

National Maternity and Perinatal Audit

Clinical Report 2019 – Executive Summary

Based on births in NHS maternity services between 1 April 2016 and 31 March 2017



The National Maternity and Perinatal Audit (NMPA) is led by the Royal College of Obstetricians and Gynaecologists (RCOG) in partnership with the Royal College of Midwives (RCM), the Royal College of Paediatrics and Child Health (RCPCH) and the London School of Hygiene and Tropical Medicine (LSHTM).

The NMPA is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP) on behalf of NHS England, the Welsh Government and the Health Department of the Scottish Government. HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality. HQIP holds the contract to commission, manage and develop the NCAPOP, comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies (www.hqip.org.uk/national-programmes).

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Executive summary

Introduction

In the wake of national maternity and neonatal reviews and other improvement initiatives, changes are being implemented in the delivery of care to mothers and their babies in England, Scotland and Wales. Use of electronic records for maternity care is constantly developing, and provides a rich source of data to understand and evaluate these changes. The National Maternity and Perinatal Audit (NMPA) uses these data to produce information that can usefully support the improvement of maternity and perinatal care.

This report presents measures of maternity and perinatal care based on births in English, Welsh and Scottish NHS services between 1 April 2016 and 31 March 2017. The report also provides contextual information describing the characteristics of women and babies cared for by NHS maternity services during this time period.

The majority of the measures presented in this report are the same as presented in our previous report on 2015/16 data. One measure has been removed: early elective delivery without documented clinical indication. Four measures have been added. The first is birth without intervention, a composite measure to describe births that start and proceed spontaneously. The other new measures relate to babies admitted to a neonatal unit following birth: the proportions of term and late preterm babies who are admitted to a neonatal unit; the proportion of term babies who receive mechanical ventilation in the first 72 hours of life; and the proportion of babies who develop an encephalopathy in the first 72 hours of life.

The results in this report are presented at trust/board level, rather than by site with an obstetric unit, as was the case for most measures in the previous report. This follows feedback from clinical services to the NMPA team,^{*} and enables a more balanced inclusion of births in freestanding midwifery units and at home, as these can be included in trust level results but not as individual sites owing to low numbers.[†] The majority of trusts have a single obstetric unit and for those trusts this reporting change makes little difference. Site level results continue to be reported on the [NMPA website](#).

Methods

The analysis in this report is based on 728 620 births in NHS maternity services in England, Scotland and Wales between 1 April 2016 and 31 March 2017.[‡] The project is estimated to have captured 97% of eligible births in this time period. The NMPA makes use of data electronically collected through maternity information systems and national datasets. These datasets have been enhanced through linkage of maternity data from the NMPA to the National Neonatal Research Database (NNRD), which collects information on babies admitted to neonatal care.

In order to compare like with like, the majority of measures are restricted to singleton, term births. As a general principle, the denominator for each measure is restricted to women or babies to whom

* Feedback can be provided to the NMPA team via email at nmpa@rcog.org.uk.

† These births could not be included when the smallest unit of consideration was hospital sites as the numbers of births are very low. In order for numbers to be large enough to be published and a valid statistical comparison to be made, many measures are restricted to sites with at least 500 births.

‡ The time lag between the period covered by this report and its publication is due to the timing of the receipt of one of the English national datasets.

the outcome or intervention of interest is applicable. For example, the measure of the 'proportion of women with a third or fourth degree tear' is restricted to women who gave birth vaginally. Rates of measures are also adjusted for risk factors that are beyond the control of the maternity service, such as age, ethnicity, level of socio-economic deprivation and clinical risk factors that may explain variation in results between organisations.

The trusts and boards included in the audit provide intrapartum maternity care on one or more sites, and this report presents aggregated results by trust or board for each measure. Results are reported at other organisational levels (site, region and country) on the [NMPA website](#).

How to use this report and the NMPA website

Users of these results should use this set of measures to consider how maternity services compare locally and nationally. We recommend that this be a starting point for reflection on the reasons behind variation in practice and outcomes, and that this report be used to identify areas for potential quality improvement.

Users of this report should not consider the results of individual measures in isolation, but rather collectively and alongside other relevant programmes such as Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK)¹ and the National Neonatal Audit Programme (NNAP).²

Women and their families can use these results to start conversations with their care providers. A lay summary of the report is provided on the [NMPA website](#).

