

11. Dietary supplements, smoking and drinking during pregnancy

Key findings

- The UK health departments advise pregnant women to take a daily supplement of 400 micrograms of folic acid prior to conception and during the first 12 weeks of pregnancy to reduce the risk of neural tube defects, such as spina bifida, in unborn babies. Most mothers (94%) reported that they took folic acid either before or during pregnancy. More than a third (37%) said they took folic acid before they were pregnant, increasing to 79% who reported taking it during the first three months of pregnancy, while 23% took it later on in pregnancy.
- Almost two thirds (64%) of all mothers took vitamin or iron supplements (apart from folic acid taken by itself) during pregnancy, which was higher than in 2005 (54%).
- Around a quarter of mothers (26%) in the UK smoked in the 12 months before or during their pregnancy, which was down from a third (33%) in 2005. Lower levels of smoking were seen in all countries in the UK.
- Mothers in Wales were the most likely to have smoked before or during pregnancy (33%) and mothers in England the least likely (26%).
- Twelve per cent of mothers continued to smoke throughout their pregnancy, down from 17% in 2005.
- Of mothers who smoked before or during their pregnancy, over half (54%) gave up at some point before the birth.
- The highest levels of smoking before or during pregnancy were found among mothers in routine and manual occupations (40%) and among those aged under 20 (57%). Mothers aged under 20 were also the least likely to have given up smoking at some point before or during pregnancy (38%), but by socio-economic group, mothers who had never worked were the least likely to have done so (29%).
- Almost nine in ten mothers (88%) who were smoking before or during pregnancy received some type of information on smoking. Midwives were the most common source of information, mentioned by 85% of mothers who had received information. Almost a third of mothers (32%) lived in a household where at least one person smoked during their pregnancy, including just under one in five (19%) where only other people smoked (not the mother herself).
- At Stages 2 and 3 (when babies were around four to six months old and eight to ten months old respectively), three per cent of infants lived in a household where at least one person ever smoked in the home.
- The UK health departments recommend that women should avoid drinking alcohol before and during pregnancy. Recommendations on drinking during pregnancy have tightened since the 2005 survey, when the guidelines were that drinking up to one or two units of alcohol no more than once or twice a week was regarded as safe. In 2010, two in five mothers (40%) drank alcohol during pregnancy, which was fewer than in 2005 (54%). Mothers aged 35 or over (52%), mothers from managerial and professional occupations (51%) and mothers from a White ethnic background (46%) were more likely to drink during pregnancy. Mothers in England (41%) and Wales (39%) were more likely to drink during pregnancy than mothers in Scotland and Northern Ireland (35% in each).

- Among mothers who drank during pregnancy consumption levels were low. Only three per cent of all mothers drank more than two units of alcohol per week on average.
- Around seven in ten mothers (71%) who drank before pregnancy received information about drinking, with midwives being the most common source (for 81% of mothers who had received any information).

This chapter covers dietary supplementation practices: awareness and incidence of folic acid and other supplementation. Although the primary purpose of the survey has always been to monitor infant feeding practices, the survey has also been used to measure the proportion of mothers who smoke and drink during pregnancy and to look at how mothers' smoking and drinking behaviour changes as a result of their pregnancy. This chapter therefore also examines smoking and drinking behaviour before, during and after pregnancy.

11.1 Taking of dietary supplements during pregnancy

11.1.1 Folic acid

Increasing the intake of folic acid in early pregnancy helps to reduce the risk of neural tube defects, such as spina bifida, in unborn babies¹. The UK health departments advise pregnant women to take a daily supplement of 400 micrograms of folic acid prior to conception and during the first 12 weeks of pregnancy. Women with a prior history of neural tube defects, with epilepsy or diabetes are advised to discuss the need to take an increased dose of 5mg folic acid with their doctor.

Awareness of why folic acid is recommended

At Stage 1 of the survey all mothers were asked if they knew why increasing their intake of folic acid is recommended either when planning or during pregnancy. Across the UK, 71% of mothers reported that they knew why increasing the intake of folic acid when planning or during pregnancy was recommended, a decrease since 2005 when 79%² were aware of this recommendation. It is possible that this decrease is at least partially due to a small change in the question wording: in 2005 mothers were asked whether they were aware of the benefits '*immediately before or during pregnancy*' whilst in 2010 they were asked about the benefits '*either when planning or during pregnancy*'.

Mothers in Northern Ireland (78%) and Scotland (75%) were more likely than mothers in other countries to say that they knew why increasing the intake of folic acid was recommended.

Mothers from managerial and professional groups (86%) and older mothers (85% of those aged 35 or over) were the most likely to know why increased intake of folic acid was recommended before and during early pregnancy.

Mothers who said they knew why increasing their intake of folic acid was recommended were asked if they knew the reasons for this recommendation. Answers were collected in an open format and later coded into categories.

Table 11.1 also shows that just under half of all mothers (47%) who said they knew why increased folic acid was recommended before or during pregnancy mentioned the reduced risk of spina bifida, while a further 12% mentioned something to do with the spine or spinal cord.

Some mothers knew that increasing folic acid intake had a positive impact on the development of the baby, without being able to be more precise. For example, 16% of mothers said that increased folic acid intake helped with the growth or development of the baby, while 8% said that it helped to reduce the risks of abnormalities.

Table 11.1

Taking folic acid before or during pregnancy

All mothers were asked whether they had taken folic acid before they became pregnant, during the first three months of pregnancy, or later on in the pregnancy. The question was changed in 2010, so results are not directly comparable with the 2005 survey.

Table 11.2 shows that most mothers (94%) reported taking folic acid either before or during their pregnancy. More than a third (37%) said they took folic acid before they were pregnant, increasing to 79% who reported taking it during the first three months of pregnancy, while 23% took it later on in pregnancy.

Mothers in Northern Ireland (97%) were most likely to have taken folic acid before or during pregnancy. They were also the most likely group to have taken folic acid before pregnancy (42%) while mothers in Wales were least likely (34%).

Mothers from managerial and professional and intermediate occupations were more likely than other mothers to have taken folic acid before or during pregnancy (98% and 97% respectively). Although it was lower for mothers from routine and manual occupations (93%), the differential was most marked for mothers who had never worked, where only 82% had taken folic acid. The greatest variation by socio-economic group was seen for taking folic acid before pregnancy. Fifty-two per cent of managerial and professional mothers reported taking folic acid prior to pregnancy, compared with 39% of intermediate occupations, 25% of routine and manual occupations and just 15% of those who had never worked.

