



NHS England's Saving Babies' Lives Care Bundle

A care bundle for reducing perinatal mortality

Matthew Jolly
National Director for Maternity and Women's Health
NHS England and NHS Improvement
@matthewcjolly

NHS England and NHS Improvement

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Snapshot of stillbirth in UK

| Stillbirth data for the UK | |
|---------------------------------------|---|
| Number of stillbirths per year (2009) | 2,830 |
| Rank out of 193 countries - numbers | 115 |
| Rank out of 193 countries - rates | 33 |
| Rate of reduction 1995-2009 | 1.4% |
| Important causes | <ul style="list-style-type: none"> Placental problems Congenital abnormalities Antepartum causes Maternal disorders Pharmacological infection |
| Priority actions | <ul style="list-style-type: none"> 1. Reduce stillbirths, neonatal deaths and perinatal loss to reach underranked 2. Review from poor communities or ethnic minorities 3. Review quality of care and risk factors for high-risk women 4. Address lifestyle risk factors such as obesity, smoking, and advanced maternal age |

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Background of development

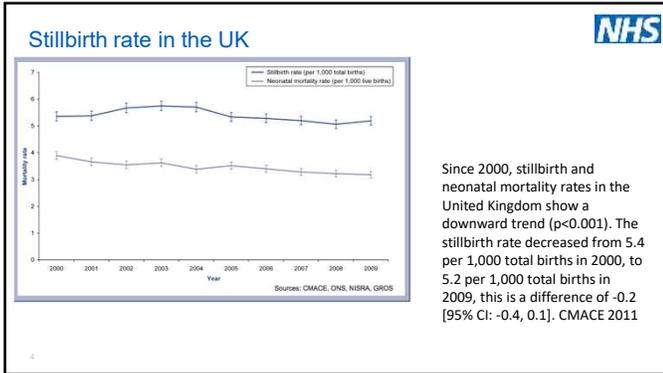


Mat & CYP Strategic Clinical Networks

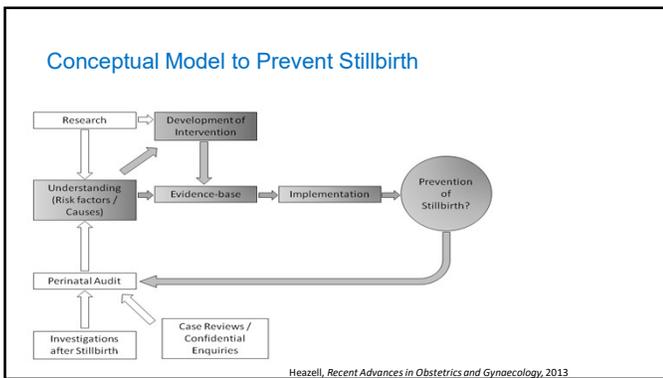
- 12 Senate/SCN geographical areas
- Subject to Smith Review – objectives now aligned to national priorities
- Conduct between Providers and Commissioners
- Local variation in outcomes still a priority
- PHE working with SCNs to develop improvement data

NHS | Presentation for SCN Development [11th May 2013]

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Key Point 1

Evidence based medicine is the preferred approach but if the evidence is lacking understand unwarranted variation and use expert opinion to implement best practice care which can form a baseline standard for further research.

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Background of development

- Network meeting to explore alignment with and determine national priorities – March 2014 - Still birth reduction identified as a priority.
- "Care bundle" approach suggested as effective means to drive improvement
- Identified and engaged key stakeholders to explore close alignment of related work streams.
 - NHS Litigation Authority (NHS LA) now NHS Resolution (NHS R)
 - Royal College of Obstetricians & Gynaecologists (RCOG)
 - Royal College of Midwives (RCM)
 - British Maternal & Fetal Medicine Society (BMFMS)
 - Stillbirth and Neonatal Death Society (SANDS)
- August 2014 workshop with stakeholders to agree approach and build consensus.

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What is the Saving Babies' Lives Care Bundle?

