

# Destination TC! Reducing mother/infant separation in hospital

## NNAP 2018 audit measure:

### Minimising inappropriate separation of mother and term baby

For babies  $\geq 37$  weeks, who did not have any surgery or a transfer during any admission: How many Special Care or Normal Care days were provided when oxygen was not administered?

- Dr Sankara Narayanan, Consultant Neonatologist
- Dr Anastasia Katana, Consultant Neonatologist
- Lydia Gerrie, Inpatient Matron, Postnatal Ward
- Clare Dawson, Senior Neonatal Nurse
- Elvira Baker, Neonatal Matron
- Ling Tan, Neonatal Trainee, ST2
- Ms Marcellina Coker, Consultant Obstetrician



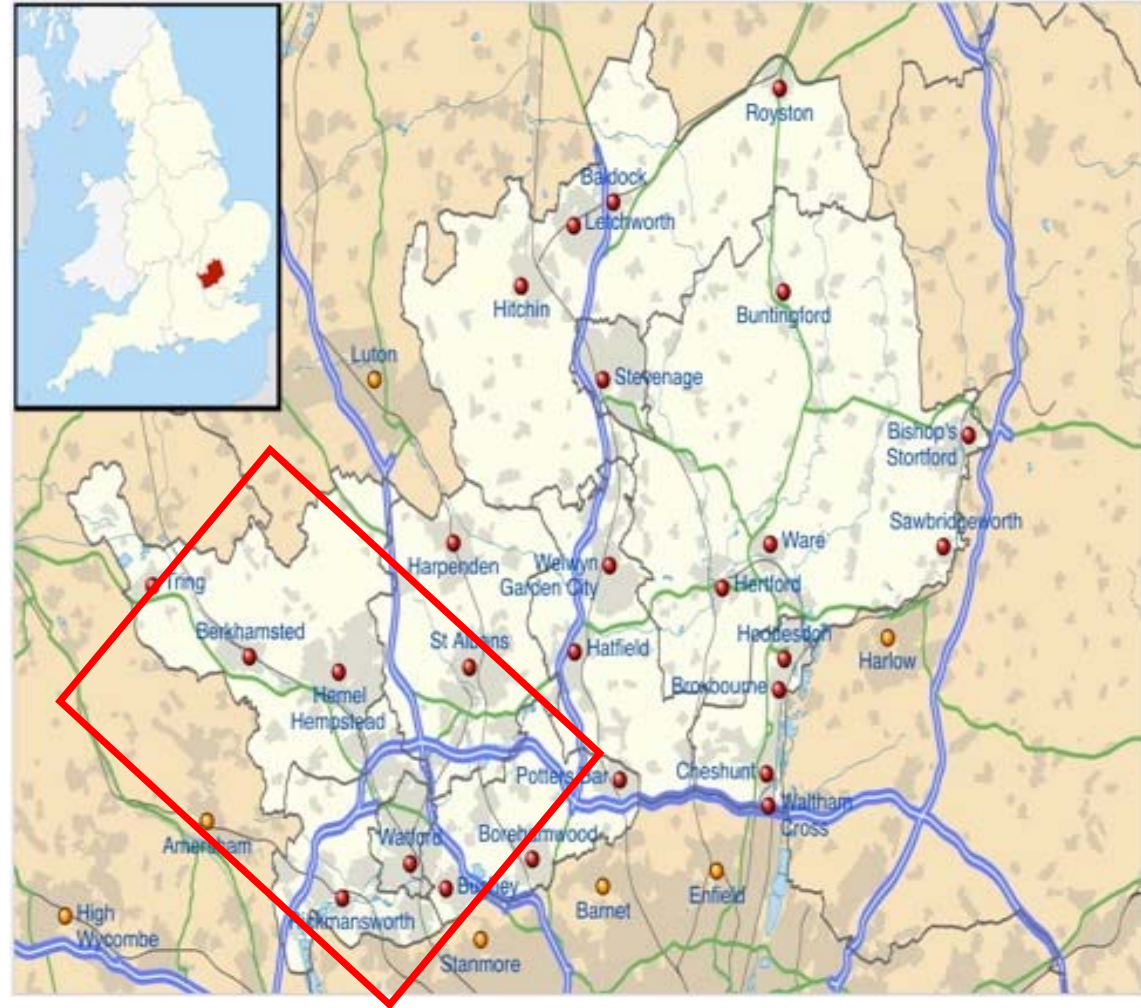
West Hertfordshire Hospitals

NHS Trust



# Setting

- Large District General Hospital Perinatal service
- NW London
- East of England Neonatal Network
- ~ 5000 live births
- Level 2 Neonatal unit
- High term admissions
- **6 dedicated transitional care beds**





