

## Smoking in Pregnancy

### Introduction

Smoking continues to be a significant public health issue. Smoking in pregnancy is of particular concern due to the potential impacts on both the mother and the baby. Therefore women need advice and support in order to stop.

### Summary

Smoking in pregnancy increases the risk of stillbirth, miscarriage, and poor growth and development of the baby, which can lead to ill-health,<sup>1</sup> as well as increasing the risk of complications during pregnancy and labour. Women who smoke at the time of pregnancy are therefore encouraged to stop. Women can also gain long-term health benefits from stopping smoking both for themselves, and for the child in terms of reduced exposure to secondhand smoke.<sup>2</sup> There is a decreasing trend of women smoking at the time of delivery in line with the rest of England, however rates in Norfolk remain above the national average.

### Headlines

There are approximately 9,300 live births annually in Norfolk.<sup>3</sup> Of those giving birth 12.7% in 2015/16 were documented to be smokers at the time of delivering their baby (figure 1). This follows a downward trend however Norfolk has consistently recorded higher rates of maternal smoking than the national average. This also places Norfolk as the region in the East of England with the 2<sup>nd</sup> highest rates of smoking at time of delivery.

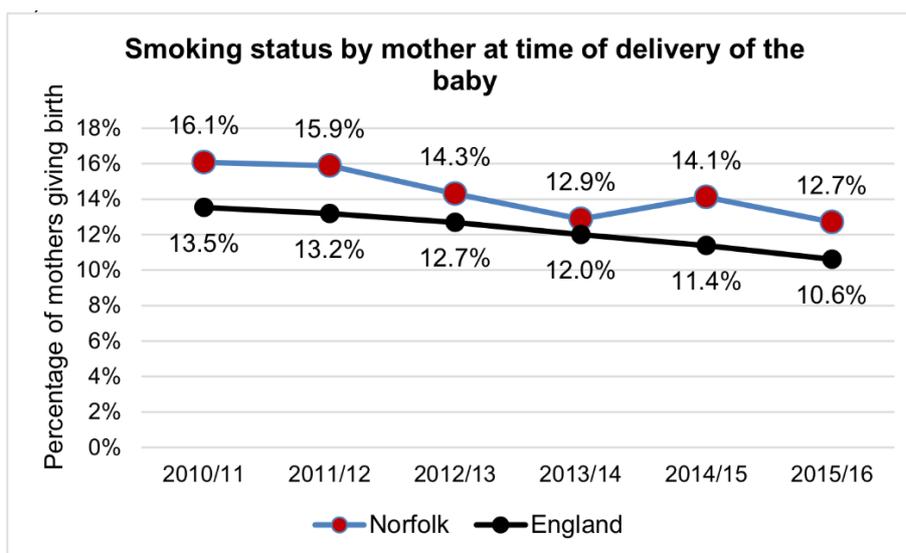


Figure 1: Smoking status at time of delivery.<sup>4</sup>

KEY: Markers are coloured red where they are statistically significantly higher than average, yellow where there is no significant difference and green where they are significantly lower than average.

<sup>1</sup> Public Health England (2015) Health Matters: Smoking and Quitting in England <https://www.gov.uk/government/publications/health-matters-smoking-and-quitting-in-england/smoking-and-quitting-in-england> (accessed 27/04/2017)

<sup>2</sup> Public Health England. Public Health Outcomes Framework, Smoking status at time of delivery. <http://www.phoutcomes.info/public-health-outcomes-framework#page/6/gid/1000042/pat/6/par/E12000006/ati/102/are/E10000020/iid/20301/age/1/sex/2> (accessed 27/04/2017)

