Proposal for North regional neonatal dashboard for all ODNs and LMS's to support reduction in neonatal morbidity

Background

- A neonatal deep dive for the North Region was held in November 2017 attended by Neonatal Operational Delivery Network managers and clinical leads, North regional members of the Neonatal Clinical Reference Group and representation from regional maternity team
- The deep dive identified key indicators from the National Neonatal Audit Programme (NNAP) to prevent and address neonatal morbidity and agreed to establish a regional dashboard
- The dashboard should be collated by ODNs by unit and used at ODN executive and LMS meetings to identify key areas of variation and address shared pathways to improve neonatal morbidity
- Definitions of indicators will be those used in the National Neonatal Audit Programme 2018 Audit Programme https://www.rcpch.ac.uk/improving-child-health/quality-improvement-and-clinical-audit/national-neonatal-audit-programme-nn-2#NNAP 2018 audit measures

Regional Indicator 1: Are all mothers who deliver babies between 23 – 33 weeks gestation given any dose of antenatal steroids?

Background

Antenatal steroids are the most powerful health intervention in neonatal care. They are given to mothers by obstetricians and midwives prior to preterm birth in order to reduce the chance that their baby is affected by breathing difficulties (respiratory distress syndrome) as well as to reduce the risk of several other serious complications on prematurity. In 2016 86% of mothers of preterm babies (24 -34 weeks) in the UK were given antenatal steroids. This figure has risen by 1% since 2015. The National Neonatal Audit Programme (NNAP)standard is 85%. Scotland has the highest rates of antenatal steroid administration at 93% Some units in England have achieved 98%-100%.[1]

The NNAP definition for 2018 has changed to pre-term babies 23 – 33 weeks but the standard remains 85%.[2]

NICE guideline on preterm labour and birth states that professionals should consider maternal corticosteroids for women between 24+0 and 25+6 weeks of pregnancy and offer maternal corticosteroids to women between 26+0 and 33+6 weeks of pregnancy who are in suspected, diagnosed or established preterm labour, are having a planned preterm birth or have P-PROM.'[3]

Giving corticosteroids to a woman before a preterm birth reduces the severity of lung disease of prematurity and of other associated complications for her baby. Maternal corticosteroids also have the potential to reduce the number of days that the baby needs to be on a ventilator. [4]

