At the National Perinatal Epidemiology Unit we have been carrying out national maternity surveys since 1995. The aim of these surveys is to find out about women’s experiences and care around the time of pregnancy, birth and in the postnatal period. The findings from the surveys we have carried out have helped to inform maternity policy in England, for example, the Better Births National Maternity Review, and so the surveys make a real difference to the healthcare that mothers, babies and families receive.

It is important that we are able to include a large number of women in the national surveys so that our findings are based on the views and experiences of a wide range of mothers. Therefore, we are continually working to improve the way that we carry out the national surveys and to develop the questionnaires that we send to women.

We are currently carrying out the 2018 national survey of women who have recently given birth in England and, in preparation for this survey, we carried out a pilot survey to find out how best to encourage women to take part and the best ways to ask women about their maternity experiences.

**Pilot survey**

All of the women in the pilot survey were selected at random from birth registrations held by the Office for National Statistics (ONS). The women were all aged 16 years or older, were living in different regions across England and had given birth 3-6 months previously. The pilot survey questionnaire was initially mailed out to 2,000 women (phase 1). However, the number of women who responded to this questionnaire was lower than we had expected based on previous national maternity surveys. Therefore, we made some changes to the questionnaire and to the mail-out and then we re-ran the pilot survey, sending it out to another 3,250 women (phase 2).

The changes we made between phase 1 and phase 2 were: giving women prior notice that they had been selected for the survey; shortening and redesigning the questionnaire and information leaflets; sending out an additional reminder questionnaire; and including Quick Response (QR) codes to simplify access to the online version of the questionnaire.

We compared the response rates to phases 1 and 2 of the pilot survey (before and after we made the changes) in order to work out the best way to carry out the 2018 survey.
Results from the pilot survey

About the response rate

Altogether, 560 women took part in phase 1 of the pilot survey (28% of those selected) and 1,041 took part in phase 2 of the pilot survey (32% of those selected). Women were able to take part by post, over the telephone, or online and the majority chose to take part by returning their questionnaire by post.

About the women who took part

As we found with previous national maternity surveys, the women who took part in the pilot survey were more likely to be older, married, living in less deprived areas, and to have been born in the UK, when compared to those women who were selected but who chose not to take part. The large majority of the women who took part self-identified as being from a White ethnic background (87%) and were living with their spouse or partner (90%).

About pregnancy and delivery

Half of the women who took part in the survey had given birth before (50%) and half were first-time mothers (50%). The majority of the women gave birth to a single baby (97%) and there were slightly fewer boys than girls. The average gestational age at birth was 39 weeks. The majority of women gave birth in hospital (90%) with a minority giving birth in a birth centre separate to the hospital (5.6%) or at home (3.2%). Over half of women had a vaginal birth (58%), over a quarter had a Caesarean section (28%) and 14% of women had an assisted vaginal delivery. Three quarters of women reported that the labour and birth were either more or less as they had expected (29%) or better than they had expected (44%). However, more than twice as many first-time mothers reported that the labour and birth were worse than they had expected (36%) compared to those mothers who had given birth before (17%).

Over half of the women felt that their baby belonged to them during pregnancy (55%), a fifth immediately after birth (21%), and for other mothers, it took a few days, weeks or months. The majority of mothers described their babies as about average (44%) or easier than average (50%) compared to other babies.

How babies were fed

We asked women about their experiences of infant feeding. The majority of the mothers tried to breastfeed their babies even if it was only once (88%). Over half of mothers fed their babies exclusively on breast milk for the first few days (60%), a quarter fed both breast milk and formula milk (24%), and 16% fed formula milk only. At the time of completing the questionnaire, over a third of women with babies younger than 6 months were feeding breast milk exclusively (39%), 14% were feeding both breast milk and formula milk, and almost half of the women were feeding formula milk only (46%).

For the women who breastfed, slightly over half reported that they did so for as long as they intended (53%). Help and advice were most frequently provided by midwives (74%), health visitors (45%), and partners, relatives and friends (30%). To a lesser extent, breastfeeding support groups (20%) and other health professionals (17%) provided support. Some women reported that they did
not require any help or advice (12%), yet almost a third of women reported that they would have liked more support with breastfeeding (29%).

