Avoiding Term Infants Into Neonatal units

Insights from the Atain programme

Michele Upton
Head of Maternity and Neonatal Transformation Programmes
NHS Improvement

November 2018

Atain

- What is Atain?
- Summary of background

- Findings into reasons for term admissions to a NNU
- Insights into admissions from the community
- Strategies for avoiding admissions in low risk settings

- National drivers for Atain

What is Atain?

Acronym for

Avoiding **T**erm **A**dmissions **I**nto **N**eonatal units

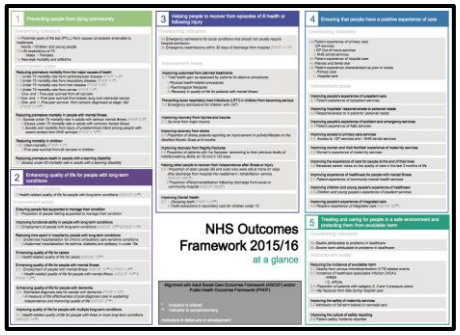
Programme of work initiated under patient safety to identify harm leading to term admissions

Current focus on reducing harm and avoiding unnecessary separation of M&B

Atain – a programme of work to reduce harm leading to admission of term babies to NNU

NHS Improvement

2010 - NHS Mandate & Outcomes Framework



National perspective

Seen as a signal of sub-optimal care during antenatal, intrapartum or post natal period – few fully grown babies should need neonatal services

Signal that avoidable harm might have been caused

Significant but avoidable cost to NHS and families

Maternity and neonatal teams long recognised as an issue – will to resolve

Why minimising separation is important

NHS Improvement

- The first hour of life following birth is a once-in-a-lifetime experience – not replicable - to be protected.

- Mothers and babies have a physiological and emotional need to be together: hours and days following birth.

- Important for physiological stability of baby and initiation of maternal infant interaction

- There is overwhelming evidence that separation of mother and baby so soon after birth interrupts the normal bonding process, which can have a profound and lasting effect on maternal mental health, breastfeeding, long-term morbidity for mother and child.

Why is this important

This makes preventing separation, except for compelling medical reason, an essential practice in maternity services and **an ethical responsibility** for healthcare professionals.

The Atain journey

2010 - NHS Mandate & Outcomes Framework

Feb 2014 Analysis of primary RfA NNRD

2013 First meeting to consider issue

58% of all babies in NNU = term

1. Resp
2. Infection
3. Hypoglycaemia
4. Jaundice
5. Asphyxia

National Neonatal Research Database – 'primary reason for admission'

National Reporting and Learning System – patient safety data

NHSLA – claims in relation to term babies

Parent stories

Clinical frontline experts

Avoiding harm leading to Term Admissions Into Neonatal Units

Respiratory

Chairs

Dr Sandy Calvert (N)

Dr Kate Harding (M)

Priorities
V = completed

- ✓ Data analysis to understand contributory factors:
  - ➢ Elective c/s <39 weeks
  - ➢ Role of hypothermia
  - ➢ Role of steroids
- ✓ Improve education training for all staff
- ✓ Parent information on recognising the sick newborn

Publish findings

Asphyxia

Chairs

Dr Debbie Derbyshire (N)

Dr Sheila McPhail (M)

Priorities
V = completed

- V Develop a MDT leadership training programme for labour ward leaders to include Board level lead and delivery of a QI programme

Jaundice

Chairs

Dr Janet Rennie (N)

Stephanie Michaelides (M)

Priorities
V = completed

- ✓ Data analysis to understand contributory factors to admission
- ✓ Thematic review of litigation claims
- ✓ Promote increased use of TcB
- ✓ NICE guidance for detection and management of jaundiced babies
- ✓ Improve education and training
- ✓ Parent involvement and information in recognising sick newborn
- ✓ Publish

Scope practice on management of jaundice

Hypoglycaemia

Chairs

Dr Jane Hawdon (N)

Debbie Sharp (M)

Priorities
V = completed

- ✓ Data analysis to understand contributory factors to admission
- ✓ Scope practice on detection and management of hypoglycaemia
- ✓ Thematic review of litigation claims
- ✓ Publish
- ✓ Education and training - all staff
- ✓ Parent information on recognising the sick newborn