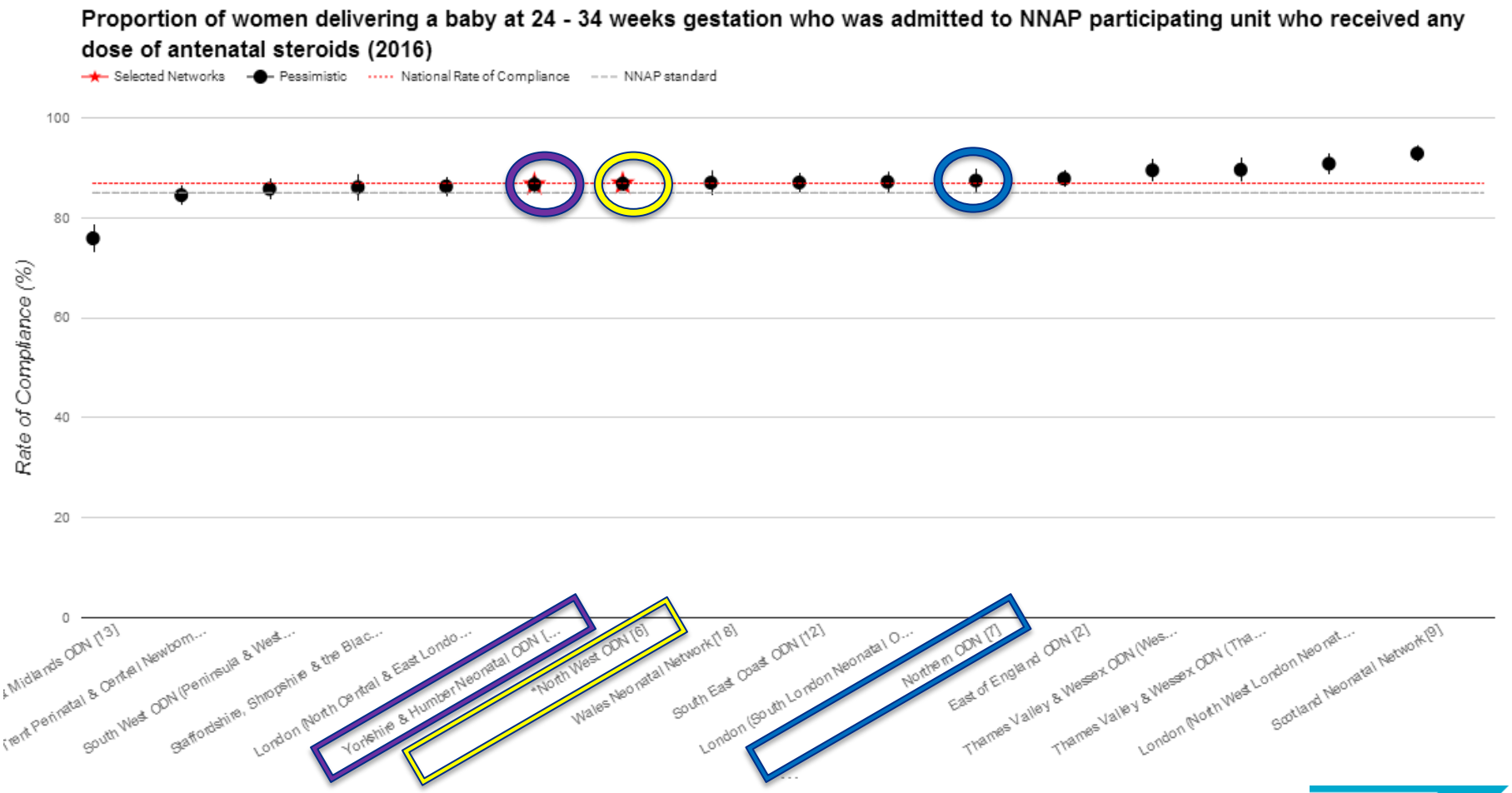
[1]National Neonatal Audit Programme 2017 Annual Report on 2016 data

[2]National Neonatal Audit Programme 2018 Audit Measures

[3] NICE guideline NG 25: Preterm labour and birth: recommendation 1.9.3, published Nov 2015, updated August 2017

[4] NICE quality standard QS135, quality statement 5, corticosteroids for women between 30+0 and 33+6 weeks of pregnancy; published October 2016

NNAP audit 2016



Rationale

- While all three ODN areas in the North are slightly above the NNAP standard of 85%, Scotland is achieving a rate of 93% and some units achieving nearly 100%.
- The neonatal deep dive felt that the use of antenatal steroids was so powerful that this should be included as an indicator on a regional dashboard so that variation between units can be understood and LMS/ODNs strive to achieve standards above the national average and nearing the highest rates in England.
- The National Neonatal Audit Programme 2017 report makes recommendations about how obstetricians and neonatal units can work together to identify potential missed opportunities and develop appropriate action plans

Regional indicator 2: Are mothers who deliver babies below 30 weeks gestation given magnesium sulphate in the 24 hours prior to delivery?