Quality improvement policy designed to improve care of pregnant women in four key elements

1. Reducing smoking in pregnancy
2. Risk assessment and surveillance for fetal growth restriction
3. Raising awareness of reduced fetal movement
4. Effective fetal monitoring during labour



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Element 1

Reducing smoking in pregnancy

Element description

Reducing smoking in pregnancy by carrying out Carbon Monoxide (CO) test at antenatal booking appointment to identify smokers (or those exposed to tobacco smoke) and referring to stop smoking service/specialist as appropriate

Intervention

Carbon monoxide (CO) testing of all pregnant women at antenatal booking appointment and referral, as appropriate, to a stop smoking service/specialist, based on an opt out system. Referral pathway must include feedback and follow up processes.

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Element 2

Risk assessment and surveillance for fetal growth restriction

Element description

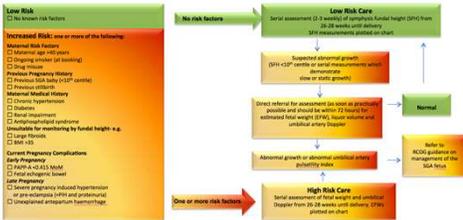
Risk assessment and surveillance of pregnancies for fetal growth restriction

Interventions

1. Use supplied algorithm to aid decision making on classification of risk, and corresponding surveillance of all pregnancies. (Some providers may wish instead to use the RCOG algorithm*)
2. For women at high risk of fetal growth restriction, fetal growth to be assessed using serial ultrasound scans as per algorithm (Appendix B). Estimated fetal weight derived from ultrasound measurements recorded on a chart**
3. For low risk women, fetal growth to be assessed using antenatal symphysis fundal height charts** by clinicians trained in their use. All staff must be competent in measuring fundal height with a tape measure, plotting measurements on charts, interpreting appropriately and referring when indicated.
4. Ongoing audit, reporting and publishing (on local dashboard or similar) of Small for Gestational Age (SGA) birth rate, antenatal detection rate, false positive rate and false negative rate.
5. Ongoing case-note audit of selected cases not detected antenatally, to identify learning and improve future detection

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Algorithm and risk assessment tool



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Element 3

Raising awareness of reduced fetal movement

Element description

Raising awareness amongst pregnant women of the importance of detecting and reporting reduced fetal movement (RFM), and ensuring providers have protocols in place, based on best available evidence, to manage care for women who report RFM.

Interventions

1. Information and advice leaflet* on reduced fetal movement (RFM), based on current evidence, best practice and clinical guidelines, to be provided to all pregnant women by, at the latest, the 24th week of pregnancy and RFM discussed at every subsequent contact.
2. Use provided checklist to manage care of pregnant women who report reduced fetal movement, in line with RCOG Green-top Guideline

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Key Point 2

Co-Development is key

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Jeremy Hunt aims to cut number of stillbirths and neonatal deaths

UK ranked 33 out of 35 high-income countries in 2011 study on stillbirths, and has one of highest rates in Europe



▲ Hunt wants a reduction of 20% by 2020 and 50% by 2030. Photograph: Dave Thompson/PA

A drive to halve the number of stillbirths and deaths among newborn babies and mothers has been launched by health secretary **Jeremy Hunt**.

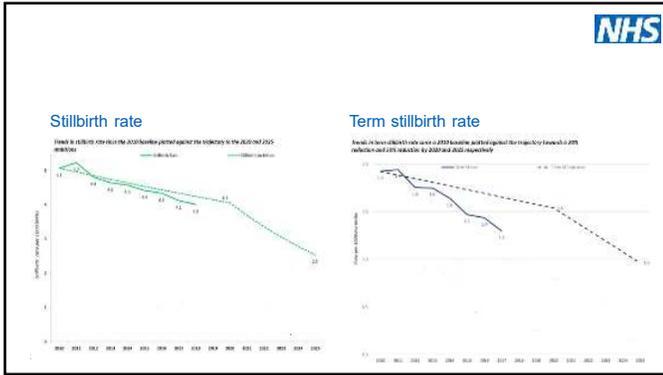
NHS

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Key Point 3

Get political support

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SPIRE evaluation

- Carbon monoxide (CO) testing was implemented in almost all Trusts, however referral to and uptake of smoking cessation services was poor.
- Detection of small for gestational age (SGA) babies increased by 59%
- Most Trusts were giving women the RFM leaflet which women were reading and taking the information into consideration.
- Very few Trusts able to provide up-to-date staff training records in CTG interpretation and intermittent auscultation (IA) and competency assessments.
- There were a number of impacts on the services provided by Trusts, including an increase in the number of ultrasound scans and interventions at or around the time of birth (including inductions and caesarean sections).

