Saving Babies Lives V 2 National Developments

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London

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AMBITION

In November 2015, the Secretary of State of Health announced a national ambition to halve the rate of stillbirths, maternal and neonatal deaths and brain injuries that occur during or soon after birth by 2030. The ambition was subsequently extended to include reducing preterm birth from 8% to 6% and the timeframe revised to 2025.

NHS England

The journey to a national maternity safety ambition

2010

2010 - NHS Mandate & Outcomes Framework

2014 – Five Year Forward View

2015 – National Ambition

2015 – Kirkup Report

2016 – Safer Maternity Care Action Plan

2016 – Better Births

2017 – Progress and next steps

2019 - Long term Plan

Department of Health

NHS England

National Maternity Ambition

To reduce the rate of stillbirths, neonatal and maternal deaths, and brain injuries occurring during or soon after birth by 50% by 2025; and 20% by 2020

Maternity Transformation Programme

A cross-system programme set up to implement the vision set out in the National Maternity Review. NHSI is leading workstream 2 'Promoting good practice for safer care' with NHSE

How?

1) **Roll out of SBLCB V 2 & also New Maternity Networks**
2) **Focus on Preterm birth**
3) **Continue roll out of Better Births – especially "seamless care" & all Trusts be part of National Maternal and Neonatal Health Safety Collaborative.**
4) **Continuity of carer**
5) **NHSIB using Perinatal Mortality Review tool**
6) **Digital records**
7) **Better perinatal mental health care**
8) **Neonatal care**

NHS Long Term Plan 2019

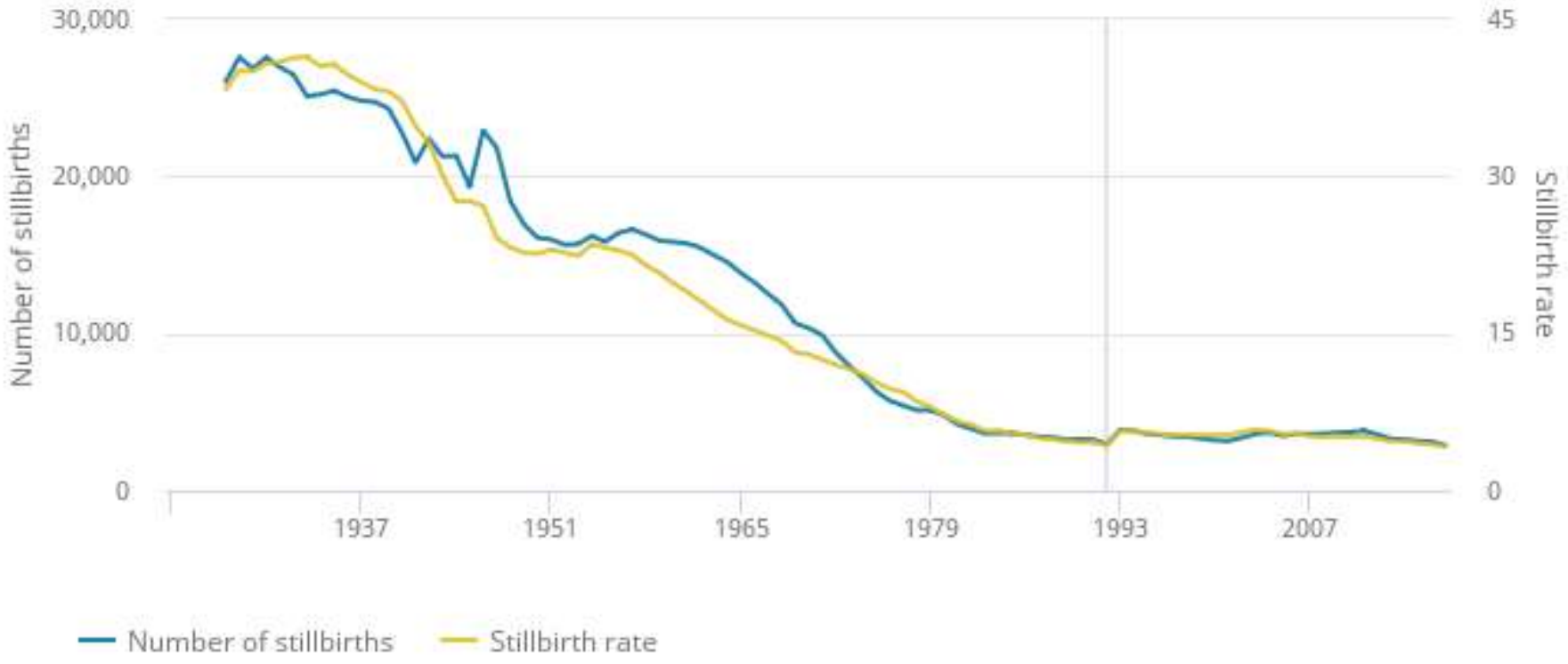
As well as…..NHS Staff

The "NHS is supporting a culture of multidisciplinary team working and learning, vital for safe, high-quality maternity care".

&

"Working in the NHS demands the highest levels of skill and compassion, and the NHS attracts some of the very best people from home and abroad. But, over the past decade, workforce growth has not kept up with need, and the way staff have been supported to work has not kept up with the changing requirements of patients."

2017 – Lowest SB rate on record



1927 – 2017 ONS

1964: 16.3/1000
2017: 4.1/1000 (total births)

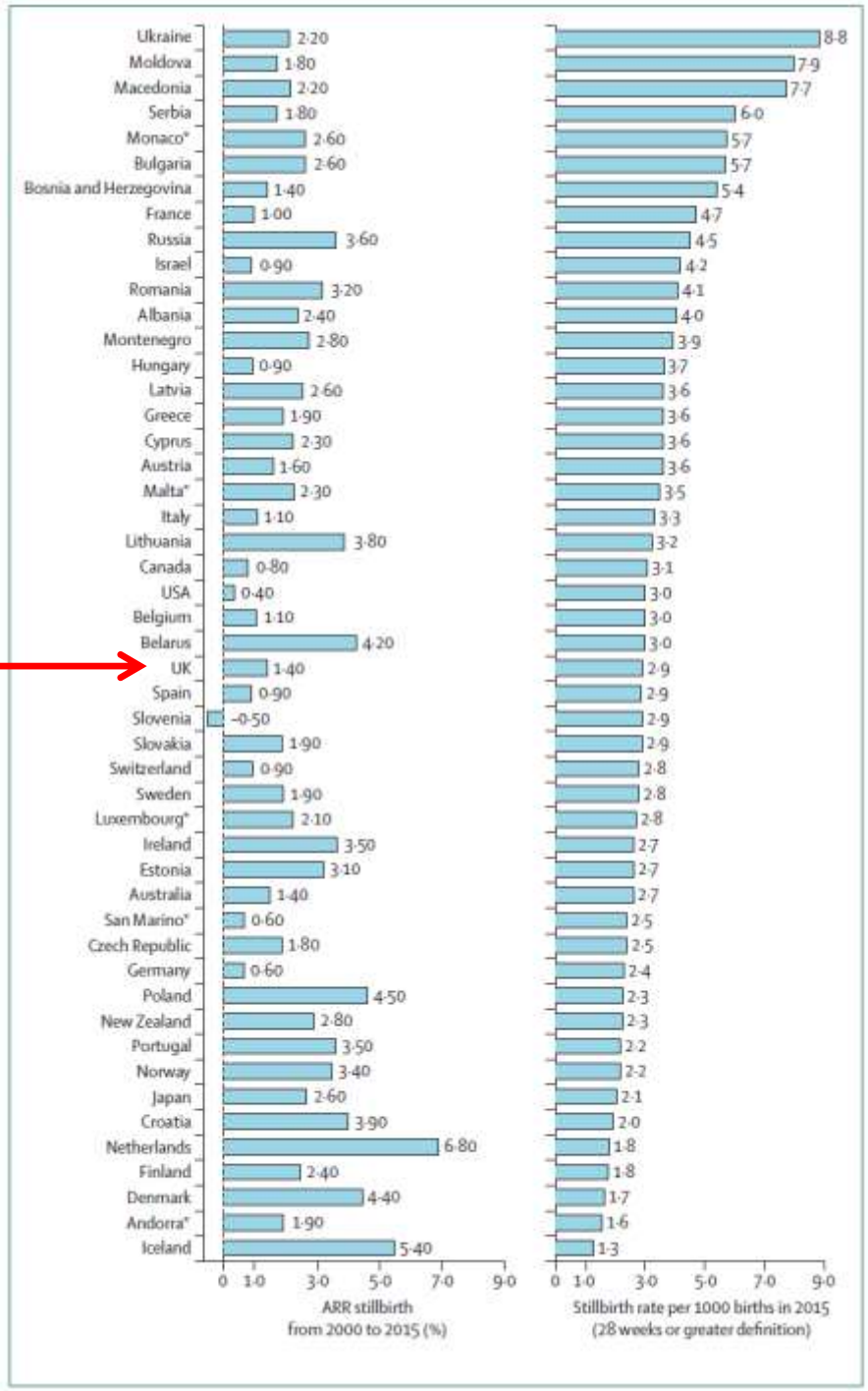
Stillbirth rates are still too high:

- In 2017, 1 in every 225 births ended in a stillbirth
- 3200 babies were stillborn in 2017 in UK
- 9 babies stillborn every day
- Croatia, Poland and Czech Republic have lower SB rates.

