Time is Brain

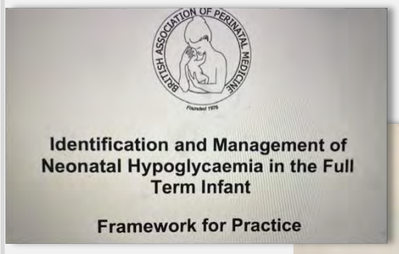
Feeding and checking pre-feed blood sugar levels early in newborn's at risk of low blood sugar levels will prevent long term brain damage.

S Habermann Northwick Park Hospital

Problem Statement

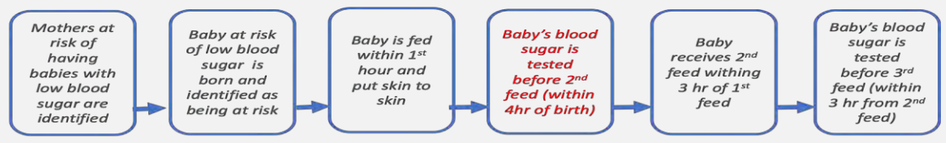
Every month at least 10 of our babies are at risk of low blood sugar levels. We fail to test at least half of them in a timely manner, putting them at risk of long term brain damage.

BACKGROUND

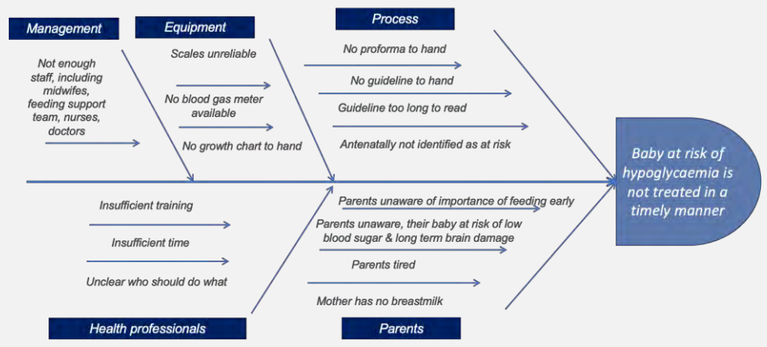


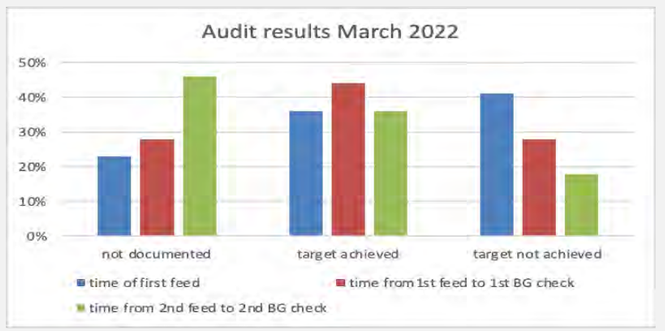
DIAGNOSTICS

- High level Process map



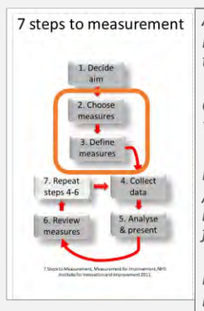
- Fishbone





AIM & MEASUREMENT DEFINITION

- Choose & define your baseline measures



Sense check! How long would it take to generate 20 data points for your baseline?

Aim
By September 2022 all babies at risk of low blood sugars will have their blood sugar checked within 4 hours of birth

Chosen measure
Time from birth it takes to have first blood sugar checked

Inclusions
All babies born at Northwick Park Hospital who are born after or including at 35 weeks gestation and have an underlying risk factor for developing low blood sugars

Exclusions
Babies born before 35 weeks gestation
No risk factors for low blood sugar identified

Sampling method and frequency
After collecting my baseline retrospectively, I will collect data every week to see if change occurred. I will collect this data on a run chart.