For those women with babies aged 6 months or older, the majority reported that they had given solid food to their babies (97%). Of these mothers, 9% introduced solid food to their babies when they were younger than 4 months of age, 16% started solids when their babies were between 4-5 months, and almost the same number of women introduced solid food at 5-6 months (38%) or after 6 months (37%).

**Smoking and vaping**

We asked women about tobacco smoking patterns around the time of pregnancy and after birth. Approximately one in six (17%) of the women who took part smoked during the three months before pregnancy and the majority smoked daily (12%). During pregnancy, 9% smoked during the first trimester (5% daily), 6% smoked during the second trimester (4% daily) and 5% smoked during the final trimester (4% daily). After the birth, 8% of mothers smoked during the first three months (4% daily) and 11% were smoking 3-6 months after giving birth (7% daily). Therefore, the number of women smoking tobacco fell slightly from before pregnancy to during pregnancy and then increased slightly again after pregnancy.

We also asked women about their use of electronic cigarettes and vaping devices around the time of pregnancy. One in ten (10%) of the women who responded to the survey reported that they had ever used an electronic cigarette or vaping device. Less than 5% of the women used an electronic cigarette or vaping device in the three months before becoming pregnant, or during or after their pregnancies. Following the same pattern as with smoking tobacco cigarettes, the number of women using electronic cigarettes or vaping devices fell slightly from before pregnancy to during pregnancy and then increased slightly again after pregnancy. However, the changes were marginal and the numbers were small.

**Returning to work**

The survey asked women about their experiences of or plans to return to work. Approximately one in ten mothers (10%) were working at the time they completed the survey (6% of the women with babies aged 0-25 weeks and 12% of the women with babies aged 26 weeks or older). Of the mothers who were not working, 71% were planning to return to work within the next 12 months, 11% were not planning to return to work and 17% were undecided. When asked about provision of childcare after returning to work, most women reported that they were or would be using nursery care (54%), grandparents (47%), spouses / partners (36%) and/or childminders or nannies (20%). These percentages add up to more than 100% because many women selected more than one option indicating that they would use a combination of childcare arrangements. Some women had yet to decide how their child would be cared for (13%). The reasons for returning to work mentioned most frequently by the women were: needing the money (88%), wanting to (50%), and having always planned to (45%).

**Maternal health**

We asked women about their mood postnatally using a well-known series of questions (the Edinburgh Postnatal Depression Scale). From women’s responses to these questions, we were able to work out whether they were likely to be experiencing symptoms of anxiety and/or depression.
The results showed that 13% of women were experiencing symptoms suggesting they were probably depressed. More mothers with babies aged 6 months or older reported symptoms indicating they were probably depressed (16%) compared to the women with younger babies (11%). The results also showed that 19% of women were experiencing symptoms suggesting they were probably anxious. Again, more mothers with babies aged 6 months or older reported symptoms indicating they were probably anxious (21%) compared to the women with younger babies (18%).

The women were also asked to select words to describe how they had been feeling during the past seven days from a checklist of 24 words. The most frequently selected words were happy (76%), grateful (58%), calm (49%), cheerful (49%) and contented (42%). Drained (35%) and exhausted (33%) were the most frequently selected negative feelings. Women with younger babies (less than 6 months) tended to report more positive feelings than women with older babies (6 months or older). In terms of physical wellbeing, the majority of women described feeling ‘quite well’ (47%) or ‘very well’ (43%). The majority of mothers had a postnatal check-up with their GP (93%) and were asked about their emotional and mental health during the postnatal period (89%).

Conclusions

The response rate to phase 2 (32%) of the pilot survey was higher than the response rate to phase 1 (28%). Therefore, the changes that we made to the pilot survey were adopted in the 2018 survey.

The results presented from the pilot survey provide an overview of the women who took part and some information about their experiences around the time of pregnancy, birth and postnatally. The pattern of responses to many of these questions have helped us design the questionnaire for the 2018 survey. However, the findings from the pilot survey are based on small numbers and so no definitive conclusions can be drawn from them.

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This report was produced by the ‘You and Your Baby’ study team:
Dr Siân Harrison
Dr Jane Henderson
Professor Fiona Alderdice
Professor Maria Quigley

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