Stillbirth rates in the UK

- In 2015
- 24th/49 listed HIC
- 19th/38 Europe

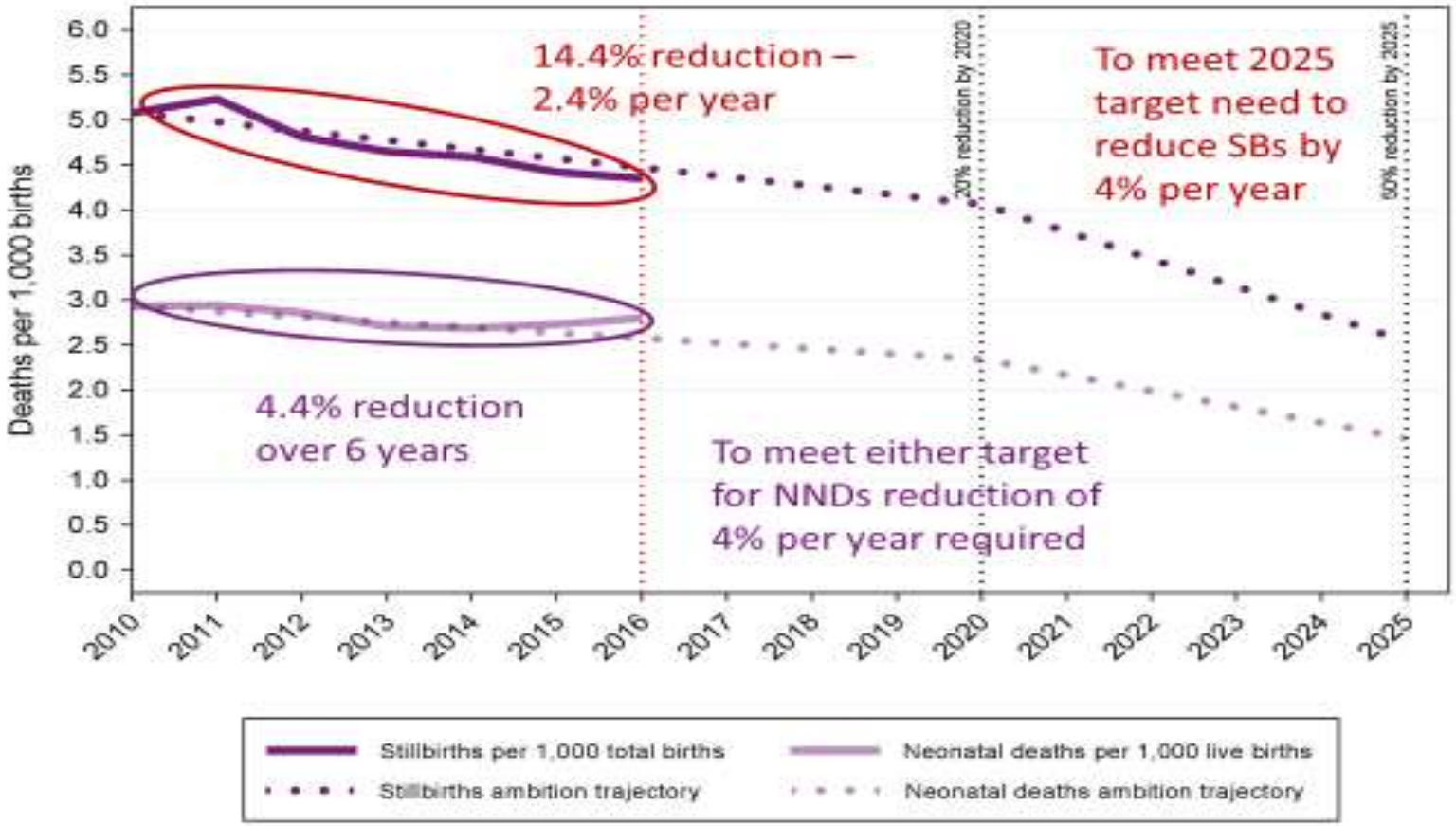
Annual rate of reduction since 2000 only 1.4%



Lancet Stillbirth Series 19th January 2016, Lawn et al 2016

How does this compare to cot-death?

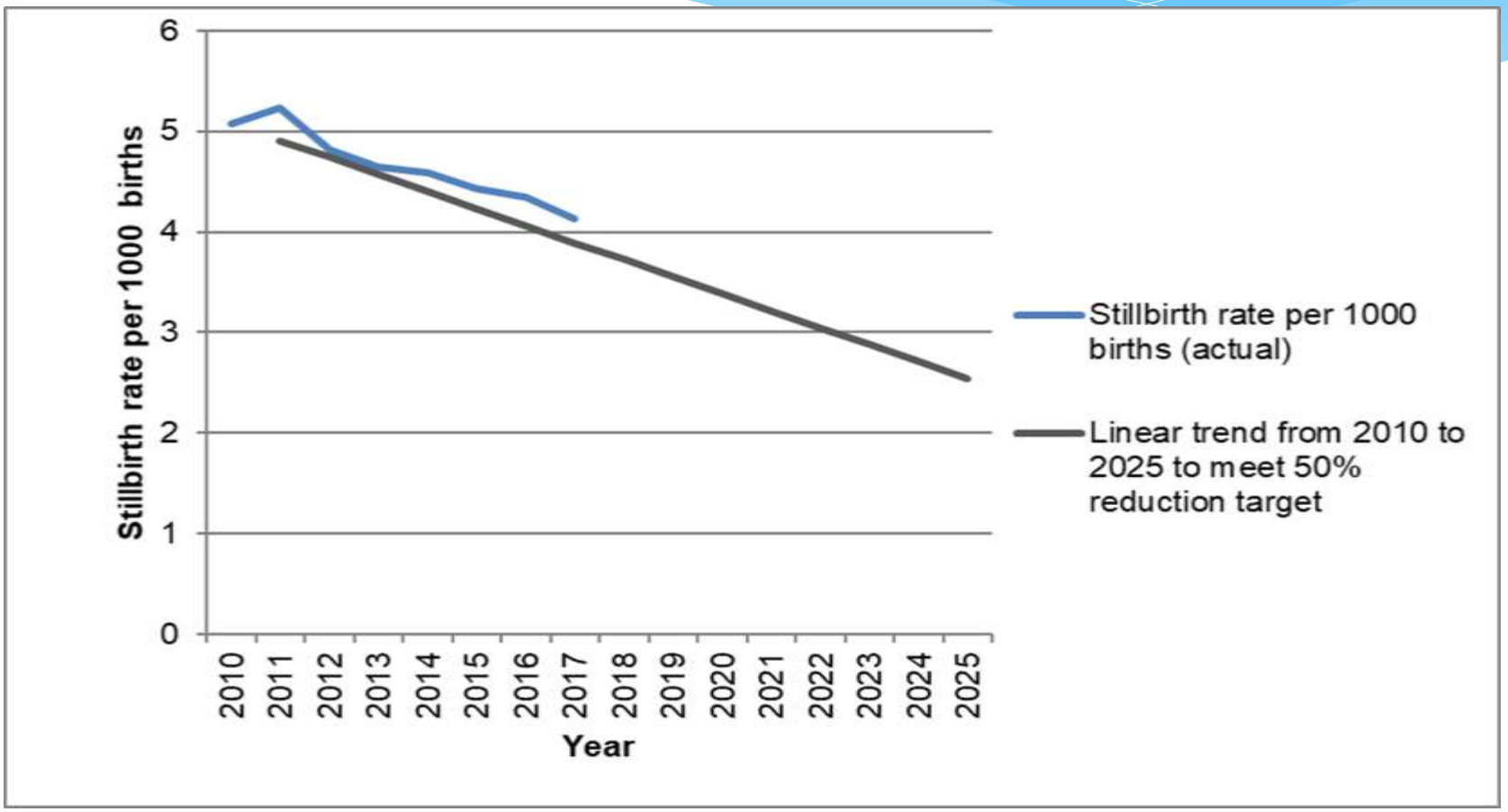
Stillbirth and neonatal mortality rates, England, 2010-2016 and National Maternity Safety Ambition trajectories



Data source: ONS

MBRRACE-UK

Stillbirth rate against linear trend required to meet a 50% reduction by 2025



MBRRACE – October 2019 – Highlights:

The stillbirth rate for the UK in 2017 has reduced to 3.74 per 1,000 total births from 4.20 in 2013, which represents 350 fewer stillbirths.

The largest fall in stillbirth and neonatal death rates is seen in term babies (37+0 to 41+6 weeks gestational age), accounting for half of the reduction seen in these rates.

There has been a substantial reduction in stillbirths recorded as having an intrapartum cause in the CODAC classification of cause of death from 189 (5.8%) stillbirths in 2014 to 51 (1.8%) stillbirths in 2017.

MBRRACE 2019 No 1 Recommendation:

In order to achieve the various UK Governments' ambitions renewed efforts need to be focused on implementing existing national initiatives to reduce stillbirths and continue the slow but steady decline in neonatal mortality rates observed since 2013. Particular emphasis should be placed on reducing preterm birth.

