

Maternity and Neonatal

## North East and North Cumbria: Demography, ethnicity, social deprivation and other safety issues in pregnancy and birth

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@NatPatSIP / @MatNeoSIP

Delivered by: The **AHSN**Network North East Quality Observatory Service

www.improvement.nhs.uk

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## Maternity and Neonatal Safety Improvement Programme (MatNeoSIP)



The Maternity and Neonatal Safety Improvement Programme (MatNeoSIP) was renamed following the launch of the <u>NHS Patient Safety Strategy</u> in July 2019. It was previously known as the Maternal and Neonatal Health Safety Collaborative.

MatNeoSIP is led by the National Patient Safety Team and covers all maternity and neonatal services across England. It continues to be supported by 15 regionally-based <u>Patient Safety Collaboratives</u> one of which covers the North East and North Cumbria region.

Programme Aims:

- Contribute to the national ambition, set out in Better Births, to reduce the rates of maternal and neonatal deaths, stillbirths and brain injuries that occur during or soon after birth by 50% by 2025
- Contribute to the national ambition, set out in Safeer Maternity Care, to reduce the national rate of preterm births from 8% to 6%
- Improve the safety and outcomes of maternal and neonatal care by reducing unwarranted variation and provide a high quality healthcare experience for all women, babies and families across maternity and neonatal care settings in England.

# North East Quality Observatory Service (NEQOS)

## Credit must be given to NEQOS for their expertise in identifying, analysing and summarising the data which is included.

NEQOS have considerable expertise in quality measurement for NHS organisations (both providers and commissioners).

- NEQOS leads on the measurement programmes for the Academic Health Science Network in North East and North Cumbria
- NEQOS services are delivered by clinical epidemiological expertise combined with high level analytic skills
- NEQOS has Service Level Agreements (SLA) with subscribers, which provide core projects and services as well as tailored bespoke projects
- NEQOS is also commissioned to deliver specific quality measurement projects
- NEQOS is managed under a joint agreement between Cumbria, Northumberland, Tyne and Wear and South Tees Hospitals NHS Foundation Trusts
- NEQOS supports NICE as its National Collaborating Centre for Indicator Development

#### The North East Quality Observatory Service (neqos.nhs.uk)

## Introduction



A requirement of the <u>Maternity and Neonatal Safety Improvement Programme</u> (MatNeoSIP) is to undertake a scoping exercise to understand the demography, ethnicity and social deprivation factors that are present across the system, as well as the safety issues most affecting local communities with the North East and North Cumbria region.

Considerable work has already been undertaken within the regional Local Maternity Systems, Northern England Maternity Clinical Network, Northern Neonatal Network, and Maternity Voice Partnerships, so much intelligence has already been collected. Therefore, the purpose of this document is to provide an additional useful resource to support this ongoing work.

The document is split into two distinct but interrelated parts:

<u>Part 1</u>: Demography, ethnicity and social deprivation factors in pregnancy and birth – NEQOS were commissioned to undertake this work due to their expertise in data analysis

Part 2: Recommendations from recent National and Regional reports

### Aims



This report is designed to provide a snapshot of factors and outcomes relating to pregnancy and birth in the North East and North Cumbria region. Data on this topic can be found from a wide range of sources, across varying geographies, and by further breakdowns of demographic and other information.

#### Part 1: Demography, ethnicity and social deprivation factors in pregnancy and birth

The aim is to summarise this data into a simple format allowing for quick comparison across areas of the North East and North Cumbria, as well as highlighting other factors which can contribute to inequalities in pregnancy and birth.

#### Part 2: Recommendations from recent National and Regional reports

The aim is to outline the recommendations from recent National and Regional reports. The MatNeoSIP acknowledges that:

- there is a regional approach already in place to identify, understand, and learn lessons from safety incidents
- work is ongoing across the region regarding the recommendations outlined in these reports, but they are included as a quick point of reference/sense check.



## Part 1 Demography, ethnicity and social deprivation factors in pregnancy and birth





- Charts highlight and identify all North East and North Cumbria (NE&NC) Local Authorities and CCGs where data was available, categorising by better than, similar to or worse than the England average where appropriate.
- Additionally, where available further breakdowns of England level data is presented to further understand how variation can occur across more than just geographical lines. Examples of these breakdowns are:
  - Deprivation (IMD2019)
  - Age
  - Ethnicity
  - Pregnancy related inequalities (Prematurity and first or subsequent pregnancy)

### **Methods**



#### Index of Multiple Deprivation (IMD) 2019

Many of the indicators in this report are displayed by IMD decile. The IMD is a method of ranking areas of England by their relative deprivation across a range of seven domains not limited to income deprivation alone. 39 separate indicators are combined and weighted in order to produce a simple score whereby a higher score represents a more deprived area. For ease of comparison areas can be divided into deciles from the most deprived to the least deprived. Further information can be found at:

https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019

#### **Data Sources**



Data sources are indicated on each slide. A range of data sources were used with varying time periods, collection methods and reporting for a variety of organisations and geographies:

- Fingertips data (Public Health England)
- NNAP data

Links to data sources are provided with each indicator where full definitions and further information are available.