Develop a framework for identification and management of neonatal hypoglycaemia

Education and training working group

Parent information working group

IDENTIFICATION OF COMMON THEMES

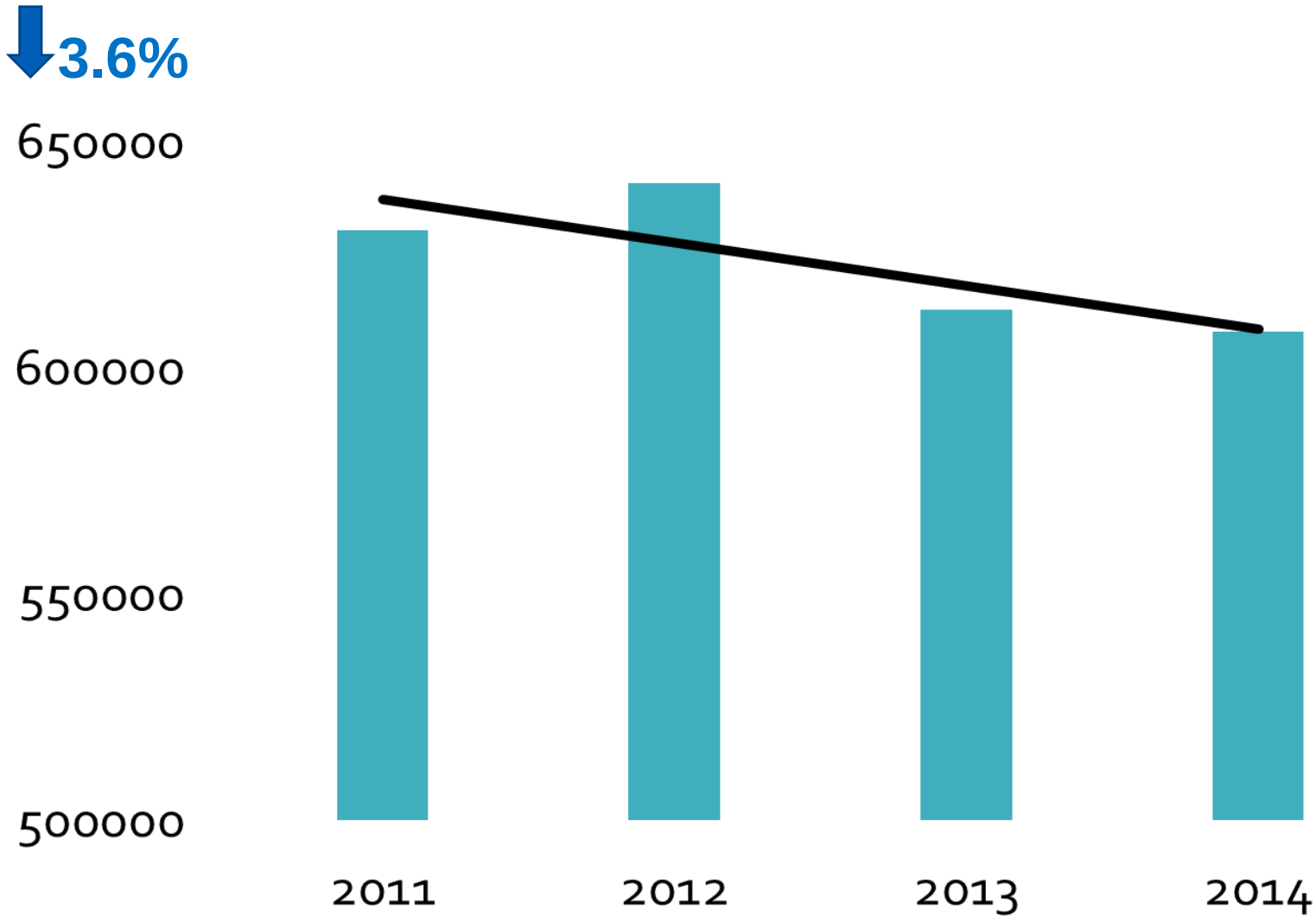
Atain work programme

NHS Improvement

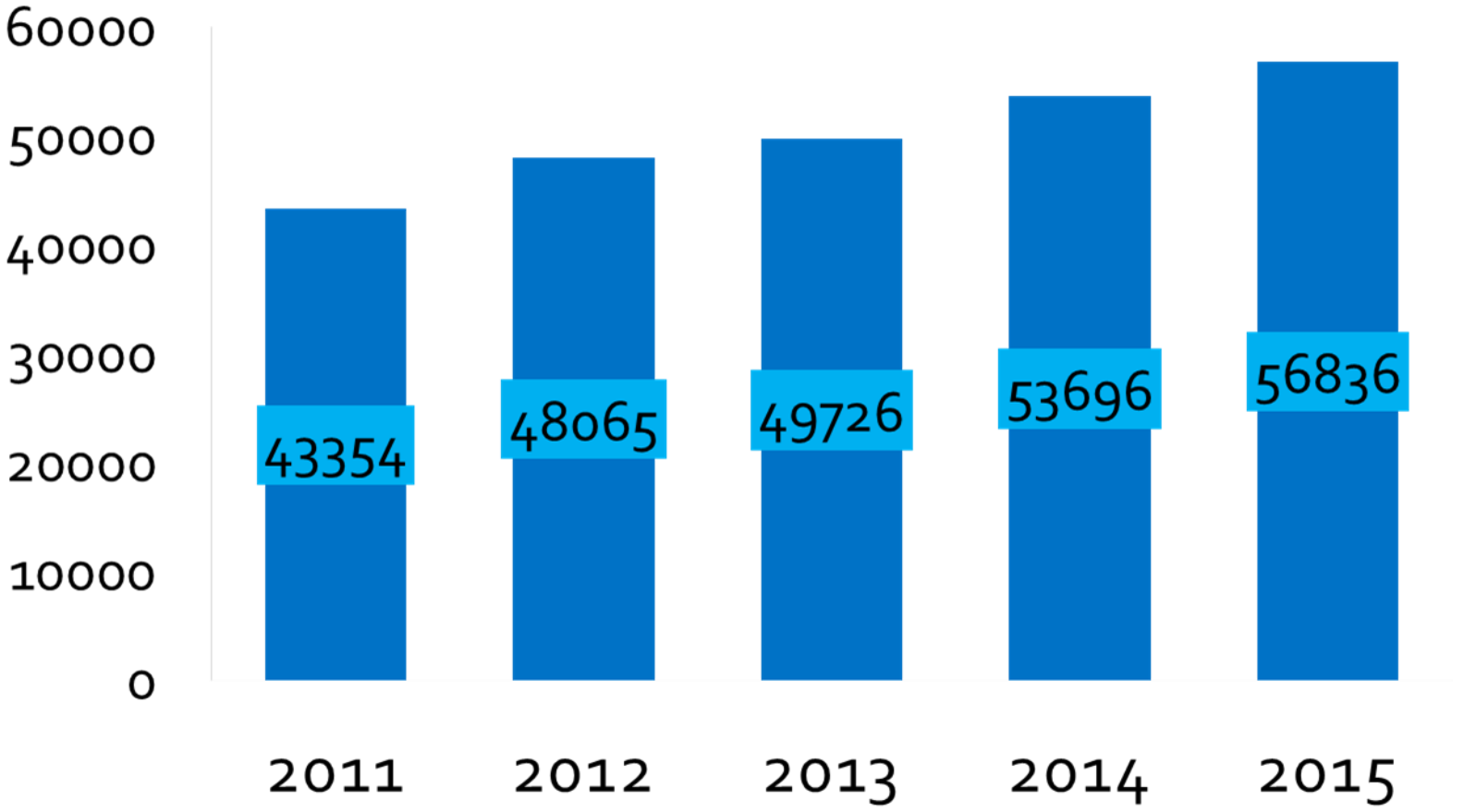
- ✓Six working groups
- ✓20 strands of work

