

Patient Safety Project: Neonatal Blood Spot Screening

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Background

In the UK, newborn blood screening has been taking place to identify rare but serious diseases since 1969, the screening process was most recently updated in May 2014 recommending the inclusion of four further rare inherited metabolic diseases (Public Health England, 2015).

It is essential that all babies have a blood sample taken by a small heel prick; early detection, referral and treatment of these conditions prevent severe disability or even death (Public Health England, 2016). Babies should have a sample taken on their day of birth and day 5 of life (Department of Health, 2009).

However, if the baby has had a blood transfusion the sample cannot be obtained until 72 hours post transfusion. In Neonatal Units, this can lead to confusion about the right time to take the babies sample and blood screening can be missed.

In this unit there have been a number of missed and incorrectly taken samples, resulting in retesting or results being delayed. It was identified that a tool was required to assist practitioners in obtaining samples within the correct time frame as recommended by the national newborn blood screening guidelines (Public Health England, 2016).

Plan:

We reviewed flowcharts from Neonatal Units within the Network and decided to adapt one that had successfully improved compliance in their unit from 75% to no missed blood spot screenings 100% (appendix 1).

We circulated the proposed tool to all band 7s and the education team on the unit, with an evaluation form (appendix 2) in order to test its effectiveness and make changes based on their feedback. The Band 7's were allocated a time frame of 4 weeks to complete evaluation forms and provide feedback to us.

Do:

With assistance from the education team, the tool along with the questionnaire was sent out to all band 7's and education team members on our unit via email. We received responses from three of the Band 7 team out of 20 staff members contacted; two of the responders chose to send written feedback via email and one completed the evaluation form (appendix 2).

Study:

Following feedback, some slight amendments were made to the tool, ensuring accuracy and improving ease of use; the general consensus from staff is that the proposed tool is effective in supporting and prompting staff in the taking of blood spot samples. However one concern is a reminder that once the tool is completed it has to be inputted on to Badgernet as well.

Act:

The next stage is to fully implement this change on the unit.

We plan to review the use of this tool within 3 months in order to review effectiveness and measure compliance with the overall aim of no babies on this unit having a missed blood spot sample.

Strategies to implement this change and improve compliance:

Ensure all staff are aware of the new tool and the rationale underpinning its use.

Ensure there are sufficient copies of the tool and all staff know where to get spare copies.

Prepare a teaching aid/completed form to support/demonstrate how it will be used.

Utilise all forms of communication, daily handover, posters in all clinical rooms, e- mail, posters in break rooms and toilets.

Aim

To produce and implement in to clinical practice an appropriate tool that ensures a consistent approach in supporting practitioners to correctly identify and complete blood spot screening in a timely manner, therefore reducing the number of missed or late samples.

Results

The tool in its first draft is implemented into practice we will circulate our questionnaire to all staff over the next 3 months with a view of making further adaptations and changes to improve clinical effectiveness and compliance. We then hope to permanently introduce this document to the unit, indefinitely improving the safety of our neonatal patient group in regards to the timely completion of newborn bloodspot samples.

Preceptees - Wessex Neonatal Preceptorship Programme

Dear staff member

As part of our preceptorship programme, we are undergoing a Patient Safety Project. Our chosen project is related to the blood spot samples taken from our patient safety group as part of the Neonatal Screening Programme. The aim is to assist practitioners in the timely collection of these samples, to reduce our unit's number of missed or late samples, through the use of a suitably designed document to be included in the notes of every admitted baby.

Hopefully by now you would have seen our document circulating the nurseries. We would very much appreciate if you could take a couple of minutes of your time to complete the questionnaire below so we can hear your views on the suitability and effectiveness of the document. Your responses will be included in the presentation of our project; however, each and every response will remain anonymous.

Thank you in advance for your time and for assisting us with our project!

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Questionnaire

Please rate the following statements/questions on a scale of 1-5, with 1 being poor and 5 being good. Please give your honest opinion.

1. The documents ease of use:

1	2	3	4	5
POOR		AVERAGE		GOOD

2. The clarity of the instructions:

1	2	3	4	5
POOR		AVERAGE		GOOD

3. The suitability of the document to achieve its purpose:

1	2	3	4	5
POOR		AVERAGE		GOOD

4. The suitability of the document for use by ALL banding staff:

1	2	3	4	5
POOR		AVERAGE		GOOD

5. The documents ability to reduce the number of missed or late blood spot samples:

1	2	3	4	5
POOR		AVERAGE		GOOD

6. Please leave any comments below of what you feel could be improved or added to the document to help us achieve our aim of reducing the number of late or missed blood spot samples:

Patient Label

Neonatal Blood Spot Screening Record of Completion

Gestation _____

Day 0: _____

Day 5: _____

Day28: _____

On Admission

All babies to have single spot sample.

Date & Time of completion: _____

Signature: _____

Record on badger

Baby to wait 72 hours posts transfusion before having 4 spot sample

Date & time: _____

Signature: _____

Consent from parents received

Record on badger

Send 1 & 4 blood spot samples

Attach pink slips to notes

Day 5

Has baby had a blood transfusion either in utero or before day 5?

Born <32 weeks gestation?

Yes No

(If yes, continue below. If no, blood sampling complete)

Day 28 or discharge (depending which comes first):

Baby to have 4 spot sample.

Send sample

Record on badger

Attach pink slip to notes

Date: _____

Signature: _____

Baby to have 4 spot sample

Date & time: _____

Signature: _____

Consent from parents received

Record on badger

Send 1 & 4 blood spot samples

Attach pink slips to notes