## Clinical Commissioning Groups (CCGS)

North East & North Cumbria (NENC) CCGs pre 1 Apr 2020		North East & North Cumbria (NENC) CCGs post 1 Apr 2020		
Full Name	Short Name used in charts	Full Name	Short Name used in charts	
Durham Dales, Easington and Sedgefield	DDES	County Durbam	C. Durham	
North Durham	N. Durham		O. Dumani	
Newcastle Gateshead	Newcastle Gateshead	Newcastle Gateshead	Newcastle Gateshead	
North Cumbria	N. Cumbria	North Cumbria	N. Cumbria	
North Tyneside	N. Tyneside	North Tyneside	N. Tyneside	
Northumberland	Northumberland	Northumberland	Northumberland	
South Tyneside	S. Tyneside	South Tyneside	S. Tyneside	
Sunderland	Sunderland	Sunderland	Sunderland	
Darlington	Darlington			
Hartlepool and Stockton-on-Tees	HAST	Tees Valley Tees Valley	Tees Valley	
South Tees	South Tees			

- County Durham CCG was formed by the merger of N. Durham and DDES CCGs
- Tees Valley CCG was formed by the merger of Darlington, HAST and South Tees CCGs
- Hambleton, Richmondshire and Whitby CCG was a NENC CCG prior to April 2020 but has now merged to form part of North Yorkshire CCG and is not included in this analysis
- CCG data included in this report uses pre-April 2020 boundaries in most cases as most data sources used still publish at this level, some indicators do use post-April 2020 boundaries where available.

### **Local Authorities**



North East & North Cumbria (NENC) Local Authorities			
Full Name	Short Name used in charts		
Allerdale	Allerdale		
Carlisle	Carlisle		
Copeland	Copeland		
County Durham	C. Durham		
Cumbria	Cumbria		
Darlington	Darlington		
Eden	Eden		
Gateshead	Gateshead		
Hartlepool	Hartlepool		
Middlesbrough	Middlesbrough		
Newcastle upon Tyne	Newcastle		
North Tyneside	N. Tyneside		
Northumberland	Northumberland		
Redcar and Cleveland	Redcar & C'land		
South Tyneside	S. Tyneside		
Stockton-on-Tees	Stockton		
Sunderland	Sunderland		

• Where lower tier local authority data is not available Cumbria is displayed instead of the local authorities making up North Cumbria (Allerdale, Carlisle, Copeland and Eden).

#### **Northern Neonatal Network Units**



Northern Neonatal Network units			
Full Name	Short Name used in charts		
Cumberland Infirmary	Cumberland Inf		
Darlington Memorial Hospital	Darlington		
Northumbria Specialist Emergency Care Hospital	Northumbria		
Queen Elizabeth Hospital, Gateshead	QE Gateshead		
Royal Victoria Infirmary	RVI		
South Tyneside District Hospital	South Tyneside		
Sunderland Royal Hospital	Sunderland Royal		
The James Cook University Hospital	JCUH		
University Hospital of North Durham	North Durham		
University Hospital of North Tees	North Tees		
West Cumberland Hospital	West Cumberland		

### 1. Demographics and wider determinants



Health outcomes can be greatly affected by the environment and population of the area, so it is important to consider these alongside indicators directly relating to pregnancy and birth.

#### **Indicators in this section:**

- **1.1: Age profile of the North East**
- 1.2: Number of births
- **1.3: Ethnic minority population**
- 1.3: Deprivation Score (IMD2019)
- **1.4: Children in relative low income families**

### **1.1 Age profile**



MES

#### North East and North Cumbria population pyramid, 2019

Data source: Mid year population estimates, Office for National Statistics (ONS) Note that this chart is calculated by aggregating the 12 North East local authorities with Allerdale, Carlisle, Copeland and Eden

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#### Number of births, 2019

**1.2 Number of births** 



## **1.3 Ethnic minority population**



Percentage of the population from ethnic minorities (Persons), 2016



Data source: Public Health England (PHE) Fingertips (indicator ID: 92860), from Annual population survey (APS) via NOMIS. Ethnic minority is defined as people who stated their ethnicity as Mixed/Multiple, Asian/Asian British, Black/African/Caribbean/Black British, or Other. Allerdale, Copeland and Eden are suppressed due to a small count.

## 1.4 Deprivation score (IMD2019)





Index of Multiple Deprivation (IMD) score, 2019

Data source: Public Health England (PHE) Fingertips (indicator ID: 93553), from Ministry of Housing, Communities & Local Government

### 1.5 Children in relative low income families

Percentage of children (under 16) in an area, living in relative low income families, 2018/19



Data source: Public Health England (PHE) Fingertips (indicator ID: 93700), from Department for Work and Pensions / HM Revenue and Customs

### **Section 1 Summary**



- The age profile of the North East is broadly similar to England, however it is important to note that there is variation across the region. For example Northumberland has a higher percentage of over 50's, while Newcastle has a much higher percentage of 20-30 year olds.
- The proportion of people within the North East and North Cumbria population from an ethnic minority background is lower than the national average, but variation does exist across the region. There are very low numbers in parts of North Cumbria and higher rates in Newcastle and Middlesbrough, with Newcastle being similar to the national average.
- The Index of Multiple Deprivation (IMD) is a method of measuring deprivation in England, with a higher score representing a greater level of deprivation. Most North East and North Cumbria local authorities are more deprived than the England average, and Hartlepool and Middlesbrough are in the top ten local authorities in England.
- Most local authorities in NENC have a higher proportion of children living in relative low income families than the England average. This indicator measures the proportion of children in households earning less than 60% of the UK median income and is used as a measure of child poverty. Middlesbrough at 36.8% is in the top five local authorities in England for this measure.