Young mothers under the age of 20 were less likely to take folic acid than average (83% compared with 94%). Older mothers were much more likely than younger mothers to have taken folic acid prior to pregnancy, increasing from 7% of mothers aged under 20 to 52% of those aged 35 or over.

White mothers were a little more likely to have taken folic acid (95%) than mothers from ethnic minority groups (91% of Black mothers, 90% of Asian mothers and 89% for both mothers of Mixed and Chinese or other ethnic origin). This pattern was most pronounced among those taking folic acid prior to pregnancy; 39% of White mothers did so, compared with 27% of Asian mothers, 25% of mothers from a Mixed ethnic background and 23% of Black mothers. The findings for mothers from Chinese or other ethnic groups were slightly different: they were as likely as White mothers to take folic acid prior to pregnancy (39%), however they were less likely than average to take folic acid in the first three months of pregnancy (68%).

There was an association between mothers' awareness of the benefits of taking folic acid before or during pregnancy and taking folic acid. Overall, 97% of mothers aware of the benefits took folic acid either before or during pregnancy, compared with 87% of those who were unaware. The strongest association was for taking folic acid before pregnancy: 44% of those aware of the benefits took folic acid before they were pregnant, compared with 19% of those who were not aware.

Table 11.2

11.1.2 Other dietary supplements taken during pregnancy

Apart from increasing their intake of folic acid, pregnant women are recommended to ensure they take sufficient iron and vitamin D during pregnancy.³ Women are advised to take vitamin D supplements during pregnancy and while breastfeeding, to ensure their own needs for vitamin D are met and so that their baby is born with enough stores of vitamin D for the first few months of life. Other groups at risk of vitamin D deficiency include people who have darker skin and people who are not exposed to a sufficient level of sunlight (since the main source of vitamin D is direct sunlight on skin), for example those who cover their skin.

Pregnant women can generally get sufficient iron through their diet, but may be recommended to take iron supplements during pregnancy by their health professional if they are low on iron. Pregnant women are also specifically recommended to avoid taking supplements with high levels of vitamin A. At Stage 1 of the survey all mothers were asked if they had taken extra vitamin or iron supplements while they were pregnant (apart from folic acid).

Table 11.3 shows that 64% of mothers across the UK took some form of vitamin or mineral supplements (apart from folic acid by itself) during their pregnancy. This was higher than reported in 2005, when the figure was 54%. Mothers in Northern Ireland were the most likely to have taken supplements during pregnancy (73%), while mothers in Scotland and Wales were the least likely (both 60%).

There was some variation in the proportion of mothers taking supplements during pregnancy by socio-demographic characteristics, as with taking folic acid. For example, 71% of mothers from managerial and professional occupation groups took some form of dietary supplements compared with 59% of mothers from routine and manual occupations and 58% of those who had never worked. Younger mothers were less likely to have taken supplements during pregnancy than older mothers (54% of mothers aged under 20 compared with 68% of mothers aged 30-34 and 69% of mothers aged 35 or older.)

As in 2005, the most common type of supplement taken by mothers during their pregnancy was iron, taken either as a single supplement or in combination with vitamins. Across the UK, almost three in ten (28%) mothers took an iron only supplement during pregnancy, while a further 18% took iron combined with multi-vitamins. Eleven per cent took multi-vitamins only and six per cent took a combined vitamin, iron and folic acid supplement. Three per cent specifically mentioned they had taken Healthy Start vitamins (which contain folic acid and vitamins C and D) and the same proportion mentioned taking a vitamin D supplement.

Mothers in Northern Ireland were the most likely to take some form of iron supplement (39% iron only; 22% multi-vitamins and iron combined, compared with 28% and 18% respectively overall). Mothers aged under 20 and those who had never worked were more likely to take iron only (37% for each). Mothers aged 30-34 and 35 or over and those in managerial and professional occupations were more likely to take multi-vitamins and iron combined (23%, 23% and 26% respectively).

The proportion of mothers taking iron only and vitamins and iron has remained similar to 2005 (28% compared with 29% in 2005; 18% compared with 17% in 2005). The increase since 2005 has therefore come from other types of supplement. Taking vitamins only increased from 7% in 2005 to 11% in 2010. A wider range of other types of supplement were mentioned in 2010 than was the case in 2005.

Table 11.3

11.2 Smoking

Government policies relating to smoking during pregnancy in England include Every Child Matters (HM Government, 2004), Maternity Matters: choice, access and continuity of care in a safe service (DH, 2007), the Cancer Reform Strategy (DH, 2007), Health Inequalities: progress and next steps (DH 2008), and the Implementation Plan for reducing health inequalities in infant mortality: a good practice guide (DH, 2007). In June 2010, NICE issued guidance on how to stop smoking during pregnancy and following childbirth.⁴

Most recently, the Department of Health's (DH) Tobacco Control Plan for England⁵, published in March 2011, outlined the action that the Government will take nationally until 2015 to continue to drive down the prevalence of smoking and to support comprehensive tobacco control in local areas. It includes a national target to reduce smoking during pregnancy to 11% or less by the end of 2015 (baseline measure of 14.1% in 2009/10). This target is to be specifically measured by the smoking status at time of delivery statistical collection (SSATOD⁶, recorded at the time of giving birth) published by HSCIC (previously DH). These data (which are also available quarterly) show that the proportion of mothers smoking at delivery in England was 13.5% in 2010/11, lower than the 2009/10 outturn (14.1%) and 2008/09 outturn (14.4%).⁷ The nearest IFS estimate which could be used as a proxy measure is the proportion of mothers who smoked throughout pregnancy.

There was a further national target in Scotland to reduce smoking during pregnancy, which sought a reduction in the proportion of women who smoke during pregnancy from 29% to 23% between 1995 and 2005 and to 20% by 2010. The proportion of women in Scotland smoking during pregnancy in 2009/10 it was 18.8%.⁸

More generally, a key policy development since the 2005 Infant Feeding Survey has been the introduction of smokefree legislation across the UK. Legislation came into force in Wales in April 2007 and England in July 2007, making it against the law to smoke in virtually all 'enclosed' and 'substantially enclosed' public places and workplaces.⁹ Similar legislation was also introduced in Scotland in March 2006¹⁰ and in Northern Ireland in April 2007¹¹. This has had a wider impact on smoking behaviour which may in turn have affected the smoking behaviour of mothers and their families.

More recently, the Scottish Government recognised the need for increased emphasis on preventing smoking uptake in the first place and, in May 2008, published a new Smoking Prevention Action Plan "Scotland's Future is Smoke-free" setting out a programme of measures in this respect. These proposals were incorporated in the Tobacco and Primary Medical Services (Scotland) Act 2010 which updates the law relating to the sale and display of tobacco products. As a result a number of new controls on the sale of tobacco came into force with effect from 1 April 2011 and 1 October 2011 including a registration scheme for tobacco retailers.