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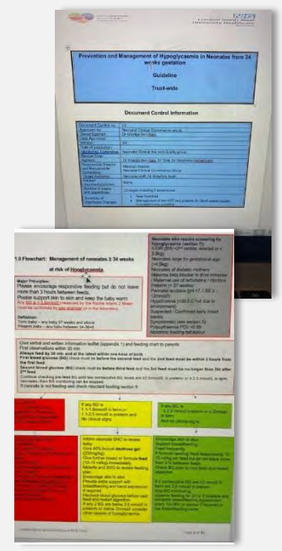
CHANGE IDEAS

Your change Ideas scored logical, quick, excites me

- Speak to SHO about giving information to parents and midwifes
- Score: 2 x1x2 =4
- Give parents information leaflets before/ after birth
  Score: 2 x1 x 2 =4
- Label babies at risk by putting a sticker on top of their notes
  Score: 2 x1x2=4
- Share audit finding with midwifes Score: 2 x 2 x 1 = 4
- Produce a 1 page summary of management pathway and hang up on labour ward and email to relevant health professionals
  Score:2x2 x1 =4
- Organise training session for the health professionals
- Score 2 x 1 x1 =2
- Provide babies with a hat on which it says "feed me early"
  score: 2 x1 x 2 =4

Guidelines



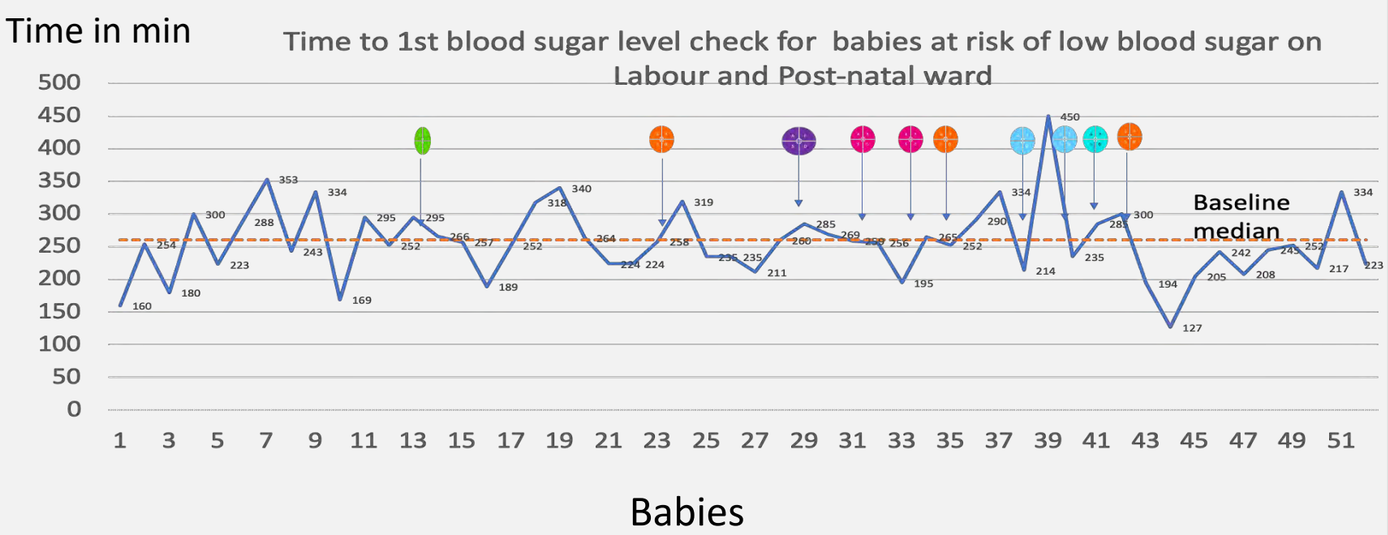
PDSA CYCLES

PDSA Test #	PLAN	Do	STUDY	ACT
1.1	Speak to team to investigate problem further	Discussion with infant feeding team, junior doctors, nursery nurse, consultants, and midwifes during separate short meetings. Very different feedback from different team members. Junior doctors feel that this out of their control, consultant aware of problem, Infant feeding team and midwife surprised with findings of audit.	Different team members perceive the problem very differently. Not everyone aware of how big a problem this is. Most team members are overestimating how well we do	Inform rest of team of audit results and increase awareness of current problem
2.1	Infant feeding team to email audit results to midwives	Audit results summarised as a 1 page summary and emailed to all senior midwives (12).	No response detected	Try a different way to find out why problem ongoing and get involvement from midwives
2.2	Email to midwives about opinions on ideal hypoglycaemia management	Email sent out by the infant feeding team to all senior midwives (12) inviting opinion on awareness and ideal hypoglycaemia management. 3 midwives responded raising issues needing response.	Many team members are unclear on management of hypoglycaemia.	Update guidelines (new PDSA series – see 5.1)