### How Mother-Child Separation Causes Neurobiological Vulnerability Into Adulthood

TAGS: BIOLOGICAL/NEUROSCIENCE | CHILDHOOD DEVELOPMENT | PARENTING | RELATIONSHIP QUALITY



**BIRTH** ISSUES IN PERINATAL CARE

### Early Contact versus Separation: Effects on Mother-Infant Interaction One Year Later

Ksenia Bystrova MD, PhD, Valentina Ivanova, Maigun Edhborg RNMTD, PhD, Ann-Sofi Matthiesen, Anna-Berit Ransjö-Arvidson RNMTD, PhD, Rifkat Mukhamedrahimov PhD ... See all authors

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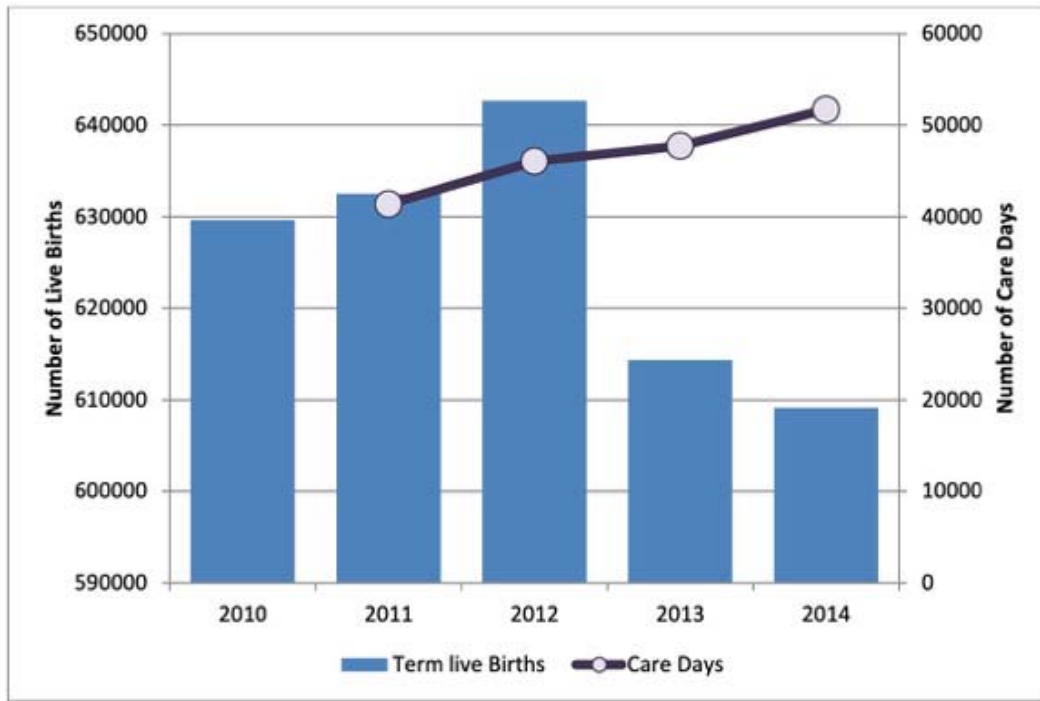
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### EFFECTS OF MOTHER-INFANT SEPARATION ON MATERNAL ATTACHMENT BEHAVIOR