<sup>3</sup> Office for National Statistics (2011) Birth summary tables, England and Wales [https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwj9k7CAxMTTAhXjD8AKHc6ECewQFggzMAI&url=https%3A%2F%2Fwww.ons.gov.uk%2Ffile%3Furi%3D%2Fpeoplepopulationandcommunity%2Fbirthsdeathsandmarriages%2Flivebirths%2Fdatasets%2Fbirthsummarytables%2F2011%2Fbirthsummarytables2011final\\_tcm77-282963.xls&usq=AFQjCNHAMTAoweVOI1LINHSxiseL1ykBeA](https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwj9k7CAxMTTAhXjD8AKHc6ECewQFggzMAI&url=https%3A%2F%2Fwww.ons.gov.uk%2Ffile%3Furi%3D%2Fpeoplepopulationandcommunity%2Fbirthsdeathsandmarriages%2Flivebirths%2Fdatasets%2Fbirthsummarytables%2F2011%2Fbirthsummarytables2011final_tcm77-282963.xls&usq=AFQjCNHAMTAoweVOI1LINHSxiseL1ykBeA) (accessed 27/04/2017)

<sup>4</sup> Public Health Outcomes Framework.

<http://www.phoutcomes.info/public-health-outcomes-framework#page/3/gid/1000042/pat/6/par/E12000006/ati/102/are/E10000020/iid/20301/age/1/sex/2>

The East of England region overall is following the downward trend of smoking at the time of delivery with rates closely aligned with the national average since 2010/11, reaching 10.6% both nationally and locally in 2015/16. Despite the prevalence in Norfolk remaining higher than average, the rate of decrease is in keeping with targets, having decreased from 14.1% to 12.7% in 2015/16, however this remains above the national ambition of 11%.<sup>5</sup>

Within Norfolk (figure 2) the most recent figures for smoking in pregnancy showed that prevalence is highest in Great Yarmouth and Waveney CCG at 15.9%, followed by Norwich CCG, West Norfolk CCG and South Norfolk CCG. North Norfolk CCG was the only region to fall below the national target of 11%, with a prevalence of 10.8%.<sup>6</sup>

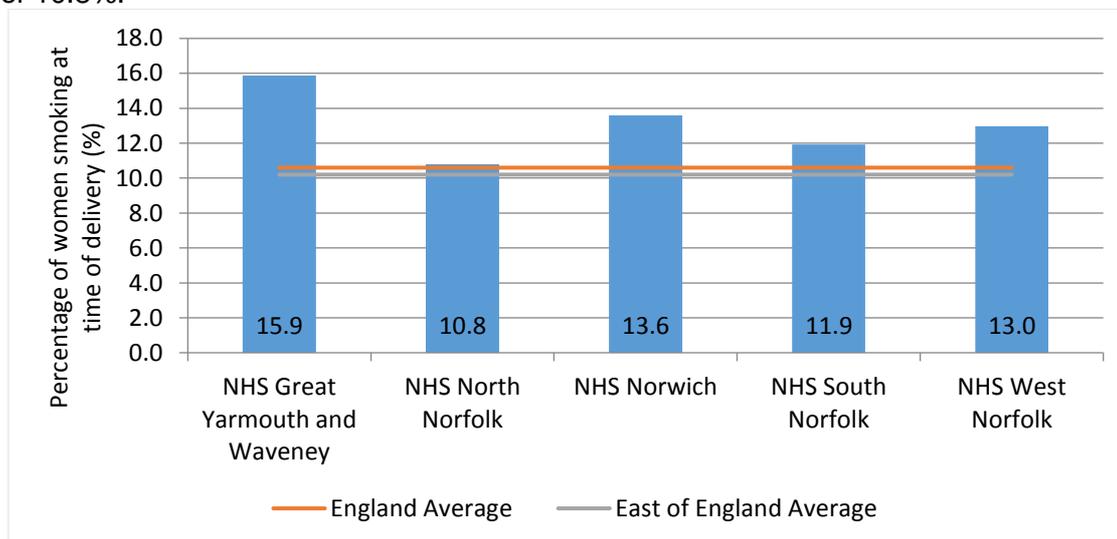


Figure 2: percentage of women who were smokers at time of delivery in Norfolk in the 3rd quarter of 2016/17 according to clinical commissioning group. Data from NHS Digital (2017) Statistics on Women's Smoking Status at Time of Delivery, England- Quarter 3, 2016-17: Report.