- *Data analysis >136 000 babies*
- *Academic publications – Open Access*
- *Analysis of litigation claims*
- *Prospective scoping of practice*
- *E-Learning to address knowledge gaps leading to Atain*
- *Parental involvement in recognising the sick newborn*
- *MDT workshops for LW leaders*
- *Supernumerary status for the LWC*
- *Cross collegiate safety huddles and handovers*

Term live births in England (2011-2014)



Care days for term admissions (⬆31%) (>60%)



What we know

136 036 babies care analysed: 2013 – 2015:

- >8% of all live births resulted in a L1,2 or 3 NNU admission
- >60% of all NNU admissions are term
- Additional 10,000 care days delivered for term babies in 2015 compared to 2011
- Increase predominantly in Special Care category
- ~20% - 30% of admissions were avoidable - intervention received did not warrant admission

- 30% = 40 810 ~13 000/annum
- Role for transitional care facilities

What we know

Identified modifiable factors including:

- Avoiding EL C/S <39 weeks
- Early S2S - ↓30% babies admitted for hypoglycaemia
- Identifying ‘at risk’ babies and planning pathway
- Unnecessary intervention
- Risk factors not identified
- Evidence based guidance not followed

- Babies born at 37-38 weeks twice as likely to be admitted to neonatal services as those born at 39-42 weeks gestation

- 20% of all community admissions were for jaundice

What we know - jaundice

Characteristics of babies admitted for jaundice differed significantly from the baseline characteristics of all term born babies in England ($p<0.001$)

More babies admitted for jaundice were:

- born at 37 weeks gestation (30.8% vs 6.5%)
- male (54.9% vs 51.1%)
- low birth weight (1500–2499 g, 7.7% vs 2.7%)
- from multiple pregnancies (3.4% vs 1.5%)
- Asian (17.9% vs 10.7%).

35.7% of babies admitted for jaundice were born to multigravida mothers
61.5% were delivered vaginally,

39.2% were maternal blood group O+ and

66.6% were maternal rhesus positive;

What we know - jaundice

- 6% of term infants admitted for jaundice (3000/annum)
- Most common reason for admission from home (approximately 20% each year)
- infants admitted from home statistically significantly later – median age is 1.7 vs 3.9
- Majority received phototherapy only
- Admission more likely in babies born at 37 weeks, male babies, those of Asian ethnicity or who were one of a multiple birth

What we know - hypoglycaemia

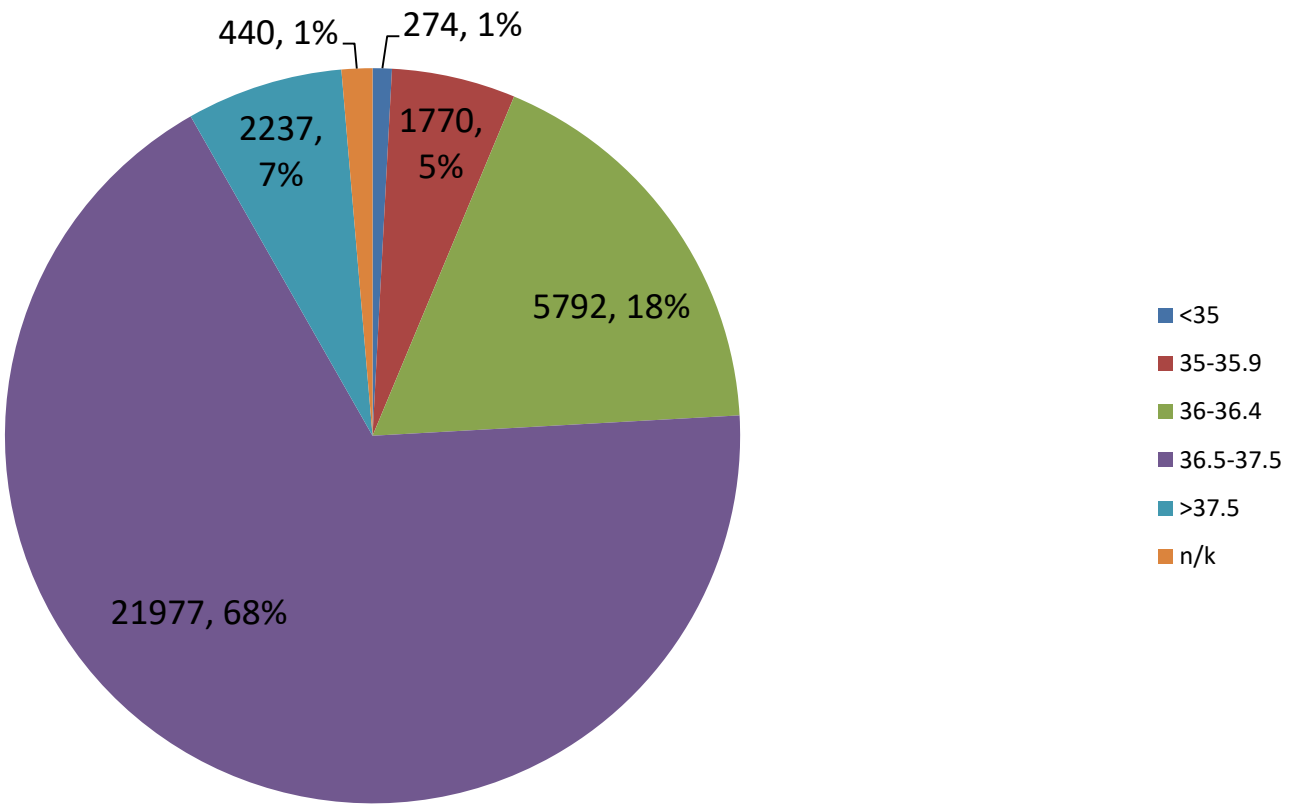
- Third most common cause of admissions of term newborns
- Accounted for 12% of all term admissions and 0.7% of all term live births in England
- Babies 37 to 38 weeks gestation accounted for 21% of all term live births but 55% of admissions for hypoglycaemia