A. D. LEIFER, P. H. LEIDERMAN, C. R. BARNETT,  
and J. A. WILLIAMS

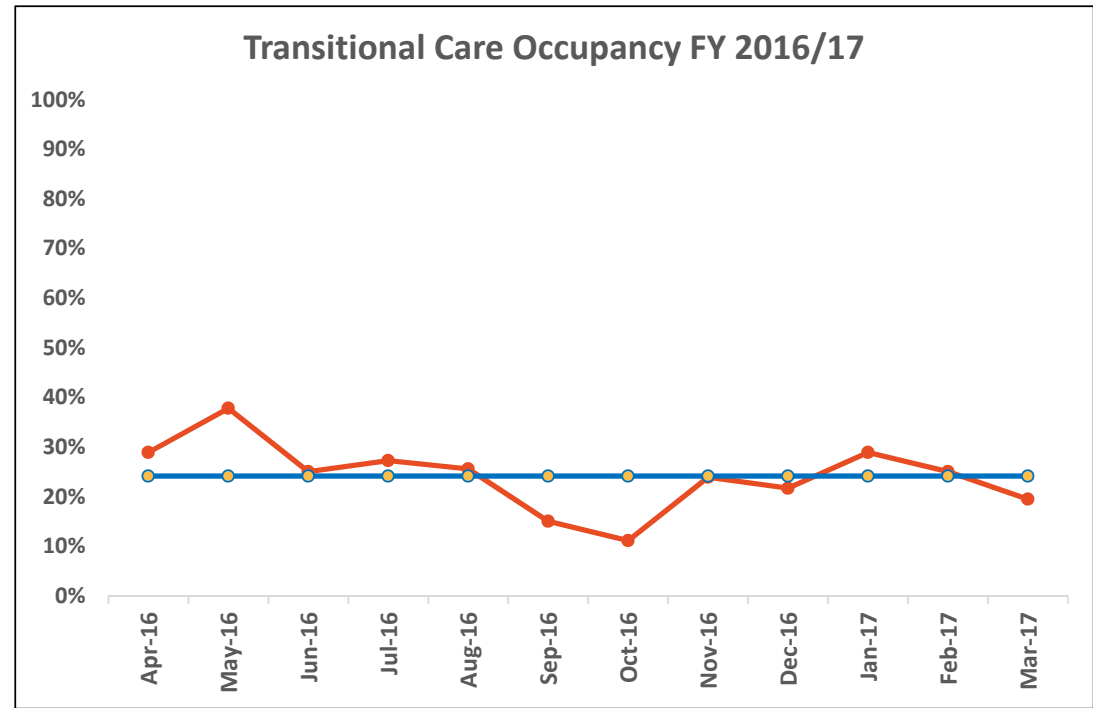
Stanford University

**National scene 2011 - 2014**



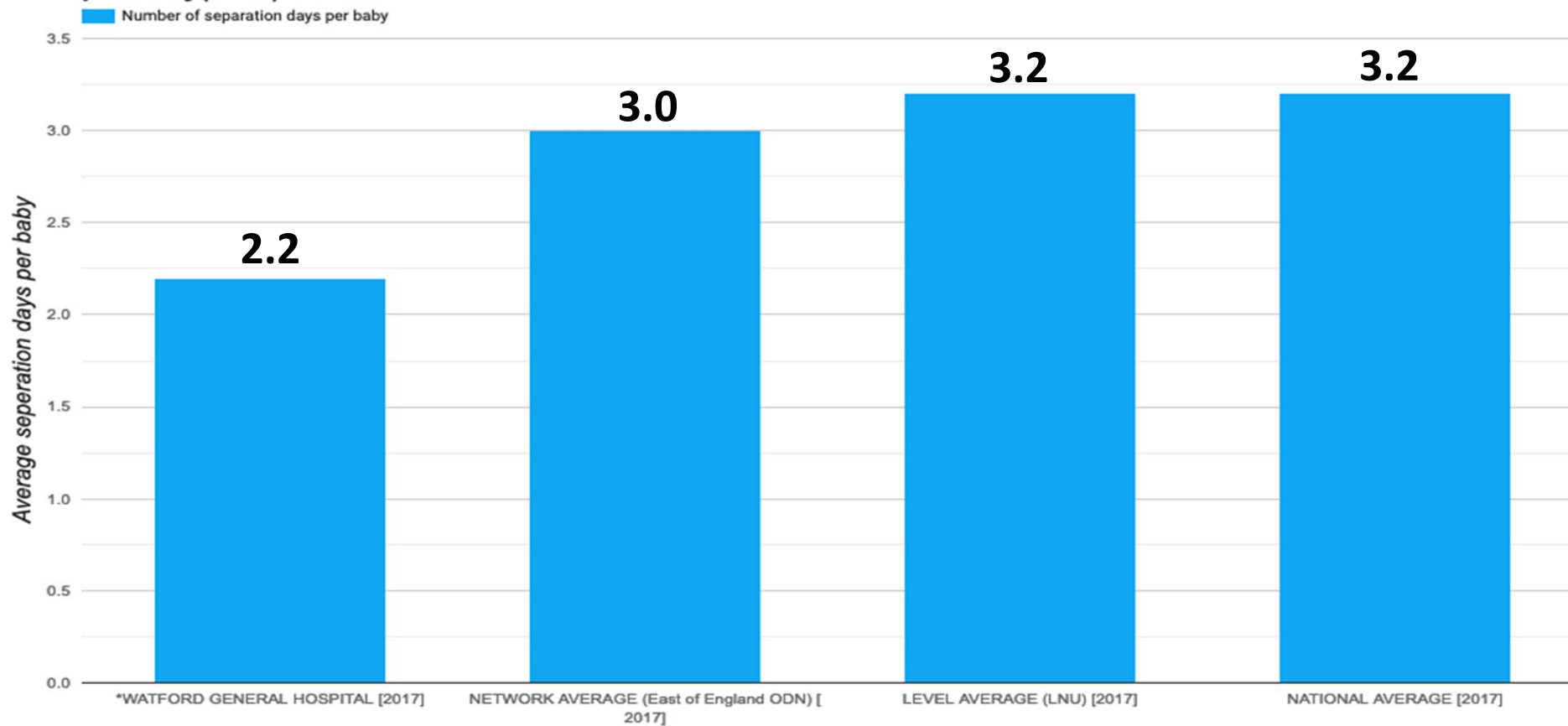
**Local**

	Live births	Term admn	%
<b>2016</b>	<b>5020</b>	<b>415</b>	<b>8.3%</b>
<b>2017</b>	<b>4973</b>	<b>438</b>	<b>8.8%</b>





**Babies born at 37 weeks gestational age or above (no surgery or transfer): average number of separation days per baby(2017)**



## Neonatal Transitional Care - A Framework for Practice (2017)

### Category

BAPM publications  
Endorsed by BAPM  
How To Guides  
Members' resources  
Quality  
Research

Keeping mothers and babies together should be the cornerstone of newborn care. Neonatal Transitional Care (NTC) supports resident mothers as primary care providers for their babies with care requirements in excess of normal newborn care, but who do not require to be in a neonatal unit (NICU). Implementation of NTC has the potential to prevent thousands of admissions annually to UK neonatal units, and also to provide