**NHS Digital**

**Indicator Supporting Documentation**

**IAP00145 Maternal smoking at delivery**

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| FIELD | CONTENTS |
| IAP Code | IAP00145 |
| Title | Maternal smoking at delivery |
| Published by | Department of Health and Social Care |
| Reporting period | Annual |
| Geographical Coverage | England |
| Reporting level(s) | National |
| Based on data from | The Smoking Status at Time of Delivery (SATOD) collection |
| Contact Author Name | TBC |
| Contact Author Email | TBC |
| Rating | Fit for use. |
| Assurance date | 14/12/2016 |
| Review date | 14/12/2019 |
| Indicator set | CCG Outcomes Indicator Set (OIS) 1.14 |
| Brief Description | This indicator is the percentage of maternities where the women were smokers at the time of delivery. |
| Purpose | This indicator aims to provide a measure of the prevalence of smoking among pregnant women at Clinical Commissioning Group (CCG) level.  Smoking in pregnancy has well known detrimental effects on the growth and development of the baby and health of the mother. The Tobacco Control Plan contained a national ambition to reduce the proportion of women smoking throughout pregnancy to 11% or less by the end of 2015 (measured at time of giving birth). The inclusion of this indicator will ensure that local tobacco control activity is appropriately focused on pregnant women, in order to try to achieve this national ambition. This ambition was achieved at national level during 2015/16 although around half of CCGs still had an indicator value above this target. A new Government Tobacco Control Plan for England was introduced in July 2017 along with a new national ambition.  This indicator will help make sure priority is given to the reduction of smoking at delivery. Encouraging pregnant women to stop smoking during pregnancy may also help them kick the habit for good, and will result in health benefits for the child and mother, as well as cost savings to the NHS. |
| Definition | Proportion of all pregnancies where the smoking status is not ‘Unknown’, and the mother has self-reported smoking cigarettes or any other tobacco products at the time of delivery. This does not include the inhalation or consumption of non-combustible nicotine products, such as e-cigarettes or other nicotine containing products.  Maternities are defined as 'the number of women in the relevant population who give birth to one or more live or still born babies of at least 24 weeks gestation where the baby is delivered by either a midwife or a doctor and the place of delivery is either at home or in an NHS hospital (including GP units). It excludes all maternities that occur in either psychiatric or private beds/hospitals.' (Source: Vital Signs Monitoring Return).  The reporting period is the quarter in the financial year of the birth registration. The indicator is published quarterly from Quarter 1, 2013/14 onwards. All maternities which occurred in this period should be included.  The indicator is collected from Clinical Commissioning Groups (CCGs) and published at that level. There is no demographic breakdown.  A woman is assigned to a CCG based on the postcode of their GP. |
| Data Source | SATOD collection. |
| Numerator | The number of women known to be smokers at the time of delivery. |
| Denominator | The number of maternities, defined as the number of pregnant women who give birth to one or more live or still born babies of at least 24 weeks gestation, where the baby is delivered by either a midwife or doctor at home or in an NHS hospital (including GP units).  This count is the number of pregnant women, not the number of babies (deliveries). |
| Calculation | The indicator is calculated by dividing the numerator by the denominator and multiplying by 100 to provide a percentage indicator value. 95% confidence intervals are then calculated using the Wilson Score method. |
| Interpretation Guidelines | N/A |
| Caveats | Prior to April 2017, those mothers with an unknown smoking status at delivery were included in the denominator. This should be taken into account when comparing values from different years.  On 1 April 2013, responsibility for this collection transferred from Primary Care Trusts (PCTs) to Clinical Commissioning Groups (CCGs). For transitional reasons, some organisations may not have been able to fully report their figures during the first releases of the data.  Presently, the smoking status at the time of delivery is not known for around 2% of women across England. At CCG level the percentage of women with unknown smoking status is in the range 0 to 29%. |

Application Form

Indicator Assurance Service

**Title:** Maternal Smoking at delivery

**Set or domain:** CCG OIS 1.14

**IAS Reference Code:** IAP00145

# Application Form

Section 1. Introduction / Overview

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| **1.1 Title** | Maternal smoking at delivery |
| **1.2 Set or domain** | CCG Outcomes Indicator Set (OIS) 1.14 |
| **1.3 Topic area** | Maternity |
| **1.4 Definition** | Rate of smoking at time of delivery per 100 maternities  The indicator was recommended by MRG on 26th October 2012 and assured by IGB on 14th February 2013. It was published for the first time in March 2014, using data from Quarters 1 and 2, 2013/14 for each CCG in England.  This application form is in respect of a definition review as the denominator currently includes those with unknown smoking status which regards them as non-smokers.  The proposal is to exclude deliveries where smoking status is unknown from the denominator.  This will bring the definition into line with changes planned for the equivalent indicator in the Public Health Outcomes Framework (PHOF) from April 2017. |
| **1.5 Indicator owner & contact details** | Matt Whitston, Principal Information Analyst, HSCIC  clinical.indicators@hscic.gov.uk |
| **1.6 Publication status** | Currently in publication |