- **39% were low risk infants** *(Mat/Obstet problems; BW and Apgar)*
- Babies born by CS were over represented (48%)
- 30% admitted <4 hours of age *(normal period of transient hypoglycaemia)*
- of which half were <1hour of age (LW/OT)

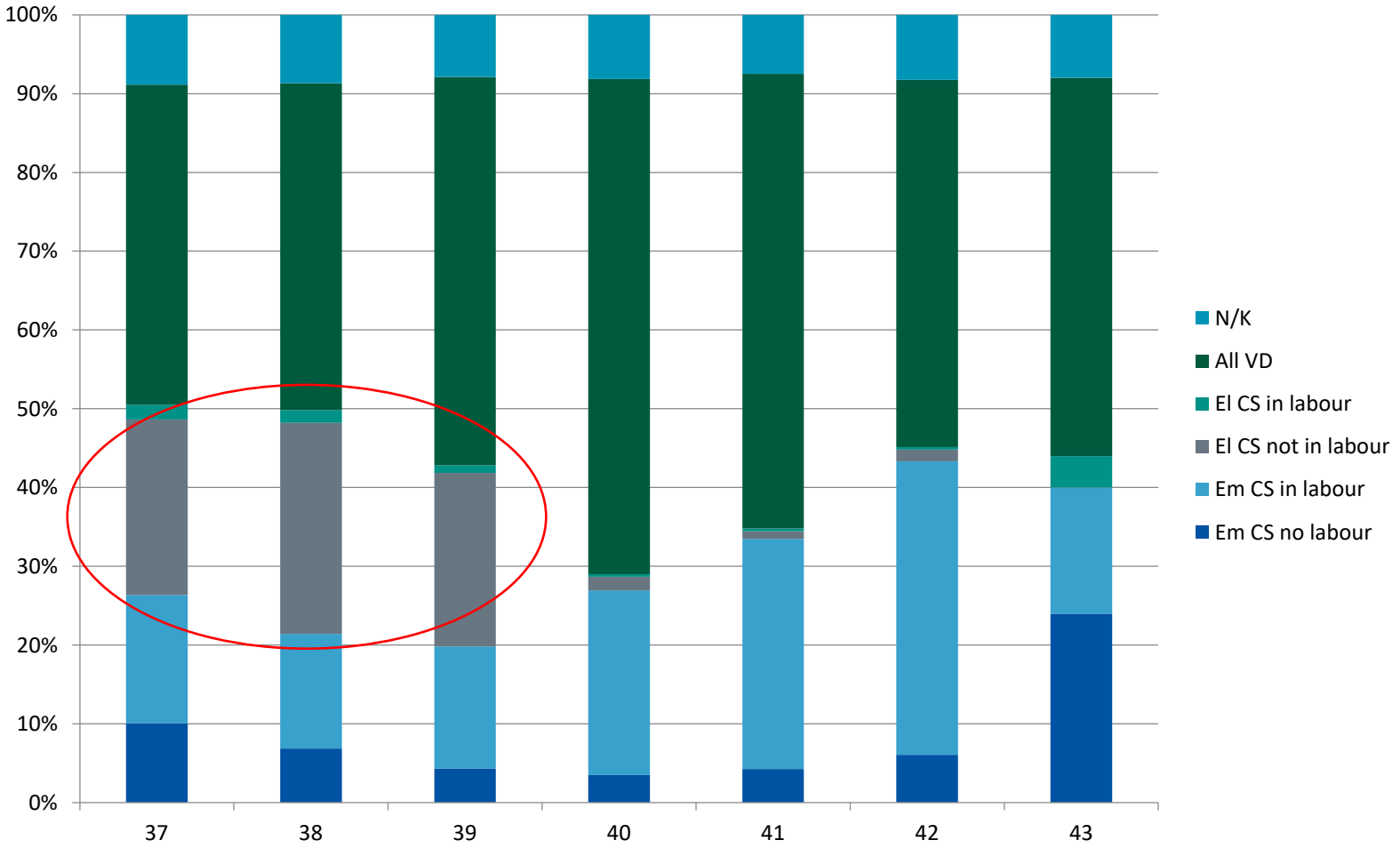
What we know - hypoglycaemia

- 44% of **all** admissions for hypoglycaemia were directly from birth room (or theatre).
- This increased to 71% among those admitted before 4 hours of age
- Blood glucose of <2.6 mmol/l at admission was significantly more common in babies who were hypothermic on admission (admission temperature 36 oC) than among those whose body temperature was within normal limits (71.3% vs 56.8%, p<0.001).

Temperature of babies admitted with respiratory symptoms



Mode of delivery of babies admitted with respiratory symptoms



Overall data findings

- 20% – 30% of all babies admitted to L1, 2 or 3 care received no intervention which could not have been delivered by keeping them with their mothers n = 34 000
- 31% of babies were admitted for <48 hours and received no high dependency or intensive care intervention
- Role for prevention
- Role for Transitional Care facilities
- Babies born at 37-38 weeks were twice more likely to be admitted to Neonatal services compared to those born at 39-42 weeks gestation = increased vulnerability