The [NMPA website](#) enables comparison of individual services and benchmarking against national averages. Guidance on using the data on the NMPA website can be found on the [Resources page](#) and in the [Frequently Asked Questions](#). We welcome feedback on how the audit outputs can be made more useful.

Key findings

For reference, the key findings have been numbered to correspond with the recommendations of the same number at the end of this executive summary, e.g. recommendation 4 is based on key findings 4a, 4b and 4c, and recommendations 6a and 6b on key finding 6. (See p. ix for a full list of key findings, recommendations, report evidence and related national guidance).

- KF1 When comparing findings on data quality, maternal characteristics and measures between the two reporting years, our findings have remained generally stable and many findings were similar to the previous report both at national and at trust/board level. Where changes are seen, it should be noted that these are changes only over two discrete periods in time, and therefore cannot be considered to be trends at this stage.
- KF2 The quality and completeness of data submitted to the NMPA has improved between the 2015/16 and 2016/17 reporting years; however, many trusts and boards are still excluded from one or more measures owing to poor data quality and completeness.
- KF3 There is variation between and within the three countries in the availability, quality and completeness of the data items used to generate the measures in this report.
- KF4a Only a minority of trusts and boards submitted data of sufficient completeness and quality to be included in the measure of birth without intervention.

- KF4b The quality of data collected about smoking in pregnancy and at the time of birth is poor. This is concerning given the importance of smoking cessation as part of initiatives to reduce stillbirth.
- KF4c The quality and completeness of the data items needed to determine place of birth, in particular where obstetric units and alongside midwifery units are co-located, remains variable.
- KF5 More than half (50.4%) of women with a recorded BMI at booking were overweight or obese (up from 47.3% in 2015/16).
- KF6 There is a small increase in induction rates (27.9% to 29.2%) and a small decrease in the proportion of small-for-gestational-age babies born at or after 40 weeks (55.3% to 52.3%) in England only compared with 2015/16 data. This coincides with the introduction of the Saving Babies' Lives care bundle and requires further monitoring.
- KF7 There remains substantial variation, beyond that which would be expected due to chance, in the rates of key measures of maternity care such as induction of labour and modes of birth. This suggests that there remains variation in clinical practice, decision making and outcomes across England, Scotland and Wales.
- KF8 Among the 163 508 women with singleton pregnancies who gave birth at term for whom available data were of sufficient quality, 36.9% did so without intervention (spontaneous onset, progress and birth, without epidural, spinal or general anaesthesia and without episiotomy). There was substantial variation in this rate (between 23% and 48%), which persisted after adjustment for case mix.
- KF9 There remains variation, beyond that which would be expected, in the proportion of women experiencing complications at birth in the form of a third or fourth degree tear, or a postpartum haemorrhage of 1500 ml or more.
- KF10 5.8% of babies born between 37⁺⁰ and 42⁺⁶ weeks of gestation (term), and 41.9% of those born between 34⁺⁰ and 36⁺⁶ weeks (late preterm), are admitted to a neonatal unit. There is substantial variation in these rates, even after adjustment for maternal case mix factors, perhaps reflecting different organisational provision for babies requiring additional care after birth.
- KF11 5.8 in 1000 babies born between 37⁺⁰ and 42⁺⁶ weeks of gestation receive mechanical ventilation in the first 3 days of life. There are a number of trusts and boards with levels of ventilation that are higher than expected, even after adjustment for maternal case mix factors.
- KF12 1.7 in 1000 babies born between 35⁺⁰ and 42⁺⁶ weeks of gestation develop an encephalopathy, a component of neonatal brain injury, in the first 3 days of life. Following adjustment for case mix, there are a number of trusts and boards with higher levels of encephalopathy than expected.

Conclusions

This second clinical report from the NMPA demonstrates overall stability in the availability of data. It is positive that the completeness of the data received by the NMPA has increased, both in terms of births captured and of individual data items. This suggests that electronic maternity records are being used more widely and effectively.

This report gives a national picture of services in 2016/17 and builds on the NMPA's previous report from 2015/16.³ It is not possible to speak of trends based on just two years, but we highlight areas that require monitoring, in particular around induction of labour, timing of birth and timely delivery of babies that are small for gestational age.

Recommendations

For reference, the recommendations have been numbered to correspond with the key findings of the same number earlier on this executive summary, e.g. recommendation 4 is based on key findings 4a, 4b and 4c, and recommendations 6a and 6b on key finding 6.