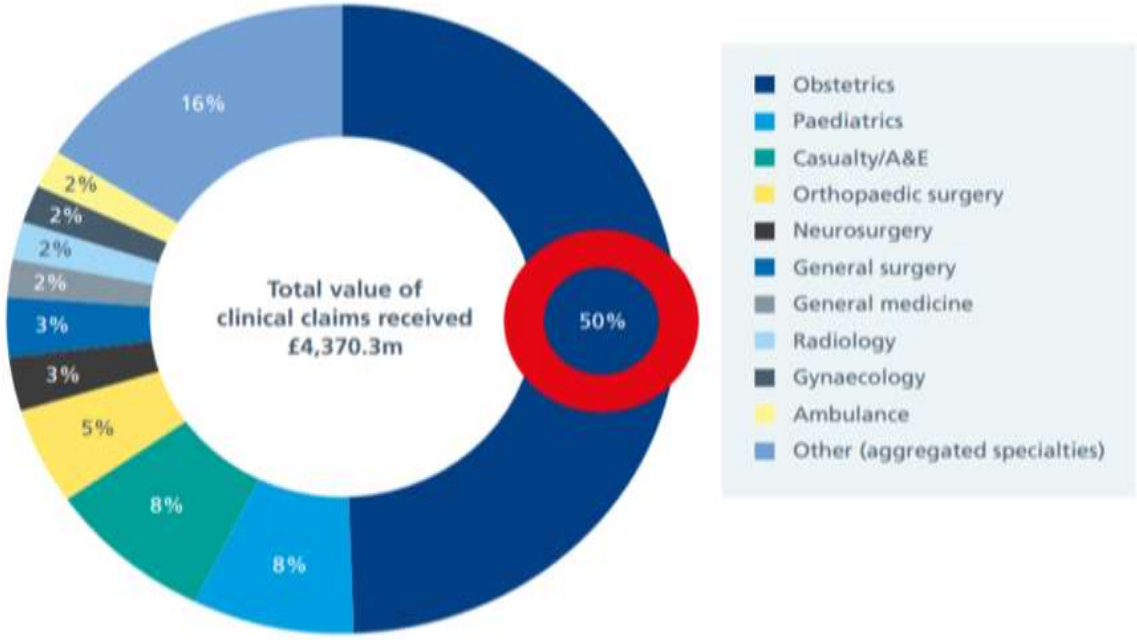
Cost

Rising cost of claims

NHSR 2016/17

Cost to families

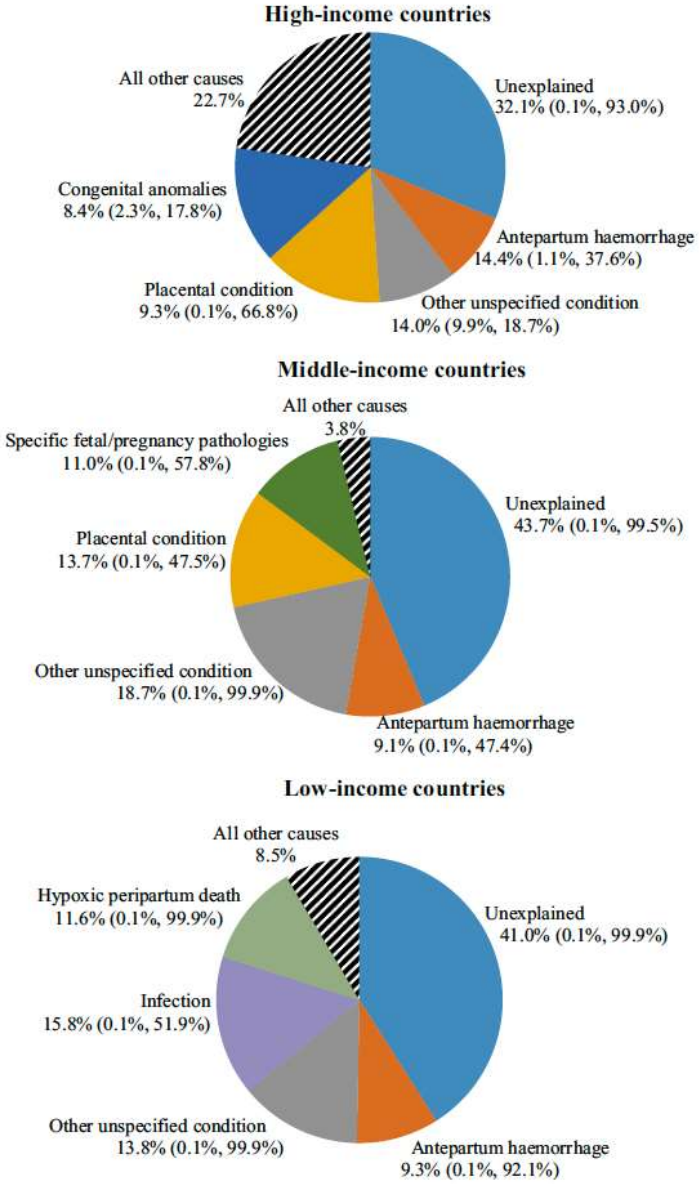
Cost to staff



Need to make maternity services safer

Causes of Stillbirth

N = 454533



Reinebrant et al 2018

Version 1 of Saving Babies' Lives Care Bundle 2016

Brought together four key elements of care that are recognised as evidence-based and/or key practice:

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

RESULTS of SBLCB V1

- Potentially 1,106 fewer stillbirths across England between 2015- 2017.
- 98% of responding providers are carrying out activities from all elements (31% fully implementing all the activities).
- Stillbirth rates declined by 20% in the participating Trusts
- Detection of SGA babies during the antenatal period increased by 59% in participating Trusts during the implementation period
- Increased intervention rates and number of USS
- Latest survey - 98% of responding providers are carrying out activities from all elements however only 31% of the responding providers are fully implementing all the activities

Why version 2?

Why SBLCB v 2?

* It could be better = less intervention
* SBLCBv2 will also try addresses implementation difficulties of v1
* SBLCBv2 contains additional elements and an additional focus on PREVENTION
* This alone will not be enough to achieve national targets

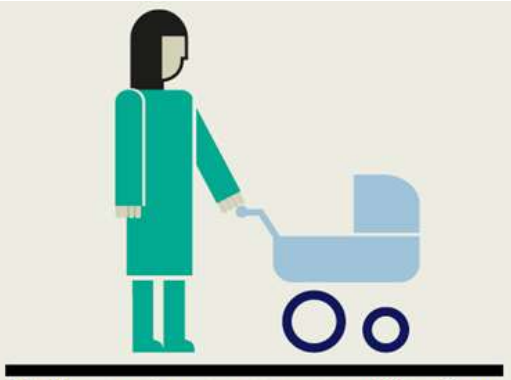
Achieving the national ambition - reducing inequality

3 times as likely to have poor mental health

Smoking is the main modifiable risk factor in pregnancy

Geographical variation: 2% - 26.6% SATOD

FNP RCT: 56% smoking in late pregnancy



Mothers who are young, white, from routine and manual professions and who left education early are least likely to breastfeed[6]

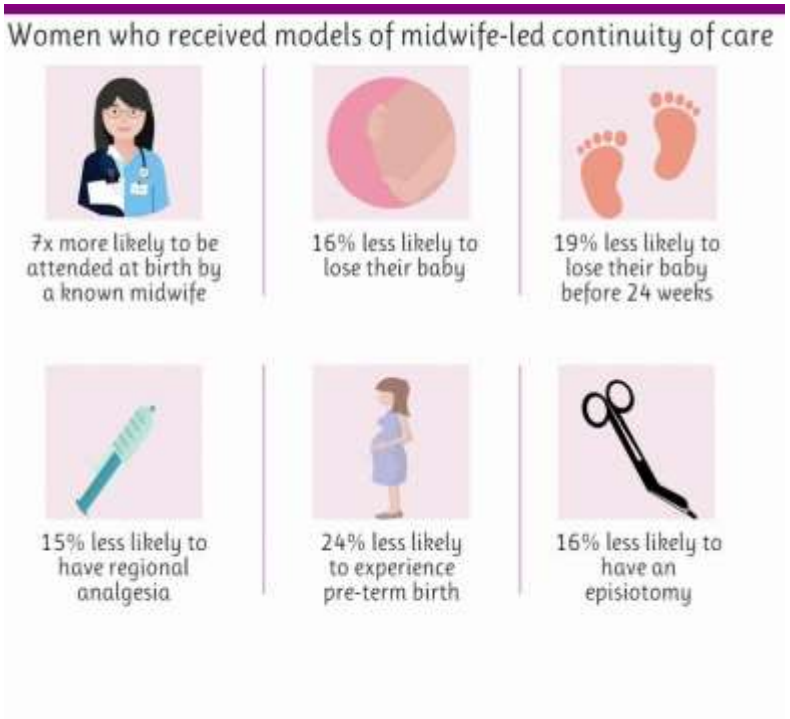
Up to 20% of women develop a mental health problem during pregnancy or within a year of giving birth – this can have significant and long-term consequences

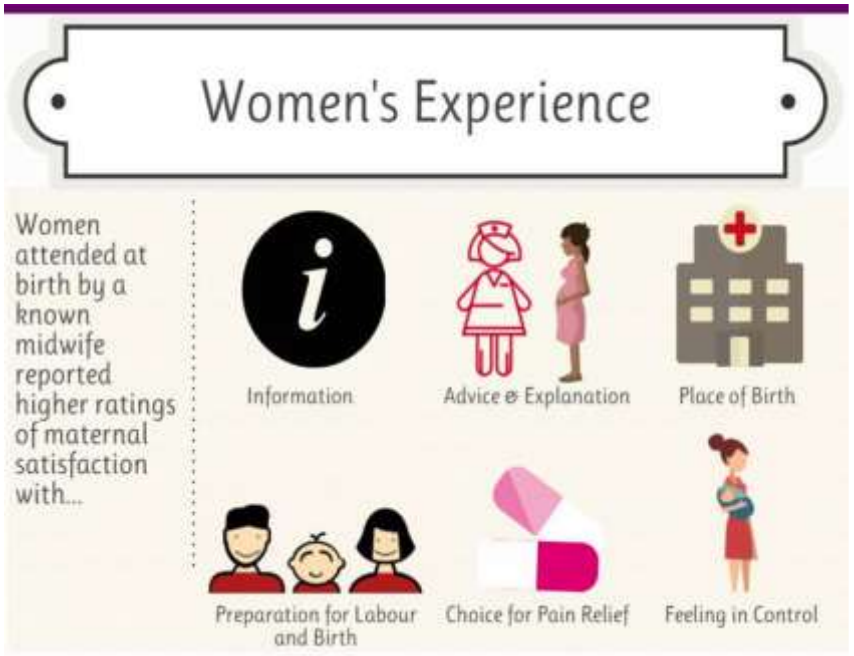
Pregnancies in areas of highest social deprivation 50% more likely to end in stillbirth or neonatal death

Continuity of Carer

Evidence: Improving safer care and quality of care (Prof Sandall)

17,674 mothers and babies





A trend towards a cost-saving effect for midwife-led continuity care compared to other care models. Depends on caseload size.

Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database of Systematic Reviews 2016, Issue 4. Art. No.: CD004667

Target areas to enable achievement of the national ambition

Teenage pregnancy

In 2016 babies born to mothers under 20 years had a 24% higher rate of stillbirth and a 56% higher rate of infant mortality

Smoking in pregnancy
causes up to 2,200 premature births, 5,000 miscarriages & 300 perinatal deaths per year

Folic acid
In 2011/12, only 31% of women took folic acid before pregnancy (intake of which reduces risk of neural tube defects)

Mental health
20% of women experience mental health issues in pregnancy and the first year after birth and up to 10% of fathers suffer from postnatal depression. Suicide is one of the commonest causes of maternal mortality

Long-term conditions
Two thirds of maternal deaths occurred in those with pre-existing physical or mental health problems