Section 2. Rationale

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| **2.1 Purpose** | This indicator aims to provide a measure of the prevalence of smoking among pregnant women at Clinical Commissioning Group (CCG) level.  Smoking during pregnancy can cause a range of serious health problems, including placental complications and perinatal mortality and an increased risk of miscarriage, stillbirth, low birth weight, premature birth. Smoking remains the main modifiable risk factor in pregnancy. Babies from deprived backgrounds are more likely to be born to mothers who smoke and to have much greater exposure to second-hand smoke in childhood. |
| **2.2 Sponsor** | Richard Owen, Outcomes Strategy Lead, NHS Medical Directorate, NHS England  Emma Wilbraham, DH, Team Leader - Tobacco Control Policy  Jo Locker, PHE, Tobacco Control Manager  Clare Griffiths, PHE, Deputy Head of Indicators and Risk Factors Intelligence |
| **2.3 Endorsement** | This change to definition is supported by HSCIC, DH and PHE.  The change was also consulted on publicly as part of the PHOF consultation. See <https://www.gov.uk/government/consultations/reviewing-the-indicators-in-the-public-health-outcome-framework> |
| **2.4 Evidence and Policy base**  Including related national incentives, critical business question, NICE quality standard and set or domain rationale, if appropriate | The National Institute for Clinical Excellence (NICE) Clinical Guideline (CG62) for antenatal care, smoking in pregnancy (guideline 1.3.101) states to “monitor smoking status and offer smoking cessation advice, encouragement and support throughout the pregnancy and beyond”.1  The Tobacco Control Plan contains a national ambition to reduce the rate of smoking throughout pregnancy to 11% or less by the end of 2015 (measured at time of giving birth). The inclusion of this indicator will ensure that the local tobacco control activity is appropriately focused on pregnant women, in order to try to achieve this national ambition.2  This ambition was achieved during 2015/16 and a new Government tobacco control plan for England is expected later in 2016.  Smoking during pregnancy can cause serious pregnancy-related health problems. These include: complications during labour and an increased risk of miscarriage, premature birth, still birth, low birth-weight and sudden unexpected death in infancy (Royal College of Physicians 1992). Smoking during pregnancy also increases the risk of infant mortality by an estimated 40% (Department of Health 2007).  Children exposed to tobacco smoke in the womb are more likely to experience wheezy illnesses in childhood. In addition, infants of parents who smoke are more likely to suffer from serious respiratory infections (such as bronchitis and pneumonia), symptoms of asthma and problems of the ear, nose and throat (including glue ear). Exposure to smoke in the womb is also associated with psychological problems in childhood such as attention and hyperactivity problems and disruptive and negative behaviour (Button et al. 2007). In addition, it has been suggested that smoking during pregnancy may have a detrimental effect on the child's educational performance (Batstra et al. 2003).3  In July 2011, the first ever comprehensive systematic review to establish which specific birth defects are associated with smoking was published4. It found significant positive associations with maternal smoking for many birth defects including cardiovascular/heart defects, musculoskeletal defects and limb reduction defects. It recommends that all defects positively associated with smoking during pregnancy should be mentioned in education materials during the antenatal period4.  Mothers’ smoking during pregnancy is associated with many adverse outcomes for children, such as intrauterine growth retardation, premature birth, low birth weight, stillbirth and infant mortality, as well as with negative consequences for subsequent health and development.5, 6 Mothers who are exposed to second-hand (i.e., environmental) smoke are also more likely to have babies with lower weights, putting them at risk for many health problems. Infants whose mothers smoke during pregnancy are three times more likely to die from Sudden Infant Death Syndrome than are babies whose mothers do not smoke during pregnancy.7 Children born to mothers who smoked while pregnant, and possibly children whose grandmothers smoked while pregnant, have a higher risk of developing childhood asthma.8, 9, 10 In addition, maternal smoking during pregnancy is a risk factor for early childhood obesity.11  Smoking during pregnancy is also associated with later problem behaviours for the child. For example, smoking by the mother during pregnancy has been found to be associated with attention deficit hyperactivity disorder (ADHD) 12 and conduct problems with substance abuse and criminal behaviour when children reach adulthood.13, 14  1) Clinical Guideline for Antenatal Care (CG62), NICE, March 2008 <http://www.nice.org.uk/guidance/cg62/chapter/1-Guidance#lifestyle-considerations>  2.Healthy Lives, Healthy People: a tobacco control plan for England. Department of Health, 2011  https://www.gov.uk/government/publications/the-tobacco-control-plan-for-england  3) National Guidance for quitting smoking in pregnancy and following childbirth, NICE, June 2010 <https://www.nice.org.uk/guidance/ph26/chapter/2-Public-health-need-and-practice>  4) Maternal smoking in pregnancy and birth defects: a systematic review based on 173 687 malformed cases and 11.7 million controls, Oxford Journals, July 2011 <http://humupd.oxfordjournals.org/content/early/2011/07/09/humupd.dmr022.abstract>  5) Mathews, T. J. (2001). Smoking during pregnancy in the 1990s, National Vital Statistics Reports, <http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_07.pdf>  6) The health consequences of smoking: What it means to you, U.S. Department of Health and Human Services, 2004 <http://www.cdc.gov/tobacco/data_statistics/sgr/2004/pdfs/whatitmeanstoyou.pdf>  7) The health consequences of involuntary exposure to tobacco smoke: A report of the Surgeon General, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2006) <http://www.surgeongeneral.gov/library/reports/>  8) Jaakkola, J. J. K., & Gissler, M. (2004). Maternal smoking in pregnancy, fetal development, and childhood asthma. American Journal of Public Health, 94(1), 136-140  9) Lee, W., & Galant, S. (2002). Effects of maternal smoking during pregnancy and environmental tobacco smoke on asthma and wheezing in children. Paediatrics, 110(2), 445-446  10) Li, Y. F., Langholz, B., Salam, M. T., & Gilliland, F. T. (2005). Maternal and grand-maternal smoking patterns are associated with early childhood asthma. Chest, 127(4), 1232-1241  11) Salsberry, P. J., & Reagan, P. B. (2005). Dynamics of early childhood overweight. Pediatrics, 116(4), 1329-1338  12) Silva, D., Colvin, L., Hagemann, E., & Bower, C. (2014). Environmental risk factors by gender associated with attention-deficit hyperactivity disorder. Pediatrics, 133(1), e14-e22  13) Gaysina, D., Fergusson, D. M., Leve, L. D., Horwood, J., Reiss, D., Shaw, D. S., Elam, K. K., Natsuaki, M. N., Neiderhiser, J. M., & Harold, G. T. (2013). Maternal smoking during pregnancy and offspring conduct problems. JAMA Psychiatry, published online July 24, 2013 <http://archpsyc.jamanetwork.com/article.aspx?articleid=1716166>  14) Brennan, P. A., Grekin, E. R., Mortensen, E. L., & Mednick, S. A. (2002). Relationship of maternal smoking during pregnancy with criminal arrest and hospitalization for substance abuse in male and female adult offspring. American Journal of Psychiatry, 159(1), 48-54 |

