G107(P) THE INTERGROWTH-21ST NEURODEVELOPMENT PACKAGE: A NOVEL MULTI-DIMENSIONAL ASSESSMENT OF EARLY CHILD DEVELOPMENT

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Background Globally, 250 million children under 5 years of age are at risk of not achieving their developmental potential. One of the rate-limiting steps to the scalability of child developmental assessments is their reliability on specialist professionals. The INTERGROWTH-21st Project has developed a neurodevelopment Package for rapid, holistic, and robust assessment of young children.

Objectives

- To describe the development, characteristics and implementation of the INTERGROWTH-21st Neurodevelopment Package
- To explore whether field workers from Brazil, India, Italy, Kenya and the UK can (a) administer and (b) score the INTER-NDA component of the Package comparably with healthcare professionals.

Methods The INTERGROWTH-21st Neurodevelopment Package measures (i) visual acuity and contrast sensitivity (using the Cardiff Cards) (ii) cortical auditory processing, using the auditory novelty odd-ball paradigm administered through gel-free, wireless electroencephalography (iii) cognition, language skills, motor skills, behaviour, attention and social-emotional reactivity using the 53-item INTER-NDA and (iv) sleep using actigraphy; in 22 to 26 month olds. Data are collected through a tablet-based application, the NeuroApp.

The agreement between the INTER-NDA and the BSID-III was evaluated in a sample of 81 infants from Oxford, UK. To determine whether non-specialists can implement the INTER-NDA, protocol adherence and INTER-NDA domain scores were compared between field workers and healthcare professionals.

Results The administration times of the Package and the INTER-NDA are 45 and 15 min respectively. To date, more than 2500 children in Brazil, India, Italy, Kenya, Pakistan, South Africa, Thailand and the UK have been assessed.

Interclass correlation coefficients between the BSID-III and the INTER-NDA for cognitive, motor and behaviour domains were between 0.745 and 0.883 ($p < 0.001$), with little to no bias in the Bland-Altman analysis.

INTER-NDA protocol adherence is 92.9% and 89.8% for healthcare professionals and field workers respectively. There are no significant differences in INTER-NDA scores between the groups.

Conclusions The INTERGROWTH-21st Neurodevelopment Package is a rapid, multi-dimensional ECD instrument. The INTER-NDA component shows good agreement with the BSID-III for the 2 year age group, despite its short administration time, and can be administered effectively by non-specialists.

G108(P) DON'T WASTE TIME! IMPROVING DOCUMENTATION FOR PLANNED PAEDIATRIC MEDICAL ADMISSIONS TO A TERTIARY CHILDREN'S HOSPITAL

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Background and aims Elective medical or specialty admissions often arrive out-of-hours when the admitting team is not available to commence care. Clearly communicating plans for investigation and management to the on-call team can prevent delays to management of these children. This quality improvement project aimed to ensure over 90% of elective medical admissions had a written plan available and treatment started within six hours by September 2017.

Methods Standard Quality Improvement methodology was used, including analysis using a driver diagram and PDSA cycles. Data was collected from the charts of electively admitted children every month and recorded whether there was a written management plan, the location of any plan, whether notes were available and clerk in completed and whether planned treatment was started within six hours. The data was analysed using a run chart. Three measurements were obtained between changes to facilitate identification of outliers. Interventions to improve compliance with admission plans included raising awareness through staff training/teaching sessions, providing written guidance to consultants and empowering the bed managers to address the whereabouts of admission plans with the responsible consultants at time of first contact.

Results Fewer elective admissions occurred over the winter period than expected as beds were occupied by emergency admissions. A large portion of elective admissions were patients admitted for sleep studies, GI procedures or investigations, metabolic investigations or planned antibiotic courses (Cystic Fibrosis). Of those studied, initially between 20%–60% had both a written plan available and planned treatment started within six hours. Following simple interventions 60%–100% of patients met the standard, however, variability in the data and small numbers mean that work will need to continue to embed these changes so the results are sustained.

Conclusions Simple interventions and raising awareness improved adherence to standards for elective medical admissions, however further intervention and support is needed to make this sustainable.

G109(P) ROTHERHAM RAPID ACCESS CLINIC: AN AMBULATORY CARE MODEL SERVICE EVALUATION

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Introduction Ambulatory care services such as Rapid Access Clinics (RAC) improve access to specialist secondary care and potentially reduce unnecessary referrals for acute assessment/admission. Such clinics are endorsed by Standard 2 in Facing

the future together for child health. XX Hospital established a consultant delivered RAC in 1995 and provides 16 thirty minute appointments weekly for children less than 16 years old. Referrals are made by fax and bookings are made 2 working days in advance. If no slots are available, the referrer is re-directed to the on-call paediatric registrar to discuss alternatives.