#### 2. Public health indicators



Outcomes in pregnancy and birth can be affected by a mothers lifestyle and background. This section describes a range of indicators that may influence outcomes in birth. For all indicators data is presented at geographical level first where available, and for demographics and inequalities data is for England only.

#### Indicators in this section:

- 2.1: Women taking folic acid prior to pregnancy
- 2.2: Women who have their booking appointment within 10 completed weeks of their pregnancy
- 2.3: Women who are obese at the time of booking appointment
- 2.4: Women smoking at the time of booking appointment
- 2.5: Women drinking at the time of booking appointment
- 2.6: Women misusing drugs at the time of booking appointment
- 2.7: Teenage mothers
- 2.8: Deliveries to mothers from Black and Minority Ethnic (BME) groups

Percentage of pregnant women who reported taking folic acid prior to pregnancy at their booking appointment with a midwife, 2018/19



Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93586), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

#### By IMD2019 deprivation decile



England = 27.3%

Data source: Public Health England (PHE) Fingertips (indicator ID: 93586), from Maternity Services Dataset (MSDS) v1.5





By ethnicity of mother

By age of mother

Data source: Public Health England (PHE) Fingertips (indicator ID: 93586), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data



#### By first or subsequent pregnancy



Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93586), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data



Percentage of pregnant women who have their booking appointment with a midwife within 10 completed weeks of their pregnancy, 2018/19



Data source: Public Health England (PHE) Fingertips (indicator ID: 93583), from Maternity Services Dataset (MSDS) v1.5



By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 93583), from Maternity Services Dataset (MSDS) v1.5





Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93583), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data





By first or subsequent pregnancy

Data source: Public Health England (PHE) Fingertips (indicator ID: 93583), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data



Percentage of pregnant women who are obese (BMI>=30kg/m2) at the time of booking appointment with a midwife, 2018/19



Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93584), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data



#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 93584), from Maternity Services Dataset (MSDS) v1.5





Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93584), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data







Data source: Public Health England (PHE) Fingertips (indicator ID: 93584), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

# 2.4 Women smoking at the time of booking appointment



Significantly Better

Significantly Worse

Similar

Percentage of pregnant women who smoke at the time of booking appointment with a midwife, 2018/19 Compared with England



Data source: Public Health England (PHE) Fingertips (indicator ID: 93579), from Maternity Services Dataset (MSDS) v1.5

# 2.4 Women smoking at the time of booking appointment



#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 93579), from Maternity Services Dataset (MSDS) v1.5

# 2.4 Women smoking at the time of booking appointment





Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93579), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data
## 2.4 Women smoking at the time of booking appointment









Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93579), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

# 2.5 Women drinking at the time of booking appointment

Percentage of pregnant women currently drinking (weekly units > 0) at the time of booking appointment with a midwife, 2018/19



By IMD2019 deprivation decile

Data source: Public Health England (PHE) Fingertips (indicator ID: 93585), from Maternity Services Dataset (MSDS) v1.5 CCG data is not available for this indicator



# 2.5 Women drinking at the time of booking appointment





Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93585), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

## 2.5 Women drinking at the time of booking appointment





Data source: Public Health England (PHE) Fingertips (indicator ID: 93585), from Maternity Services Dataset (MSDS) v1.5

# 2.6 Women misusing drugs at the time of booking appointment



Percentage of pregnant women who misusing non-medicinal drugs or other unauthorised substances at the time of booking appointment with a midwife, 2018/19



#### By IMD2019 deprivation decile

Data source: Public Health England (PHE) Fingertips (indicator ID: 93634), from Maternity Services Dataset (MSDS) v1.5 CCG data is not available for this indicator

# 2.6 Women misusing drugs at the time of booking appointment





Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93634), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

## 2.6 Women misusing drugs at the time of booking appointment





Data source: Public Health England (PHE) Fingertips (indicator ID: 93634), from Maternity Services Dataset (MSDS) v1.5

#### **2.7 Teenage mothers**



Percentage of delivery episodes where the mother is aged under 18 years, 2019/20



Data source: Public Health England (PHE) Fingertips (indicator ID: 90811), from Hospital Episode Statistics (HES) Copyright © 2020, Re-used with the permission of NHS Digital. All rights reserved.

#### **2.7 Teenage mothers**

#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 90811), from Hospital Episode Statistics (HES) Copyright © 2020, Re-used with the permission of NHS Digital. All rights reserved.

England = 0.7%



#### 2.8 Percentage of deliveries to mothers from Black and Minority Ethnic (BME) groups



Percentage of deliveries to mothers from Black and Minority Ethnic (BME) groups, 2018/19



Data source: Public Health England (PHE) Fingertips (indicator ID: 92974), from Hospital Episode Statistics (HES) Copyright © 2020, Re-used with the permission of NHS Digital. All rights reserved.