A Tobacco Control Action Plan for Wales has been published recently, which includes smoking in pregnancy, using this survey as an indicator.¹²

A new ten-year strategy for the future of tobacco control in Northern Ireland was published in February 2012.¹³ While the strategy is aimed at the entire population, it identifies pregnant women, and their partners who smoke as a key priority group requiring more focused action. An aspirational target has been included in the strategy to reduce the proportion of pregnant women who smoke to 9% by 2020.

At Stage 1 of the survey, when most babies were between four and ten weeks, all mothers were asked a number of questions about their smoking: if they had ever smoked, if they had smoked at all in the two years before the survey, if they smoked at all now and if they smoked at all during pregnancy, after they found out they were pregnant. They were also asked questions about the smoking habits of other people who lived with them. At Stages 2 and 3 of the survey, mothers were asked about their current smoking behaviour meaning that any changes to their smoking behaviour could be tracked after the birth.

11.2.1 Smoking during pregnancy

Table 11.4 shows a detailed breakdown of mothers smoking behaviour in each country. Over seven in ten mothers (74%) across the UK were classified as non-smokers. Over half of all mothers (58%) had never smoked, while a further 16% had given up smoking more than a year before their current pregnancy. Over a quarter of mothers (26%) were classified as smokers, meaning that they smoked during their pregnancy or in the year before it. Twelve per cent of mothers smoked throughout their pregnancy, while 14% of mothers smoked in the year before but gave up at some point either before or during their pregnancy.

Of the 14% of mothers who gave up before or during pregnancy, four per cent gave up in the year before pregnancy; nine per cent gave up on confirmation of their pregnancy, while one per cent gave up later in pregnancy and stayed stopped throughout.

Of the 12% of mothers who smoked throughout their pregnancy, one per cent tried to give up during pregnancy but started again before the birth, while nine per cent cut down the amount they smoked.

Table 11.4

The rest of the analysis on mothers' smoking behaviour summarises the detailed information presented in Table 11.4 into three main categories as follows:

- *Smoked before or during pregnancy* is the proportion of women who smoked **at all** in the two years before they completed Stage 1 of the survey. This roughly covers the period of their pregnancy plus the year before conception.
- *Smoked throughout pregnancy* is the proportion of women who smoked in the two years before they completed Stage 1 of the survey and who were smoking at the time of their baby's birth. It included women who may have given up smoking before or during their pregnancy, but who had restarted before the birth.
- *Gave up smoking before or during pregnancy* is the proportion of women who smoked in the two years before they completed Stage 1 of the survey and who gave up during this period and had not restarted before the birth of their baby.

Table 11.5 shows that in 2010, around a quarter (26%) of mothers in the UK smoked before or during their pregnancy. Smoking levels before or during pregnancy were highest in Wales (33%) and lowest in England (26%).

Among mothers who smoked before or during pregnancy, over half (54%) gave up at some stage before the birth. Mothers in England were most likely to give up smoking before or during pregnancy (55%), whereas those in Northern Ireland were the least likely to give up (47%).

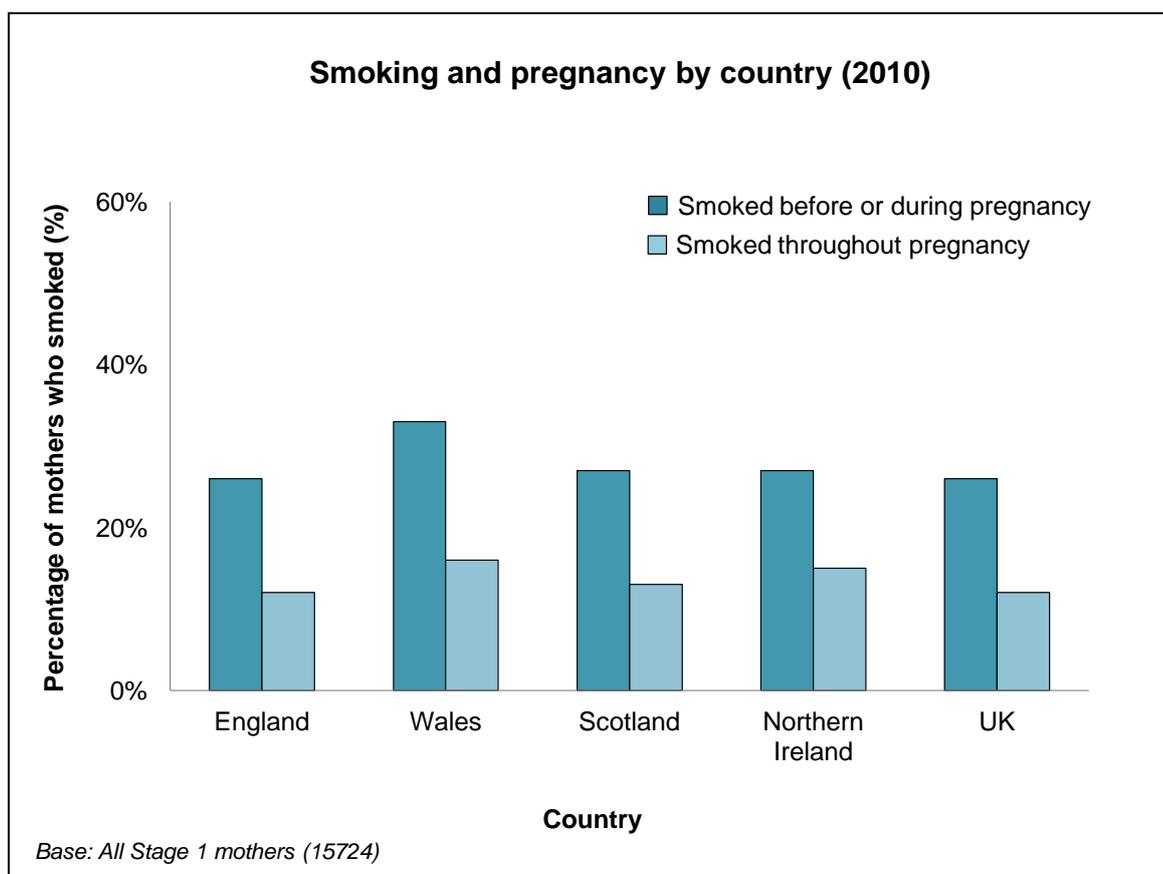
Across the UK, one in eight mothers (12%) continued to smoke throughout pregnancy, and were still smoking after the baby was born. Mothers in Wales were most likely to smoke throughout their pregnancy (16%).