additional support for small and/or late preterm babies and their families. NTC also helps to ensure a smooth transition to discharge home from the neonatal unit for sick or preterm babies who have spent time in a neonatal unit, often at some considerable distance from home.



## Patient Safety Alert

### Resources to support safer care for full-term babies

23 February 2017

Alert reference number: NHSPSA02/2017/001  
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. 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, 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.

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.

Classification: Official



### Actions

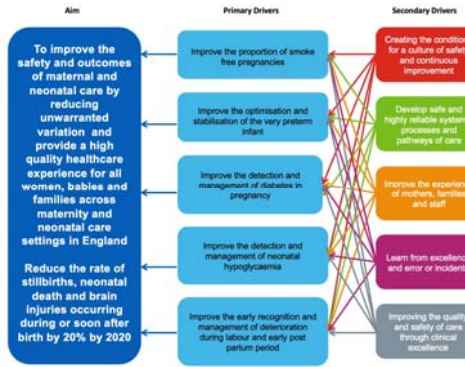
Who: All providers of NHS-funded maternal and neonatal care

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](mailto:patientsafety.enquiries@nhs.net).



# National Drivers



### **28-YEAR-OLD PRIMI: SVD, 37 WEEKS, BW 4.2 kg**

Admitted to neonatal unit for blood glucose monitoring. **Formula offered** as mum had PPH and was moved to OOB.