Partnership development of SBLCBV.2

NHS England

NICE National Institute for Health and care Excellence

NHS England

Tommy's Funding research Saving babies' lives

NHS Digital

Royal College of Obstetricians & Gynaecologists

THE ROYAL COLLEGE OF MIDWIVES

Public Health England

Tamba TWINS & MULTIPLE BIRTHS ASSOCIATION

bmfms British Maternal & Fetal Medicine Society

PMRT Supporting high quality local perinatal reviews

NHS Improvement

NHS Health Education England

NATIONAL Maternity Voices Networking Maternity Voices Partnerships in England

Saving Babies' Lives 2

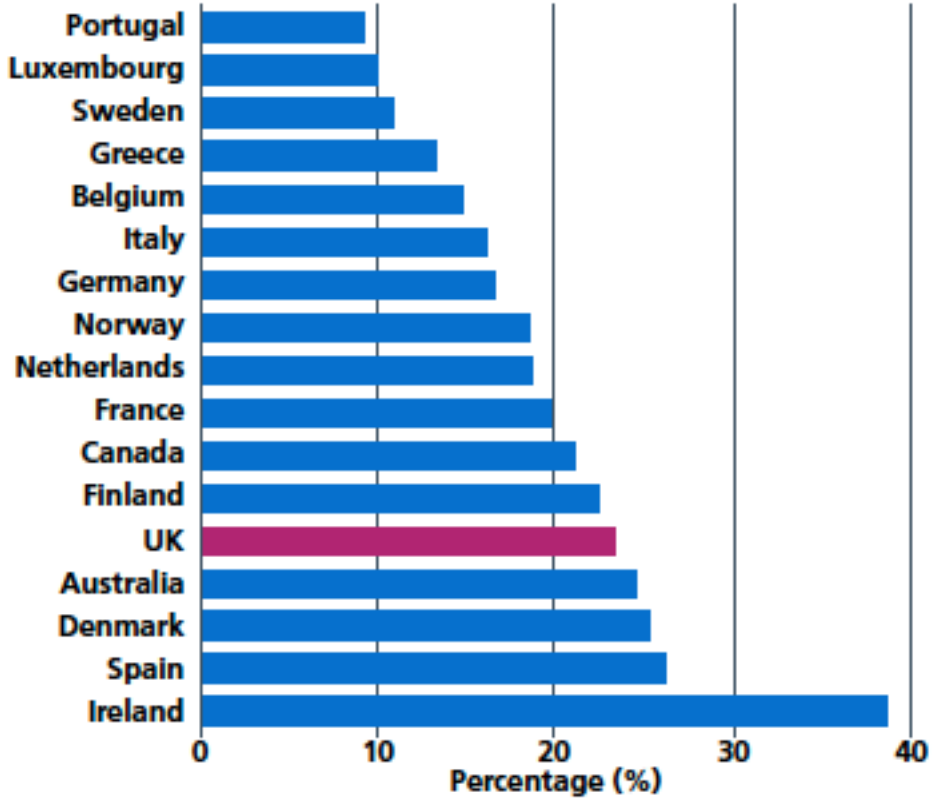
5 Elements:

- 1 Smoking
- 2 Growth restriction
- 3 Fetal movements
- 4 Intrapartum monitoring
- 5 Preterm birth prevention

Saving Babies Lives 2 (2019)

Element 1 Smoking

Figure 10: Smoking at any time during pregnancy in the UK and EU15+, 2015.



Source: Royal College of Paediatrics and Child Health. Child Health in 2030: Comparisons with other wealthy countries. October 2018.

Element 1 Smoking

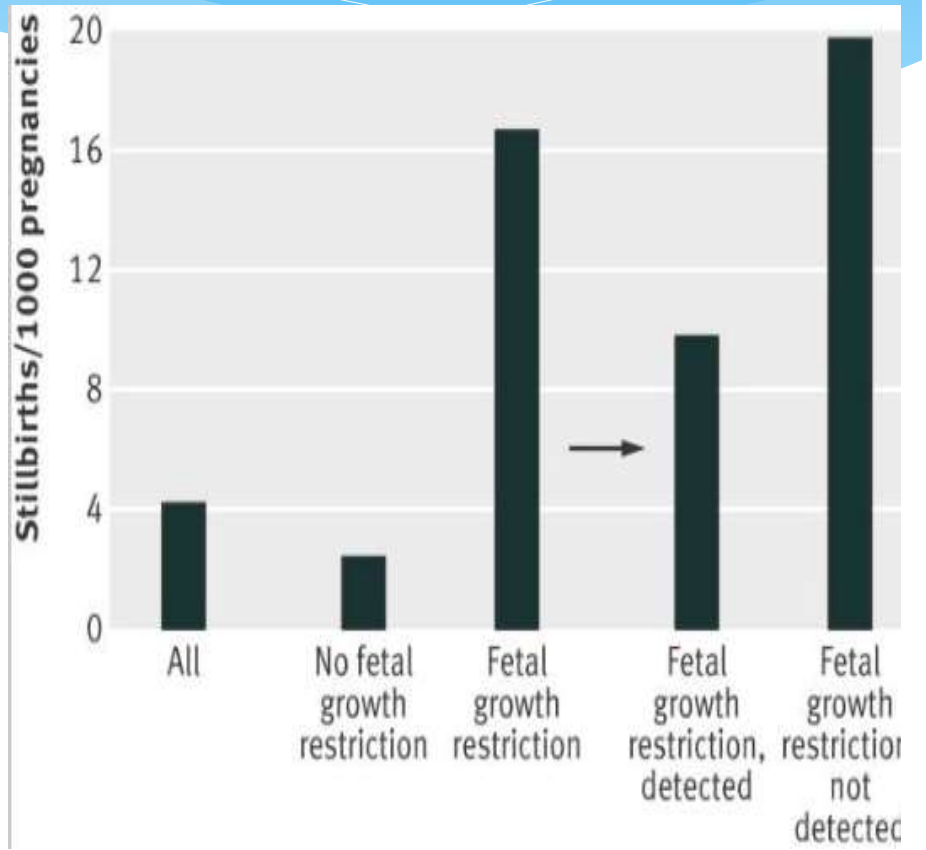
Table 3: Impact of smoking in pregnancy.

	Maternal smoking	Second-hand smoke exposure
Low birth weight	Average 250g lighter	Average 30-40g lighter
Stillbirth	Double the likelihood	Increased risk
Miscarriage	24-32% more likely	Possible risk
Preterm birth	27% more likely	Increased risk
Heart defects	50% more likely	Increased risk
Sudden infant death	3 times more likely	45% more likely

Source: Action on Smoking and Health. Smoking in pregnancy challenge group. Review of the Challenge 2018. July 2018.

Element 2: Fetal growth restriction (FGR)

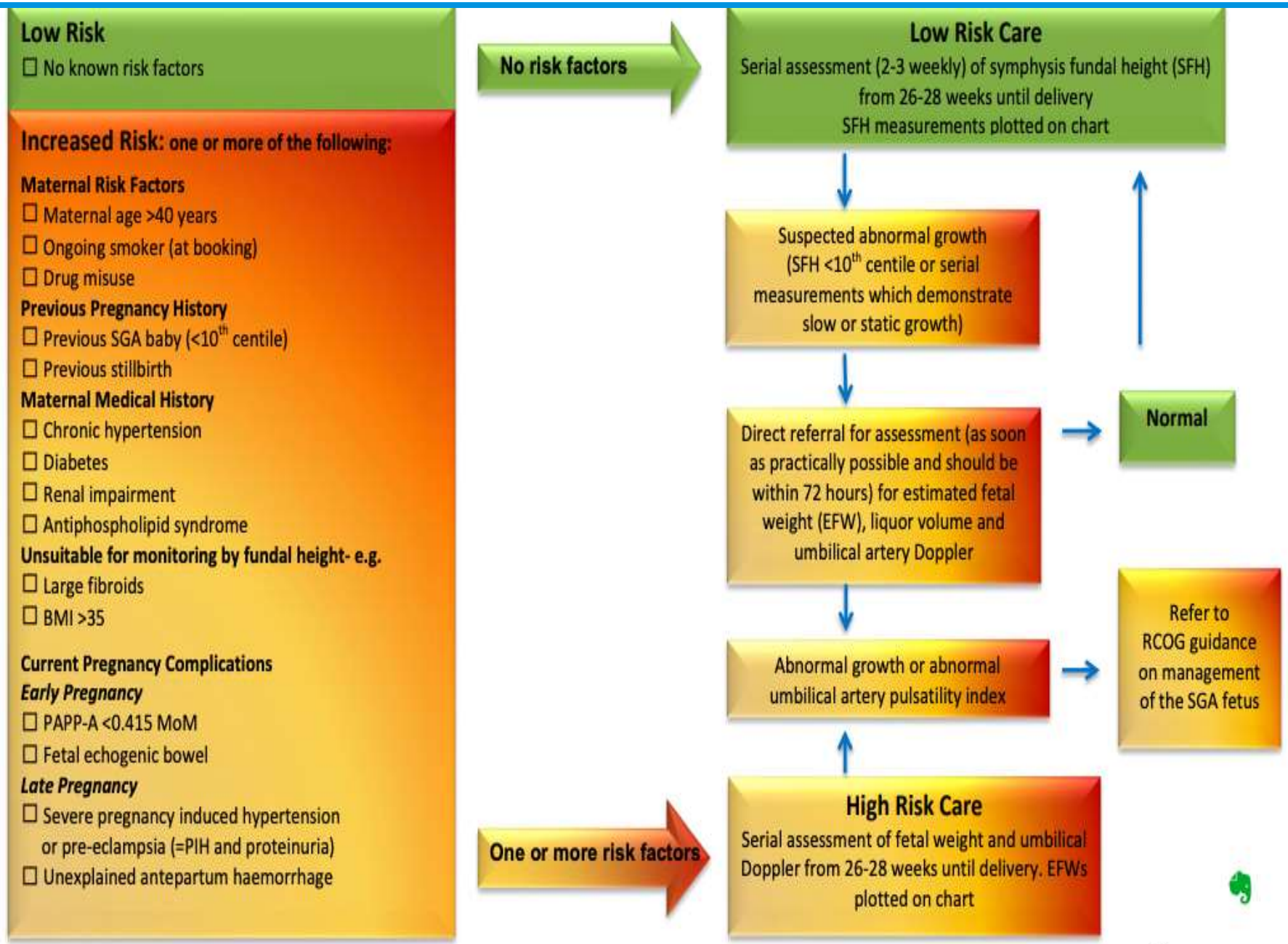
* FGR is associated with stillbirth in ~40% cased
* If we can detect it then we can potentially reduce the rate of stillbirth
* High detection rates and subsequent appropriate management of detected FGR should reduce stillbirth



