Paediatric Clinical Leaders: Service Planning, Provision and Best Practice

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ROTA INNOVATION AND E-ROSTERING IMPROVING TRAINEE EXPERIENCE IN A GENERAL PAEDIATRIC DEPARTMENT

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10.1136/archdischild-2021-rcpch.444

Background Junior Doctor rotas have gone through a number of iterations over the years. Rigid, rolling rotas with fixed annual and study leave have been opposed by trainees and the BMA ¹. They leave junior doctors unhappy, burnt out and disengaged. This has a negative effect on patient care ³ and serious consequences for retention and recruitment in Paediatrics and Healthcare at large.

Objectives To introduce a new electronic rota management (HealthRota) system which will facilitate self-rostering, improve adherence to the BMA and RCPCH Trainee Charter ² recommendations and improve junior doctor wellbeing.

Methods Twelve Junior Doctors (and senior doctor equivalents) starting a General Paediatric Medicine post will complete a survey of fourteen questions about their experiences in their previous rota (Non-HealthRota). They will then be introduced to HealthRota and repeat the survey towards the end of their Paediatric post. The survey included questions on life: work balance, rota design, transparency, access, leave requesting, annual leave, study leave, clinics and flexibility.

Results Overall there was on average a 1.3 point improvement (on a 5 point Leichardt scale) across all questions, with the various Non-HealthRota experiences having a satisfaction score of 3.0, whilst e-HealthRota had a score of 4.3. There were no questions where HealthRota was inferior to other rotas. The biggest improvements were seen with 'Requesting Leave', 'Access the rota 24 hours a day' and 'Feeling of Ownership'. There were many positive comments in the open section including HealthRota was 'Much less Stressful', 'Absolutely fantastic' and 'A breath of fresh air'.

Conclusions Despite COVID-19 impacting on the junior doctor experience. HealthRota still proved to be a much more popular and efficient system across all important aspects of medical rotas.

Paediatric Critical Care Society

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THE WALES INFANTS' AND CHILDREN'S GENOME SERVICE' (WINGS): DIAGNOSTIC RAPID WHOLE GENOME SEQUENCING FOR UNWELL CHILDREN WITH A SUSPECTED RARE GENETIC DIAGNOSIS

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10.1136/archdischild-2021-rcpch.445

Background Caring for severely ill infants and children necessitates the use of tremendous NHS resources. As a significant proportion of unwell neonates and children have a rare underlying genetic diagnosis, it is well recognised that genetic testing can play an important role in their care. In recent years, rapid whole genome sequencing (rWGS) has been shown to have a positive impact on these patients. Specifically, previous research studies and projects that have adopted a rWGS approach have reported that it increased their diagnostic rate and reduced time to diagnosis. It also substantially reduced healthcare spending due to fewer days in hospital and avoided unnecessary surgeries and other invasive procedures.

In 2019, the All Wales Medical Genomics Service formed a multidisciplinary working group to set up a rWGS service for acutely unwell infants and children. The group consisted of intensive care clinicians, geneticists and laboratory staff. New diagnostic testing infrastructure was established and a bespoke diagnostic pipeline to identify causative genetic variants was validated. In April 2020, the 'Wales Infants' and children's Genome Service' (WINGS) was launched. Although rWGS is increasingly being adopted internationally, WINGS is the first commissioned NHS diagnostic rWGS service for acutely unwell children within the UK.

Patients are eligible for the service if a monogenic cause for their illness is suspected, a DNA sample from both biological parents is available, and a timely genetic diagnosis might alter clinical management. The service is available to paediatric and neonatal patients in intensive care units (ICUs) across Wales, and Welsh children in ICUs elsewhere in the UK.

Objectives To highlight the role of rWGS in the diagnosis and subsequent management of acutely unwell children and infants.

Methods Phenotypic information and test results were prospectively collected over an eleven month period from service launch.

Results Seventeen families have completed testing to date. Pathogenic or likely pathogenic variants have been identified in seven children. Additionally, a 'hot' variant of uncertain significance in a candidate gene was reported in another patient. Mean time to reporting was 10 calendar days (range 6–26 days).

These results have had significant health benefits for this patient group, including immediate clinical management changes. For example, one child was shown to have interleukin-2 receptor β deficiency. Her timely genetic diagnosis had a direct impact on her clinical care, and a decision was made to proceed with a bone marrow transplant.

Conclusions In summary, we have introduced the UK's first national diagnostic rWGS service for acutely unwell children. The project's success is based on the participation and collaboration of multidisciplinary teams. WINGS continues to have a positive impact on patient care. The current diagnostic yield of 41% is similar to previous research projects in the UK and other services internationally.

British Association of Perinatal Medicine and Neonatal Society

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PREVALENCE AND ASSOCIATIONS OF PNEUMOTHORACES IN A LEVEL 2 NEONATAL UNIT

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10.1136/archdischild-2021-rcpch.446