#### **Feedback from mother: Largely positive experience**

Staff always wanted to help, but I could see that they were **too busy** with things

Didn't feel I could ask questions, didn't have much experience with breast feeding ,expressing milk, **formula seemed an easy option, doctors in neonatal unit seemed pretty ok with it**

### **Planned LSCS, GDM**

- **Baby whisked off for glucose monitoring**
- Wanted to breast feed, but SCBU staff suggested formula, hubby consented
- Didn't get much support with breast feeding
- Went home mixed feeding and full formula from 2 weeks of age
- **"Ridden with guilt", "I could've insisted and been more assertive on breast feeding"**
- **"Option of colostrum expression beforehand not explained to me"**

- **"Have a plan and try not to change it every 12 hours when a new person comes on"**
- **"service should follow and reshape to women's needs NOT the other way around"**
- **"Need a balanced way to provide information with TRANSPARENCY"**
- **"Finding the RIGHT WORDS is important, when you communicate with women"**
- **"Don't forget the NEEDS of the BABY"**
- **"Work in partnership with women & their families"**
- **"Try and RELAX expectant mothers, Listen to them"**

# Change ideas

## Safety

- Daily patient safety meetings
- Perinatal service board rounds
- Just culture
- Weekly ATAIN reviews

## Evidence based care:

- BAPM Hypoglycaemia FfP
- NICE Jaundice/Infection
- Steroids for Elective LSCS

## Feeding support:

- Skin to skin
- Early breastfeeding
- Antenatal colostrum
- 

## Education/Training:

- Multiprofessional study days
- Ward level champions
- Decision tools / cheat sheets

## Parent involvement:

- Guideline consultation
- Information leaflets
- Posters


## Communication:

- Learning boards
- Message of the week
- WhatsApp/Twitter/FB groups
- Ward to Board Comms


**GLUCOGEL 40 %**  
ADMINISTRATION GUIDE

West Hertfordshire Hospitals NHS Trust


Glucogel Indications		Weight-based Dosing of Glucogel		
Pre-feed Blood Glucose: 1-1.9 mmol/l in asymptomatic infants	Birth	Dose of 40% Glucose (g)	Amount to be Given (ml)	
Infants ≥ 35 weeks GA & younger than 48 hours	2000 - 2499	0.4	1	
	2500 - 2999	0.5	1.25	
Glucogel should always be administered alongside a supervised feed and ongoing active feeding plan	3000 - 3499	0.6	1.5	
	3500 - 3999	0.7	1.75	
Babies with glucose below 1mmol/l OR symptomatic with blood glucose <2.5mmol/l – use oral Glucogel only as an interim measure, while arranging urgent medical review and immediate IV dextrose	4000 - 4499	0.8	2	
	4500 - 4999	0.9	2.25	
	5000 - 5499	1.0	2.5	
	5500 - 6000	1.1	2.75	




Step 1: Obtain Glucogel, gauze, oral syringe




Step 2: Squeeze desired amount of gel into oral syringe




Step 3: Identify patient and gather equipment



Step 4: Dry oral mucosa with gauze



Step 5: Administer Glucogel onto inner cheek



Step 6: Massage gel into the buccal mucosa using gloves, then offer feed immediately after

**Appendix 2: Use of Glucose Gel**

**Indications**

- Blood glucose 1.0-1.9mmol/l in infant with no abnormal clinical signs
- Infants ≥ 35 weeks' gestational age and younger than 48 hours after birth

**Notes**

- Must be used in conjunction with a feeding plan
- For babies with severe hypoglycaemia (BG <1.0mmol/l) use oral glucose gel only as an interim measure while arranging for urgent medical review and treatment with IV glucose

**Dose**

- Use 40% glucose gel 200mg/kg, (up to two doses given 30 minutes apart per episode of hypoglycaemia and a maximum of six doses of buccal glucose gel in 48 hours.
- If a weight per weight preparation of 40% glucose gel is used, practitioners should be aware of the weight of 5 ml of the preparation and calculate the ml/kg volume required to deliver 200mg/kg of glucose. Advice from local pharmacist is recommended. Practitioners may decide that variations in glucose content per ml of glucose gel is unlikely to be clinically significant