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Saving Babies' Lives Version Two

- Reducing burden and unwarranted intervention
- Respecting women's autonomy and offering choice and personalised care
- Promote the availability of continuity of carer to women
- Provide 'Safe and Healthy Pregnancy Information' to help women reduce the risks to their baby
- Implement NICE guidance
- Implement best practice care in the event of a stillbirth
- Inform women of the long-term outcomes of early term birth
- Consider how the risks of induction of labour change with gestational age
- Reduce the risks of human error through the use on antenatal computerised CTG

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Provide 'Safe and Healthy Pregnancy Information' to help women reduce the risks to their baby

It is important that women have access to high quality information before and during their pregnancy to enable them to reduce the risk to their baby. Public Health England and Sands have developed some key messages.

Pre-pregnancy:

- Choose when to start or grow your family by using contraception.
- Eat healthily and be physically active to enter pregnancy at a healthy weight.
- Take a daily supplement of folic acid before conception and until 12 weeks of pregnancy .
- Ensure that you are vaccinated against rubella.
- Find out if you think you or your partner could be a carrier for a genetic disorder.
- Stop smoking.

25 Presentation title

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Provide 'Safe and Healthy Pregnancy Information' to help women reduce the risks to their baby

During pregnancy:

- Pregnant women should have 10µg of vitamin D a day.
- Don't drink alcohol.
- Don't smoke and avoid second hand smoke.
- Don't use illegal street drugs or other substances.
- Have the seasonal flu vaccination.
- Have the pertussis (whooping cough) vaccination.
- Avoid contact with people who have infectious illnesses, including diarrhoea, sickness, childhood illnesses or any rash-like illness.
- Remember the importance of handwashing to reduce the risk of CMV (cytomegalovirus) infection.
- Go to all antenatal appointments.
- Contact the maternity service promptly if you are worried. Don't wait!
- In later pregnancy (after 28 weeks), it is safer to go to sleep on your side than on your back.

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Addressing Intervention Creep

Figure 2: Prevalence of special educational needs by gestation at delivery¹⁹.

After adjusting for maternal and obstetric characteristics and expressed relative to delivery at 40 weeks, the risk of SEN was increased by 26% (95% CI (confidence interval): 27 – 45) at 37 weeks, by 19% (95% CI 14 – 25) at 38 weeks and by 9% (95% CI 4 – 14) at 39 weeks. The risk of subsequent SEN was 4.4% at 40 weeks. Hence, assuming causality, there would be one additional child with SEN for every 60 inductions at 37 weeks, for every 120 inductions at 38 weeks, and for every 250 inductions at 39 weeks compared with the assumption that they would otherwise have delivered at 40 weeks¹⁹.

Mackay DJ, Smith GS, Dobbie R, Pell JP (2010). Gestational Age at Delivery and Special Educational Need: Retrospective Cohort Study of 407,503 Schoolchildren. *PLoS Med* 7(6): e1000289. Available from: <https://doi.org/10.1371/journal.pmed.1000289>

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Saving Babies' Lives Version Two

Prior to 39 weeks gestation, induction of labour or operative delivery is associated with small increases in perinatal morbidity. However, at 39 weeks gestation and beyond, induction of labour is not associated with an increase in caesarean section, instrumental vaginal delivery, fetal morbidity or admission to the neonatal intensive care unit. Thus, a recommendation for delivery before 39 weeks should be based upon objective concerns.

'ARRIVE STUDY' Labor Induction versus Expectant Management in Low-Risk Nulliparous Women
List of authors. William A. Grobman, M.D.et.al.