PDSA Test #	PLAN	Do	STUDY	ACT
3.1	Reminder of hypoglycaemia management at morning handovers in labour ward	Attend 8am handover with labour ward team (midwifes, neonatal registrar and obstetricians) and spoke about audit results, importance of hypoglycaemia management and new guidelines. Some interest shown	I questioned whether this was a successful and sustainable approach	Abandon idea
3.2	Reminder at morning handover on neonatal unit	Attend neonatal unit handover (junior doctors) and speak about importance of hypoglycaemia management and audit results. Junior doctors feel that by the time they see baby often already too late and they have little influence on feeding time	The doctor's approach did not surprise me. I questioned whether this was a successful approach to lead to behavioural change.	Abandon idea
4.1	Teaching on hypoglycaemia to junior doctors	I ran a one 45 min session on hypoglycaemia management to about 6 doctors. This included audit results and my QIP findings and a section on current evidence for hypoglycaemia management.	Good turn out. I should have spent more time on ideas on how to achieve change rather than on evidence and guidelines.	Adapt teaching to focus on what I would like to happen differently
5.1	Updating Guideline	I have updated the guideline on hypoglycaemia management. The review of the guideline by different consultants, junior doctors, nurses, midwives and infant feeding team has resulted in many changes to the guideline. Updating the guidelines has taken 4 months.	This resulted in a 22 page guideline with a 1 page summary at the front. The guideline is now ready for committee approval. Updating the guideline was a frustrating and timely exercise and impact it will have is still unclear	Test the new guideline and see if it will have an impact
5.2	Lunch of new guideline	In progress		

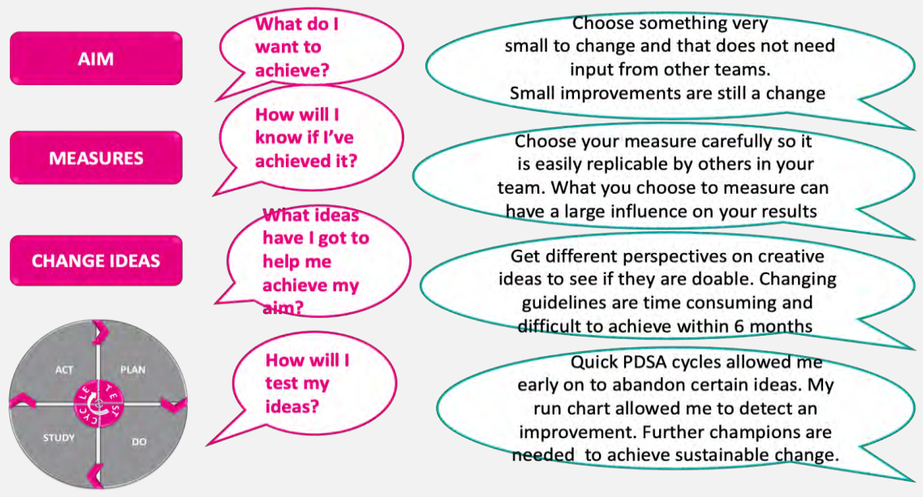
PDSA Test #	PLAN	Do	STUDY	ACT
6.1	Review current parent awareness of problem	I spoke to 4 parents with baby's at risk of hypoglycaemia. They had very limited awareness of hypoglycaemia and wanted to be informed further on this. They had not received any verbal or written information previously	Parents are a crucial member of the team and it is vital that they have the information they need to drive change.	Involve parents by creating QR code and make leaflets more accessible
6.2	Update parent information leaflet	have updated the parent information leaflet to make it more user friendly. I have asked 2 parents with babies' at risk of hypoglycaemia to give me feedback on Parent information leaflet update	Parents were happy with current parent information leaflet and found it useful;	Ensure parents have access to parent information leaflet
6.3	Create QR code with parent information leaflet	I created the QR code and displayed them in all delivery rooms. I informed the team about this so that this can be pointed out to parents	The midwives and doctors seemed happy with this change as the leaflet was not easily accessible and very rarely given to parents. 2 parents logged onto the QR code and found this useful.	Continue this idea and make further changes if uptake is not high

RUN CHART



REFLECTIONS & LEARNING

Model for improvement Reflection & Learning



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QI Change Champion
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