Across the UK, the proportion of mothers smoking before or during pregnancy fell from 33% to 26% between 2005 and 2010. Lower levels of smoking were seen in all countries in 2010 compared to 2005. The most significant decreases in smoking levels before or during pregnancy were in Scotland, where smoking levels fell from 35% to 27%, and in England, where they fell from 32% to 26%.

Mothers who smoked were more likely to give up before or during pregnancy in 2010 than in 2005 (54% and 48% respectively). Hence, a smaller proportion of all mothers smoked throughout pregnancy in 2010 (12% compared to 17% in 2005, in line with the downward trend of the SSATOD data and set target). This is true for all countries where time trend data are available.

Table 11.5 and Figure 11.1

Figure 11.1



Although direct comparisons are not possible with surveys prior to 2000 because of changes to the questions, the 2010 results continue the general downward trend in smoking during pregnancy seen since around 1990.

11.2.2 Variation in smoking behaviour

Socio-economic classification (NS-SEC) of mother

As previous surveys have shown, there is a strong association between smoking levels and socio-economic status.

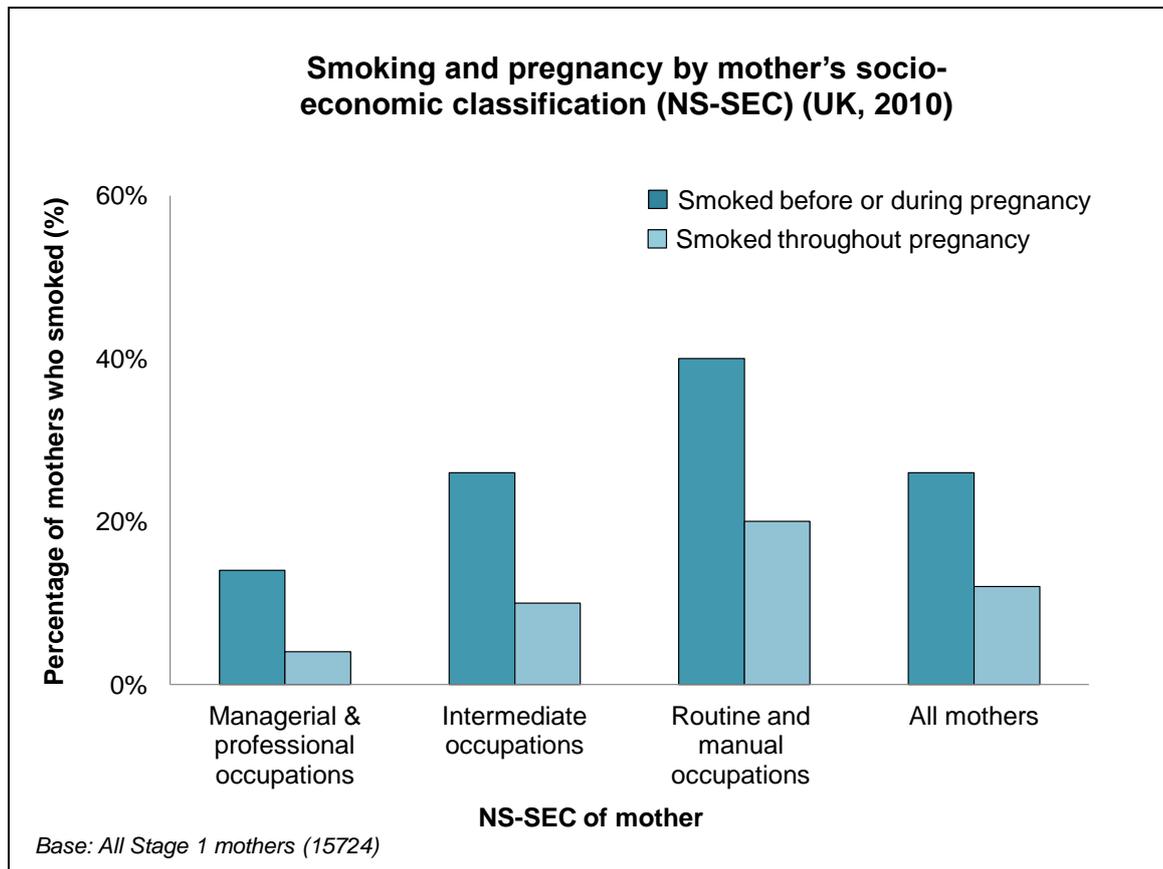
Across the UK, mothers in managerial and professional occupations were the least likely to have smoked before or during pregnancy (14%), whilst those in routine and manual occupations were the most likely to have done so (40%). Among mothers who did smoke, those in managerial and professional occupations were most likely to have given up at some point before or during pregnancy (72%), while mothers who had never worked were the least likely to have done so (29%).

Mothers in routine and manual occupations and those who had never worked were five times as likely as those in managerial and professional occupations to have smoked throughout pregnancy (20%, 21% and 4% respectively).

For the UK as a whole, levels of smoking before or during pregnancy across all socio-economic groups fell between 2005 and 2010. Although mothers in routine and manual occupations had the highest levels of smoking in 2010 (40%), this group also had the largest decrease in smoking rates from 2005 compared to 2010 (down eight percentage points, from 48% to 40% respectively).

Table 11.6 and Figure 11.2

Figure 11.2



All countries in the UK show a broadly similar pattern of smoking by socio-economic classification.