doi: 10.1136/bmj.f108

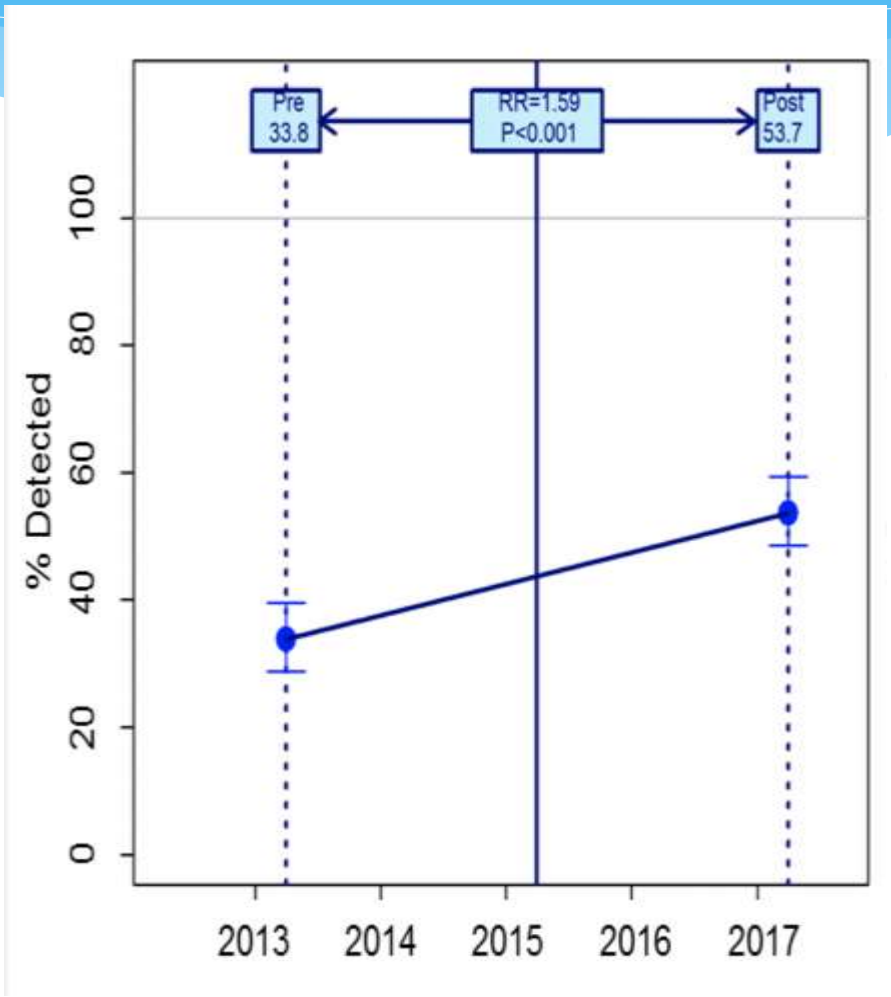
Saving Babies Lives Version 1 Fetal Growth Restriction

1. Use of SBLCB algorithm (or RCOG algorithm) for risk classification
2. For high-risk women (as per RCOG Green Top Guideline), fetal growth assessed using serial ultrasound and estimated fetal weight plotted on chart
3. For low-risk women (as per RCOG Green Top Guideline), fetal growth assessed using symphysis fundal height
4. Ongoing audit of SGA birth rates, antenatal detection rates on local dashboard or similar
5. Ongoing case-note audit of 'missed' SGA cases


Low Risk
No known risk factors
Increased Risk: one or more of the following:
Maternal Risk Factors
Maternal age >40 years
Ongoing smoker (at booking)
Drug misuse
Previous Pregnancy History
Previous SGA baby (<10th centile)
Previous stillbirth
Maternal Medical History
Chronic hypertension
Diabetes
Renal impairment
Antiphospholipid syndrome
Unsuitable for monitoring by fundal height- e.g.
Large fibroids
BMI >35
Current Pregnancy Complications
Early Pregnancy
PAPP-A <0.415 MoM
Fetal echogenic bowel
Late Pregnancy
Severe pregnancy induced hypertension or pre-eclampsia (=PIH and proteinuria)
Unexplained antepartum haemorrhage
No risk factors
Low Risk Care
Serial assessment (2-3 weekly) of symphysis fundal height (SFH) from 26-28 weeks until delivery
SFH measurements plotted on chart
Suspected abnormal growth (SFH <10th centile or serial measurements which demonstrate slow or static growth)
Direct referral for assessment (as soon as practically possible and should be within 72 hours) for estimated fetal weight (EFW), liquor volume and umbilical artery Doppler
Normal
Abnormal growth or abnormal umbilical artery pulsatility index
Refer to RCOG guidance on management of the SGA fetus
One or more risk factors
High Risk Care
Serial assessment of fetal weight and umbilical Doppler from 26-28 weeks until delivery. EFWs plotted on chart

Outcomes (Spire report)

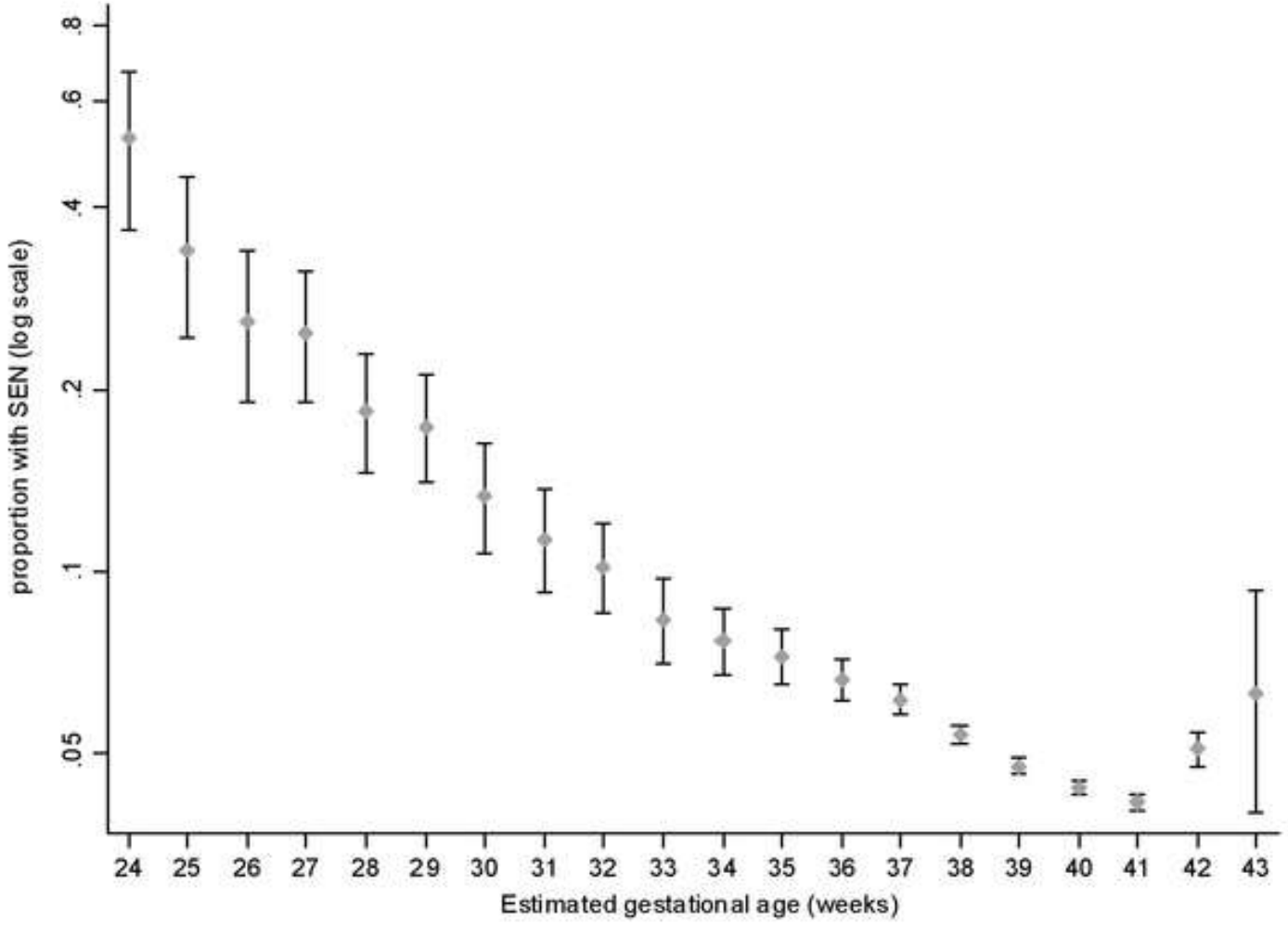
* SGA detection rates increased from 33.8% to 53.7%
* In early adopter trusts
  * SFH plotting increased from 35% to 48%
  * EFW plotting increased from 25% to 76%
  * Stillbirths identified as SGA fell from 40% to 32%



Problems with SBLCB1

* Compliance with all parts of Element 2 was rare in the evaluation
* There was a big increase in the need for ultrasound scans (↑ 24%)
* There was with an increase in inductions and caesarean sections (both ↑ ~19%) - which might not be a bad thing
* In attempting to simplify the screening and management process we made too many women ”high risk” for FGR

Figure 1. Prevalence of special educational need by gestation at delivery.



MacKay DF, Smith GCS, Dobbie R, Pell JP (2010) Gestational Age at Delivery and Special Educational Need: Retrospective Cohort Study of 407,503 Schoolchildren. PLOS Medicine 7(6): e1000289. https://doi.org/10.1371/journal.pmed.1000289
https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000289

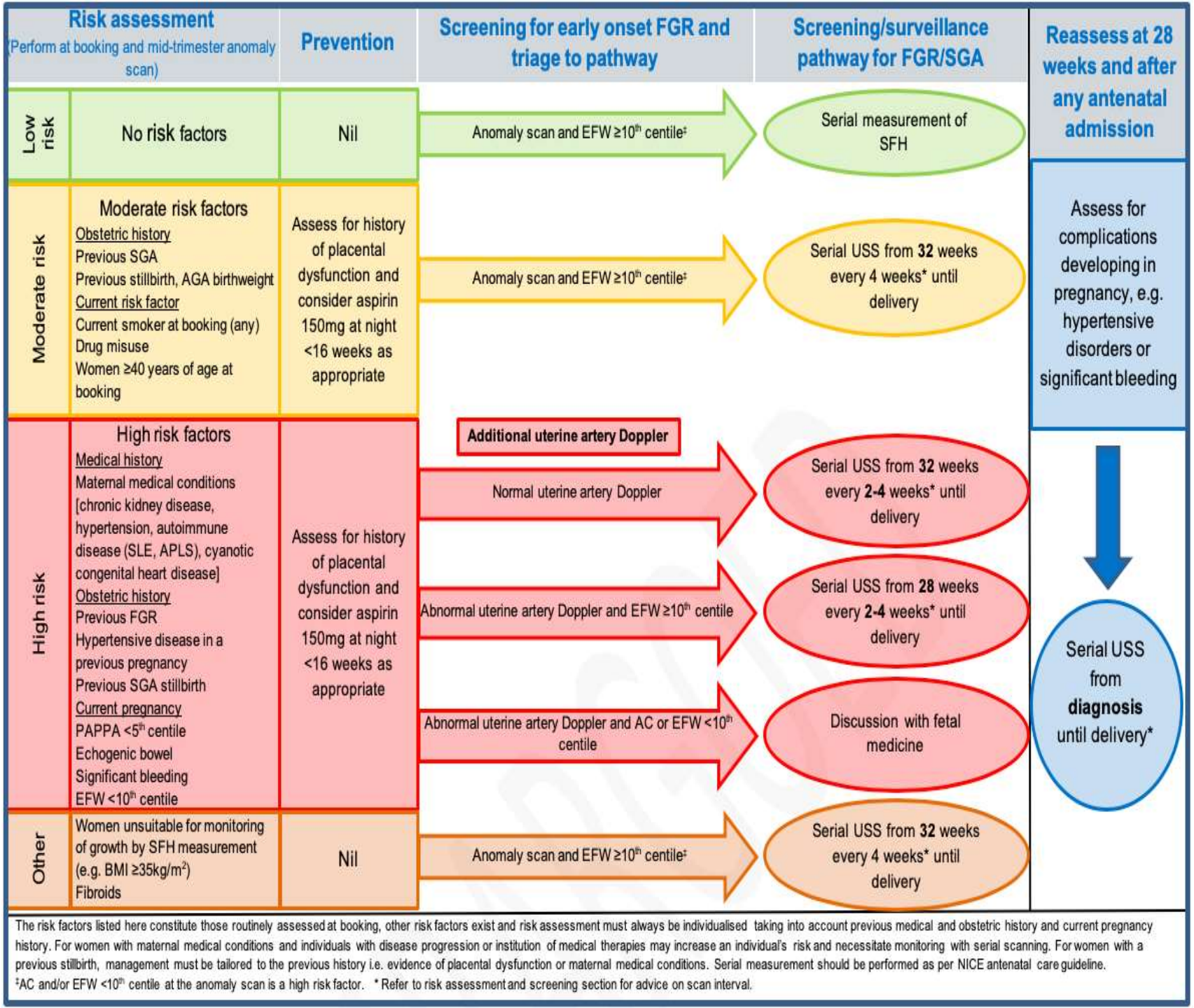
Saving Babies Lives 2
Fetal Growth Restriction