## Influences on Health and Wellbeing

Smoking during pregnancy can have an impact on both the mother and the developing baby. Maternal concerns include long term health impacts of continuing smoking, such as cardiovascular disease and lung disease, as well as complications during labour and postpartum. Smoking causes an increased risk of miscarriage, premature birth, stillbirth and low birth weight as well as increased risk of sudden infant death.<sup>7</sup> Long term complications for the baby of smoking during pregnancy include greater risk of asthma, attention deficit hyperactivity disorder (ADHD), and congenital heart disease.<sup>8</sup>

In Norfolk rates of low birth weight babies at term are similar to the national average with 2.7% compared to 2.8% in 2015. Infant mortality is also not significantly different from the average for England, at 4.0 per 1000 compared to 3.9 per 1000 in 2013-2015. However the rates of women smoking at the time of delivery in Norfolk remains above the national average and represents the 2<sup>nd</sup> highest rates in the East of England.<sup>9</sup>

<sup>5</sup> Norfolk Tobacco Control Alliance (2016) Tobacco Control Strategy 2016-2020.

<https://norfolkcc.comis.uk.com/NorfolkCC/Document.ashx?czJKcaeAi5tUFL1DTL2UE4zNRBcoShgo=yjdWI%2BwFw9LrNWYvAVDq4JYQiMdQv%2Bil%2FBFDZL4Qu47ewF7Bn0o%2FD6g%3D%3D&rUzwRPf%2BZ3zd4E7lkn8Lyw%3D%3D=pwRE6AGJFLDNih225F5QMaQWCtPHwdhUfCZ%2FLUQzqA2uL5jNRG4jdQ%3D%3D&mCTIbCubSfXsDGW9IXnlg%3D%3D=hFfIUdN3100%3D&kCx1AnS9%2FpWZQ40DXFvdEw%3D%3D=hFfIUdN3100%3D&uJovDxwdjMPoYv%2BAJvYtyA%3D%3D=ctNJFf55vVA%3D&FgPIIEJYlotS%2BYGoBi5oIA%3D%3D=NHdURQburHA%3D&d9Qjj0ag1Pd993jsyOJqFvmyB7X0CSQK=ctNJFf55vVA%3D&WGewmoAfeNR9xqBux0r1Q8Za60lavYmz=ctNJFf55vVA%3D&WGewmoAfeNQ16B2MHuCPMRKZMwaG1PaO=ctNJFf55vVA%3D> (accessed 08/05/2017)

<sup>6</sup> NHS Digital (2017) Statistics on Women's Smoking Status at Time of Delivery, England- Quarter 3, 2016-17: Report. <http://www.content.digital.nhs.uk/catalogue/PUB23580> (accessed 08/05/2017)

<sup>7</sup> National Institute of Health and Care Excellence (2010). Smoking: stopping in pregnancy and after childbirth [PH26]. <https://www.nice.org.uk/guidance/ph26/chapter/2-Public-health-need-and-practice> (accessed 08/05/2017)

<sup>8</sup> <https://www.norfolk.gov.uk/news/2016/11/pregnant-women-urged-to-give-up-smoking-to-help-protect-their-unborn-baby> (accessed 08/05/2017)

<sup>9</sup> Public Health England. Public Health Outcomes Framework, Smoking status at time of delivery. <http://www.phoutcomes.info/public-health-outcomes-framework#page/6/gid/1000042/pat/6/par/E12000006/ati/102/are/E10000020/iid/20301/age/1/sex/2> (accessed 08/05/2017)

## Social, environmental, population context

Prevalence of smoking in pregnancy is higher in women who have never worked or are routine and manual workers. More deprived communities are also more likely to smoke.

Within Norfolk the highest rates of smoking in pregnancy are in Great Yarmouth and Waveney CCG. North Norfolk CCG has the lowest rate, where prevalence is in line with the average for England.