Section 3. Data

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| **3.1 Data source** | Smoking status at time of delivery (SATOD) collection sourced from Omnibus and published by the HSCIC <http://www.hscic.gov.uk/datacollections/ssatod> |
| **3.2 Justification of source and others considered** | HSCIC SATOD is the single source of data for maternal smoking status at time of delivery.  Public Health Outcomes Framework (PHOF) indicator 2.03 smoking status at time of delivery also uses this as its source for its 2.03 smoking status at time of delivery indicator <http://www.phoutcomes.info/>  There are no known alternative sources of data on which to compare these results. |
| **3.3 Data availability** | All reports are accessible on the HSCIC website as PDF documents. All tables in the report are provided in Excel format and as csv files, as part of the government’s requirement to make public data public.  The HSCIC has produced SATOD reports since Quarter 3 2011/12. Prior to this, the Department of Health produced these reports. They are publically available on the DH national archives website at the following links:  <http://webarchive.nationalarchives.gov.uk/20130107105354/http:/www.dh.gov.uk/en/Publicationsandstatistics/Statistics/StatisticalWorkAreas/Statisticalpublichealth/DH_124185>  <http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publichealth/Healthimprovement/Tobacco/Tobaccogeneralinformation/DH_4139682>  This data is published by HSCIC around eight weeks (two months) after the end of the reporting period (or five months after the beginning of the reporting period).  CCG OIS indicator data are reported quarterly from Quarter 1 2013/14. The data for each quarter is available approximately 3 months before the CCG OIS publish it. |
| **3.4 Data quality** | **Status of data**  From 1 April 2014, CCGs are not able to revise data within the financial year so all quarterly data from 2014/15 onwards should be considered as final. Prior to this date, the data was subject to revisions until the final data submission in quarter 4.  Accuracy  Currently the number of women where the smoking status is not known is included within the denominator, which will result in the under reporting of the percentages of known smokers as the unknowns are effectively treated as if they are non-smokers.  A simple example follows for CCGs A and B which both have an indicator value of 20 per cent but in reality CCG B could have a higher indicator value if it was discovered that some of the 40 unknowns were in fact smokers.  In other words, 20 per cent is a **minimum** value for CCG B and the likelihood is that some of the unknowns will be smokers so the true indicator value is probably higher. Whereas we definitely know that CCG A has an indicator value of 20 per cent as the smoking status has been gathered for all maternities. Therefore it seems odd to allow their performance to look the same when it is likely that CCG B is actually not performing as well as CCG A. |

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|  | **CCG A** | **CCG B** |
| **Smokers** | 40 | 40 |
| **Non-smokers** | 160 | 120 |
| **Unknowns** | 0 | 40 |
| **Indicator** | 20% | 20% |