Complexity

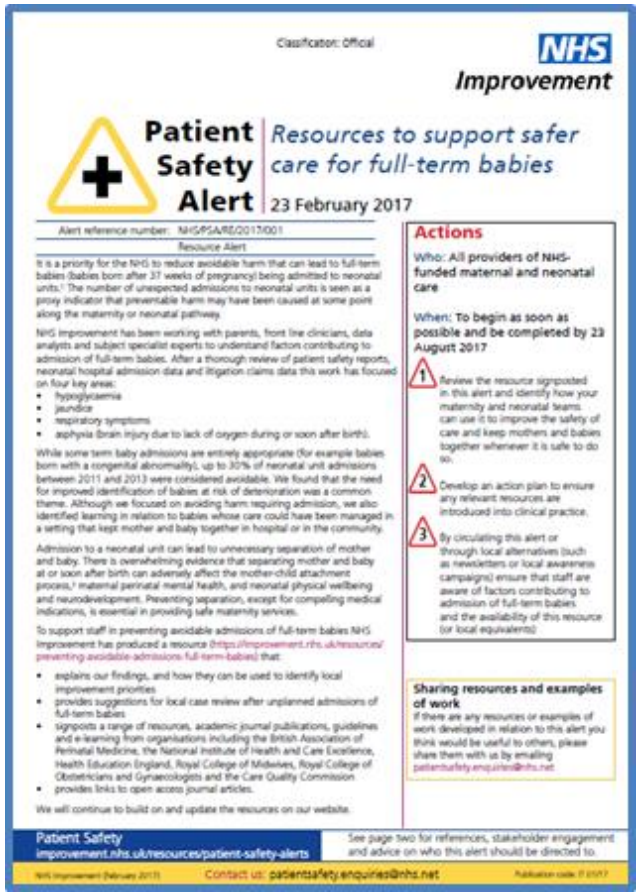
Which term babies?
Data collection system – accuracy of data entry
Different commissioning arrangements across networks and even within trusts - variation in TC
Incentives for admission – income via Neonatal services
Local variation: clinical practice/admission policies….

Midwifery skills/resource

- **Maternal morbidity**
- **Early discharge / transfer**

Fail safe decision-making + inexperience of junior doctors
Some term admissions are entirely appropriate

National Drivers – February 2017



Classification: Official

NHS Improvement

Patient Safety Alert

Resources to support safer care for full-term babies

23 February 2017

Alert reference number: NHS/PSA/RE/2017/001

Resource Alert

It is a priority for the NHS to reduce avoidable harm that can lead to full-term babies (babies born after 37 weeks of pregnancy) being admitted to neonatal units.[1] The number of unexpected admissions to neonatal units is seen as a proxy indicator that preventable harm may have been caused at some point along the maternity or neonatal pathway.

NHS Improvement has been working with parents, front line clinicians, data analysts and subject specialist experts to understand factors contributing to admission of full-term babies. After a thorough review of patient safety reports, neonatal hospital admission data and litigation claims data this work has focused on four key areas:

- hypoglycaemia
- jaundice
- respiratory symptoms
- asphyxia (brain injury due to lack of oxygen during or soon after birth).

While some term baby admissions are entirely appropriate (for example babies born with a congenital abnormality), up to 30% of neonatal unit admissions between 2011 and 2013 were considered avoidable. We found that the need for improved identification of babies at risk of deterioration was a common theme. Although we focused on avoiding harm requiring admission, we also identified learning in relation to babies whose care could have been managed in a setting that kept mother and baby together in hospital or in the community.

Admission to a neonatal unit can lead to unnecessary separation of mother and baby. There is overwhelming evidence that separating mother and baby at or soon after birth can adversely affect the mother-child attachment process,[2] maternal perinatal mental health, and neonatal physical wellbeing and neurodevelopment. Preventing separation, except for compelling medical indications, is essential in providing safe maternity services.

To support staff in preventing avoidable admissions of full-term babies NHS Improvement has produced a resource (https://improvement.nhs.uk/resources/preventing-avoidable-admissions-full-term-babies) that:

- explains our findings, and how they can be used to identify local improvement priorities
- provides suggestions for local case review after unplanned admissions of full-term babies
- signposts a range of resources, academic journal publications, guidelines and e-learning from organisations including the British Association of Perinatal Medicine, the National Institute of Health and Care Excellence, Health Education England, Royal College of Midwives, Royal College of Obstetricians and Gynaecologists and the Care Quality Commission
- provides links to open access journal articles.

We will continue to build on and update the resources on our website.

Actions

Who: All providers of NHS-funded maternal and neonatal care

When: To begin as soon as possible and be completed by 23 August 2017

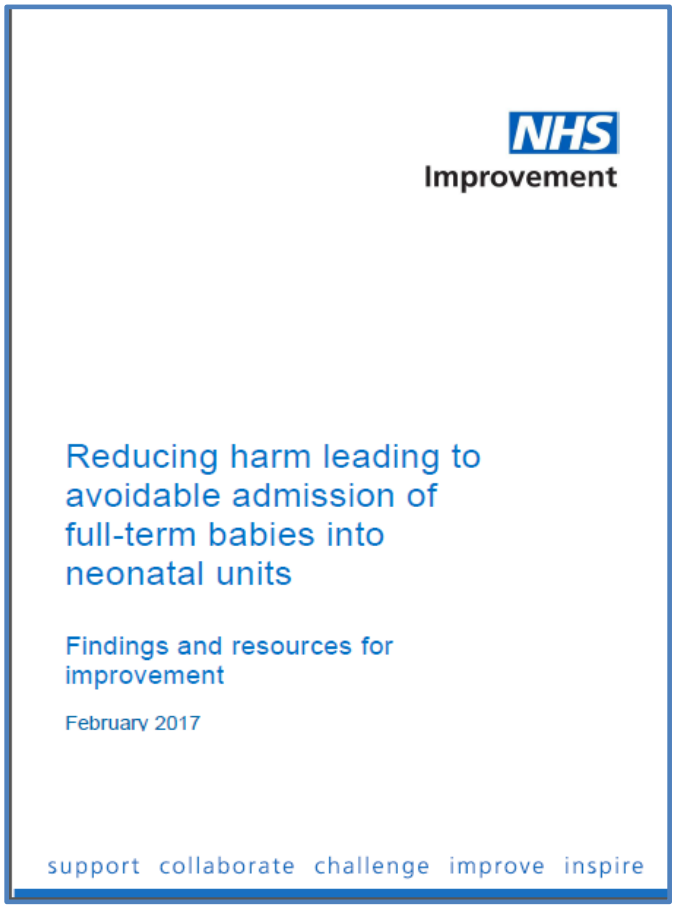
1. Review the resource signposted in this alert and identify how your maternity and neonatal teams can use it to improve the safety of care and keep mothers and babies together whenever it is safe to do so.
2. Develop an action plan to ensure any relevant resources are introduced into clinical practice.
3. By circulating this alert or through local alternatives (such as newsletters or local awareness campaigns) ensure that staff are aware of factors contributing to admission of full-term babies and the availability of this resource (or local equivalents).