Smoking is also a factor shown to exacerbate inequalities in life expectancy and causes of death in Norfolk.<sup>10</sup> Reducing levels of smoking in pregnancy may contribute to breaking the cycle of health inequalities as this is a key life point for multiple contacts with a healthcare professional to provide education and support.

## Burden of ill health and gaps in services

Smoking in pregnancy can lead to complications for both the mother and the developing baby including increasing risk of stillbirth, low birth weight and congenital heart disease. Ongoing ill-health for the infant such as asthma, and for the mother, such as cardiovascular disease and chronic obstructive pulmonary disease (COPD) are also potential consequences of tobacco use during pregnancy.

In England smoking costs society an estimated £13.8 billion per year when direct healthcare and social care costs for smoking-related disease, lost productivity and smoking-related fires are included. This figure includes £242 million spent on illnesses of non-smokers exposed to secondhand smoke.<sup>11</sup> Using pregnancy as a critical point of contact to initiate intervention in terms of encouraging women to cut down or stop smoking could reduce these costs going forward. It will also reduce personal and close contact morbidity from smoke exposure.

## Current services, local plans and strategies

All pregnant women who are eligible for NHS care can receive free antenatal care including referral to smoking cessation services where necessary.<sup>12</sup> Smoking cessation services can also be accessed by women directly, outside of their maternity care, via local Smokefree services which are free of charge.

Smoking in pregnancy is an ongoing problem in Norfolk and has been a key issue included in the 2016 Tobacco Control Strategy.<sup>13</sup> The target a 10% reduction per year until 2020, when it shall be reviewed. This target is to be reached by better utilising existing smoking cessation services and ensuring improved referral pathways.

Carbon monoxide (CO) is one of the chemicals taken into the body when smoking. In addition to taking a smoking status history from women, routine CO monitoring is offered to pregnant women at antenatal clinic appointments. Shown to improve the accurate identification of pregnant smokers and facilitate referral to smoking cessation services, this has therefore been recommended in guidance from the National Institute of Health and Care Excellence (NICE),<sup>14</sup> as well as a national strategy set out in the 2016 Saving Babies' Lives care bundle.<sup>15</sup>

Other measures in place include use of an opt-out system for referral following CO testing, greater awareness and training for midwives and other healthcare professionals, and encouraging greater shared accountability by partners. A family approach is also being used, targeting messages to other young women as well as mothers.

These measures all accompany national legislation including regulation of cigarette packaging design and packet size, age of sale, and ban on indoor smoking in public places.

<sup>10</sup> Norfolk Tobacco Control Alliance (2016) Tobacco Control Strategy 2016-2020.

<sup>11</sup> Action on Smoking (2015) Smoking Still Kills: Protecting Children, Reducing Inequalities. <http://ash.org.uk/information-and-resources/reports-submissions/reports/smoking-still-kills/> (accessed 08/05/2017)

<sup>12</sup> Maternity Action. Entitlement to free NHS maternity care for women from abroad (in England) <https://www.maternityaction.org.uk/advice-2/mums-dads-scenarios/3-women-from-abroad/entitlement-to-free-nhs-maternity-care-for-women-from-abroad/> (accessed 08/05/2017)

<sup>13</sup> Norfolk Tobacco Control Alliance (2016) Tobacco Control Strategy 2016-2020.