Brief

* Maintain what was good about SBLCB1
* Reduce intervention (where needed) and poor compliance with certain parts of guidance
* Reduce controversy
* Improve management guidance
* Focus attention on those at greatest risk (i.e. FGR)

New SBLCB - Element 2 FGR

1. Prevention (New – eg low dose Aspirin)
2. Risk assessment and surveillance of women at increased risk of FGR (New pathway)
3. Surveillance of low risk population
4. Management of the SGA and growth restricted fetus
5. Continuous learning, process and outcome indicators



The risk factors listed here constitute those routinely assessed at booking, other risk factors exist and risk assessment must always be individualised taking into account previous medical and obstetric history and current pregnancy history. For women with maternal medical conditions and individuals with disease progression or institution of medical therapies may increase an individual's risk and necessitate monitoring with serial scanning. For women with a previous stillbirth, management must be tailored to the previous history i.e. evidence of placental dysfunction or maternal medical conditions. Serial measurement should be performed as per NICE antenatal care guideline.

‡AC and/or EFW <10th centile at the anomaly scan is a high risk factor. * Refer to risk assessment and screening section for advice on scan interval.

3. Surveillance of low risk population

Aims to keep what has been successful in SBLCB1 in best practise use of SFH and charts

2.5 In women not undergoing serial ultrasound scan surveillance of fetal growth, assessment is performed using antenatal symphysis fundal height (SFH) charts by clinicians trained in their use. All staff performing these measurements are to be competent in measuring, plotting, interpreting appropriately and referring when indicated."

4. Management of the SGA and growth restricted fetus

Aims to improve the management of SGA/FGR as a whole

* Refers to Appendix D and the distinction between those babies highly likely to have FGR (<3rd centile) and those SGA who are less likely to have FGR (3-<10th centile)

* Later onset FGR management stays the same = recommend delivery between 37-37+6 weeks

* Earlier onset FGR (<34) weeks now needs input from network fetal medicine centres

* SGA babies (3-<10th centile) Babies with lower risk of FGR, management has changed = recommend delivery at 39 weeks

Changes to version 2 summary

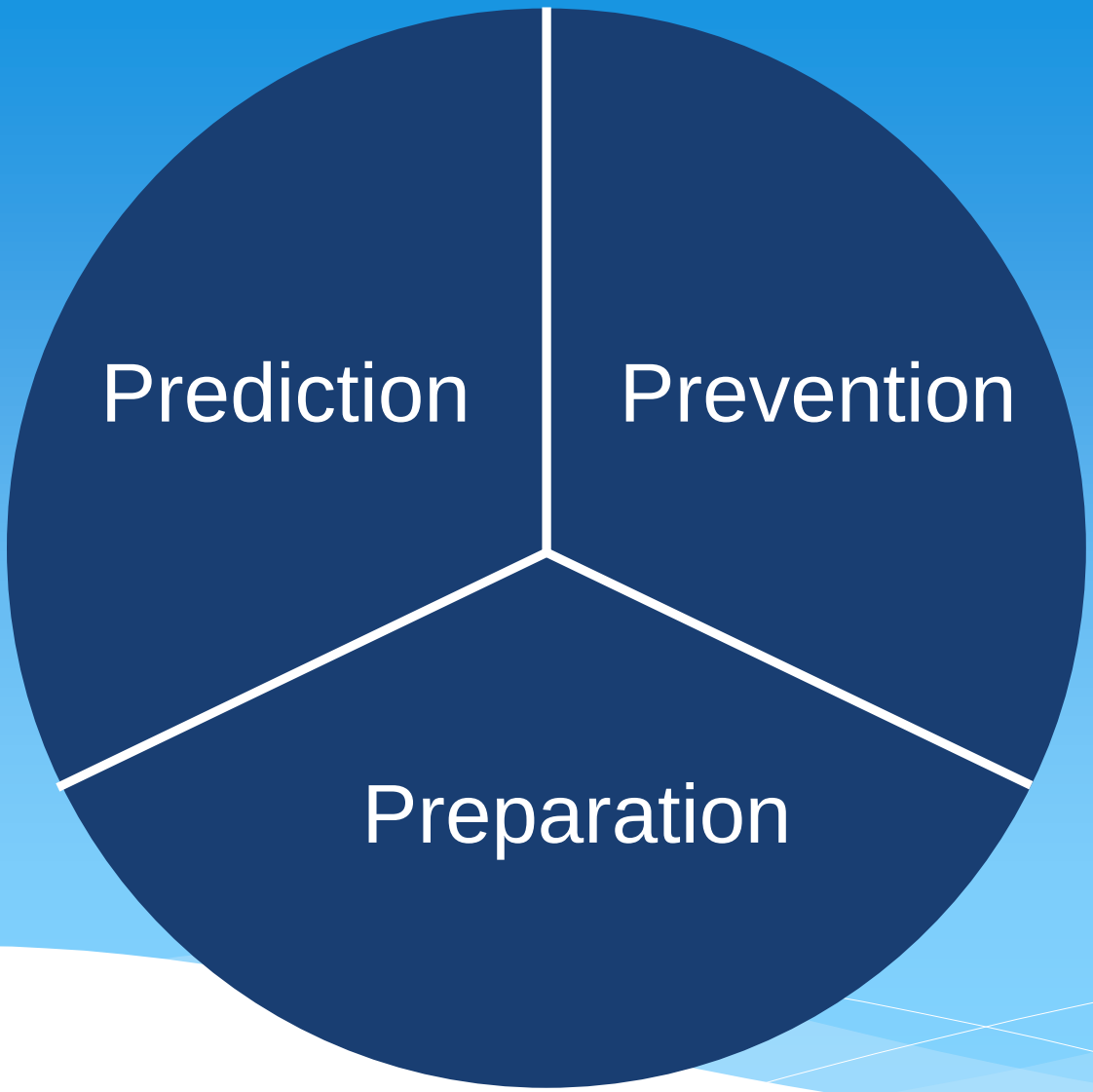
* Reduce unnecessary intervention
* Element 1 – Reducing Smoking - main difference is introduction of re-testing at 36/40
* Element 2 – Mx of Growth Restriction
* **Element 3 – Reduced Fetal Movements - Induction of labour prior to 39 weeks gestation is only recommended where there is evidence of fetal compromise or other concerns in addition to the history of RFM. Recommendation to use computerised ctg as it removes human error and reduces time to get normal CTG not because has been shown to reduce stillbirths**
* **Element 4 – Fetal Monitoring in Labour - Trusts must be able to demonstrate that all qualified staff who care for women in labour are competent to interpret cardiotocographs (CTGs), always use the buddy system and escalate accordingly when concerns arise or risks develop. This element now includes use of a standardised risk assessment tool at the onset of labour and the appointment of a Fetal Monitoring Lead with the responsibility of improving the standard of fetal monitoring. Fresh ears and eyes.**
* New element 5 – Reducing Preterm Birth - developed in response to The Department of Health's 'Safer Maternity Care' report which extended the 'Maternity Safety Ambition' to include reducing preterm births from 8% to 6%. This new element focuses on three intervention areas to improve outcomes which are prediction and prevention of preterm birth and better preparation when preterm birth is unavoidable.

Changes to version 2 - Summary

* The second version of the care bundle includes a greater emphasis on continuous improvement with a reduced number of process and outcome measures. The implementation of each element will require a commitment to quality improvement with a focus on how processes and pathways can be developed and where improvements can be made.

* SBLCBv2 includes sections which reference the importance of other interventions outside of the remit of the care bundle, such as continuity of carer models, following NICE guidance, delivering 'healthy pregnancy messages' before and during pregnancy and offering choice and personalised care to all women. These are not mandated by the care bundle but reflect best practice care and are recommended to be followed in conjunction with the care bundle.