Background

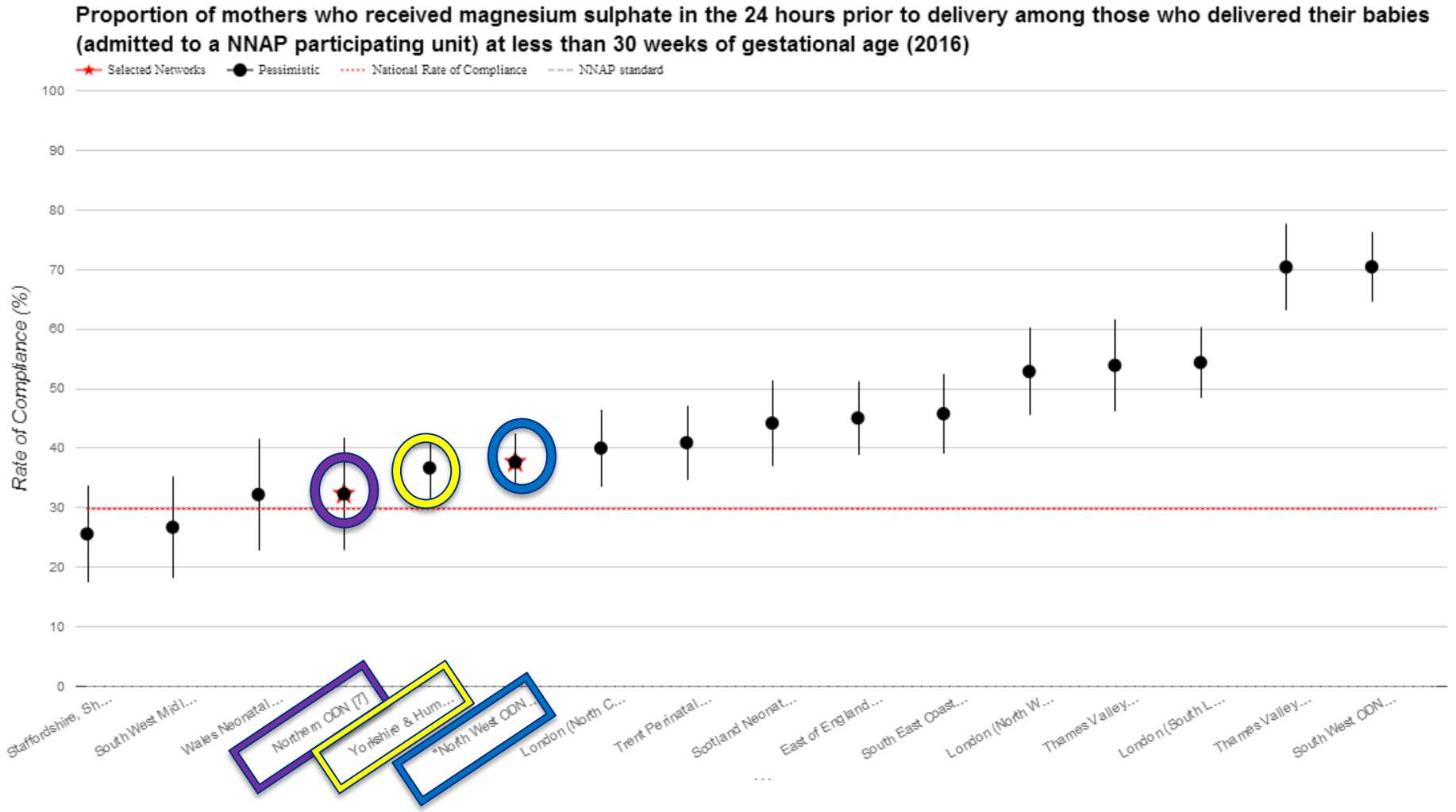
Administering intravenous magnesium sulphate to women who are at risk of delivering a preterm baby reduces the chance that the baby will later develop cerebral palsy by around 30%. NICE guidance recommends that all women who may deliver at less than 30 weeks should be offered treatment. In 2016 43% of women who delivered at <30 weeks gestation were given magnesium sulphate. In 2016 magnesium sulphate was administered more commonly to mothers of babies born in maternity units associated with a neonatal intensive care unit (48%) vs a local neonatal unit (36%) and a special care baby unit.[5]