<sup>14</sup> National Institute of Health and Care Excellence (2010). Smoking: stopping in pregnancy and after childbirth [PH26]. <https://www.nice.org.uk/guidance/ph26/chapter/2-Public-health-need-and-practice> (accessed 08/05/2017)

<sup>15</sup> NHS England (2016) Saving Babies' Lives, A Care Bundle For Reducing Stillbirth. <https://www.england.nhs.uk/wp-content/uploads/2016/03/saving-babies-lives-car-bundl.pdf> (accessed 08/05/2017)

## Voice – the perspective from the public, service users, referrers and front line staff

A survey in 2011 of midwives at eight Trusts in the North East of England indicated that midwives feel that engaging in conversations about smoking are part of their professional role<sup>16</sup>, however it can be difficult for some midwives to have frank conversations about smoking with the women in their care. In May 2016 Public Health England and the National Centre for Smoking Cessation and Training (NCSCT) published guidance for discussing smoking with pregnant women.<sup>17</sup> This highlights how some women feel that there is stigma associated with smoking during pregnancy and may therefore be reluctant to disclose their exposure.

The importance of maintaining continuity of support throughout pregnancy and postpartum is noted to aid success in stopping. Support to stop smoking extended beyond healthcare professionals by encouraging partners and family to quit can have a great impact on chances of success.

Some women use pregnancy as the trigger to start their cessation efforts, while others need greater support to encourage this change and appreciated the support of NHS smoking cessation services. Common concerns about stopping smoking in pregnancy include fear of weight gain, feeling unable to stop completely, and worries about how to avoid giving in to cravings.<sup>18</sup>

### Considerations for Health and Wellbeing Board and commissioners

Smoking related disease and premature deaths are largely preventable. At the critical contact point of pregnancy it is important to encourage healthy lifestyle changes to benefit women and their unborn babies. The Norfolk Tobacco Control Strategy describes a need to develop clearer guidance on the use of e-cigarettes in smoking cessation during pregnancy as it emerges within general smoking cessation services, which may be an important addition to smoking cessation services than remains to be fully explored.

Consideration given to continuing to target primary prevention strategies towards young women with the aim to minimise those starting to smoke in the first instance, prior to pregnancy, as well as encouraging those planning a pregnancy to stop.

It has been noted that family influences can have a large effect on whether pregnant women are successful in stopping smoking.<sup>19</sup> This indicates a need to engage pregnant women's partners and families in the process of smoking cessation in order to change attitudes towards smoking. This will in turn help to reduce secondhand smoke exposure to the baby after delivery in addition, with a likely reduction in long-term smoking related health problems for the whole family. More benefit is gained when women are encouraged to stop completely where possible rather than simply cut down.

Accurately identifying women who smoke or are exposed to smoke during pregnancy should be a focus during antenatal care. Carbon monoxide (CO) monitoring routinely offered to all women regardless of their self-reported smoking status can aid in the identification of women who are exposed but feel embarrassment or social stigma which prevents them from reporting this accurately, and therefore ensure that these women are appropriately referred to smoking cessation services.

Although rates of stopping are improving it has been noted in evidence examined by NICE that relapse rates are high in the 6 months following delivery. This is a period of time in which women continue to have contact with a variety of healthcare professionals gives opportunities to offer further support and advice via ongoing smoking cessation services, again aiming for health benefits for both the mother and the infant long-term.

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<sup>16</sup> Action on Smoking and Health (2013) Smoking Cessation in Pregnancy: A Call to Action. <http://ash.org.uk/information-and-resources/reports-submissions/reports/smoking-cessation-in-pregnancy/> (accessed 12/05/2017)

<sup>17</sup> Public Health England & the National Centre for Smoking Cessation and Training (2016) Smoking Cessation: A Briefing for Midwifery Staff [http://www.ncsct.co.uk/publication\\_briefing\\_for\\_midwifery\\_staff.php](http://www.ncsct.co.uk/publication_briefing_for_midwifery_staff.php) (accessed 12/05/2017)

<sup>18</sup> Baby Centre (2017) Mum's Tips on Quitting <https://www.babycentre.co.uk/a550972/mums-tips-how-to-quit-smoking> (accessed 12/05/2017)

<sup>19</sup> National Institute of Health and Care Excellence (2010). Smoking: stopping in pregnancy and after childbirth [PH26]. <https://www.nice.org.uk/guidance/ph26/chapter/2-Public-health-need-and-practice> (accessed 10/05/2017)

## References and information

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