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|  | The proposal is that from April 2017, the definition changes to exclude the unknowns from the denominator when calculating the proportion of women smoking at the time of delivery. Therefore the indicator will be published under both definitions during 2016/17 to allow time to work with CCGs to improve the quality of this data, and to co-ordinate the change with the publication of the new Government tobacco control plan for England which is expected later in 2016. This will also allow CCGs to assess what the impact will be of switching to the new definition. More information is available in the Government response to the consultation on the Public Health Outcomes Framework (PHOF).  Presently, the smoking status at the time of delivery is not known for around 3% of women across England. This can be significantly higher for some CCG’s. In 2014/15 for example, 5 CCGs had more than 20% unknowns and a further 10 CCGs had more than 10% unknowns. It is possible therefore that poor data quality is masking poor performance in these CCGs and resources are not being targeted effectively to decrease the number of women smoking at the time of delivery.  .  There may be separate SATOD data quality issues for each reporting period and these can be seen in the data quality statements which accompany each quarterly report on the HSCIC website. |
| **3.5Quality assurance** | Validation at the point of entry checks that the sum of the number of women known to be smokers at the time of delivery; the number of women known to be non-smokers at the time of delivery and the number of women whose smoking status was not known at the time of delivery equals the number of maternities.  A secondary validation check is applied once the data has been collected and checks the number of maternities reported in each quarter falls within an ‘expected’ range, by comparing to the average reported for the previous four quarters.  **Validation**  For the return, CCGs are requested to submit the following data items each quarter via the HSCIC Omnibus web based system:   * Number of maternities is defined as the number of pregnant women who give birth to one or more live or stillborn babies of at least 24 weeks gestation, where the baby is delivered by either a midwife or doctor at home or in an NHS hospital (including GP units). This count is the number of pregnant women, not the number of babies (deliveries). It does not include maternities that occur in psychiatric hospitals or private beds / hospitals. * Number of women known to be smokers at the time of delivery is defined as the number of pregnant women who reported that they were smokers at the time of giving birth. * Number of women known to be non-smokers at the time of delivery is defined as pregnant women who reported that they were not smokers at the time of giving birth. This count does not include women whose smoking status is not known (which is collected separately). * Number of women whose smoking status was not known at the time of delivery are defined as those whose smoking status was not determined at the time of giving birth.   All four numbers must be submitted as integers. The following validation will be undertaken by the HSCIC Omnibus system on each quarter’s submission:  Number of women known to be smokers at the time of delivery + Number of women known to be non-smokers at the time of delivery + Number of women whose smoking status was not known at the time of delivery = Number of maternities  The Omnibus system will not accept a submission that fails this validation. In this situation the CCG will be prompted to amend and re-submit their data until their submission passes this validation.  A second validation will also be undertaken by the Omnibus system. The current data return will be validated and a warning will appear on submission if any of the following occur:   * number of maternities is more than +/-15% of an average of the previous 4 quarters * number of women known to be smokers at the time of delivery is more than +/-15% of an average of the previous 4 quarters * number of women known to be non-smokers at the time of delivery is more than +/-15% of an average of the previous 4 quarters * number of women whose smoking status was not known is above or equal to 5% of number of maternities   This will either need to be confirmed as correct by selecting a drop down breach reason or amended. |
| **3.6 Quality improvement plan**  If appropriate | Revising and publishing this indicator in this way is expected to reduce the number of records where the smoking status of the mother is unknown. |
| **3.7 Data linkage** | N/A |
| **3.8 Quality of data linkage** | N/A |
| **3.9Data fields** | The data fields from the published data are as follows:   * CCG code * CCG name * Number of maternities * Number of women smoking at time of delivery * Number of women whose smoking status at time of delivery was not known * Percentage of women smoking at time of delivery * 95% confidence interval |
| **3.10 Data filters** | Previously, data that failed a validation check (e.g. percentage of women whose smoking status was not known >5 per cent) was not published. From quarter 1 of 2013/14, all data has been published along with the number of unknowns in the HSCIC Smoking at the Time of Delivery report to indicate the quality of the data. |
| **3.11 Justifications of inclusions and exclusions**  and how these adhere to standard definitions | N/A. |
| **3.12 Data processing** | The calculated CCG level indicator is taken from the published Statistics on Smoking at the Time of Delivery produced by the Lifestyles team within NHS Digital. It includes the percentage of women smoking at time of delivery, Number of women whose smoking status at time of delivery was not known, numerator, denominator and 95% confidence intervals. The Clinical Indicators (CI) Team take this data and reformat it for CCG OIS publication. No suppression is applied to this indicator. |