### **Section 2 Summary**



- All commentary on this page is from Maternity Services Dataset data and refers to 2018/19.
- Folic acid takeup prior to pregnancy in North East and Cumbria CCGs where data is available ranges from 19.1% of women in South Tees to 34.7% in North Cumbria. There is a clear pattern across deprivation deciles, with women in the most deprived decile less than half as likely to take folic acid than those in the least deprived. 47.3% of women aged 45 and over took folic acid prior to pregnancy, and this falls through the age groups with only 7.5% of under 18s doing so. Mothers with complex social factors were far less likely (15.2%) to take folic acid than those without (29.1%).
- In England 57.8% of pregnant women had their booking appointment within the 10 complete weeks target recommended by NICE. All NENC CCGs other than South Tees (55.9%) had higher proportions than this. 60.7% of White women had their booking appointment within this timescale, while women from Mixed (52.9%), Asian (52.8%) and Black (41.6%) backgrounds were significantly worse than the England average. Women aged 25-29 (60.3%) and 30-34 (59.1%) were significantly better than the England average, all other age groups were significantly worse, falling to 45.8% in under 18's and 45.0% in over 45's.
- A higher proportion than England (22.1%) of pregnant women who are obese at the time of booking is
  present in most NENC CCGs. This is most prevalent among women in the most deprived decile (28.5%)
  compared to the 15.1% in the least deprived decile. 32.6% of Black pregnant women are obese, while
  18.5% of Asian women are. This varies by age, with higher proportions in 20-29 year olds and those aged
  40 and above. Pregnant women are more likely to be obese during a subsequent pregnancy (24.3%)
  than a first pregnancy (18.3%).

## **Section 2 Summary**



- All commentary on this page is from Maternity Services Dataset data and refers to 2018/19.
- 12.8% of pregnant women in England are current smokers at the time of their booking appointment. All NENC CCGs with the exception of North Tyneside (12.6%) were significantly worse, with Sunderland (25.7%) highest. This is by far more prevalent in the most deprived decile (24.0% compared to 4.3% in the least deprived), and among younger mothers. White women (15.2%) are more likely to smoke, with Black women (4.1%) and Asian women (1.7%) much less likely. Mothers with complex social factors are more likely to smoke than those without.
- Women drinking at the time of their booking appointment is not available at CCG level currently, the England average is 4.1% of women drinking any alcohol. There is variation by deprivation without a clear trend, though women in the least deprived decile (5.0%) are more likely to drink than those in the most deprived (3.3%). White women (4.6%) are the highest ethnic group, and women in older age groups have a higher proportion than younger women.
- 1.4% of women in England are misusing drugs at the time of their booking appointment. This ranges from 2.8% in the most deprived decile to 0.4% in the least deprived. Younger women and women from a Mixed (2.7%) or Black (1.7%) background have higher percentages than the England average.
- Women are more likely to smoke, drink, or take drugs in a subsequent pregnancy than their first.

## **Section 2 Summary**



- 0.7% of delivery episodes in England in 2019/20 were to mothers aged under 18 years. All NE and Cumbria local authorities had higher proportions than this. The most significant of these were Redcar and Cleveland (2.3%) and Middlesbrough (2.0%) which had the two highest levels in England. 0.9% of deliveries in the most deprived decile were to mothers aged under 18 compared to 0.3% in the least deprived.
- 20.6% of deliveries in England were to mother from Black and Minority Ethnic (BME) groups. All NENC CCGs had lower percentages than this, ranging from 15.4% in Newcastle and Gateshead to 1.1% in North Cumbria.

#### 3. Birth outcomes



Birth outcomes can vary greatly across geographical areas, but where available further investigation of wider inequalities can give further insight.

#### **Indicators in this section:**

- 3.1: Baby's first feed breastmilk
- 3.2: Low birth weight of all babies
- 3.3: Very low birth weight of all babies
- 3.4: Stillbirth rate
- 3.5: Neonatal mortality and stillbirths
- 3.6: Admissions of babies under 14 days

#### 3.1 Baby's first feed is breastmilk



Percentage of babies whose first feed is breastmilk, 2018/19



Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 93614), from Maternity Services Dataset (MSDS) v1.5 Missing values are suppressed due to incompleteness of source data

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slide), from Maternity Services Dataset (MSDS) v1.5

#### 3.1 Baby's first feed is breastmilk

#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 93580. Note that inequalities data for this indicator is displayed on the local authority version so ID differs from CCG

England = 67.4%



#### 3.1 Baby's first feed is breastmilk





Data source: Public Health England (PHE) Fingertips (indicator ID: 93580. Note that inequalities data for this indicator is displayed on the local authority version so ID differs from CCG slide), from Maternity Services Dataset (MSDS) v1.5

#### 3.1 Baby's first feed is breastmilk



By prematurity



Data source: Public Health England (PHE) Fingertips (indicator ID: 93580. Note that inequalities data for this indicator is displayed on the local authority version so ID differs from CCG slide), from Maternity Services Dataset (MSDS) v1.5

### 3.2 Low birth weight of all babies



All births (live and still births) with a recorded birth weight under 2500g as a percentage of all live births with stated birth weight, 2018



Data source: Public Health England (PHE) Fingertips (indicator ID: 92531), from Office for National Statistics (ONS)

#### 3.2 Low birth weight of all babies



#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 92531), from Office for National Statistics (ONS)

### 3.3 Very low birth weight of all babies

All births (live and still births) with a recorded birth weight under 1500g as a percentage of all live births with stated birth weight, 2018



Data source: Public Health England (PHE) Fingertips (indicator ID: 92532), from Office for National Statistics (ONS)

### 3.3 Very low birth weight of all babies





Data source: Public Health England (PHE) Fingertips (indicator ID: 92532), from Office for National Statistics (ONS)