Table 11.7 - 11.10

Age of mother

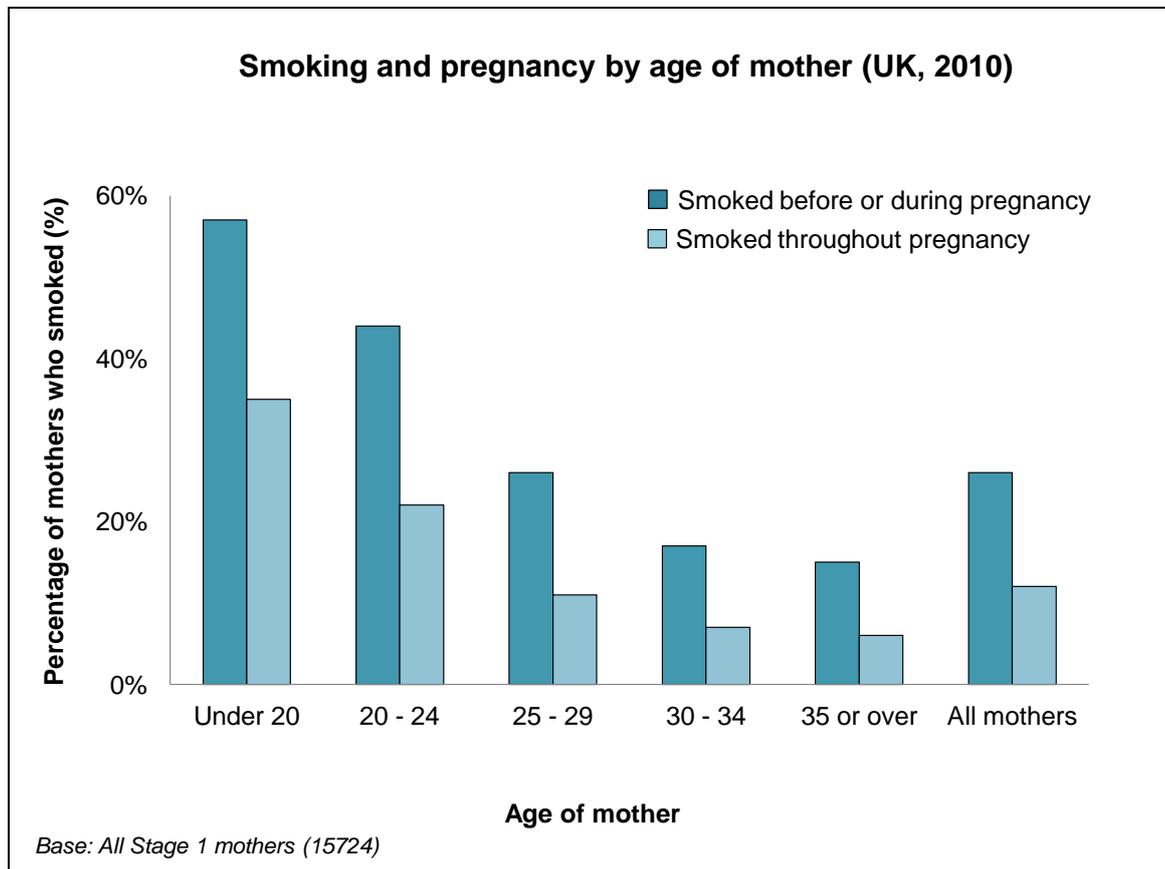
There is an association between the age of the mother and smoking status. For the UK as a whole, mothers under the age of 20 were nearly four times as likely to smoke before or during pregnancy, than mothers aged 35 or over (57% compared with 15%). As well as being more likely to smoke in the first place, younger mothers were less likely to quit before or during pregnancy: 38% of mothers under the age of 20 did so compared with 58% of mothers aged 35 or above. Mothers under the age of 20 were therefore almost six times as likely as those aged 35 or over to have smoked throughout pregnancy (35% and 6% respectively).

Between 2000 and 2005, the proportion of mothers who smoked before or during pregnancy fell among mothers of all ages, except for those under the age of 20. Between 2005 and 2010, however, the proportion of mothers who smoked before or during pregnancy fell amongst mothers of all ages

but particularly amongst mothers under the age of 20, with levels falling for this group from 68% in 2005 to 57% in 2010.

Table 11.11 and Figure 11.3

Figure 11.3



All countries in the UK show a broadly similar pattern of smoking by age of mother.

Table 11.12 - 11.15

11.2.3 Smoking behaviour of other household members

Apart from the mother, an unborn baby can also be exposed to tobacco smoke if anyone else in the household smokes. Therefore, at Stage 1 of the survey all mothers were asked whether anyone else in the household smoked at all during their pregnancy.

Overall, almost three in ten mothers (28%) reported that they lived with at least one other person who smoked during their pregnancy. Table 11.16 shows that there was a strong association between a mother's own smoking behaviour during her pregnancy and whether or not she lived with other smokers. As has already been seen, 12% of all mothers smoked throughout their pregnancy. However, among mothers who lived with at least one other smoker, 30% continued to smoke

throughout their pregnancy compared with only five per cent of mothers who did not live with any other smokers.

Table 11.16

By considering the smoking behaviour of everyone in the household it is possible to work out the proportion of mothers who had any exposure to tobacco smoke in the home during their pregnancy.

Table 11.17 shows that across the UK 68% of mothers lived in a household where no-one, including themselves, smoked during their pregnancy, an increase from 62% in 2005. Conversely, 32% lived in a household where at least one person smoked during their pregnancy. Just under one in five mothers (19%) lived in a household where only other people smoked, while four per cent lived in households where only the mother herself smoked during pregnancy. In eight per cent of households **both** the mother and others in the household smoked during the pregnancy.

Mothers in Wales were a little more likely than average to live in a household where at least one person smoked during their pregnancy (36%), compared with mothers in England (31%), Northern Ireland (33%) and Scotland (32%).

Table 11.17

11.2.4 Information received on smoking during pregnancy

Mothers were asked whether or not they had received any information about smoking during their pregnancy. Those who reported that they had received some information were asked what sort of information they had received. Mothers could choose from a list and/or write in other types of information they had received. Almost nine in ten mothers (88%) who were smoking before or during their pregnancy said they had received some type of information about smoking, a similar proportion to 2005 (87%)¹⁴. Nearly four-fifths (79%) of mothers who were smoking before or during pregnancy said they received information on the effects of smoking on the baby, and around three-fifths had received information about the dangers of sharing a bed with their baby and smoking (60%) and the risks to continuing to smoke in pregnancy (59%). Over half (53%) had been given information on how to stop smoking, and a third each had received information on how to cut down smoking (32%) and how their partner could stop smoking (33%).

Mothers in Northern Ireland who were smoking before or during pregnancy were most likely to have received information about smoking (93% compared with 88% across the UK). They were also more likely to have received a number of specific types of information, in particular about dangers of sharing a bed with your baby and smoking (70% compared with 60% overall) and the risks of continuing to smoke in pregnancy (67% compared with 59% overall).

Table 11.18

Midwives were the most common source of information about smoking, mentioned by 85% of mothers who had received information about smoking. A fifth (20%) of those who received information on smoking mentioned health visitors as a source of information, while a similar proportion (19%) mentioned doctors. Books, leaflets or magazines were also an important source of information, with 29% using these.

Sources of smoking information were broadly similar in all countries. However, mothers in Wales were the most likely to have received information about smoking from a midwife (89%) and least likely to have done so from a doctor (16%). Mothers in Northern Ireland were more likely than mothers in other countries to have received information about smoking from a doctor (33% compared with 19% overall) or a nurse (11% compared with 5% overall).