Section 4. Construction

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| **4.1 Numerator** | The number of women who were smoking at the time of delivery. |
| **4.2 Denominator** | The number of maternities which is defined as the number of pregnant women who give birth to one or more live or stillborn babies of at least 24 weeks gestation, where the baby is delivered by either a midwife or doctor at home or in an NHS hospital (including GP units). This count is the number of pregnant women, not the number of babies (deliveries). It does not include maternities that occur in psychiatric hospitals or private beds / hospitals. |
| **4.3 Computation** | The current indicator is calculated as a percentage.  Percentage of mothers known to be smokers at the time of delivery: 100 x (Number of mothers known to be smokers at the time of delivery / Number of maternities)  The proposed indicator is calculated as follows:  Percentage of mothers whose smoking status was not known at the time of delivery (excluding unknowns) : 100 x number of mothers recorded as smoking at time of delivery / (number of mothers recorded as smoking at time of delivery + number of mothers recorded as not smoking at time of delivery)  From April 2017, the definition will change to exclude the unknowns from the denominator when calculating the proportion of women smoking at the time of delivery. Therefore the indicator will be published under both definitions during 2016/17 to allow time to work with CCGs to improve the quality of this data, and to co-ordinate the change with the publication of the new Government tobacco control plan for England which is expected later in 2016. This will also allow CCGs to assess what the impact will be of switching to the new definition. More information is available in the Government response to the consultation on the Public Health Outcomes Framework (PHOF). |
| **4.4 Risk adjustment or standardisation type and methodology** | The indicator is not standardised or risk adjusted. |
| **4.5 Justification of risk adjustment type and variables**  or why risk adjustment is not used | N/A |
| **4.6 Confidence interval / control limit use and methodology** | Confidence Intervals  Confidence intervals are calculated using the Wilson Score method, as specified in “Commonly used public health statistics and their confidence intervals” (Public Health England (PHE), March 2008 <http://www.apho.org.uk/resource/view.aspx?RID=48617>).  The formulae for the 100(1 – α)% confidence interval limits for the proportion *p* are:  where:  *O* is the observed number of individuals in the sample/population having the specified characteristic (i.e., the numerator);  *n* is the total number of individuals in the sample/population (i.e., the denominator);  *q* = (1 – *p*) is the proportion without the specified characteristic;  *z* is the 100(1 – α/2)th percentile value from the Standard Normal distribution. For example for a 95% confidence interval, α = 0.05, and *z* = 1.96 (i.e. the 97.5th percentile value from the Standard Normal distribution). |
| **4.7 Justification of confidence intervals / control limits used** | The preferred PHE confidence interval method for proportions is the Wilson Score method15 which has been evaluated and recommended by Newcombe and Altman16, 17. It can be used with any data values and, unlike some methods, it does not fail to give an interval when the numerator count, and therefore the proportion, is zero18.  15. Wilson EB. Probable inference, the law of succession, and statistical inference. J Am Stat Assoc 1927.  16. Newcombe RG. Two-sided confidence intervals for the single proportion: comparison of seven methods. Stat Med 1998.  17. Newcombe RG, Altman DG. Proportions and their differences. In Altman DG et al. (eds). Statistics with confidence (2nd edn). London: BMJ Books; 2000.  18. Agresti A, Coull BA. Approximate is better than ‘exact’ for interval estimation of binomial proportions. Am Stat 1998 |

Section 5 Presentation and Interpretation

Presentation

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| **5.1 Presentation of indicator** | The indicator is presented on the NHS Digital Indicator Portal in a consistent format to other CCG OIS indicators. It is accompanied by indicator specification and quality statement documents, which provide details of indicator construction, data quality, statistical methods and interpretation considerations https://indicators.hscic.gov.uk/webview/ The data is presented with a detailed header including information on the statistic presented, the reporting period, level of coverage, publication date, data source, and any further notes to be aware of. The customer is also able to make use of drop-down filtering. |

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| **Column name** | **Output** |
| Reporting Period | Quarter in the financial year of the birth registration |
| Breakdown | CCG |
| Level | CCG code |
| Level description | CCG name |
| Percentage | Percentage of women smoking at delivery |
| 95% confidence interval | Confidence interval range (lower limit – upper limit) |
| Denominator | Number of maternities where smoking status is known (ie. excluding unknowns) |
| Numerator | Number of women smoking at time of delivery |
| Unknowns | Number of mothers whose smoking status was not known at the time of delivery |
| New Indicator (From April 2017)  Percentage (excluding unknowns) | From April 2017, the definition will change to exclude the unknowns from the denominator when calculating the proportion of women smoking at the time of delivery. Therefore the indicator will be published under both definitions during 2016/17 to allow time to work with CCGs to improve the quality of this data, and to co-ordinate the change with the publication of the new Government tobacco control plan for England which is expected later in 2016. This will also allow CCGs to assess what the impact will be of switching to the new definition. More information is available in the Government response to the consultation on the Public Health Outcomes Framework (PHOF). |