**Method of administration**

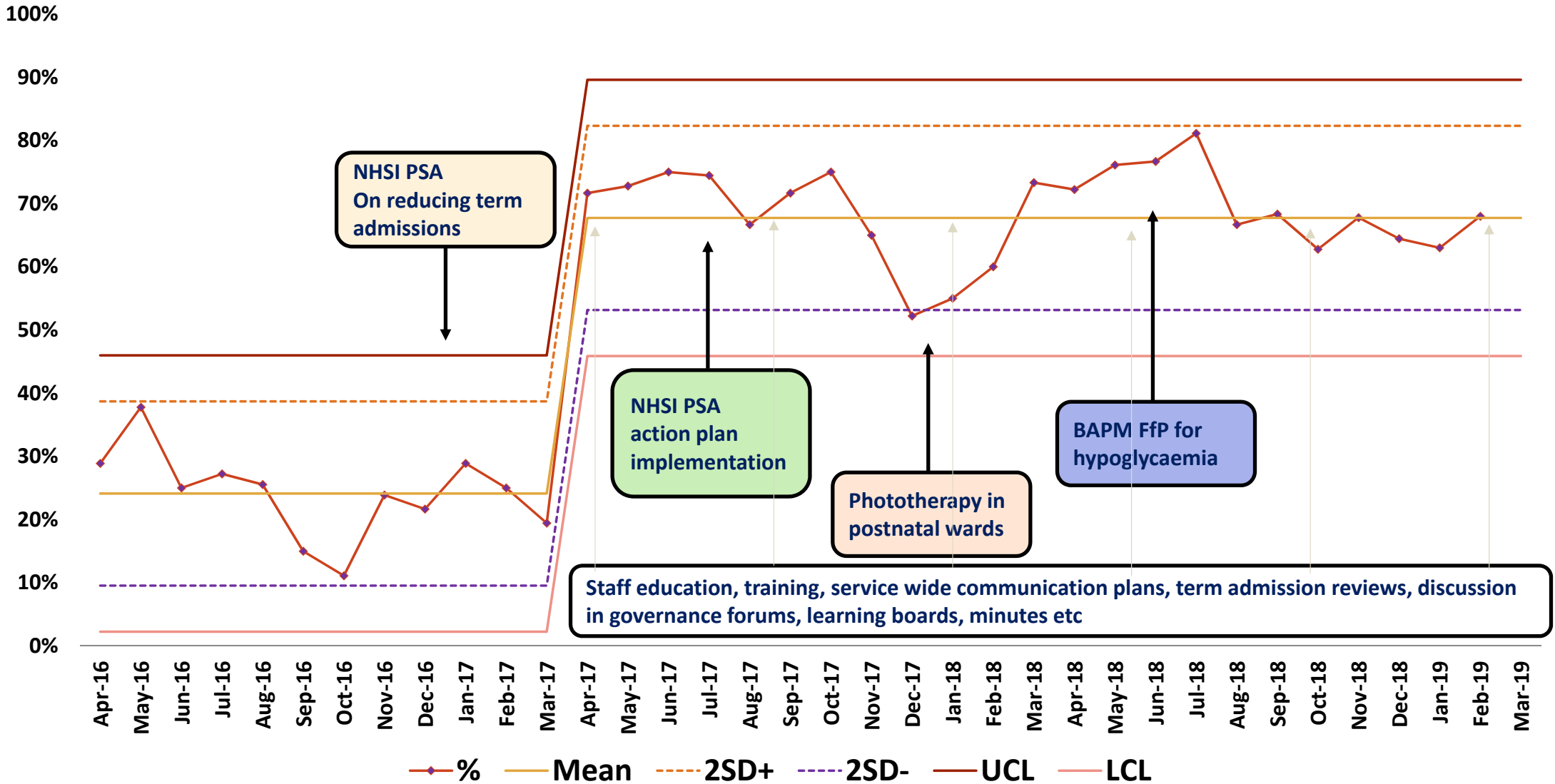
- Draw up correct volume of 40% glucose gel using a 2.5 or 5ml oral / enteral syringe
- Dry oral mucosa with gauze, gently squirt gel with syringe (no needle) onto the inner cheek and massage gel into the mucosa using latex-free gloves
- Offer a feed preferably breast milk, immediately after administering glucose gel
- Repeat blood sugar measurement as requested
- Repeat oral glucose gel if baby remains hypoglycaemic according to flow chart

Up to 6 doses can be given over a 48-hour period but any more than one dose should be discussed with the neonatal team and it is advisable for the baby to be examined before the 3<sup>rd</sup> dose is administered.