#### **3.4 Stillbirth rate**



Rate of stillbirths (fetal deaths occurring after 24 weeks of gestation) for all maternal ages occurring in the respective calendar years per 1,000 births, 2017-2019



Data source: Public Health England (PHE) Fingertips (indicator ID: 92530), from Office for National Statistics (ONS)

#### **3.4 Stillbirth rate**



#### By IMD2019 deprivation decile



Data source: Public Health England (PHE) Fingertips (indicator ID: 92530), from Office for National Statistics (ONS)

#### 3.5 Neonatal mortality and stillbirth rate

The number of stillbirths and deaths under 28 days, per 1,000 live births and stillbirths, 2018



Data source: <u>Public Health England (PHE) Fingertips</u> (indicator ID: 90510), from NHS Outcomes Framework, NHS Digital Note Cumbria used as PHE do not publish at lower tier local authority

### 3.5 Neonatal mortality and stillbirth rate

#### By IMD2019 deprivation decile



England = 6.8 per 1,000 births

Data source: Public Health England (PHE) Fingertips (indicator ID: 90510), from NHS Outcomes Framework, NHS Digital

#### 3.6 Admissions of babies under 14 days

Number of emergency admissions from babies aged 0-13 days (inclusive), rate per 1,000 deliveries, 2018/19



Data source: Public Health England (PHE) Fingertips (indicator ID: 92966), from Hospital Episode Statistics (HES). Copyright © 2020, re-used with the permission of NHS Digital. All rights reserved.

### **Section 3 Summary**



- In 2018/19 67.4% of babies in England have their first feed as breastmilk (including expressed and donor milk). All NENC CCGs where data is available have a significantly lower percentage. Babies from the least deprived decile are more likely (78.2%) to have their first feed as breastmilk than those in the most deprived (53.0%). Babies born to White mothers are less likely to receive their first feed as breastfed than all other ethnic groups, and those born to women aged 30-44 are more likely than those born to younger or older mothers. Babies born premature (<37 weeks gestational age) are less likely than those born after 37 weeks.</li>
- There is substantial variation across the region in babies born with a low (<2500g) and very low (<1500g) birth weight, with North Tyneside and Northumbria significantly lower than England for both indicators. In both indicators rates are higher in the most deprived deciles.
- Stillbirth rates and rates of neonatal mortality and stillbirths are similar to the England rates across the region, though there is variation in both indicators. For both indicators rates are higher in the most deprived deciles.
- Emergency admissions for babies under 14 days vary across the region from 148.8 per 1,000 deliveries in Darlington to 38.5 per 1,000 in Sunderland

### 4. Neonatal audit indicators



The National Neonatal Audit Programme (NNAP) measures a specific group of indicators relating to care of babies admitted to neonatal services. The following indicators are all from this source. Please note that National averages in this section relate to England, Scotland, Wales and the Isle of Man.

#### **Indicators in this section:**

- 4.1: Antenatal Steroids
- 4.2: Magnesium sulphate
- 4.3: Temperature
- 4.4: Mother's milk at discharge

#### **4.1 Antenatal Steroids**



Percentage of mothers who deliver a baby between 23 and 33 weeks gestational age inclusive who are given at least one dose of antenatal steroids, 2019 Newborn Intensive Care Unit Special Care Baby Unit 100 National = 91.3% 90 80 70 60 % of mothers 50 40 30 20 10 75.0 82.5 88.0 90.8 90.9 92.9 93.5 94.2 96.6 100.0 100.0 0 JCUH Cumberland Inf QE Gateshead West Cumberland North Tees Darlington R Northumbria North Durham Sunderland Royal South Tyneside Unit

Data source: <u>National Neonatal Audit Programme (NNAP)</u>, Royal College of Paediatrics and Child Health National rate refers to all participating units

### 4.2 Magnesium sulphate



Percentage of mothers who deliver a baby below 30 weeks gestational age who are given magnesium sulphate in the 24 hours prior to delivery, 2019



Data source: National Neonatal Audit Programme (NNAP), Royal College of Paediatrics and Child Health

National rate refers to all participating units. No data for South Tyneside District Hospital was present for this indicator.

#### **4.3 Temperature**



Percentage of admitted babies born at less than 32 weeks gestational age who have a first temperature taken within an hour of birth which is between 36.5 and 37.5°C, 2019



Data source: <u>National Neonatal Audit Programme (NNAP)</u>, Royal College of Paediatrics and Child Health National rate refers to all participating units

#### 4.4 Mother's milk at discharge



Percentage of babies born at less than 33 weeks gestational age receive any of their own mother's milk at discharge to home from a neonatal unit, 2019



Data source: <u>National Neonatal Audit Programme (NNAP)</u>, Royal College of Paediatrics and Child Health National rate refers to all participating units. Transfers to other units are excluded.

## **Section 4 Summary**



- In 2019 the proportion of mothers who delivered babies between 23 and 33 weeks gestational age receiving antenatal steroids in the Northern Neonatal Network ranged from 75%-100%, with most units including the three Newborn Intensive Care Units (NICU) giving them to over 90% of mothers of these babies.
- For mothers who delivered babies below 30 weeks gestational age, the percentage who received magnesium sulphate in the 24 hours prior to delivery ranged from 50% in West Cumberland to 100% in four of the Special Care Baby Units (SCBU).
- For babies born at less than 32 weeks gestational age, those who had a temperature taken on time and within the normal range varied from 33% to 100% across the network. James Cook University Hospital achieved this for 50% of their babies, lower than the national average of 70.3%
- All units in the network had lower than the national average values for babies born at less than 33 weeks gestational age receiving any of their own mothers milk at discharge to home.