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| **5.2 Contextual information provided alongside indicator**  with justification | It is proposed to include the number of unknowns as contextual information alongside the indicator. |
| **5.3 Calculation and data source of contextual information** | NHS Digital Omnibus Survey. |
| **5.4 Use of bandings, benchmarks or targets**  with justification | N/A |
| **5.5 Banding, benchmark or target methodology**  if appropriate | N/A |
| **5.6 Interpretation guidelines** | A low percentage of women who were smokers at the time of delivery is desirable.  Currently, the percentage of women where the smoking status is not known is included within the denominator which will result in the under reporting of the percentages for known smokers and/or non-smokers. It is proposed to include the number of maternities with an unknown smoking status alongside the indicator as contextual information. From April 2017, it is proposed that the indicator will exclude the number of unknowns from the calculation (see section 4.3). |
| **5.7 Limitations and potential bias** | Amending the methodology by excluding the unknowns will remove the previous limitation of the under reporting of percentages for known smokers and/ or non-smokers.  The indicator is based on observation and is therefore susceptible to measurement bias. |
| **5.8 Improvement actions** | It is expected that CCGs will use this to identify where the messages about smoking in pregnancy are not being heard, so that action can be targeted. Ultimately, there should be a reduction in emergency hospital admissions associated with pregnancy, the number of babies requiring specialised care, the number of hospital admissions due to childhood illnesses caused by smoking in pregnancy and a reduction in many birth defects including cardiovascular/heart defects, musculoskeletal defects and limb reduction defects.  The National Institute for Clinical Excellence (NICE) has produced national guidance on how best to support women to stop smoking in pregnancy and following childbirth; this can be found at:- http://guidance.nice.org.uk/PH26. This guidance provides advice on the use of Carbon Monoxide monitoring to systematically identify all pregnant women who smoke at booking, and on making onward referrals to local stop smoking services. It also provides guidance on opportunistic advice giving and referral (as appropriate) throughout pregnancy. The provision of intensive support, including use of pharmacotherapy and supporting others who smoke in the household to stop is also recommended.  NICE have also produced guidance on smoking cessation in maternity care settings; this can be found at: https://www.nice.org.uk/guidance/ph48  The National Centre for Smoking Cessation and Training Community Interest Company (NCSCT CIC) were commissioned to develop and test a tiered approach to identifying pregnant smokers by the midwife as well as other health care professionals involved in the woman’s care. The pilot included an electronic referral system used across professional groups as well as follow-up in the postpartum period. Details of this project can be found at http://www.ncsct.co.uk/publication\_smoking\_in\_pregnancy\_project.php |
| **5.9 Evidence of variability** | See table 2 of 15/16 report at <http://www.hscic.gov.uk/catalogue/PUB20899/stat-wome-smok-time-deli-eng-q4-15-16-tab.xlsx> |

Section 6. Risks

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| **6.1 Similar existing indicators** | This indicator replicates both the HSCIC smoking status at time of delivery (SATOD) report and the Public Health Outcomes Framework (PHOF) 2.03 smoking status at time of delivery indicators.  The HSCIC SATOD publications use the same omnibus collection: <http://www.hscic.gov.uk/article/2021/Website-Search?q=smoking+status+at+delivery&area=both>  The PHOF publications for smoking status at time of delivery use the same omnibus collection but is broken down by Local Authority (LA): <http://www.phoutcomes.info/>  From April 2017, the PHOF definition will change to exclude the unknowns from the denominator when calculating the proportion of women smoking at the time of delivery. Therefore the indicator will be published under both definitions during 2016/17 to allow time to work with CCGs to improve the quality of this data, and to co-ordinate the change with the publication of the new Government tobacco control plan for England which is expected later in 2016. This will also allow CCGs to assess what the impact will be of switching to the new definition. More information is available in the Government response to the consultation on the Public Health Outcomes Framework (PHOF).  The Opinions and Lifestyle Survey (OPN) construction differs from this indicator. It provides information on smoking rates, average number of cigarettes smoked and smoking during pregnancy at a national level during 2012. This continues the series of releases on smoking; previously provided by the General Household Survey (GHS) and the General Lifestyle Survey (GLF).  <http://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2014> |
| **6.2 Coherence and comparability** | This indicator is broken down by CCG and focuses solely on the percentage of women who are smoking *at* delivery.  The methodology, results and aggregation for this indicator are consistent with that of the SATOD publication.  The PHOF indicator is the same but is published at Local Authority (LA) level.  The OPN construction differs from this indicator as provides information on smoking rates, average number of cigarettes smoked and smoking during pregnancy, not smoking specifically at delivery. The data is given at national level. |
| **6.3 Undesired behaviours and/or gaming** | Undesired behaviours have been addressed within this indicator by amending the methodology to exclude unknowns from the denominator. Previously, there may have been an incentive to record mothers who smoked as unknown to under report the figures of mothers who smoked. There is however, no evidence that this was happening. |
| **6.4 Approach to indicator review** | The time period for when the indicator is to be reviewed will be set by the Indicator Governance Board (IGB).  User feedback and comments on this indicator are welcomed via HSCIC Enquires [enquiries@hscic.gov.uk](mailto:enquiries@hscic.gov.uk) or the CCG OIS mailbox [clinical.indicators@hscic.gov.uk](mailto:ccgois@hscic.gov.uk) |
| **6.5 Disclosure control** | No disclosure control is applied to the indicator. All figures have already been made publicly available by HSCIC.  Percentages are rounded to one decimal place before publication.  Information is disseminated at a high level of aggregation and the only small numbers that occur do not require suppressing as they are not considered identifiable or disclosive. The HSCIC report from which the indicator data are taken is subject to an annual risk assessment which requires approval from the HSCIC Statistical Head of Profession. |
| **6.6 Copyright** | There are no restrictions on the use of these data. Any subsequent use or publishing of these data should reference the HSCIC. |

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| Logo of Indicator Governance Body |
| Indicator and Methodology Assurance Report |
| **Maternal Smoking at delivery** |
| **IAP00145** |

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**Final Assurance Rating from the Indicator Governance Board - 14/12/2016**

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| --- | --- |
| **Reason for assessment** | Scheduled review (review date reached) |
| **Iteration** | 1st IGB meeting |

|  |  |
| --- | --- |
| **Ratings Against Assessment Criteria** |  |
| Clarity | **Fit for use** |
| Rationale | **Fit for use** |
| Data | **Fit for use with caveats** |
| Construction | **Fit for use** |
| Presentation and Interpretation | **Fit for use** |
| Risks and Usefulness | **Fit for use** |
| **Overall Rating** | **Fit for use** |