NICE guideline on preterm birth and labour states that magnesium sulphate would be offered for neuroprotection of the baby to women between 24+0 and 29+6 weeks of pregnancy who are in established preterm labour or having a planned preterm birth within 24 hours.[6]

With advances in neonatal care in recent years, more babies born preterm are surviving. These children frequently have long-term complications associated with preterm birth. Neurological effects are common and may cause severe disability. Magnesium sulphate can protect the developing fetal brain and so has significant potential to reduce disability.[7]

[5] National Neonatal Audit Programme 2017 Annual Report on 2016 data
[6] NICE guideline NG 25 Preterm labour and birth: recommendation 1.10.1 published November 2015, updated August 2017
[7] NICE Quality Standard QS 135, quality statement 6, magnesium sulphate for women between 24+0 and 29+6 weeks of pregnancy; published October 2016

NNAP audit 2016



Rationale

- All North neonatal ODN areas were below the national average of 43% of women who delivered at <30 weeks gestation given magnesium sulphate in 2016.
- Some network areas in England are achieving significantly above the national average at 50 – 70% of women given magnesium sulphate.
- Units within each ODN areas should monitor magnesium sulphate administration levels with the aim of exceeding the national average of 43% and striving to achieve among the best rates in England.
- The National Neonatal Audit Programme 2017 Annual Report makes recommendations for neonatal units and obstetricians to identify potential missed opportunities and develop appropriate action plans.

Regional indicator 3: Proportion of babies with gestation at birth <30 weeks who were discharged home on some of their mother's own milk.