- R1 [Recommendations from the NMPA report on 2015/16 data](#) remain relevant, particularly those related to data quality and to the wide variation in rates of smoking cessation, breastfeeding and skin-to-skin contact. All users of this report should review and assess their performance locally against data in this report and consider improvement action required in response.
(All users of this report)
- R2 Maternity service providers and national organisations responsible for collating and managing maternity datasets should use the NMPA data items described in the [NMPA Measures Technical Specification](#) as a guide to focus improvements to data quality.
(National organisations responsible for collating and managing maternity datasets, maternity service providers)
- R3 National organisations from across England, Wales and Scotland that are responsible for collating and managing maternity datasets should work together to ensure alignment of data specifications used.
(National organisations responsible for collating and managing maternity datasets, with support and input from maternity service providers and from national governments and NHS bodies)
- R4 Where local data provided have been insufficient to report results, or where results suggest there may be data quality issues for any or all of the following measures:
- birth without intervention
 - smoking in pregnancy
 - planned and actual place of birth,
- maternity service providers should work with maternity information system suppliers and those responsible for collating and managing maternity datasets to improve completeness and accuracy of the data items required for these measures to inform local quality improvement activities.
(Maternity service providers, national organisations responsible for collating and managing maternity datasets, maternity information system suppliers)
- R5 Maternity services, primary care and public health services should work together, with involvement of local service users, to ensure that there is appropriate provision to support weight management prior to, during and after pregnancy.
(Maternity service providers, public health service providers, commissioners, primary care, women and their families and organisations representing service users)
- R6a The NMPA, MBRRACE-UK and other national organisations responsible for collating and managing maternity datasets should continue to monitor for evidence of improvements in:
- the rate of detection of small-for-gestational-age babies
 - stillbirth rates.
- (NMPA, MBRRACE-UK and national organisations responsible for collating and managing maternity datasets)*

- R6b Following implementation of national initiatives such as the Saving Babies' Lives care bundle in England, the NMPA and NHS trusts and boards should monitor for possible increases in induction rates and the impact of this on women, their babies and service providers.
(NMPA, NHS trusts and boards)
- R7 National bodies such as NHS England, the Scottish Government, the Welsh Government, the RCOG and the RCM should work together to review the need for guidance and standards to reduce variation in key aspects of maternity care, including induction of labour and modes of birth.
(National bodies including the RCOG, RCM, NICE and SIGN, all clinicians, women and their families and organisations representing service users)
- R8 Maternity service providers and local service users should work together to understand the barriers to birth without intervention in their service by reviewing:
- rates of birth without intervention (where local data provided have been adequate to report against this measure)
 - rates of individual interventions
 - place of birth.
- (Trusts and boards, women and their families and organisations representing service users)*
- R9a National bodies should continue their work to develop and implement package interventions for prevention and management of third and fourth degree tears and postpartum haemorrhage.
(National bodies including the RCOG and RCM, and national governments and NHS bodies)
- R9b All maternity services should review their clinical practices to ensure an accurate diagnosis and effective prevention and management of:
- postpartum haemorrhage
 - obstetric anal sphincter injury
- to minimise variations in care.
(Maternity service providers)
- R10 Maternity and neonatal service providers should together review their rates of late preterm and term admissions to neonatal units and consider whether any of their admissions may be avoidable. The NMPA endorses the [recommendations made by the ATAIN programme](#) to address avoidable term admissions.
(Maternity and neonatal service providers)
- R11 Maternity and neonatal service providers with higher than expected levels of mechanical ventilation between 37⁺⁰ and 42⁺⁶ weeks should work together to explore reasons behind the variation and implement any changes to clinical practice identified.
(Maternity and neonatal service providers)
- R12a Maternity and neonatal service providers with higher than expected rates of encephalopathy between 35⁺⁰ and 42⁺⁶ weeks should work together to explore reasons behind the variation and implement any identified actions and changes to clinical practice.
(Maternity and neonatal service providers)
- R12b National projects working in the area of neonatal brain injury (NNAP, NMPA, Each Baby Counts) should work together to develop an agreed, jointly used, measurable definition for neonatal encephalopathy as a component of neonatal brain injury to ensure consistent measurement.
(NMPA, NNAP, Each Baby Counts, Healthcare Safety Investigation Branch, other national projects)

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