British Association of General Paediatrics

1629 PRIORITIES FOR RESEARCH IN CHILDREN ACROSS THE UK AND IRELAND

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Background The need for research priorities for UK child health was highlighted by the RCPCH's report 'Turning the Tide'. The General and Adolescent Paediatric Research Network in the UK and Ireland (GAPRUKI) was set up in 2016 and aims to bring together general paediatricians around the UK and Ireland to develop research ideas and protocols and deliver multi-centre research alongside existing networks such as the NIHR Clinical Research Network (CRN).

Objectives To undertake a research prioritisation exercise based on gaps in the evidence that can reliably be delivered across the UK and Ireland.

Methods This study was carried out in four phases using a modified Delphi survey. The first phase asked for suggested research priorities: 'Thinking about your practice in the field of general paediatrics, both acute and in outpatients, what are the important research questions that need addressing?'. The second phase developed and ranked these suggested priorities (combining duplicate questions). The third phase refined the priorities and the final phase agreed on which were the greatest priorities (using the Hanlon Prioritisation Process (HPP)).

Results 61 out of 92 GAPRUKI members responded to the first round (66%), submitting 250 questions. Members were made up of general paediatric consultants, trainees, nurses and research personnel in the UK and Ireland. All participants worked in roles where research in children was relevant to their practice. For stage 2, GAPRUKI had grown to 103 members, of which, 61 responded (60%) ranking 92 questions in the second Delphi survey. The mean scores for these questions ranged from 3.13 to 5.77 (Likert scale of 1–7 where 7 = essential priority and 1 = not a priority). In stage three, 92 priorities were reviewed and refined by 23 members who attended a face the face meeting in September 2019. In the

final stage, HPP was applied and 14 priorities were identified and ranked. The ten highest priority areas are shown in the table with the Hanlon rank as well as the Delphi rank after stage 2 for comparison.

Conclusions Research priorities for child health in the UK and Ireland have been identified using a robust methodology. The next steps are for studies to be designed to address these priorities. Once studies are funded, GAPRUKI will work alongside the NIHR CRN to deliver these studies across centres in the UK and Ireland.

British Association of Perinatal Medicine and Neonatal Society

1630 IMPROVING DOCUMENTATION OF CENTRAL LINE INSERTION IN THE NEONATAL INTENSIVE CARE ENVIRONMENT

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Background In 2018 a national safety alert was issued after 3 cases of intraperitoneal extravasation of parenteral nutrition fluid occurred in preterm infants using Vygon double-lumen umbilical venous catheters.

The British Association of Perinatal Medicine (BAPM) subsequently released a practice framework addressing aspects of insertion, on-going use and care of central lines in the neonatal setting to standardise and improve central line care nationally.

After a local incident of abdominal TPN extravasation following UVC migration, a review of patient notes on our level 2 neonatal unit showed documentation was not meeting all the new BAPM standards and so an improvement programme was introduced.

Objectives To review central line documentation, against BAPM standards, after implementing an educational programme and procedure sticker.

Methods Two changes were introduced at the start of the study period:

- An information poster containing details of medical and nursing responsibilities was created and displayed in a prominent position in the Neonatal Unit.
- A procedure sticker for patient notes was designed. It contained 17 important data points, each included after consensus discussion between senior neonatal team members and after consulting the BAPM framework.

All babies (n=11) admitted to NICU and requiring central lines over a six month period (January to June 2020) were eligible for inclusion. Data was available and collected from 10 (91%). Medical notes were reviewed and relevant information extracted to evaluate compliance with BAPM standards and whether the 17 specific data points were recorded, and whether a procedure sticker had been used.

Results Over the 6 month period 10 patients had 16 central lines inserted.

A sticker was used in 10 cases (63%) and resulted in significantly better data completion (184/187 data points complete vs 47/85, 98% vs 55%, P value <0.01).

Abstract 1629 Table 1

Hanlon Rank (n=14)	Research area	Delphi Rank (n=92)
1	IV bronchodilator use in acute asthma	4
2	CPAP vs HFOV in bronchiolitis	1
3	Prednisolone use in viral wheeze	13
4	Inhaled corticosteroid use in childhood asthma	24
5	Use of rapid molecular bedside tests in febrile children	7
6	UTI sampling methods - acceptability to parents	74 =
	UTI sampling methods - accuracy	79 =
7	Constipation clinic delivery model	11 =
	Constipation clinic location of care	61 =
	Constipation clinic set-up	85 =
8	Paediatric clinic delivery in primary care	14
9	Medical treatment of reflux	17
10	Constipation medical treatment	47

Doctors used procedure stickers significantly less often than ANNPs (2/7 vs 9/9, 29% vs 100%, P value < 0.01) with paralleled fall in full data documentation

Conclusions The marked improvement in documentation quality when the procedure stickers were used, leading to better compliance with BAPM framework standards, demonstrated how simple interventions can contribute to patient safety.