New SBLCB – Element 5 Preterm Birth



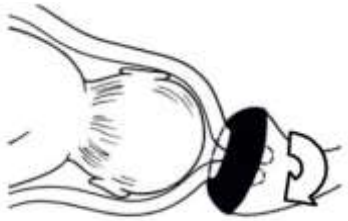
- risk factors at booking

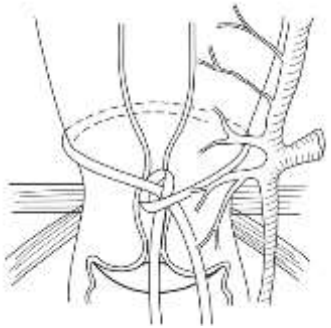
Prediction

- risk factors at booking
- transvaginal scan assessments of the cervix

Prevention

- continuity of carer
- lifestyle intervention
- treatment of bacteriuria
- low dose aspirin
- use of cerclage, progesterone, or pessary





- optimise diagnosis of labour
- transfer to/delivery in appropriate place
- antenatal corticosteroids and magnesium sulphate
- interdisciplinary discussion

Implementation

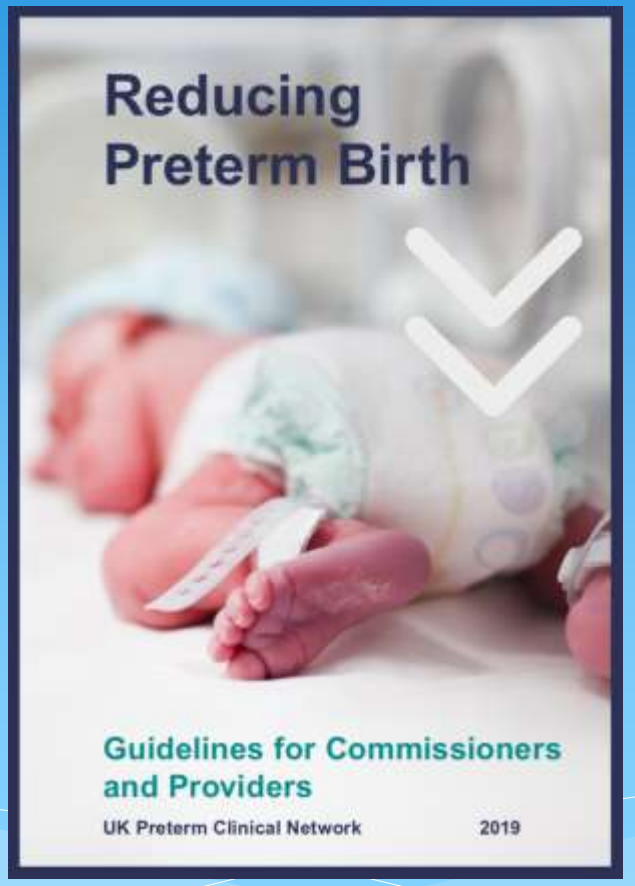
- each unit to appoint a preterm birth prevention clinician and midwife
  - assess existing expertise and capacity
  - formulate clinical pathways
  - identify local needs
- regional networks for complex care
- be aware of local statistics and trends
- offer relevant portfolio studies

UK Preterm Clinical Network

* 33 preterm prevention clinics
* 70 units taking part in studies
* clinical and research focus
* annual meeting
* online medscinet database

Further assistance

- guidance document
- UKPCN, with charities and support groups
- complements *SBLCB*
- for providers and commissioners

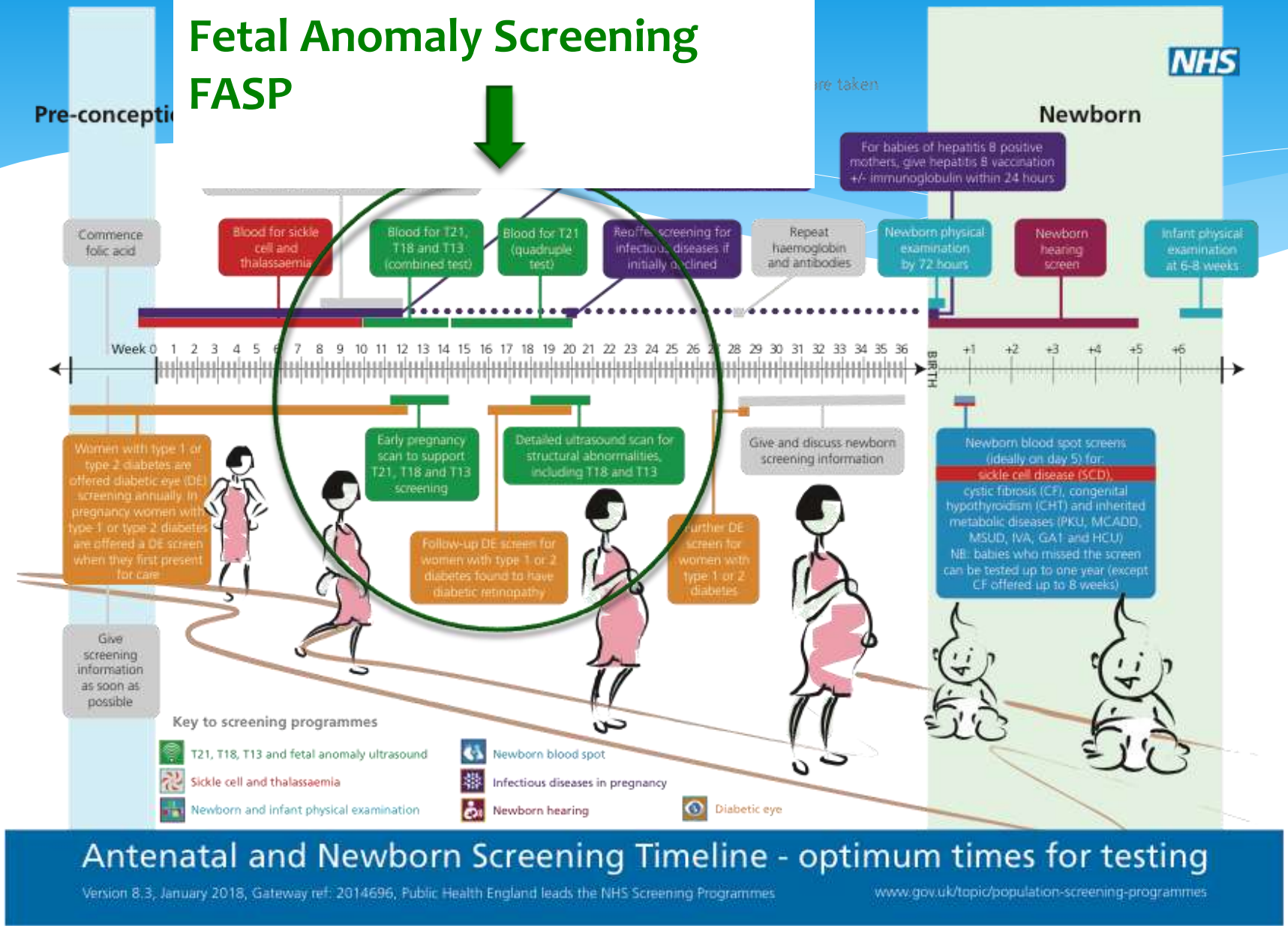


Prevention – Life Course approach

Prevention/Screening– in context

Fetal Anomaly Screening

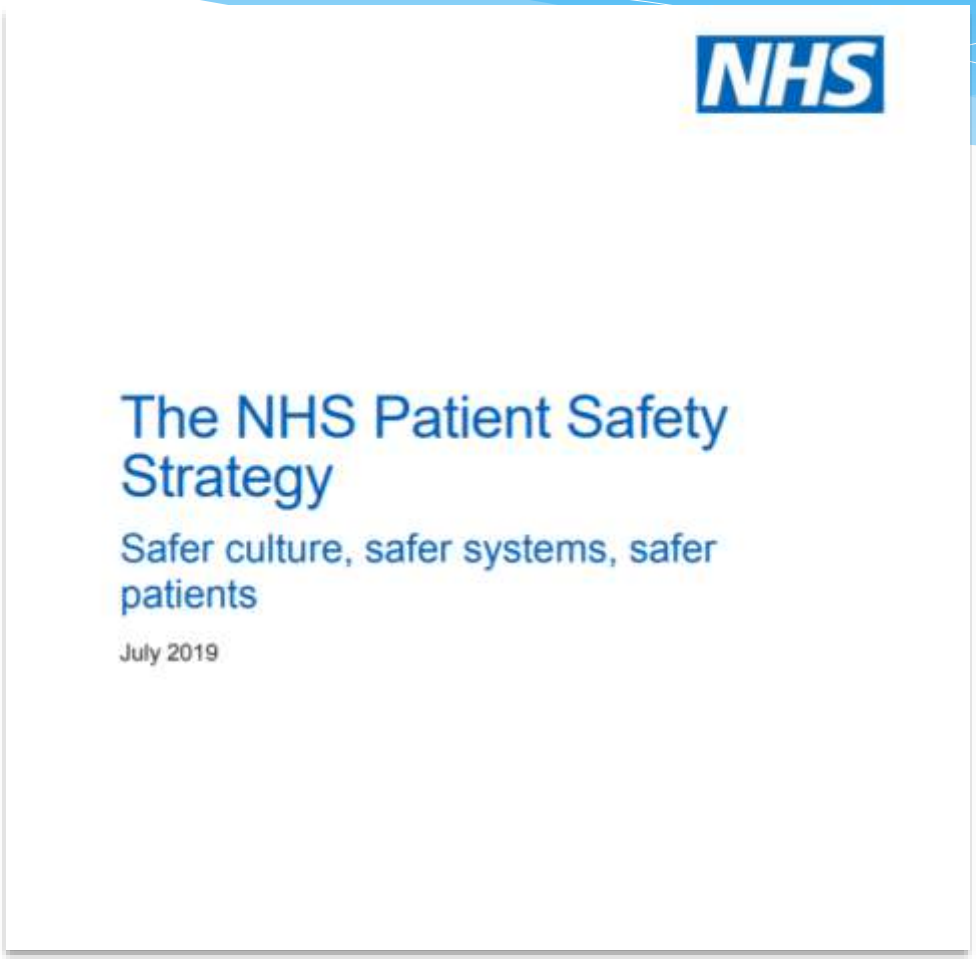
FASP



The Circle of "Progress"

The Circle of "Progress"

July 2019


NHS
The NHS Patient Safety Strategy
Safer culture, safer systems, safer patients
July 2019

“The Golden Thread of Safety.”