#### **Further exploration**



The indicators in this report have all been gathered from publically available data from established sources, however developing data sets on this topic are available for further investigation.

NHS Digital currently publish monthly experimental statistics from the <u>Maternity Services Data Set</u> (<u>MSDS</u>). These include data on maternity booking appointments, pregnancy and birth. This source is in development and should be used with caution, however data quality is improving and robust indicators are being developed including some of the indicators used in this report.

Public Health England have produced the <u>Wider Impacts of COVID-19 (WICH)</u> monitoring tool designed to monitor the indirect effects of the COVID-19 pandemic on population health and wellbeing. This includes a section on Pregnancy and Birth which uses MSDS and provisional Hospital Episode Statistics (HES) data in order to give a more up to date picture on a range of indicators



#### Part 2 Recommendations from recent National and Regional reports




# **Essential actions**

# 1. Enhancing Safety

- Safety in maternity units across England must be strengthened by increasing partnerships between Trusts and within local networks.
- Neighbouring Trusts must work collaboratively to ensure that local investigations into Serious Incidents (Sis) have regional and Local Maternity System (LMS) oversight

# 2. Listening to women and families

Maternity services must ensure that women and their families are listened to with their voices heard

# 3. Staff training and working together

Staff who work together must train together

# 4. Managing complex pregnancy

- There must be robust pathways in place for managing women with complex pregnancies.
- Through the development of links with the tertiary level Maternal Medicine Centre there
  must be agreement reached on the criteria for those cases to be discussed and/or
  referred to a maternal medicine specialist centre.

# 5. Risk assessment throughout pregnancy

 Staff must ensure that women undergo a risk assessment at each contact throughout the pregnancy pathway

# 6. Monitoring fetal wellbeing

 All maternity services must appoint a dedicated Lead Midwife and Lead Obstetrician both with demonstrated expertise to focus on and champion best practice in fetal monitoring

# 7. Informed consent

 All Trusts must ensure women have ready access to accurate information to enable their informed choice of intended place of birth and mode of birth, including maternal choice for caesarean delivery



# Recommendations

- R1 Maternity service providers should consider the local reasons for inaccuracies in the recording of 'number of infants' at birth and work to correct these by the end of the 2020/21 reporting year. This might require auditing local data, mandating the 'number of infants' data item and checking data download reports for national datasets to ensure that 'birth order' has not been mislabelled as 'number of infants'.
- R2 Maternity service providers and national organisations responsible for collating and managing maternity datasets should request/record data on the number of fetuses in the first trimester of pregnancy, in addition to number at birth, for women with multiple pregnancy, and should plan to be compliant with this for the next version of the national data specification.
- R3 Maternity service providers and national organisations responsible for collating and managing maternity datasets should make chorionicity and amnionicity a compulsory data item in maternity information systems and national datasets for women with multiple pregnancy. This should be implemented in the next version of the national data specification.
- R4 Maternity service providers who offer specialist fetal procedures, such as intrauterine fetal laser therapy, should work with their coding departments to ensure that the fetal complications and procedures are properly coded into HES, SMR and PEDW by the end of the 2020/21 reporting year.
- R5 Maternity service providers and national organisations responsible for collating and managing maternity datasets should work to include a compulsory field on planned mode of birth, to enable distinction between those women who have an urgent caesarean birth following labour onset for new clinical reasons and those who have planned caesarean birth. This should be implemented in the next version of the national data specification.
- R6 Maternity service providers should put local systems in place by the end of the 2020/21 reporting year to ensure that the NHS number for every newborn baby is stored in the maternity information system and linked to the mother's number. Particular care must be taken to ensure that the baby's NHS number is not linked to the baby record of the other twin.

**National Maternity and Perinatal Audit** 

NHS Maternity Care for Women with Multiple Births and Their Babies

A study on feasibility of assessing care using data from births between 1 April 2015 and 31 March 2017 in England, Wales and Scotland

Published in 2020 by HQIP

To view full report click here



## National Maternity and Perinatal Audit

## **Technical Report**

Feasibility of evaluating perinatal mental health services using linked national maternity and mental health data sets, based on births between 1 April 2014 and 31 March 2017 in Scotland



Published in 2019 by HQIP To view full report <u>click here</u>

# Recommendations

- R1 National organisations responsible for the evaluation of perinatal mental health services should aim to use a data set that includes all live births and stillbirths as a 'spine' against which all other data sets (maternity, general/acute and mental health inpatient data) can be linked. (Organisations responsible for the evaluation of perinatal mental health services)
- R2 Both data sets of admissions to psychiatric hospitals and of admissions to general/acute hospitals should be used to identify women with a mental health admission before and during the perinatal period.

(Organisations responsible for the evaluation of perinatal mental health services)

R3 Options of linking with data sets that include records of mental health care provided in the community should be explored so that perinatal mental health problems that are treated in the community can also be identified, and reported separately.

(Organisations involved in the study and assessment of perinatal mental health services)

R4 The classification with eight groups of mental health diagnoses described in this report should be considered to study and evaluate perinatal mental health services.