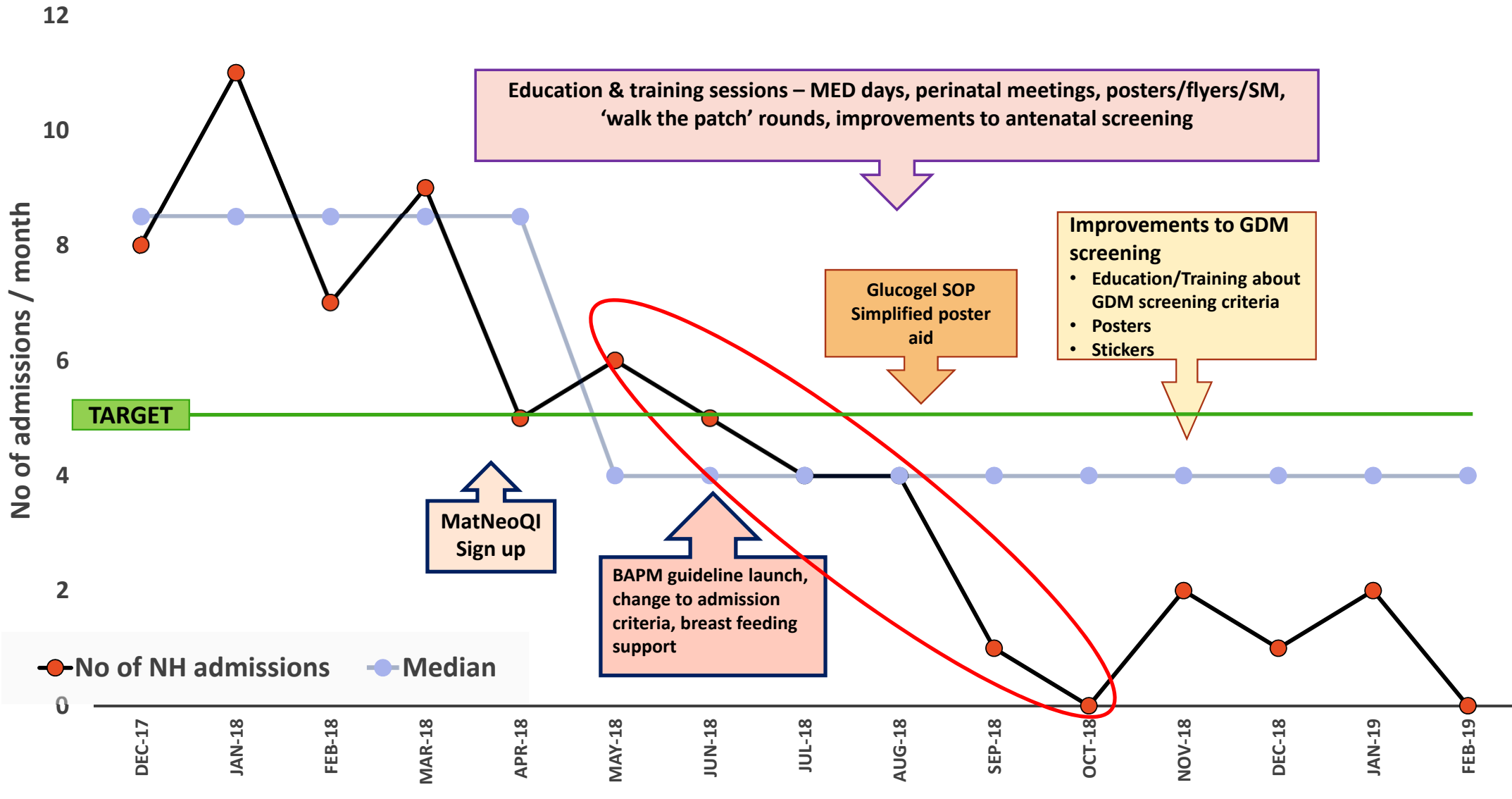
Weight based dosing of Glucose gel		
Birth weight (g)	Dose of 40% Glucose gel (g)	Amount to be given (ml)
2000 - 2499	0.4	1
2500 - 2999	0.5	1.25
3000 - 3499	0.6	1.5
3500 - 3999	0.7	1.75
4000 - 4499	0.8	2
4500 - 4999	0.9	2.25
5000 - 5499	1.0	2.5
5500 - 6000	1.1	2.75



