

improve neonatal cranial ultrasound practice?

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Background

- Indications and timings of neonatal cranial ultrasounds (US) can be a difficult subject to commit to memory, particularly for the clinician with little neonatal experience.
- Our aim was to assess neonatal cranial US practice within Portsmouth neonatal unit against trust standards, and subsequently develop an online calculator which would calculate predicted dates of cranial US, unique to an individual's date of birth and gestation. The calculator would also work out dates for initial immunisations and the initial retinopathy of prematurity exam.

Methods

- We used standards taken from the Portsmouth Neonatal Cranial US guideline, which specified:
 - Frequency of scans based on gestation
 - When scans should be "watched live/performed" by a consultant
- Our population was a sample of preterm babies on the unit on one day in January 2018, born between 24 and 33+6 weeks gestation.

Results

- We analysed 13 sets of notes. Of these, 9 infants were born <30 weeks gestation and 4 infants born 30-33+6 weeks gestation.
- Of those infants born <30 weeks gestation, all had scans within 0-3 days of guideline standards and all had at least one scan "watched live/performed" by a consultant.
- Of those infants born 30-33+6 weeks gestation, all 4 had at least one scan, in line with guideline standards.

Cranial US, Immunisation + ROP Schedule

PATIENT STICKER			
DOB	15/10/2018		
Born before 12:00?	No		
Gestation (weeks)	27		
Birth Weight (grams) - free text	875		

Cranial US			
	Day	Date Due	Complete? (tick)
<u>23-32 weeks</u>			
Day 1, 3, 7, 14, 28, term	1	16/10/2018	<input type="checkbox"/>
At discharge/transfer in or out	3	18/10/2018	<input type="checkbox"/>
<u>>32 weeks</u>			
Day 1, 7, 28, before discharge	7	22/10/2018	<input type="checkbox"/> Consultant*
	14	29/10/2018	<input type="checkbox"/> Consultant*
	28	12/11/2018	<input type="checkbox"/>
	Term equivalent (handwrite date)		<input type="checkbox"/>
	Discharge		<input type="checkbox"/>
*Day 7 or 14 performed/watched live by consultant			

Immunisations			
In immunisation clinical trial?			
Yes/No (circle)			
Immunisation	Date due	Complete? (tick)	
6 in 1, PCV, Rotavirus, Men B (2months/60 days)	14/12/2018	<input type="checkbox"/>	
6 in 1, Rotavirus (3 months/90 days)	13/01/2019	<input type="checkbox"/>	
6 in 1, PCV, Men B (4 months/120 days)	12/02/2019	<input type="checkbox"/>	

ROP			
RCOPH initial ROP exam timings			
<27 weeks (up to 26+6)			
30-31 weeks postmenstrual age			
Perform initial ROP exam between:			
27-32 weeks (up to 31+6)	12/11/2018	AND	19/11/2018
4-5 weeks postnatal age			
	Complete? (tick)		
>32 weeks + BW<1501g	<input type="checkbox"/>		
4-5 weeks postnatal age			

Conclusions

- This project is still in its infancy and we plan to reassess practice following the introduction of the calculator to clinical practice. The calculator has received very positive feedback from both junior and senior staff.
- We hope that its use can help to maintain quality and safety on the neonatal unit, in addition to serving as an educational tool for the clinician with little neonatal experience.