Certain areas however continued to be poorly documented. In several patients this included not detailing whether both lumens aspirated, which had been specifically highlighted as a risk in the previous safety alert. Other less well-completed areas included those which could not be completed at the time of the initial procedure, such as any line adjustments made after radiological studies, highlighting the importance of returning to the notes to complete documentation even at the later stage.

ANNPs demonstrated much better compliance with sticker use and completion. This may reflect that they were directly involved in the sticker conception and design or that they are permanent staff, whereas the doctors regularly rotated to different areas and units.

Despite improvements, continued education (especially of doctors) is needed to ensure that the sticker is used in full by all relevant team members.

British Association of Perinatal Medicine and Neonatal Society

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A NATIONAL SURVEY OF VOLUME GUARANTEE VENTILATION IN LEVEL 2 AND 3 NEONATAL UNITS IN THE UK

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Background NICE guidance (NG124, 2019) recommends volume targeted ventilation as the first line of invasive ventilation in preterm infants. Volume Guarantee[®] (VG) Ventilation is one of the hybrid modes which incorporates sophisticated algorithms of traditional time cycled pressure limited technology to minimise volutrauma. While it has facilitated volume targeting by helping to deliver a desired tidal volume, its unfamiliarity has created a new set of problems.

As a 'microprocessor technology rich' mode, VG[®] is often prone to 'failure' requiring a switchover to conventional mechanical ventilation. There is limited understanding of these events.

Objectives To survey usage of VG[®] in the UK neonatal units to improve our understanding of this mode of ventilation.

Methods An online national survey of Level 2 and 3 units was conducted to evaluate senior neonatal and paediatric clinicians' experience and confidence with using VG[®]. We also carried out a local departmental survey to gain perspective of senior nursing, ANNPs and junior doctors.

Results We sent questionnaires to consultants and senior registrars in 63 tier 3 units and 82 tier 2 units in the UK and

received 179 responses. Locally, we received 24 responses from our nursing and medical team.

Nationally, while 100% were aware of the VG[®], only 29% of the respondents correctly identified volume targeted ventilation is in keeping with recommendations from NICE guidance NG 124. 83% and 74% of clinicians from level 3 and level 2 units respectively advised the default mode of ventilation in their unit is VG[®]. Of the units who use VG[®], 69% use it in conjunction with AC/SIPPV as opposed to 31% with SIMV. 20% of clinicians rated their confidence levels below 8 (10 being very confident and 1 being not confident at all) with its use.

39% reported experiencing 'failures' >10% of the time. The common reported reasons for 'failure' were a large ETT leak and flow sensor errors. Commonly cited reasons for not using VG[®] were: lack of experience, lack of suitable ventilators, not enough educational resources, and desirability to keep the type of ventilation used consistent in the unit.

Our local survey indicated that 30% of our staff rated their confidence in using VG[®] at less than 8 out of 10. An intra-unit variability in practice was also observed, with 61% of clinicians reporting they use VG[®] with PC-SIMV and 39% use VG[®] with PC-AC/SIPPV. 61% of the local respondents reported experiencing VG[®] 'failure' >10% of the time.

Conclusions The majority of senior clinicians continue to consider VG[®] as synonymous to volume-controlled ventilation. In spite of the majority of the units using it as a default mode, the concerns about the unpredictability due to frequent 'failures' remain. These unpredictable failures need to be addressed by well-designed studies to help clinicians not only prevent but also manage these failures.

Young People's Health Special Interest Group

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EXPLORING THE EXPERIENCE OF ADOLESCENTS IN A PAEDIATRIC EMERGENCY DEPARTMENT – TOO OLD OR TOO YOUNG?

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Background In paediatric emergency medicine (PEM), the age of transition from paediatric to adult emergency care is variable across countries. The UK has no agreed national standard on ED age limits and this arbitrary upper age limit is often set locally by commissioning groups reflecting service capacity and the population in which it serves. In Northern Ireland, adolescents often fall into the adult domain, with the regional paediatric emergency department (PED) catering for children up to fourteen years of age.

However, in response to Covid-19 surge planning, the PED age limit increased to age sixteen. This decision marked significant progress in the regional strategy to shift paediatric services to 'a target transition stage of sixteen' as well as coinciding with the NHS Long Term Plan to move towards 0–25 service models. Our retrospective survey aims to explore