# Transitional Care Occupancy Apr 16 - Feb 19

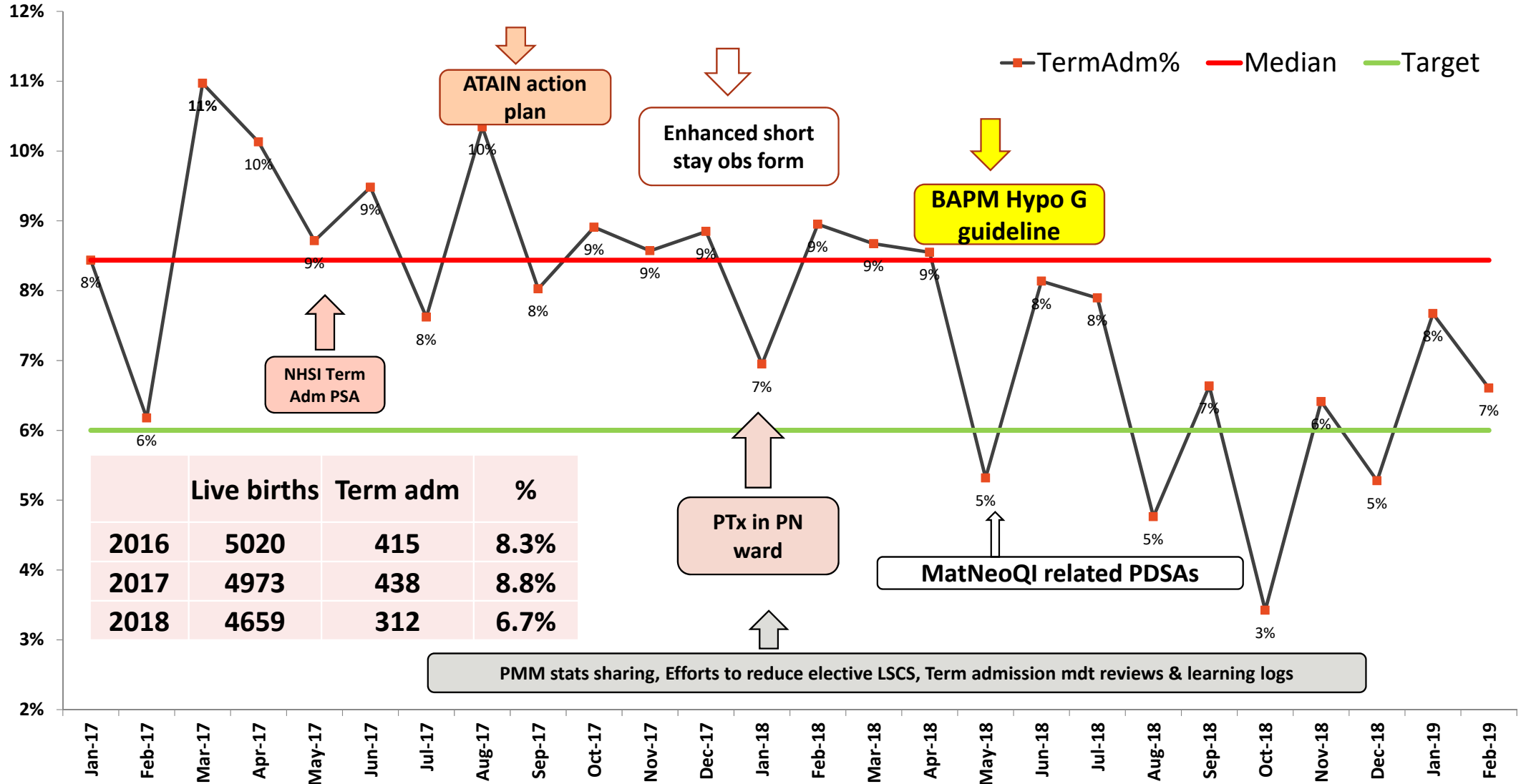


# Run chart - Number of term admissions for neonatal hypoglycaemia



# Run chart: Term Admissions to Neonatal Unit

No of admission >=37 weeks / Live births)



# Summary

- NNAP audit measure driven quality improvement
- Multi-disciplinary approach to foster a culture of shared responsibility for mother/infant care
- QI tools to identify 'special cause' variation → Timely action
- Parent involvement
- Communication plan / stakeholder analysis & engagement