Relative to 2005, mothers mentioned a smaller range of sources of information¹⁵ and were much less likely to mention receiving information from their doctor/GP (34% in 2005 and 19% in 2010) or a partner, friend or relative (27% and 8% respectively). Television and radio also had less influence in 2010 than in 2005, dropping from 17% in 2005 to 5% in 2010. However, the proportion of mothers mentioning the midwife was only slightly lower in 2010 than 2005 (89% in 2005 and 85% in 2010).

Table 11.19

11.2.5 Smoking behaviour after the birth

Although the survey was primarily interested in smoking behaviour during pregnancy, questions about smoking after the birth were also asked at all stages of the survey. Using this information it is possible to examine whether mothers who gave up during pregnancy remained stopped in the months after the birth, and also whether mothers who smoked throughout pregnancy changed their smoking behaviour after the baby was born.

Table 11.20 shows that a quarter of mothers (25%) were smoking before or during pregnancy¹⁶. At Stage 1 of the survey, the proportion of mothers who reported they were currently smoking (i.e. when the baby was about four to six weeks old) was 13%, reflecting the fact that many mothers had quit during pregnancy and had remained stopped after the birth. At Stages 2 and 3 of the survey a similar proportion of mothers reported currently smoking (14% at Stage 2 and 15% at Stage 3).

Although these figures might suggest that there was not much change in the smoking behaviour of mothers in the year after birth, the overall smoking rate at each stage of the survey actually hides the fact that a lot of mothers did change their smoking behaviour during this period, although these changes tended to cancel each other out. In other words, while some mothers who had stopped smoking during pregnancy started again after the birth, others who had smoked throughout pregnancy stopped or made attempts to stop once their baby was born.

Table 11.20 shows the smoking behaviour of mothers after birth broken down by their smoking behaviour during pregnancy. This shows that while most mothers who gave up before or during pregnancy managed to stay stopped after the birth, a minority did start smoking again. At Stage 1, 80% of mothers who had quit before or during pregnancy were still not smoking, although this had fallen to 75% by Stage 2 and to 69% by Stage 3. This means that less than a year after the birth of their baby, over three in ten mothers (31%) who had stopped during pregnancy were smoking again.

Among mothers who continued to smoke throughout pregnancy, nine in ten (91%) were smoking at Stage 1 of the survey, while 87% were smoking at Stage 2 and 87% at Stage 3. This means that at both Stages 2 and 3 of the survey over one in ten mothers who had smoked throughout their pregnancy were not currently smoking. It is worth noting, however, that the 13% of these mothers who had stopped smoking at Stage 2 and the 13% who had stopped smoking at Stage 3 were not all the same mothers. In fact, among mothers who had smoked throughout pregnancy only nine per cent were not smoking at **both** Stage 2 and Stage 3 of the survey (data not shown). This suggests that there is a fair amount of fluctuation in mothers' smoking behaviour, with some mothers making

repeated quit attempts in the period immediately after birth and going from smoking to not smoking at different times.

Table 11.20

11.2.6 Smoking behaviour of partners after the birth

At all stages of the survey mothers were also asked whether anyone else in the household was currently smoking, meaning that a similar analysis of changes in partners' smoking behaviour after the birth can be done.

Table 11.21 shows that 23% of all mothers had a partner who smoked during their pregnancy. At Stage 1 of the survey, 20% of mothers reported that their partner currently smoked, while at both Stages 2 and 3 it was 18%. The decrease of five percentage points from 23% during pregnancy to 18% at Stage 3 suggests that while pregnancy and the birth of their baby did motivate some partners to quit smoking, the impact was not as great as it was on mothers' smoking behaviour (which went down ten percentage points from 25% during pregnancy to 15% at Stage 3).

However, some partners who smoked during the pregnancy did try to give up after the birth. Thus, 14% of partners who smoked during the pregnancy were not smoking at Stage 1, and this had risen to 26% at Stage 2 and 28% at Stage 3. As with mothers themselves, there was quite a bit of fluctuation in smoking behaviour over time. Thus, only ten per cent of partners who smoked during pregnancy were not smoking at all three stages after the birth (data not shown).

Table 11.21

11.2.7 Smoking in the home

At Stages 2 and 3 of the survey mothers were asked not only whether they or anyone else in the household smoked, but also whether anyone ever smoked inside the home. This gives some indication of the proportion of young infants who are likely to be exposed to tobacco smoke in the home.

Table 11.22 shows that at Stage 2 of the survey only 13% of mothers who were currently smoking said they ever smoked in the home. Mothers in Scotland were the most likely to say they ever smoked in the home (24%), while mothers in Northern Ireland were the least likely to smoke in the home (7%). At Stage 3 of the survey, the proportion of mothers who smoked saying they ever smoked in the home had decreased to 9%, with a broadly similar pattern evident by country (from 15% in Scotland to 4% in Northern Ireland).

In households where there were other smokers, at Stage 2 of the survey 12% of mothers across the UK said they lived with at least one other smoker who ever smoked in the home. Again, mothers in Scotland were most likely to live with a smoker who ever smoked in the home (18%). At Stage 3, 10% of mothers said that they lived with at least one other person who ever smoked in the home.

Table 11.22

Table 11.23 shows the proportion of **all** households where someone ever smoked in the home at Stage 2 or Stage 3 of the survey. At Stage 2, two per cent of all mothers said they smoked in the home, while three per cent of mothers said they lived with at least one other person who ever smoked in the home. Overall, this meant that three per cent of infants lived in a household where at least one person ever smoked in the home. Infants in Scotland and Wales were more likely than children in other countries to live in a household where someone ever smoked in the home (5% and 4% respectively at Stage 2). At Stage 3 the proportion of infants living in a household where at least one person ever smoked in the home was three per cent.

Table 11.23

11.2.8 Information received on smoking after the birth

For the first time in 2010, all mothers were asked at Stage 3 whether or not they had received any information about smoking after their baby was born. Almost one third (32%) of all mothers said they had received some type of information about smoking after their baby was born. As with information on smoking during pregnancy, mothers in Northern Ireland the most likely to have received such information (36%).

Over a quarter (27%) of mothers said they received information on the effects of smoking on the baby, and around one fifth had been told about the dangers of sharing a bed with your baby and smoking (19%). Around one in seven (15%) had been given information on how to stop smoking, and one in ten had received information on how to cut down smoking (10%) and how their partner could stop smoking (10%). Six per cent specifically mentioned that they had been given information on using a nicotine patch to help them stop smoking.

Mothers in Northern Ireland were more likely than mothers in other countries to have received information on the effects of smoking on the baby (30%) and the dangers of bed sharing and smoking (22%).

