intubated and ventilated within 6 hours of age. 9 babies had raised pulmonary pressures confirmed on echocardiography, while 7 did not have it prior to transfer to a tertiary centre. 14 babies received surfactant and inhaled nitric oxide (iNO), 6 babies required high frequency oscillation ventilation (HFOV) and none of the babies needed ECMO. Out of the 14 babies who received iNO, 8 received it within 8 hours of admission. Inotropic agents were started within 8 hours of admission for 11 babies, and within 12 hours for 15 babies. 14 babies were transferred to Level 3 NICU or PICU. All babies survived to discharge, 15 babies went home within 4 weeks of birth.

Conclusions More aggressive and robust treatment of PPHN with early ventilation, use of iNO and inotropes has eliminated the need of ECMO. In the past this unit had high rates of babies requiring ECMO - 3 babies a year on average. This study has shown a great improvement of outcomes for babies with PPHN despite the seriousness of the condition.

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PIP! ONE PAEDIATRIC DEPARTMENT'S QUALITY IMPROVEMENT JOURNEY

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Background The Paediatric Improvement Plan (PIP) is a 12 workstream plan covering the main paediatric areas in the hospital as well as key themes such as medicines management. It was constructed to ensure the department provides the level of care expected by the Trust and the Care Quality Commission (CQC). 27 of the actions within the plan address the CQC domain 'safe', 25 'well led', and four 'effective'.

Objectives The main aims were:

- Documentation of operational policies and practices.
- Ensuring nursing training competencies were met, documented and used to facilitate safe rostering.
- Standardising paperwork and practices.
- Improving communication around governance.
- Ensuring children and young people cared for outside the paediatric department were provided with equitable care.

Methods The PIP started with 50 points to be actioned, and review identified a further six. These were split into three time divisions based on importance and feasibility of implementing the recommendations. The majority fell into the 0–6 month timeframe (other timeframes are 6 months–2 years and 2–5 years). Points were marked as 'Red' if no action had been taken, 'Amber' if action was in progress, 'Green' if actions were complete, and 'Blue' if the impact had been evidenced.

Results Over a four month period, 34 (92%) 'Red' actions have been addressed and 10 completed ('Green' or 'Blue'). There are now no 'Red' actions in the 0–6 month timeframe.

Key achievements:

1. A rapid access clinic has been established to see patients who require urgent but not emergency review. It also addresses training needs of paediatric registrars.

2. Evidencing and documentation of nursing competencies such as life support training has improved and is factored into rostering.
3. Training on nurse-led discharge, medicine management, 'TTA' pre-packs and controlled drugs has resumed.
4. Seven operational and clinical policies were written, and another five are in progress. Many involved clinicians who had not previously written such documents.
5. While awaiting the Trust wide introduction of governance boards, a monthly paediatric governance newsletter was designed. Neonatal governance meetings were reintroduced and a monthly medicine management meeting started.
6. A neonatal quality improvement group now meets monthly.

Conclusions A written plan with clearly documented actions, responsible owner and timeframes proved invaluable, as did having a co-ordinator with dedicated time. Involving and motivating the whole multi-disciplinary team was perhaps most crucial to the success of the PIP.

My background as a paediatric registrar allowed me to see through a clinical lens and understand competing demands. During the four month period, 11 junior doctors became involved in improvement projects, and a number joined the neonatal quality improvement group.

The COVID-19 pandemic created unique challenges. Demands on the workforce were immense and there was little spare capacity to take on additional improvement work. Many face-to-face courses and training sessions were cancelled or moved online. This remains a challenge to addressing outstanding training requirements, particularly life support training for nursing staff.

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STANDARDISING CARE – NORTHERN IRELAND REGIONAL PAEDIATRIC GENTAMICIN CHART

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Background Gentamicin is one of the most commonly reported medications associated with drug errors amongst paediatric inpatients.¹ Such errors include inappropriate dosing, insufficient monitoring and lack of awareness of its role in acute kidney injury (AKI). As with other aminoglycosides, gentamicin side-effects are dose-related, highlighting the significance of dose calculation and therapeutic monitoring.

Collaborative services is one of the key recommendations from the RCPCH standards for paediatric care.² Within Northern Ireland there is a well-established regional neonatal gentamicin prescription chart, however, it has previously lacked a paediatric equivalent. Lack of standardisation of practice across units is a common source of frustration for paediatric trainees and trainers. It also contributes to variations in care across Northern Ireland.

Objectives To improve gentamicin prescription, drug monitoring and avoidance of nephrotoxicity, through the design, implementation and evaluation of a standardised gentamicin prescription chart for children (one month to sixteen years old). Particular emphasis was placed on dose adjustment and close monitoring in renal impairment, and ideal-body-weight