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Antenatal computerized CTG

When the available evidence is inconclusive SBLCBv2 aims to implement pragmatic best practice care, based upon clinical experience and a recognition of the important human factors. Human error in antepartum CTG interpretation has been identified as a significant root cause of stillbirth and serious brain injury²⁴. A failure to meet the Dawes/Redman criteria usually prompts even the most experienced clinician to re-evaluate their clinical assessment. It provides a second line of defence when a less experienced doctor or midwife interprets a CTG. Therefore, with a recognition that the evidence is inconclusive, SBLCBv2 recommends the antepartum use of computerised CTG over and above visualised CTG due to the potential to reduce the risks of human error.

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Why preterm birth is important

- % (~ 60,000) babies are born prematurely each year in the UK
- preterm birth < 32/40 accounts for 1.4% (~13,500) births in the UK annually
- PTB is estimated to cost health services in England and Wales £3.4bn per year
- A one week increase in gestational age at delivery would save the NHS £81.3 million per year, due to a reduction in the time spent on neonatal admissions

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Saving Babies' Lives v2

- Five Elements
- Reduce unwarranted intervention
- Offer choice and respect a woman's autonomy
- Outcome measures kept to a minimum
- Focus on QI through a process of continuous learning
- Most of the required data collection can be achieved through monthly submissions to the MSDS or use of the Perinatal Maternity Review Tool

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Key Point 4

Incentivise participation

Key Point 5

Quality Improvement Approach

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The slide features the e-LH logo (e-Learning for Health Professionals) and the NHS Health Education England logo. The main title is "Saving Babies' Lives" with a sub-headline: "A resource designed to support maternity staff to implement all elements of the Saving Babies' Lives Care Bundle, Version Two." Below this, a section titled "Programme content" states: "The programme consists of five sessions, each one relating to an individual element of the Saving Babies' Lives Care Bundle Version Two." At the bottom, a blue banner reads "This programme is in partnership with..." followed by logos for the NHS England and NHS Improvement, Health Education England, the Royal College of Obstetricians and Gynaecologists, The Royal College of Midwives, and the Royal College of Paediatrics and Child Health.

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The root cause of poor outcomes is often multifactorial and complex

The diagram shows four yellow gears of varying sizes interlocked in a line, with a red arrow pointing to the right from the largest gear on the right. The NHS logo is in the top right corner.

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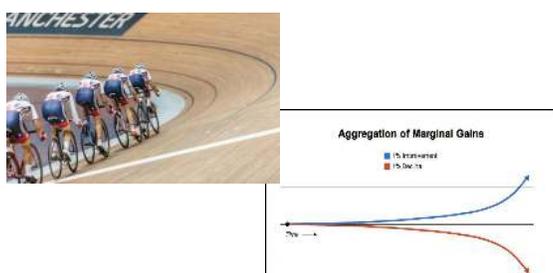
Discreet, simple solutions are rare **NHS**



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Aggregation of Marginal Gains **NHS**



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A life course approach is required to meet the ambition **NHS**



• More than SBLCBv2

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The PMRT will facilitate...

- Comprehensive and robust review of all perinatal deaths from 22nd gestation to 28 days after birth as well as babies who die after 28 days following neonatal care; excludes terminations and babies with a birth weight <500g
- Standardised, high quality review with grading of quality care linked to outcomes
- Multidisciplinary group review of care with allocated time to do so
- Inclusion of parents' perspectives in the process and consideration of any concerns they may have about their care

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Much achieved – much more to do!

A collaboration between the political, policy and clinical worlds has led to 25% a fall in the the stillbirth rate from 5.1 stillbirths per 1,000 births in 2010 to 3.8 stillbirths per 1,000 births in 2019.

The number of stillbirths in England is more than 750 fewer than if the rate had stayed the same as in 2010.

| Year | Mortality rate |
|------|----------------|
| 2013 | 6.5 |
| 2014 | 6.2 |
| 2015 | 5.8 |
| 2016 | 5.5 |
| 2017 | 5.2 |
| 2018 | 4.8 |

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Thank you to all
Who have contributed to
The Saving Babies Lives Care Bundle

Transformational change is the net result of hard transactional work

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