Background and aims A reduction in diagnostic errors is key to patient safety. Paediatric consultants and trainees were surveyed to elicit their perceptions regarding the frequency, contributing factors, and preventative strategies of diagnostic error.

Methods This online survey was pre-tested and administered using SurveyMonkey. Participants were invited to participate by email. Weighted averages of ranked outcomes were computed. Friedman's test was used to assess non-randomness of ranking.

Results The overall response rate was 38% (n = 310). Respondents included paediatric consultants (31.6%) and trainees (65.9%). 50% of Consultants reported making a diagnostic error at least 1–2 times per quarter, this frequency was significantly higher among trainees (75.9%) (p = 0.027). 36.4% and 29.7% of trainees and consultants respectively reported making a diagnostic error that results in patient harm at least once or twice per year (p = 0.69).

Inadequate staffing levels and/or inexperience of healthcare staff was the most commonly reported system-related factor contributing to diagnostic error. Inadequate data gathering and failing to consider other possible diagnoses were the most common causes of cognitive process breakdown. Excessive workload and physician fatigue were highly ranked additional factors. With regard to reducing diagnostic error, asking for second opinions and increased access to consultants respectively reported making a diagnostic error that results in patient harm at least once or twice per year (p = 0.69).

Conclusion This study highlights diagnostic error as a potentially under-recognised patient safety issue. A few key systemic- and cognitive-related factors are identified, while many factors contribute equally to diagnostic error. Further research should focus on methods to instruct clinicians on strategies to reduce recurrence.

PS-121

IMPROVING THE DELIVERY OF NEONATAL RESEARCH - DEVELOPING AN INFORMATION LEAFLET FOR PARENTS

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Background Medical and technological developments within Neonatal Care over the last decade have increased the demand for Neonatal Research. ELCH's Neonatal Unit is highly research

Abstract PS-121 Figure 1 Key topics of information valued by parents

Abstract PS-121 Figure 2 Key topics of information valued by parents

active. Parents can be approached for up to 5 or 6 studies. As a consequence, we observed an increased need for a sensitive management of multi-study approaches.

Aims As part of a service improvement project to improve the delivery of Neonatal Research, we aimed to develop an information leaflet for parents of infants admitted to the Neonatal Unit.

Methods We invited parents to help construct the leaflet involving them in all stages of development of the leaflet and worked closely to ensure multidisciplinary input. We did a survey asking parents to elect their favourite version of the leaflet from three different layouts.

Results All parents found the leaflet helpful (n = 18). The preferred version was mostly described as "clear" and "informative". Parents selected pictures that they would like to see in the leaflet and considered them helpful. The topics they valued the most are represented in Figure 1.

Conclusions Parental involvement in all stages of research can present many opportunities for service improvement. Enhanced recruitment rates and project coordination, optimised parental experience of care and increased public awareness are some of the potential advantages. Implementing patient involvement is key in making research more meaningful and in developing successful translational research.

PS-122

THE EFFECTS OF ECONOMIC DOWNTURNS ON CHILD MORTALITY: A GLOBAL ANALYSIS, 1981–2010

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Background The effects of economic downturns on population health in high-income countries have been well studied, but less so in low- and middle-income countries. We analysed how

economic downturns affect child mortality both globally and among subgroups of countries of variable income levels.

Methods Economic and health data, and child mortality data was obtained from the World Bank and Institute for Health Metrics and Evaluation for 204 countries covering the years 1981–2010. We used multivariate regression models, to analyse the effect of changes in the growth rate of GDP on health child mortality, controlling for country-specific differences in healthcare infrastructure, population size and demographic structure, and using a dummy variable for economic downturns.

Results At the global level, downturns were associated with significant ($p < 0.0001$) deteriorations in child mortality: neonatal (coefficient: 1.11, 95% CI: 0.855, 1.37), post-neonatal (2.00, 95% CI: 1.61, 2.38), child (2.93, 95% CI: 2.26, 3.60) and under-5-years of age (5.44, 95% CI: 4.31, 6.58) mortality rates. Stronger (larger falls in the growth rate of GDP/capita), and longer (lasting two years rather than one) downturns were associated with larger, significant, deteriorations ($p < 0.001$). During economic downturns, countries in the poorest quartile experienced greater deteriorations in neonatal mortality (one-and-a-half-fold), post-neonatal mortality (three-fold), child mortality (nine-fold) and under-5-mortality (three-fold), than countries in the wealthiest quartile ($p < 0.0005$). For 1–5 years after downturns ended, each mortality measure continued to display significant deteriorations ($p < 0.0001$).