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| **Outcome** | **This indicator has been approved for inclusion in the National Library of Quality Assured Indicators** |

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| **Comments** |
| * IGB endorse the MRG’s recommendation that the indicator is rated ‘Fit for use’ and is suitable for inclusion in the Library. * A three year review period has been set, after which the indicator will be reconsidered by the assurance process. |

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| **Approval date** | 14/12/2016 |
| **Review date** | 14/12/2019 |

**Details of Methodology Appraisal – 28/11/2016**

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| --- | --- |
| **Methodology appraisal body** | Indicator & Methodology Assurance Service |
| **Reason for assessment** | Scheduled review (review date reached) |
| **Iteration** | Update from MRG Chair |

***Suggested Assurance Rating by Methodology Appraisal Body***

|  |  |
| --- | --- |
| **Ratings Against Assessment Criteria** |  |
| Clarity | **Fit for use** |
| Rationale | **Fit for use** |
| Data | **Fit for use with caveats** |
| Construction | **Fit for use** |
| Presentation and Interpretation | **Fit for use** |
| Risks and Usefulness | **Fit for use** |
| **Overall Rating** | **Fit for use** |

**Update from MRG Chair:**

Following the updates made by the applicants to the paperwork post-MRG, many of the actions have now been closed and the overall rating of this indicator has been changed to ‘Fit for use’.  
  
**Summary Recommendation to IGB:**

The indicator was previously assured in 2013 and reached its review date this year. There has been an update to the methodology to exclude all maternal smoking statuses recorded as ‘unknown’ from the denominator, which aligns with the methodology used in the PHOF publication.  
The indicator is recommended to IGB as being fit for use against the assessment criteria and therefore suitable for inclusion in the Library of Quality Assured Indicators.

**Please find a detailed description of recommendations and actions in the appraisal log at the end of the document.**

**Details of Methodology Appraisal – 18/10/2016**

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| --- | --- |
| **Methodology appraisal body** | Indicator & Methodology Assurance Service |
| **Reason for assessment** | Scheduled review (review date reached) |
| **Iteration** | 1st MRG meeting |

***Suggested Assurance Rating by Methodology Appraisal Body***

|  |  |
| --- | --- |
| **Ratings Against Assessment Criteria** |  |
| Clarity | **Fit for use with caveats** |
| Rationale | **Fit for use with caveats** |
| Data | **Fit for use with caveats** |
| Construction | **Fit for use with caveats** |
| Presentation and Interpretation | **Fit for use with caveats** |
| Risks and Usefulness | **Fit for use with caveats** |
| **Overall Rating** | **Fit for use with caveats** |

**Summary Recommendation to Applicant:**

The indicator is recommended to IGB as being fit for use with caveats against pending a response to points of clarification discussed in the MRG meeting.   
  
**Summary Recommendation to IGB:**

The indicator was previously assured in 2013 and reached its review date this year. There has been an update to the methodology to exclude all maternal smoking statuses recorded as ‘unknown’ from the denominator, which aligns with the methodology used in the PHOF publication.  
The indicator is recommended to IGB as being fit for use with caveats against the assessment criteria and therefore suitable for inclusion in the Library of Quality Assured Indicators.

**Please find a detailed description of recommendations and actions in the appraisal log at the end of the document.**

**What do the Assurance Ratings mean?**

|  |  |
| --- | --- |
| **Rating** | **Description** |
| **Fit for use** | This indicator can be used with confidence that it is constructed in a sound manner that is fit for purpose. |
| **Fit for use with caveats** | The indicator is fit for use, however users should be aware of caveats and/or recommendations for improvement that have been identified during the assurance process. |
| **Use with caution – data quality issue** | The indicator is based on a sound methodology for which the assurance process endorse the use, however issues have been identified with the national data source which have implications for its use as an indicator. |
| **Not fit for use** | Issues have been identified with the indicator which have resulted in the assurance process currently not endorsing its use as a quality indicator. |
| **Not enough information provided** | There has not been enough information supplied to the assurance process to be able to accurately give the indicator a level of assurance. |

**Appraisal Log**

**Clarity**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 1a | MRG suggested to applicants to reconsider the title of the indicator to reflect that it is measuring the smoking **status** at time of delivery. | MRG 18/10/16 | Title changed to refer to smoking status | 10/11/16 |  | MRG Chair – 28/11/16 |
| 1b | Section 1.4 refers to the indicator as a rate but the measure generates a proportion – could the applicant update the paperwork to reflect the reporting of proportions. | MRG 18/10/16 | References to “rate” changed to “proportion” | 10/11/16 |  | MRG Chair – 28/11/16 |
| 1c | Please can the definition include how smoking is defined in terms of this indicator. | MRG 18/10/16 | Text added to section 1.4 in tracked changes. | 10/11/16 |  | MRG Chair – 28/11/16 |
| 1d | Please can the applicant improve the wording of the paragraph in the definition which explains the reporting periods of the indicator. | MRG 18/10/16 | Text added to section 1.4 in tracked changes. | 10/11/16 |  | MRG Chair – 28/11/16 |