(Organisations involved in the study and assessment of perinatal mental health services; providers of mental health services and providers of maternity services, and services users)

R5 The implementation of guidelines for perinatal mental health services and other initiatives to improve these services should be evaluated using national linked data sets.

(National policy makers, including NHS England, NHS Scotland and NHS Wales; organisations involved in the study and assessment of perinatal mental health services)





## New recommendations

- Ensure all pregnant or post-partum women with COVID-19 receive multidisciplinary team care and obstetric leadership with daily review. This is essential in order to ensure timely recognition of deterioration, early assessment of the need for iatrogenic birth to help respiratory function and identification of postnatal complications. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association/Royal Colleges of Physicians COVID-19 Guideline Development Groups]
- Ensure that pregnant and postpartum women are considered for antiviral or other specific therapies for COVID-19 as part of routine care, early access or compassionate use programmes. Pregnant and postpartum women should not be excluded from clinical trials unless there is a clear contraindication. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association/Royal Colleges of Physicians COVID-19 Guideline Development Groups]
- Provide specific advice to pregnant and post-partum women with COVID-19 infection about the risk of deterioration and when to seek urgent medical attention or go to the hospital. This should be communicated via an interpreter if necessary. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association COVID-19 Guideline Development Group]
- 4. Ensure that communication with partners and families, including via an interpreting service if necessary, and facilitating visits between women and their partners is a priority when women are critically ill. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association/ Royal Colleges of Physicians COVID-19 Guideline Development Groups]
- 5. Establish triage processes to ensure that women with mental health concerns can be appropriately assessed, including face-to-face if necessary, and access specialist perinatal mental health services in the context of changes to the normal processes of care due to COVID-19. Perinatal mental health services are essential and face to face contact will be necessary in some circumstances. There is a clear role for involvement of the lead mental health obstetrician or midwife in triage and clinical review. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association/Royal College of Psychiatrists COVID-19 Guideline Development Groups; Local Maternity Systems; Mental Health Service Providers; Health Boards]
- 6. Ensure that referral with mental health concerns on more than one occasion is considered a 'red flag' which should prompt clinical review, irrespective of usual access thresholds or practice. [ACTION: Royal College of Obstetricians and Gynaecologists/Royal College of Midwives/Obstetric Anaesthetists Association/ Royal College of Psychiatrists COVID-19 Guideline Development Groups; Local Maternity Systems; Mental Health Service Providers; Health Boards]
- 7. Update guidance to reflect that safeguarding actions, including removal to a place of safety if necessary, should be followed in the context of public health measures such as lockdown. [ACTION: Local Authorities, Adult Protection Committees, Northern Ireland Adult Safeguarding Partnership, Hospitals and Health Boards, Primary Care]





- 1. Develop public health initiatives to address issues linked to high risk populations. ACTION: Policy Makers, UK Public Health Services.
- Ensure that healthcare providers have implemented national initiatives to reduce stillbirth and neonatal deaths and are monitoring their impact on reducing preterm birth. ACTION: Service Commissioners, Trust and Health Board Directors, Clinical Directors.
- Ensure that there is a multi-agency targeted approach affecting women living in areas of high socioeconomic deprivation across all points of the reproductive, pregnancy and neonatal healthcare pathway.
   ACTION: Policy Makers, UK Public Health Services, Service Planners and Commissioners at local and national level.
- Identify the specific needs of Black and Asian populations and ensure that these are addressed as part of their reproductive and pregnancy healthcare provision. ACTION: Service Planners, Service Commissioners, Health Professionals.
- 5. Use the MBRRACE-UK real-time data monitoring tool as part of regular mortality meetings to help identify why an organisation's stabilised & adjusted stillbirth, neonatal mortality or extended perinatal mortality rate falls into the red or amber band. ACTION: Trust and Health Board Directors, Clinical Directors, Heads Of Midwifery, Health Professionals.
- 6. Investigate potential modifiable factors in the treatment of neonates when an organisation's stabilised and adjusted neonatal mortality rate falls into the red or amber bands after exclusion of deaths due to congenital anomalies. Ensure that this encompasses both local population characteristics and quality of care provision. ACTION: Trust and Health Board Directors, Clinical Directors, Heads Of Midwifery.
- Explore local variation in post mortem uptake by different population groups, particularly by ethnicity and deprivation, and tailor training for consent takers based on the local population. ACTION: Trust and Health Board Directors, Clinical Directors, Heads Of Midwifery, Health Professionals.
- Undertake placental histology for all babies admitted to a neonatal unit, preferably by a specialist perinatal pathologist. ACTION: Trust And Health Board Directors, Clinical Directors, Heads Of Midwifery, Health Professionals.
- Notify all deaths via the MBRRACE-UK system within 7 working days of the death occurring, but with an aim to notify within 2 working days. Incorporate mechanisms for timely notification into local processes. ACTION: Trust and Health Board Directors, Clinical Directors, Heads Of Midwifery, Health Professionals.
- 10. Aim for completion of all surveillance data within 90 days to enable timely review with the PMRT and effective use of the MBRRACE-UK real-time data monitoring tool. Utilise the real-time data monitoring tool to ensure the data entered is complete and of high quality. ACTION: Trust and Health Board Directors, Clinical Directors, Heads Of Midwifery, Health Professionals.