Conclusions Economic downturns occur frequently and are associated with significant deteriorations in child mortality, with worse declines in lower-income countries.

PS-123 THE IMPACT OF THE EUROPEAN CLINICAL TRIAL REGULATION ON PAEDIATRIC RESEARCH: ACHIEVEMENTS AND REMAINING CONCERNS

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Background and aims On 2 April 2014 the European Parliament adopted the European Clinical Trials Regulation that replaces the European Clinical Trials Directive of 2001. This paves the way for greater harmonisation of European paediatric research along with setting new rules for engaging clinical trials with vulnerable populations, including children.

Methods This paper examines key points in the European Clinical Trial Regulation that will affect the paediatric community in developing new medicines for children as well as impact nearly all areas of European paediatric research.

The following important developments are explained:

- the distinction between a 'clinical trial' and a 'clinical study',
- the new requirements for registering clinical trials on publicly accessible databases,
- requirements to report clinical trials,
- new definitions of 'vulnerable populations' and how this impacts paediatric research,
- informed consent rules,
- requirements for ethical review and their potential impact at national and institutions levels, and
- the requirements for publishing the results of clinical trials.

Results The intended result of the EU Clinical Trial Regulation is to improve the environment for clinical research in Europe. It is also intended to provide greater protections to research subjects while improving the environment for academic research.

Conclusions Important hurdles that arose in the context of the previous Clinical Trials Directive have been addressed. New challenges, however, will arise that affect both the ability to organise clinical trials among paediatric research centres as well as financial implications for those leading paediatric research.

PS-124 A 8-YEAR LONG SUCCESSFUL PROJECT OF GLOBAL HEALTH EDUCATION FOR PAEDIATRIC RESIDENTS: THE JUNIOR PROJECT OFFICER (JPO)

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Background The pressure to incorporate issues of global health into pre-/post-graduate medical curricula is increasing in order to provide new generations of doctors with a multicultural perspective on health care. Herein we update the experience of a partnership between the Paediatric Residency Program (PRP) of the Padua University (Italy) and the Non-Governmental Organisation 'Doctors for Africa CUAMM' (CUAMM), recently published in the Italian Journal of Paediatrics, which aims to offer residents the opportunity to attend a 6-month elective in Africa, called 'JPO'.

Methods The constitutive elements of the JPO are: a memorandum-of-understanding between Padua University and CUAMM; periodic site-visits; candidate selection process; pre-departure educational course; preceptorship in Padua and Africa; personalised learning objectives and job description; hands-on experience; evaluation; feed-backs/reports. The African hospitals (Beira- Mozambique and Wolisso/Ethiopia) were chosen based on the presence of paediatrics in staff from CUAMM.

Results Between 2006 and 12/2013, 16 residents, aged 27–33 years, three attending the III, ten the IV and three the V year of residency consecutively joined the JPO. All worked in paediatric in-patient units; eight in out-patient clinics, six in emergency rooms, nine in community health centres. Thirteen were involved in teaching activities; six in clinical research. All residents completed successfully the 6-month elective and achieved their learning objectives.

Conclusions To our knowledge no other European PRP provides international electives based on such strategic framework. We updated this experience convinced of the importance of stimulating a debate on this matter, of generating criticisms, ideas and hopefully inspiring similar experiences.

PS-125 IMPROVING SAFETY CULTURE, STEADY CLIMBING THE MOUNTAIN

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Introduction There is a growing awareness of the importance of safety culture and a more positive patient safety culture is believed to be related to fewer adverse events in hospitals. The aim of this study was to investigate whether safety culture changed during a five years period with active safety management in a Dutch paediatric university hospital.

Methods A survey was undertaken amongst paediatricians and specialised nurses by means of the Hospital Survey on Patient