Sharing resources and examples of work

If there are any resources or examples of work developed in relation to this alert you think would be useful to others, please share them with us by emailing patientsafety.enquiries@nhs.net

Patient Safety improvement.nhs.uk/resources/patient-safety-alerts

See page two for references, stakeholder engagement and advice on who this alert should be directed to



NHS Improvement

Reducing harm leading to avoidable admission of full-term babies into neonatal units

Findings and resources for improvement

February 2017

support collaborate challenge improve inspire


Home > Resources > Reducing admission of full term babies to ...
Reducing admission of full term babies to neonatal units
We want to reduce harm leading to avoidable admissions to neonatal units for babies born at or after 37 weeks.
Add to favourites
Share this page
(0)
We've identified that over 20% of admissions of full term babies to neonatal units could be avoided. By providing services and staffing models that keep mother and baby together we can
harm caused by separation.
We want all maternity and neonatal services to work together to
a neonatal unit could be avoided and to promote understan
and baby together when safe to do so.
Term live births in England
Themes:
Patient safety, Maternity and neonatal
Topic:
Patient safety
Resource type:
Collection
Part of:
Maternal and neonatal health safety collaborative
Source:
NHS
Academic papers
Term admissions to neonatal units
Neonatal hypoglycaemia: learning
Related content
Identifying and managing neonatal hyp
Listen to me: helping people speak up in
Resources for preventing avoidable admis
Supporting safer care for full-term babies a
Join the maternity and neonatal discussion b
MIDIRS Midwifery Digest: Aiming for a seaml
British Association of Perinatal Medicine
Identification and Management of Neonatal Hypoglycaemia in the Full Term Infant – A Framework for Practice
April 2017
NHS
atain
New e-learning programme to improve care for babies, mothers and families
'Avoiding term admissions into neonatal units (Atain)' is a new e-learning programme to help healthcare professionals improve outcomes for babies, mothers and families through the delivery of safer care.
The programme, developed by Health Education England e-Learning for Healthcare, NHS Improvement, Atain and experts from many other partner organisations, forms a vital learning tool for healthcare staff involved in the care of newborns in hospital and community settings.
The 'Avoiding term admissions into neonatal units' e-learning programme can be accessed via:
https://www.e-lfh.org.uk/programmes/avoiding-term-admissions-into-neonatal-units/
e-LfH
Learning modules, including a selection of training videos, are designed to help professionals meet the key learning needs identified through the Atain initiative, with a focus on four clinical areas:
Respiratory conditions
Hypoglycaemia
Jaundice
Asphyxia (perinatal hypoxia-ischaemia)
An additional module also raises awareness of the importance of keeping mother and baby together.
The programme is an output of the Atain initiative which aims to reduce avoidable causes of harm that can lead to infants born at term (i.e. ≥ 37+0 weeks gestation) being admitted to a neonatal unit. It also contributes to the aims and recommendations of Better Births.
The 'Avoiding term admissions into neonatal units' e-learning programme can be accessed via:
https://www.e-lfh.org.uk/programmes/avoiding-term-admissions-into-neonatal-units/
e-LfH
Original article
atal hypoglycaemia: learning from claims
What is already known on this topic?
What this study adds?
The use of transcutaneous bilirubinometers optimises safety, experience and efficiency, says Sunu Grace. Together with her colleagues, she explains why.
Lightening the load
Aiming for a seamless service for
Recent Posts

eLfh – Atain

- 8 Modules

1. Impact of mother and baby separation
2. **First hour of care –** *ranks consistently as most frequently accessed module*
3. Hypoglycaemia
4. Jaundice
5. **Term babies at risk of jaundice**
6. **Respiratory – community setting**
7. Respiratory - acute setting
8. HIE