Table 11.24

Health visitors were the most common source of information about smoking, mentioned by over half (52%) of mothers who had received information about smoking. Almost half (45%) of mothers who had received information, mentioned their midwife as a source of information. Around a third (32%) of those who received information on smoking mentioned written materials (books, leaflets or magazines), whilst around one in five (21%) mentioned a SureStart or Children's Centre / Children's Health Clinic. Just under one in five (18%) got information about smoking from their GP or doctor.

Mothers in Northern Ireland were more likely to have received information from a health visitor (62%) or a doctor or GP (22%). Mothers in England were more likely to have received information from books, leaflets or magazines (33%) or a SureStart or Children's Centre / Children's Health Clinic (23%).

Table 11.25

11.3 Drinking during pregnancy

The UK health departments recommend that women should avoid drinking alcohol before and during pregnancy.¹⁷ Recommendations on drinking during pregnancy have tightened since the 2005 survey, when the guidelines were that drinking up to one or two units of alcohol no more than once or twice a week was regarded as safe for pregnant women¹⁸.

At Stage 1 of the survey mothers were asked whether they had drunk alcohol in the past two years¹⁹ and asked about their drinking behaviour during pregnancy. Mothers who had drunk during pregnancy were asked how often they drank different types of alcohol and the amount they usually consumed each time they had a drink. From this information it was possible to assess the number of units consumed per week during pregnancy. The questions on drinking asked in the 2010 survey included low alcohol drinks as an option for the first time but otherwise were the same as in 2005, so comparisons should be made with caution.

11.3.1 Trends in drinking during pregnancy by country

In 2010, 81% of mothers across the UK had drunk alcohol in the two previous years, similar to the proportion found in 2005 (83%). However, only 40% of mothers in 2010 had drunk during pregnancy, a reduction on the 2005 figure of 54%.

Mothers in Northern Ireland (35%) and Scotland (35%) were less likely to have drunk during pregnancy compared with mothers in England (41%) and Wales (39%). The decrease in the proportion of mothers drinking during pregnancy since 2005 was seen in all countries (from 55% in 2005 to 41% in 2010 in England, 55% to 39% respectively in Wales, 50% to 35% respectively in Scotland and 46% to 35% respectively in Northern Ireland).

Among mothers who drank alcohol before pregnancy, almost half (49%) gave up drinking completely during pregnancy, whilst a slightly lower proportion (46%) cut down the amount they drank. This compares with 34% giving up alcohol during pregnancy and 61% cutting down in 2005. Only two per cent of mothers who drank before pregnancy said they made no change to their drinking behaviour as a result of their pregnancy.

Mothers who drank before pregnancy in Scotland, Northern Ireland and Wales were the most likely to give up drinking during pregnancy (59%, 58% and 55% respectively compared with 48% of mothers in England), whilst mothers in England were more likely to say they drank less (47% compared with 42% in Wales, 38% in Northern Ireland and 37% in Scotland). Again, the increase in the proportion of mothers who drank before pregnancy giving up drinking was evident in all countries. It increased from 33% in 2005 to 48% in 2010 in England, 37% to 55% respectively in Wales, 41% to 59% respectively in Scotland and 43% to 58% respectively in Northern Ireland.

Table 11.26

Table 11.27 outlines the most common reasons given by mothers for giving up or cutting down on drinking was because of a concern that alcohol might harm the baby, which was mentioned by 86% of mothers who cut down or stopped. Other reasons mentioned by mothers were because they disliked the taste of alcohol (8%) and because it made them feel sick or unwell (8%).

Table 11.27

11.3.2 Variations in drinking during pregnancy

Socio-economic classification (NS-SEC) of mother

Table 11.26 shows that mothers from managerial and professional occupations (90%) and from intermediate occupations (87%) were the most likely to drink before pregnancy, while mothers from routine and manual occupations (81%) were less likely and mothers who had never worked (46%) were the least likely. A similar difference was evident in terms of drinking during pregnancy, with 51% of mothers from managerial and professional occupations drinking during pregnancy compared with only 18% of mothers who had never worked.

Among mothers who drank before pregnancy, mothers who had never worked (59%) and mothers from routine and manual occupations (55%) were the most likely to have given up drinking, while mothers from managerial and professional occupations (43%) were the least likely to have given up.

Ethnicity of mother

The differences seen by socio-economic classification are linked to ethnicity. As discussed in Chapter 1, mothers of minority ethnic groups, and particularly those from an Asian background, are more likely to be in the 'never worked' category; both groups were less likely to drink before and during pregnancy.

As shown in Table 11.26, White mothers were the most likely to drink before pregnancy (90% compared with mothers from Mixed (76%), Black (49%), Chinese or other (48%) and Asian (24%) backgrounds) and were also more likely to drink during pregnancy (46% compared with mothers from Mixed (34%), Black (23%), Chinese or other (23%) and Asian (6%) backgrounds).

Among mothers who drank before pregnancy, White mothers were least likely to give up drinking whilst pregnant (49%) and mothers from an Asian background the most likely (71%).

Age of mother

Table 11.26 also shows that across the UK there was no clear pattern between drinking before pregnancy and the age of the mother. For example, 84% of mothers aged under 20 drank alcohol in the two years before pregnancy compared with 85% of mothers aged 35 or over.

However, there was a clear association between drinking during pregnancy and mother's age, with older mothers being more likely than younger mothers to do so. Thus, 28% of mothers aged under 20 drank during pregnancy compared with 52% of mothers aged 35 or over.

Among mothers who drank before pregnancy, younger mothers were more likely than older mothers to give up. For example, 66% of mothers aged under 20 who drank before pregnancy gave up drinking alcohol during their pregnancy compared with 38% of mothers aged 35 or over. By contrast, older mothers were more likely to cut down compared with younger mothers. Thus, 57% of mothers aged 35 or over cut down on drinking during pregnancy compared with 29% of mothers aged under 20.

Table 11.27

11.3.3 Consumption of alcohol during pregnancy

Mothers had an extremely low alcohol consumption level in terms of average weekly units. Across the UK, 93% of mothers either did not drink at all during pregnancy or drank less than one unit per week on average.²⁰ A further four per cent of mothers drank one to two units per week on average. Only three per cent of mothers drank more than two units per week on average.

As shown in Table 11.28, levels of alcohol consumption were broadly the same across all countries, although mothers in England were slightly less likely to have not drunk at all (64% compared with 66% in Wales and 69% each in Scotland and Northern Ireland).

Table 11.28

11.3.4 Information received on drinking during pregnancy

Seven in ten mothers (71%) who drank before pregnancy received some sort of information about drinking during pregnancy. Mothers in Northern Ireland (80%) and Scotland (77%) were the most likely to receive information about drinking.