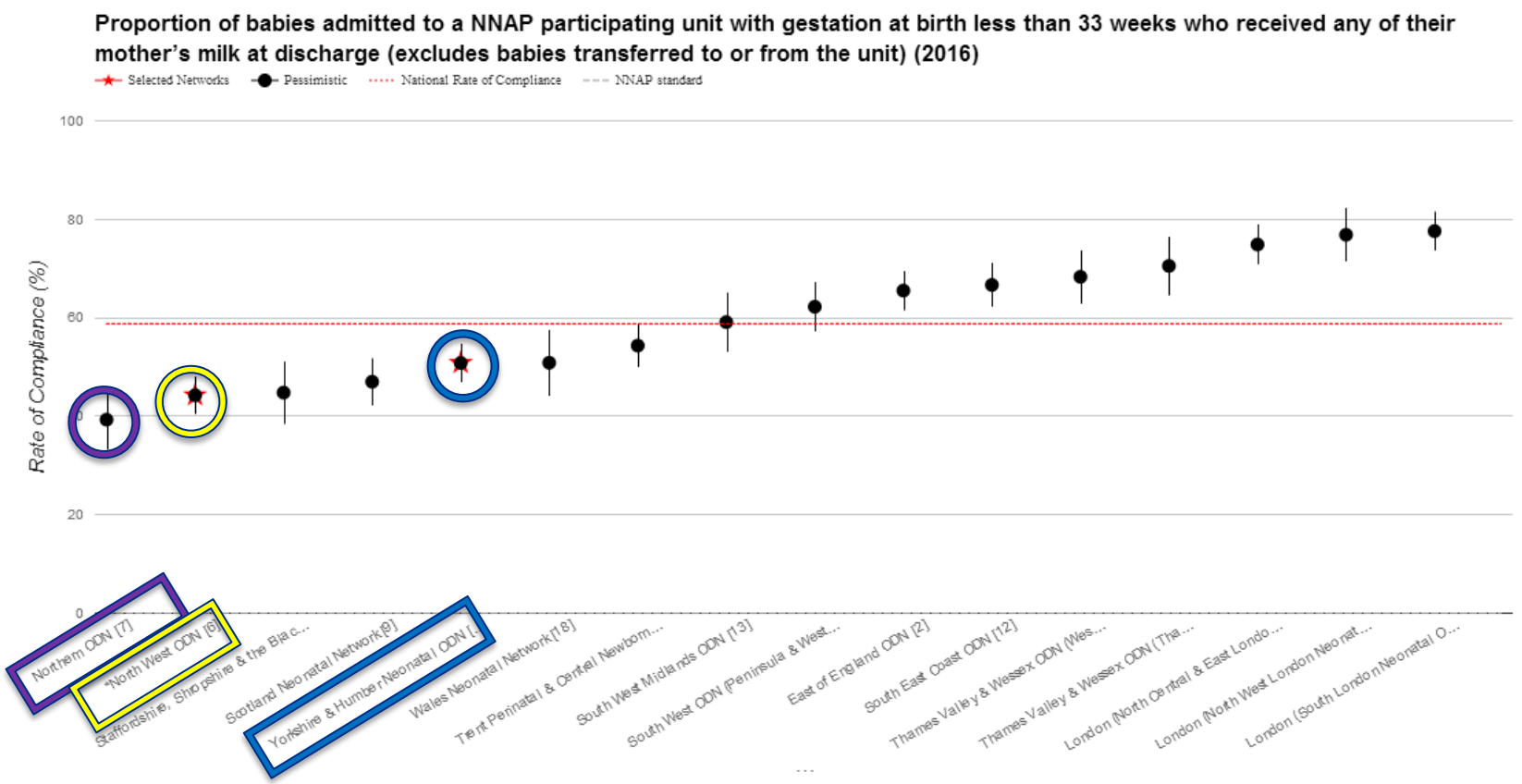
Background

Premature babies are especially vulnerable to infection and their own mother's milk provides an important line of defence through the protective antibodies that it provides. These significant health benefits include a reduction in infection and bowel problems as well as improved longer-term health and neurodevelopmental outcomes. There has been no improvement in the overall rates of breastmilk feeding for babies born at <33 weeks gestation and the rate has remained broadly stable over time, from 58 – 60% between 2012 and 2015 to 59% in 2016.[6]

NICE quality standard on neonatal specialist care states that healthcare professionals should ensure all mothers of babies receiving specialist neonatal care are supported to start and continue breastfeeding, including support to express milk.[7]

[6] National Neonatal Audit Programme 2017 Annual Report on 2016 data
[7] NICE quality standard QS4 Neonatal specialist care, quality statement 6, breastfeeding; published October 2010

NNAP audit 2016



Rationale

- One network areas in the North have shown a higher trajectory than the national average.
- Breastfeeding initiation rates are lower in the North of England than other areas in England.
- One network area in the North have shown a higher trajectory than the national average in 2016. However, all north ODNs are below the national average of 59% in 2016.
- Two north networks have the lowest rates in the country for 2016.
- The National Neonatal Audit Programme 2017 Annual Report on 2016 data makes recommendations that neonatal and midwifery staff should actively use a multi-disciplinary policy to help mothers of preterm infants to breastfeed.

Regional indicator 4: Were live born and admitted babies born at less than 27 weeks gestation delivered in a maternity service on the same site as a designated neonatal intensive care unit (NICU)?

Background

This new indicator was added to the NNAP audit in 2017 and will be included in the 2018 audit. Data by ODN is not yet available.
Under the NHS England service specification, neonatal networks intend to concentrate the delivery of babies to be born at less than 27 weeks gestation in units configured to deliver their care, i.e. a NICU. Evidence suggests that outcomes are improved by providing the care of the most vulnerable babies in units with a higher turnover, and minimising postnatal transfers.
Rates of delivery at less than 27 weeks appear to vary by neonatal network, and have changed over time. In networks where a significant number of babies are delivered in centres without a NICU on site, there may be a quality improvement opportunity.[8]

[8]National Neonatal Audit Programme 2018 Audit Measures

Rationale

- Collecting information by unit for 2018 will enable a baseline to be established.
- LMS's and ODNs will be able to understand variation and implement shared transformation programmes to delivery quality and safety improvements.