✓ 9194 registered users

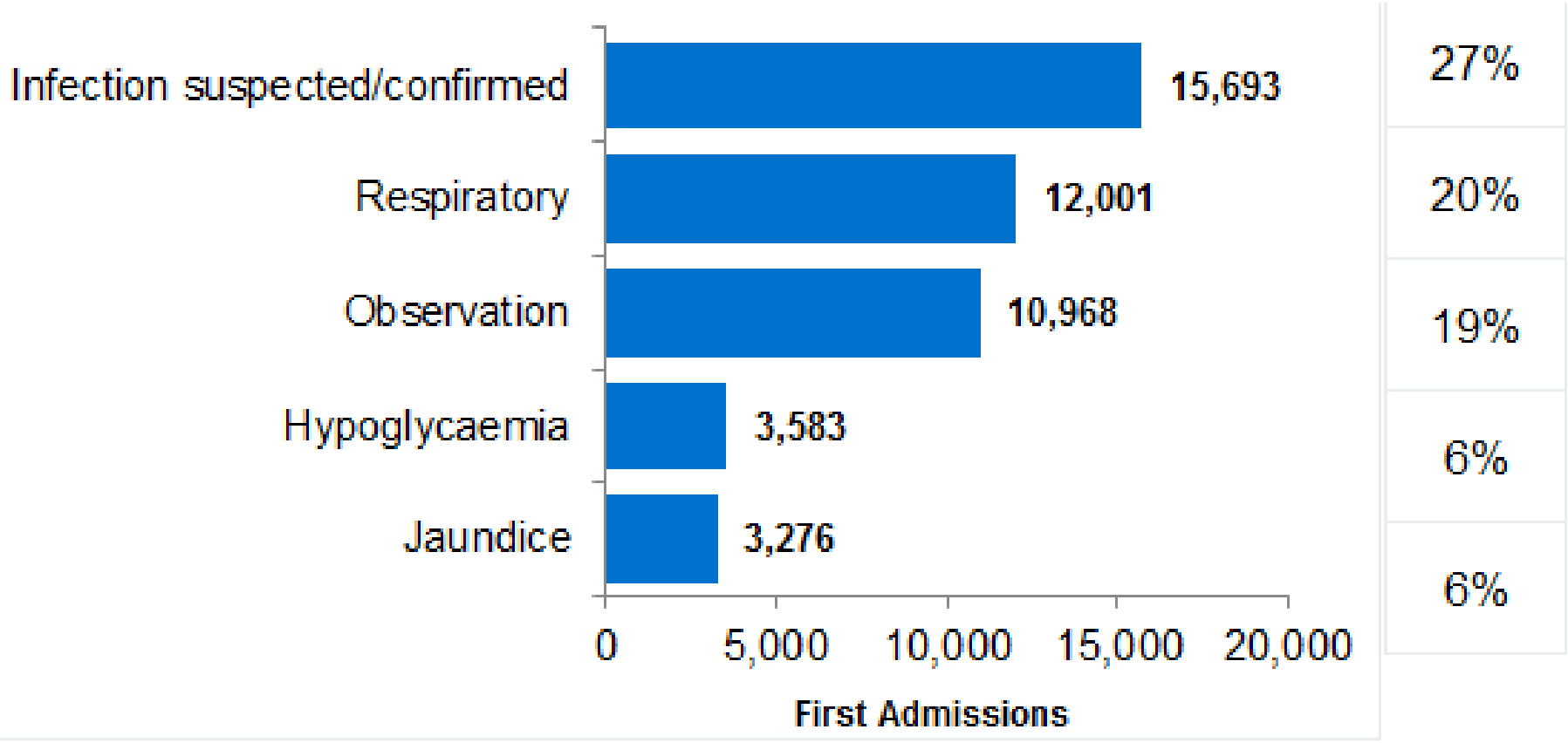
✓ 35 899 'completed' status

✓10 746 hours

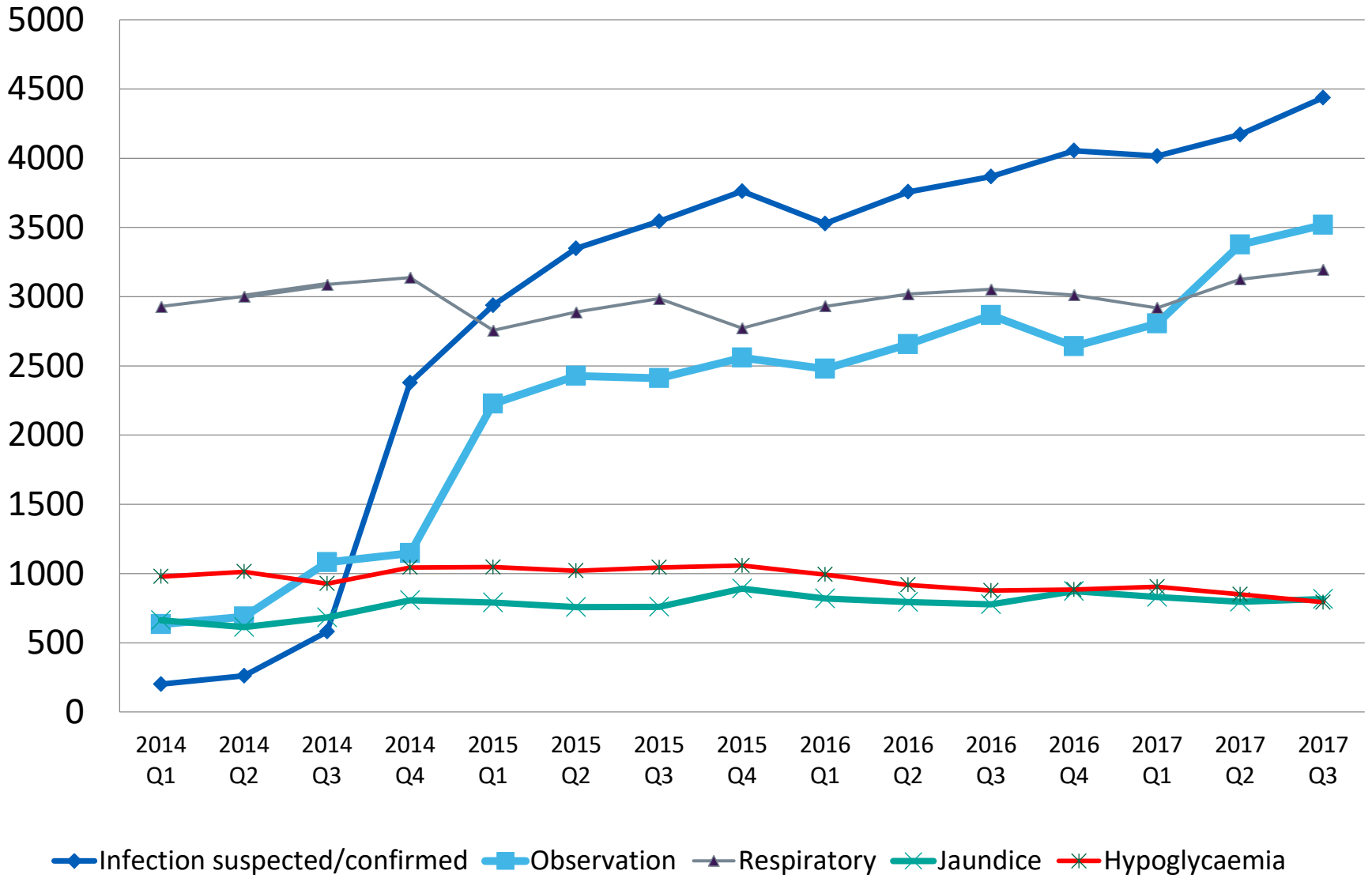
✓All grades/bands of staff – midwives, obstetricians, neonatologists, children's nurses, medical secretaries

Findings 2018

Top 5 Reasons for Admission for Full Term Babies (number of first admissions) 2016 Neonatal Unit: National



Term admissions - top 5 reasons for admission – all settings



Take home messages?