# Recommendations

 Improve the engagement of parents in reviews by standardising and resourcing local processes to ensure all bereaved parents are told a review will take place and have ample opportunities at different stages to discuss their views, ask questions and express any concerns as well as positive feedback they have about the care they received.

Action: Trusts and Health Boards, staff caring for bereaved parents

Provide adequate resourcing of multidisciplinary PMRT review teams, including administrative support.

Action: Trusts and Health Boards, Service Commissioners

Improve the process of PMRT review by involving sufficient members of multidisciplinary internal staff and an external member as part of the PMRT review team.

Action: Trusts and Health Boards, regional support systems and organisations e.g. Local Mater nity Systems in England, Service Commissioners

 Improve the quality of service improvements as a consequence of reviews by developing 'strong' actions targeted at system level changes and audit their implementation and impact.

Action: PMRT review teams, governance teams in Trusts and Health Boards, Service Commis sioners

5. Use the local PMRT summary reports and this national report as the basis to prioritise resources towards key aspects of care identified as requiring action.

Action: Trusts and Health Boards, Service Commissioners, regional support systems, e.g. Local Maternity Systems in England, Governments and national service organisations

Conduct research into new interventions that may be required to address issues with care identified in the PMRT report.

Action: Research funding organisations and researchers



## ★RCPCH Audits

National Neonatal Audit Programme 2019 Annual report on 2018 data

NATIONAL Neonatal Audit Programme



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## **Recommendations and action planning for neonatal services**

#### What to do next:

- Share your unit's NNAP results with your multidisciplinary team, using <u>NNAP Online</u> and the <u>NNAP results presentation template</u>.
- With the multidisciplinary team, set goals and develop action plans where your unit results require improvement and your unit is not meeting the audit recommendations.
- 3. Use the recommendations checklist to track your unit, trust/health board or network's status.
- Monitor your unit's performance through the year using NNAP quarterly reports and real time data. Continue to revisit the recommendations checklist and your unit's action plan throughout the year.



# Recommendations

#### Fulfilling reproductive choices

## Contraception

Public Health

State of the North Fast 2020

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Reproductive health

England

- Local authorities should work with providers to explore the data recording on the use of Long Acting Reversible Contraception (LARC) and explore the variation between areas to ensure their population has easy and timely access to LARC provision.
- General practice and sexual health providers should ensure that women of all ages have access to the range of contraceptive methods, including emergency hormonal contraception.
- Local authorities and CCGs should ensure contraception and long-term preconception care are considered together, opportunistically, at key contacts such as during pregnancy, at birth, contraception reviews and abortion.

#### Abortion

- 4. Clinical Commissioning Groups (CCGs) should investigate the reasons why there is a lower proportion of abortions under 10 weeks across the North East and why 4 in 10 women who are having late abortions receive these outside the North East region.
- 5. Due to the high rate of under 25s having an abortion who have previously given birth in the North East, maternity services, sexual health services and general practices should ensure contraception advice is provided pre, during and post pregnancy, with the full range of contraception made available.

#### Teenage pregnancy

- Local authorities should work with local partners to use PHE's Teenage Pregnancy Prevention Framework to assess their local programme to see what's working well, identify any gaps, and maximise the assets of all services.
- 7. The rates of teenage conception mask significant variation within LAs and between individual young people. Particular attention should be focused on narrowing inequalities within LAs by assessing teenage conceptions utilising the ward estimate maps<sup>1</sup> as well as reducing inequalities between individual young people, for example looked after children and care leavers.
- In 2017, a significantly smaller percentage of under 18 conceptions in the North East led to abortion than a birth compared to England (40.2% compared to 52.0%). CCGs should assess their abortion provision to ensure there is easy access for all young people, including under 16s and those relying on public transport.

## Preconception care

- Maternity staff should improve the quality of data on the Maternity Services Dataset for folic acid use, alcohol consumption and BMI.
- 10. Maternity staff should raise awareness of the benefits of folic acid use and maintaining a healthy, balanced diet, as well as the risks associated with drinking alcohol, and smoking pre, during and post pregnancy.

## Early identification and prevention of reproductive morbidity

## Cervical screening

11. Whilst the North East is doing well against the England average for coverage of cervical screening, 1 in 4 women are still not accessing screening within the recommended interval. NHS England (NHSE) and general practices should undertake further analysis using GP practice level data to target women in specific areas and engage in the Screening Saves Lives initiatives.

## Chlamydia screening

- 12. Local authorities should continue to work towards the ambition of 2,300 diagnoses per 100,000 population, ensuring access to chlamydia screening for under 25-year olds through a range of settings.
- 13. Effective management of those diagnosed with chlamydia is an essential part of reducing onward transmission and subsequent harm. This means rapid treatment, effective partner notification and retesting 3 months after treatment. Local authorities and sexual health providers should explore the variation in rates of detection as it may represent different prevalence's in different populations, but it could also be influenced by coverage and whether the most at risk populations are being reached.

## **Reproductive Wellness**

14. PHE, NHS and LA colleagues should investigate how routine indicator sets can be developed to capture data on reproductive wellness, such as menopausal problems, and explore ways to reduce barriers and stigma for those seeking help.

## Health Inequalities

15. Both commissioners and providers of local reproductive health services should ensure that inequalities data for example ethnicity, sexual orientation, is captured in order to understand the access and experience by different population groups.