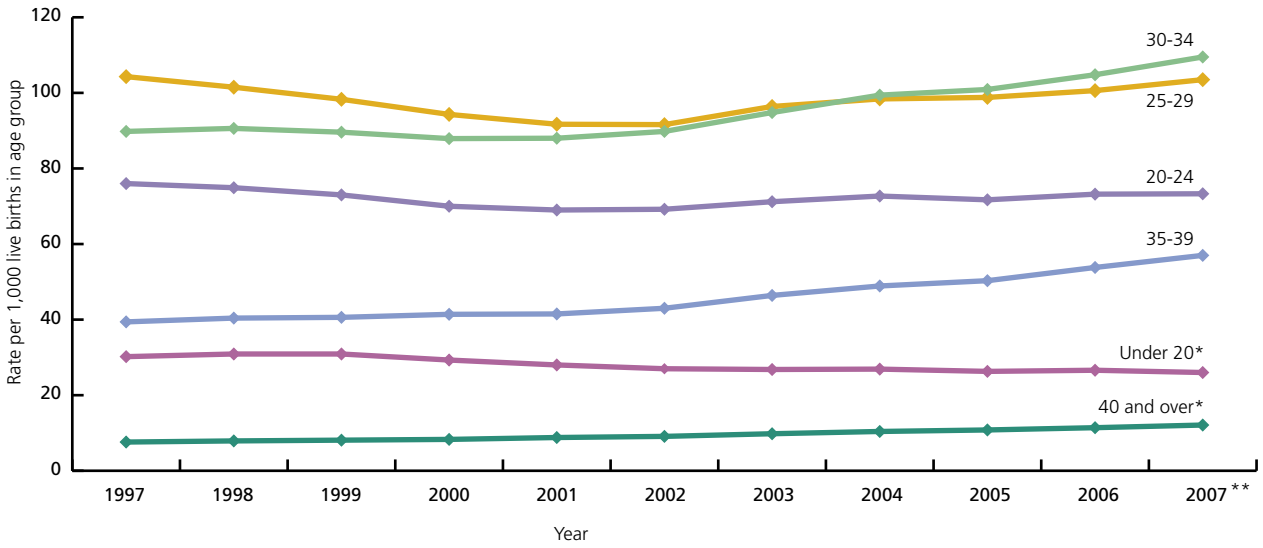
- Parents will get the information they need to support their children's health locally and help to access the support they need in pregnancy and the early years.
- There will be further development of the health visitor workforce to deliver the Healthy Child programme.
- There will be the development of a new Antenatal and Preparation for Parenthood programme.
- Expansion of the Family Nurse Partnership programme will provide intensive support from highly-trained nurses for the most vulnerable young first-time mothers.

More than 6,000 babies are born in the Devon Primary Care Trust area each year. In the Exeter and East Devon areas, birth rates are projected to increase. Figure 4.3 shows how, over the last few years, trends have changed, with an increasing birth rate in mothers aged 25 years and older.

The percentage of women in Devon having home births is slightly higher than the national average and is higher than other coastal and countryside areas. Teignbridge and West Devon have the fifth and seventh respectively highest rates of home births in the country.

For women having babies in hospital, the length of time new mothers stay there varies from 1.5 days in some parts of Devon to 2.4 days (the seventh highest in England).

Figure 4.3 Age-specific fertility rates, 1997-2007



* The rates for women aged under 20, and 40 and over, are based upon the population of women aged 15-19 and 40-44 respectively.
**Based on the 2006-based population projections for 2007.

Source: Population Trends, Crown Copyright, 2008

4. Antenatal Care and Childbirth

Recommendations

4.1 Infant and maternal health outcomes should be monitored regularly to ensure that actions to reduce the gap in infant mortality are effective.

4.2 All midwives and health care professionals looking after women who are pregnant, or who are planning to be pregnant, should offer brief intervention advice and refer to specialist NHS Stop Smoking Services as necessary.

4.3 The general availability of NHS Stop Smoking Services should be increased, and social marketing techniques should be used to ensure that there is a targeted approach.

4.3 The performance of NHS Stop Smoking Services for pregnant women should be monitored, especially in relation to minority-ethnic and socio-economically disadvantaged groups.

4.4 The Department of Health recommends that women who could become pregnant, or who are already pregnant, have a daily folic acid intake of 400 micrograms [Ìg] before conception and throughout the first 12 weeks of pregnancy.

4.5 Higher doses (5 mg daily) are recommended for those who have had a previous Neural Tube Defect pregnancy or who have a family history of Neural Tube Defect. Higher doses are also recommended for women who have (or whose partner may have) a Neural Tube Defect and those who have diabetes (Department of Health, 2000).

4.6 Information on the protective effects of a folate-rich diet needs to be incorporated into nutrition and health education at secondary school level.

4.7 During the booking appointment at the beginning of pregnancy, midwives should offer every woman information and advice on the benefits of taking a vitamin D supplement (10 micrograms [Ìg] per day) during pregnancy and while breastfeeding. They should explain that it will increase both the mother's, and her baby's, vitamin D stores and reduce the baby's risk of developing rickets. Health professionals should take particular care to check that women at greatest risk of deficiency are following advice to take a vitamin D supplement during pregnancy and while breastfeeding. These include women who are obese, have limited skin exposure to sunlight or who are of South Asian, African, Caribbean or Middle Eastern descent.

4.8 There should be an health equity audit undertaken of the availability of high-quality care before pregnancy, with all women being able to access advice, information, support and the antenatal screening they require.

4.9 Targeted support should be developed for those who are young or otherwise vulnerable.

4.10 Progress towards the South West Strategic Health Authority target of a reduction in smoking in pregnancy to no more than 5% by 2013.