Antenatally:

- ✓Ascertain maternal choice for delivery – avoiding C/S <39 weeks if no medical indication
- ✓Early identification of any ‘at risk’ factors
- ✓Planned pathway drawing on evidence base
- ✓Informed decision to support maternal choice
- ✓Promote understanding and preparation for early skin-to-skin contact with the mother to provide warmth and to facilitate the initiation of breastfeeding if relevant

Take home messages?

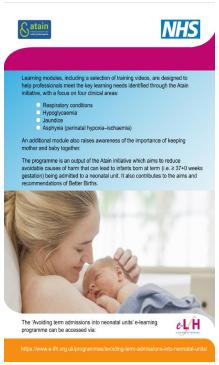
Intrapartum and delivery

✓GIRFT - first hour of care following birth

✓Sk2Sk and feed

✓Thermal optimisation

✓Implementation of planned pathway



eLfh –

✓First hour of care

✓Respiratory – community setting

Take home messages?

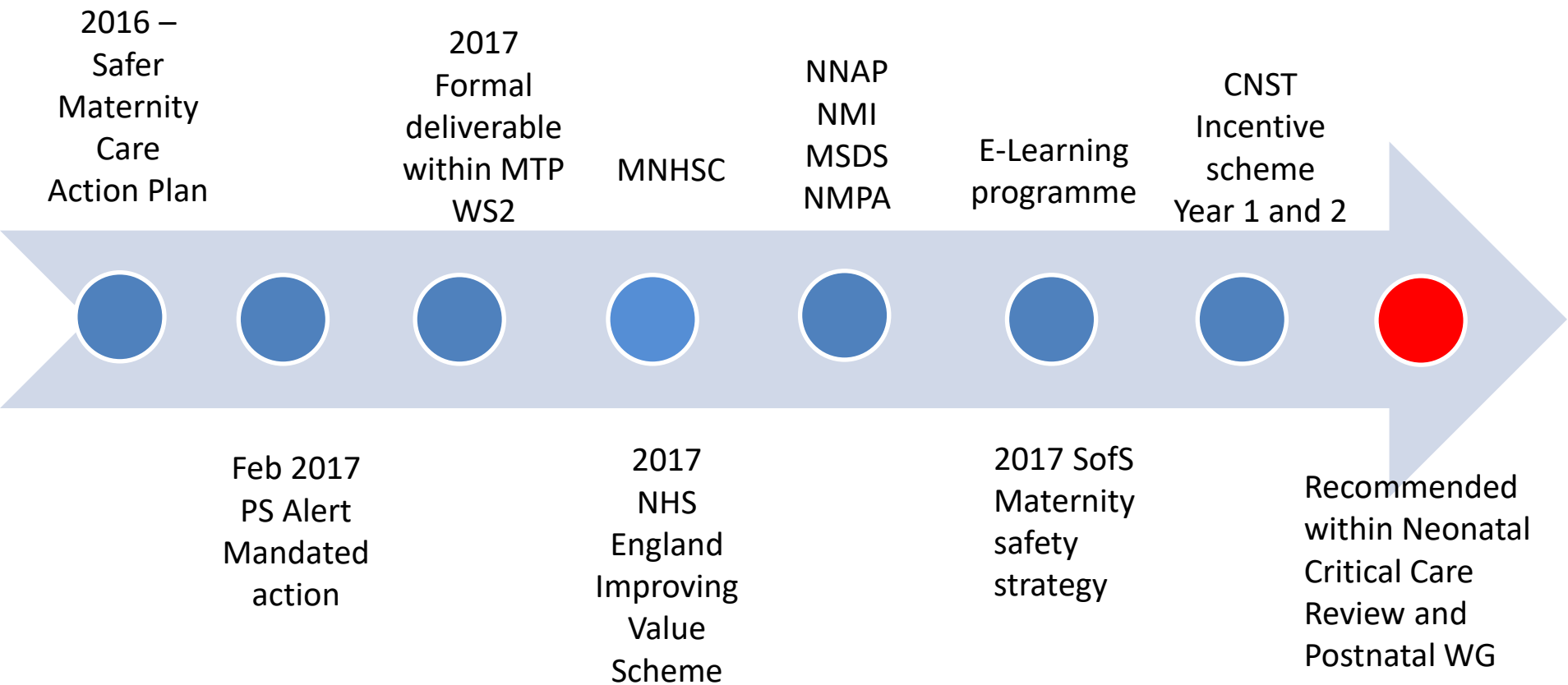
Postnatal - generic

- ✓Advice on listening to maternal instinct
- ✓Advice on how to raise concerns about their baby's well-being or feeding pattern
- ✓Teach parents the signs that could indicate that baby is becoming unwell

If infant is 'at risk' of jaundice

- ➢ vigilance for signs of early onset jaundice
- ➢promote understanding of signs of hyperbilirubinemia – yellow sclera and gums; lethargy, sleepiness
- ➢offer strategies to minimise likelihood of hyperbilirubinemia – regular feeding
- ➢ do not advise use of sunshine to relieve signs of jaundice

National drivers for Atain



Join the Journey!

NHS Improvement

@atain7

Michele.upton@nhs.net