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).

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 adaptions 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.

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 sample screenings (appendix 1).

We circulated the proposed tool to all band 7's 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 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.