**Rationale**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 2a | In section 2.1, could the applicant clarify that a new national ambition will be introduced following the publication of the new Government Tobacco Control Plan. | MRG 18/10/16 | Text added in section 2.1 in tracked changes |  |  | MRG Chair – 28/11/16 |
| 2b | It would be worth mentioning in section 2.3 that this indicator was approved through the NICE indicator committee. | MRG 18/10/16 | Text added in section 2.3 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 2c | NICE have recently published two quality standards relating to this indicator, therefore the applicants are encouraged to consider and reference them in section 2.4 Evidence and Policy Base. | MRG 18/10/16 | Text added in section 2.4 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 2d | Please can the applicants consider reducing the number of sponsors in the application form to one. The sponsor should be a senior role in the organisation which has commissioned the development of the indicator. The sponsor will have committed the resources necessary to support the development and ongoing maintenance of the indicator. | MRG 18/10/16 | Text added in section 2.2 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |

**Data**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 3a | MRG requested that more information be provided around how the data is collected during the survey. This should be captured in 3.1 in particular, but self-report techniques should be more explicitly stated throughout the form. | MRG 18/10/16 | Text added to section 3.1 and 1.4 in tracked changes | 10/11/16 |  |  |
| 3b | MRG noted that the subsection in 3.4 titled ‘Accuracy’ was referencing validity. | MRG 18/10/16 | Changed in tracked changes. | 10/11/16 |  | MRG Chair – 28/11/16 |
| 3c | In section 3.6, the board’s name should be changed to read ‘the NHS Digital Data Quality Assurance Steering Group’. | MRG 18/10/16 | Changed in tracked changes. | 10/11/16 |  | MRG Chair – 28/11/16 |
| 3d | The application form should make clear that the registered GP population is being used, rather than the resident population. | MRG  18/10/16 | Text added to section 1.4 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 3e | In section 3.6, the application states that “CCGs who have a large number of unknowns will be asked to explain why and if the problem persists, this will be escalated…”. Please can the applicants state who will be responsible for undertaking this action and at what threshold will this be done. | MRG  18/10/16 | Text added to section 3.6 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |

**Construction**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 4a | MRG requested that more information be provided regarding the choice to not risk adjust by addressing other factors such as deprivation and ethnicity, and justifying why adjustment is not appropriate or not done. | MRG  18/10/16 | Text added to section 4.5 in tracked changes. On reflection risk adjustment is not possible as data is collected at aggregated CCG level and not indiviudaly level. | 10/11/16 |  | MRG Chair – 28/11/16 |

**Presentation and Interpretation**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 5a | Please can the applicants provide further information and interpretation guidelines regarding the fact that smoking status is self-reported, and that there may well be a social gradient with regards to giving the “right” answer. | MRG  18/10/16 | This issue does not fully capture the discussion at the meeting. The statement about a “social gradient” was stated by a group member as if it were a statement of fact. As explained at the meeting however there is no evidence to support there is or isn’t a social gradient. Text has been added to section 5.7 to this effect and also to point out that if satisficing is similar across CCGs then the effect on which CCGs have the highest and lowest indicator values will be minimal. | 10/11/16 |  | MRG Chair – 28/11/16 |
| 5b | Please could applicants include in the paperwork the discussion had during the MRG meeting regarding how the 11% target relates to the new methodology and that this target is met using both the old and the new methodology. | MRG  18/10/16 | Text added to section 5.1 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 5c | Please can the applicant provide a link to where users will be able to analyse historical data using the new methodology. | MRG  18/10/16 | Text added to section 5.1 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 5d | Please can section 5.3 be updated to accurately reflect which data source is being used. | MRG  18/10/16 | Text added to section 5.3 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 5e | In section 5.6, could the applicant be clearer with regards to what “low” means in the context of this indicator. | MRG  18/10/16 | Text added to section 5.6 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |
| 5f | Please can the application form make note of the limitation that this indicator does not take into consideration the length of time the patient has been a smoker, or the frequency at which they smoke. | MRG  18/10/16 | Text added to section 5.10 in tracked changes | 10/11/16 |  | MRG Chair – 28/11/16 |

**Risks and Usefulness**

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| ***Rec. no*** | ***Issue or recommendation*** | ***Raised by / Date*** | ***Response or Action taken by applicant*** | ***Response date*** | ***Resolved*** | ***Sign off by / Date*** |
| 6a | Could the applicant include a total number of patients row in the table provided in section 6.2, as well as showing a (real) example of the effect of excluding unknowns from the denominator. | MRG  18/10/16 | New table added to section 6.2 along with a real example. | 10/11/16 |  | MRG Chair – 28/11/16 |

**Any complaints or appeals against the decisions made during the assurance process should be made to the Indicator & Methodology Assurance Service (IMAS) Team at NHS Digital. Likewise, if you are unclear regarding any of the recommendations in this report, or have any queries about the assurance process in general, please contact the IMAS team.**

**Indicator and Methodology Assurance Service**

**NHS Digital**

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**LEEDS**

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