Service evaluation A service evaluation conducted in 2016 established the spectrum of conditions accessing the service, referral appropriateness and gave insight into the patient journey alongside parental perceptions of the service provided. It was the intention of this evaluation to identify areas for improvement, to initiate change and to ultimately reduce the growing pressure on inpatient services by enhancing the RAC service.

Methodology Data was collected prospectively for patient's attending RAC over 5 weeks using a proforma and a parental/patient questionnaire. Numeric and qualitative data was then analysed.

Results Participating consultants deemed 42.6% of RAC referrals to be appropriate and a broad range of diagnoses were seen. 49% of referrals were refused due to lack of appointment availability. 100% of patients/parents seen were happy with the consultation outcome and 93.6% were happy with how quickly their child was seen despite 52% stating their initial preference was to be seen on the day of referral.

Conclusion As a result of this service evaluation, consultant led triaging of referrals is being implemented to ensure all referrals are appropriately booked into the right clinic and to free up slots for those who are being refused. Hopefully, when re-evaluated, improvements will be seen and patient satisfaction maintained.

Our presentation aims to inspire NHS trusts to set up RACs to improve efficiency of service delivery and reduce the demand on expensive inpatient assessment and overnight stay provision. Given the NHS financial climate, this type of a service is worthy of consideration.

G110(P) ABSTRACT WITHDRAWN

G111(P) TRAINEE LED IMPROVEMENT PROJECT IN A PAEDIATRIC DAY CASE UNIT

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Aims This ST2–3 Paediatric trainee led project aimed to provide structure to the medical Paediatric Day Case Unit (DCU), improving its effectiveness and patient safety.

Methods I identified deficiencies in the organisation and patient flow of our medical DCU, which impacted on patient safety, work load, clarity of roles and responsibilities and support for the junior doctors. Suspensions were confirmed after completing an online survey from colleagues.

To address those problems I analysed and documented the work flow. Two main patient groups of patients were identified; those attending as non-scheduled-outpatient appointments (NSOPs) for bloodletting and day admissions requiring a bed. Patient flow was rationalised using our electronic medical record system (TrakCare).

To improve patient safety, efficiency and define roles and responsibilities with regards to patients attending as NSOPs, NSOP request forms were designed and implemented. To increase efficiency and patient safety for day admissions, self clerking history taking forms (completed by parents/carers) and junior doctor clerking proformas were designed and implemented. The proformas are specific for the different patient groups attending for infusions, vaccinations, oral challenges and oncology interventions.

New doctor induction now includes a detailed handbook and a DCU teaching session.

Results The medical Paediatric Day Case Unit is now more efficient with all the developed changes in place and delivering patient care. NSOP request forms have been officially adopted and re-auditing has led to an incremental increase in their use and evolution of their structure. Day admission proformas have been adopted and reviewed via feedback from speciality nurses and consultants. The effects of above changes were assessed by questionnaires to junior doctors and showed a reduction of patient safety concerns. I have initiated ongoing quality improvement projects that ensure that the unit's performance is continuing to evolve.

Conclusion This project demonstrates how a trainee led project over 18 months can make significant improvements and lasting change. The right environment and support can enable level 1 trainees to identify a need of improvement, develop improvement measures and implement those in collaboration with professionals at various levels.

G112(P) GIVING A VOICE TO 'DOCTORS IN TRAINING': THE ROLE OF TRAINEES' MEETINGS IN PROVIDING A FORUM FOR DISCUSSION AND INITIATING SERVICE IMPROVEMENT IN DISTRICT GENERAL HOSPITALS

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Within our deanery, monthly 'Doctors in Training' meetings are run at two District General Hospitals. These meetings are chaired by a selected trainee and attended by all junior doctors within the paediatric department. Before each meeting, members of the paediatric multidisciplinary team are invited to suggest topics for discussion and share information learnt from clinical governance, morbidity and mortality and child protection forums.

During the meetings this information is shared with the trainees to keep everyone updated on key departmental policies and changes. Trainees are then given a safe forum to give feedback and discuss any positive aspects of working in the department, as well as areas for improvement. The trainees make suggestions for change based on these discussions. Minutes from the meeting are circulated to the junior doctors as well as to all the consultants in the department.

The meetings have proved an invaluable link for information sharing between consultants and trainees in these paediatric departments. They are an opportunity for senior trainees to provide support to junior members of the team as well as developing their own management skills. 100% of consultants and doctors in training surveyed across the two hospitals agreed or strongly agreed that these meetings are a good idea and 100% felt that positive changes have been made in the