- Insight
- Involvement
- Improvements

The Maternity & Neonatal Safety Improvement Programme MNSIP

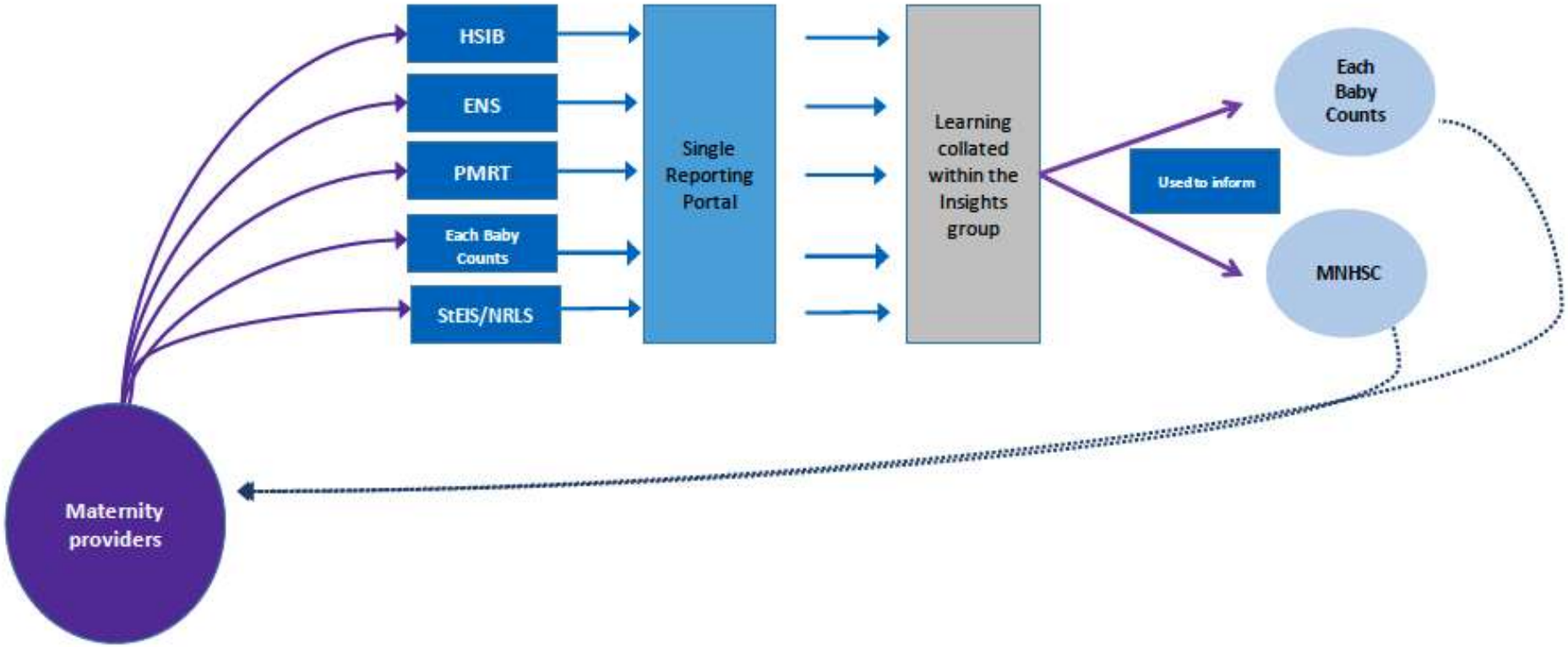
(formerly Maternity and Neonatal Health Safety Collaborative)

Dr Tony Kelly – national clinical lead for MNSIP

How can we learn more effectively?

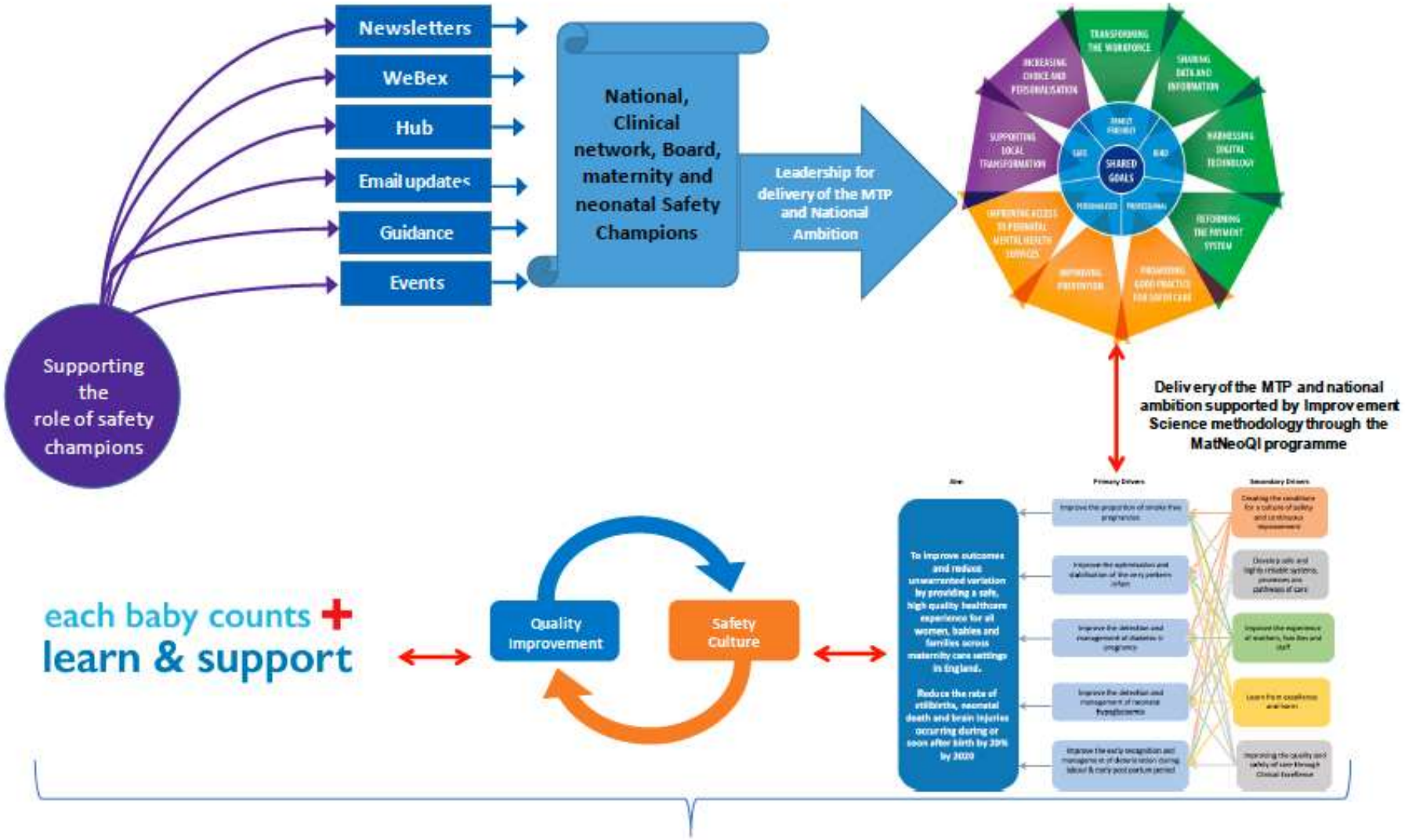
Alignment of current safety activities

Insight:



How can we support effective improvement in safety?

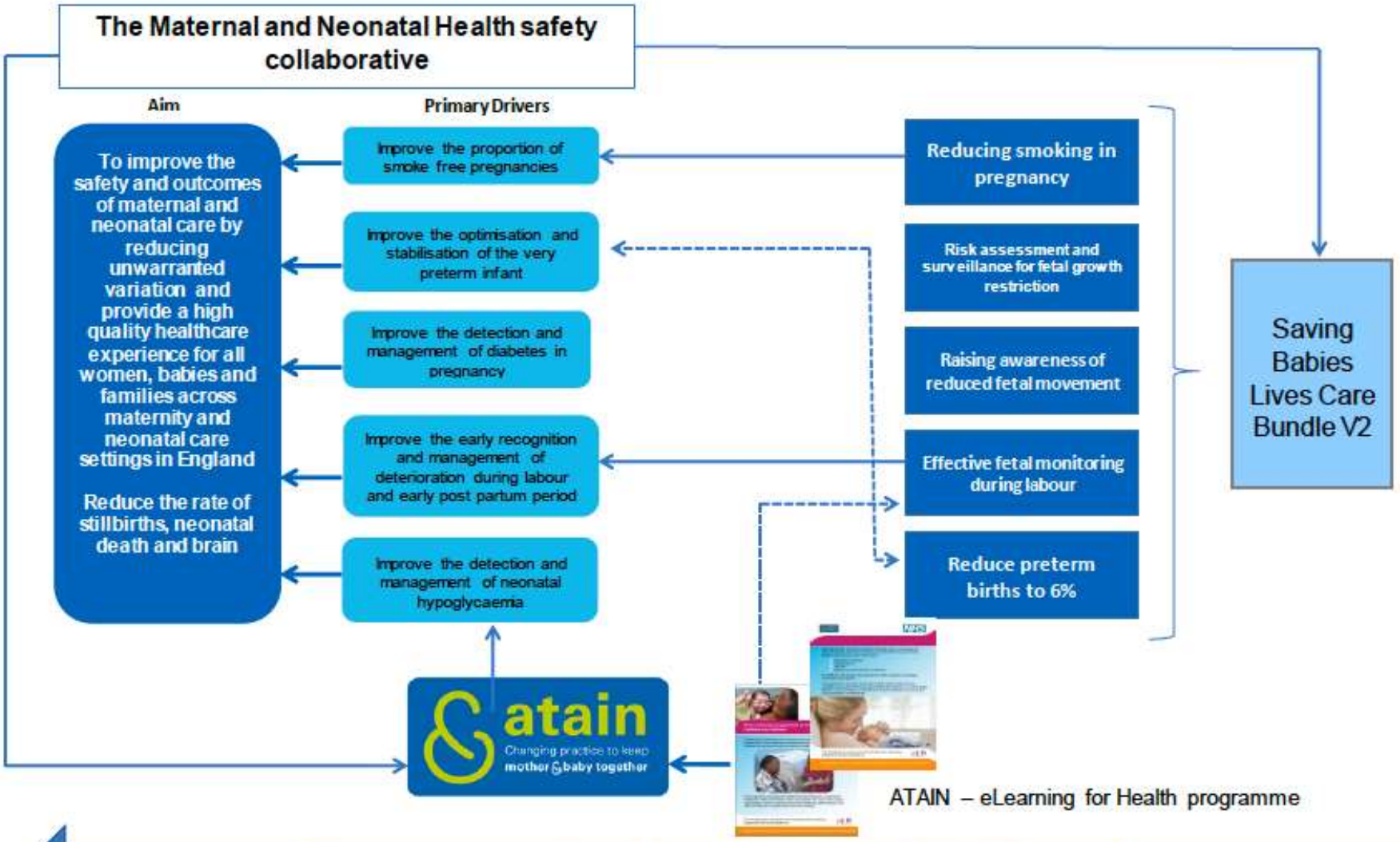
Involvement



Each Baby Counts Learn and Support: led by RCOG and RCM and aligned to the Maternal and Neonatal Health Safety Colaborative.
The EBC L&S programme is currently being established in 16 trusts. Local Improvemeent leads will support **improvements in escalation, culture change, workforce wellbeing and human factors**

How can we improve...

Improvements



Human Factors

Maternity Care V1 (1).wmv

Thanks to Moira Durbridge and Tracey Harrington, University Hospitals of Leicester NHS Trust

Health warning: this video may cause some viewers to be upset.

CONCLUSIONS

* Enormous nationally driven efforts in place to reduce still-birth
* Guidance in abundance
* Combination of evidence-based practice and pragmatism
* Success will depend on enabling staff to do their best rather than punishing bad practice.