Over three-fifths (62%) of those who drank before pregnancy said they had been given general information about the effects of drinking alcohol on the baby. Two-fifths (41%) said they had been given information on the dangers of sharing a bed with your baby and drinking alcohol. More than a third (36%) said they had been given information on how to cut down or limit the amount they drank during pregnancy, while almost three in ten (29%) said they had been given information on stopping drinking alcohol completely.

Table 11.29

Among those who received information about drinking the most common source of information was from a midwife (81%), followed by information from leaflets, booklets or magazines (34%), or from a doctor (13%) or a health visitor (14%). Mothers in Northern Ireland were the most likely to receive information about drinking from a doctor (20%), while mothers in Wales were the least likely (9%). These patterns are similar to those found in 2005.

Table 11.30

Table 11.31 shows that receiving information on drinking during pregnancy had little effect on how mothers actually changed their drinking behaviour. Mothers who had received some form of information about drinking during pregnancy were slightly more likely than mothers who had not received information to drink less (48% compared with 42%) but were consequently less likely to have given up drinking alcohol completely (48% compared with 52%).

Table 11.31

As has already been seen, some mothers received information on stopping drinking completely, while other mothers got information on limiting the amount of alcohol they drank and others just received general information about the health effects of drinking. Some mothers reported that they

had received information from more than one source and had been given mixed messages in terms of what they should do. In particular, some mothers said they had received information both on stopping drinking completely and on limiting the amount they drank.

Among mothers who had received information about drinking during their pregnancy, the type of information they received was associated with how they actually changed their behaviour.

Mothers who had only received information on stopping drinking were much more likely to have actually given up drinking during pregnancy compared with mothers who had only got information on limiting the amount of alcohol they drank (54% and 31% respectively). By contrast mothers who had only had information on limiting the amount they drank were much more likely to cut down compared with those who had received information on stopping completely (66% and 42% respectively).

Mothers who reported they had received information both on stopping drinking completely during pregnancy and on limiting the amount of alcohol they drank were slightly more likely to stop completely than to cut down on the amount they drank (50% stopped completely compared with 46% who cut down). This reverses the trend from 2005, where those receiving mixed messages were more likely to cut down (71% cut down and 23% stopped completely).²¹

Table 11.32

11.3.5 Information received on drinking after the birth

For the first time in 2010, all mothers were asked at Stage 3 whether or not they had received any information about drinking after their baby was born. Just under a third of mothers (30%) received some sort of information after their baby was born about drinking. As with information received on drinking during pregnancy, mothers in Northern Ireland (36%) and Scotland (33%) were the most likely to receive information about drinking.

Almost a quarter (23%) said they had received information on the effects of drinking alcohol whilst breastfeeding on their baby, whilst one in five (20%) said they had received information on the dangers of sharing a bed with their baby and drinking alcohol. Around one in seven (14%) said they had been given information on limiting the amount they drank, while just over one in ten (11%) said they had been given information on stopping drinking alcohol completely while breastfeeding.

Mothers in Northern Ireland were particularly likely to have received information on the dangers of sharing a bed with their baby and drinking alcohol (27%).

Table 11.33

Among those who received information about drinking, the most common source of information was a health visitor (56%), followed by a midwife (46%), books, leaflets or magazines (36%), or a SureStart or Children's Centre / Children's Health Clinic (26%). Around one in seven mentioned receiving information from the internet (14%) or their doctor / GP (14%). Mothers in Northern Ireland were more likely to receive information about drinking from a health visitor (75%). Mothers in England were more likely to have received information from a SureStart / Children's Centre or Children's Health Clinic (29%).

Table 11.34

Notes and references

¹ <http://www.nhs.uk/Conditions/vitamins-minerals/Pages/Vitamin-B.aspx>

² See Chapter 10 of the Infant Feeding Survey 2005 report, Table 10.1 <http://www.ic.nhs.uk/pubs/ifs2005>

³ See <http://www.nhs.uk/conditions/pregnancy-and-baby/pages/vitamins-minerals-supplements-pregnant.aspx#close>

and also the NHS Choices webpage on vitamin D and sunlight: <http://www.nhs.uk/Livewell/Summerhealth/Pages/vitamin-D-sunlight.aspx>

⁴ <http://www.nice.org.uk/nicemedia/live/13023/49345/49345.pdf>

⁵ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_124917

⁶ For further information on SSATOD, please see:

<http://www.ic.nhs.uk/services/omnibus-survey/using-the-service/data-collections/smoking-at-time-of-delivery>

⁷ The most recent data shows that the proportion of mothers smoking at delivery in England was 13.2% in 2011/2012, lower than in 2010/11.

⁸ See the Smoking at Booking table on the Births in Scottish Hospitals publication at: http://www.isdscotland.org/Health-Topics/Maternity-and-Births/Publications/2011-08-30/mat_bb_table8.xls#Scotland

⁹ <http://www.legislation.gov.uk/ukpga/2006/28/contents>

¹⁰ <http://www.legislation.gov.uk/asp/2005/13>

¹¹ http://www.dhsspsni.gov.uk/index/phealth/php/health_promotion/smoking_ni_order_2006.htm

¹² <http://wales.gov.uk/topics/health/improvement/index/tobaccoplan/?lang=en>

¹³ http://www.dhsspsni.gov.uk/tobacco_strategy_-_final.pdf

¹⁴ See Chapter 10 of the 2005 Infant Feeding Survey Report, Table 10.22. <http://www.ic.nhs.uk/pubs/ifs2005>

N.B. In 2005, mothers were asked if they had received *advice* or information about smoking during pregnancy.

¹⁵ In 2005, mothers were asked about sources of advice, rather than information.

¹⁶ This figure is slightly different from the 26% quoted in Table 11.4 because the analysis is based only on mothers who completed all three stages of the survey.

¹⁷ NHS Choices website “Can I drink alcohol if I’m pregnant?” webpage

<http://www.nhs.uk/chq/Pages/2270.aspx?CategoryID=54&SubCategoryID=130#close>

¹⁸ Department of Health (2006) How much is too much? Pregnancy and Alcohol

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_080105.pdf

¹⁹ To be precise, mothers were asked if they drank alcohol at all now, and if not, whether they had drunk alcohol at all in the last two years. Therefore the definition assumes that those drinking currently (at the time of the survey) had also drunk within the last two years.

²⁰ Mothers for whom units could not be calculated have been excluded from this analysis.

²¹ See Chapter 10 of the Infant Feeding Survey 2005 report, Table 10.35 <http://www.ic.nhs.uk/pubs/ifs2005>