COMPARISON BETWEEN POINT OF CARE (POC) CRP ESTIMATION AND LABORATORY CRP VALUES IN PAEDIATRIC ASSESSMENT UNIT (PAU)

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**Background** Point of care tests (PoCT), recent trend in healthcare, helps provide rapid ‘on site’ results. These are considered to have potential to improve outcomes by optimising prescribing decisions, reducing referrals, improving efficiency of care and reducing length of stay in hospitals. CRP estimation is one of the PoCT done in children. There is however no published data for PoCT CRP performed in hospital setting especially for children presenting acutely to paediatrics. A bedside CRP machine installed at our Paediatric Assessment Unit (PAU) provides result in 4 mins with one drop of blood. The machine has a range of CRP values between 5–200 mg/L.

**Aim** To compare CRP values (PoCT vs Lab) in children presenting to PAU.

**Method** PoCT test was performed along with routine lab blood tests in children presenting to our PAU. This data was collected prospectively over 5 months between January and May 2017.

**Results** A total of 100 paired CRP samples collected during that time. The children were aged between 1 month and 16 years. Of the 100 children, 35 had PoCT CRP <5 mg/L and 14 children had value >100 mg/L. On analysis of the PoCT and lab CRP results, most of the values were within ±2 SD on a Bland Altman Plot.

**Summary** The above findings were presented at a joint paediatrics and pathology meeting in our Trust. Decision was made to continue PoCT CRP in our PAU as an alternative to lab testing. Medical and nursing staff found that the PoCT machine was reliable, easy to use and gave results within 4 min. The other advantages are that this requires a small amount of blood (1.5 μL) and quick results compared to lab result. We found that those children who had CRP <5 mg/L and clinically well were discharged promptly helping in improved flow in PAU. As staff were increasingly confident of the results of this PoCT machine, this is now being used for serial CRP monitoring and as a reliable alternative to laboratory testing.

TACKLING ENTRAINED CULTURE AND PATIENT SAFETY ERROR THROUGH IMPROVEMENT AND EMPowerment of trainees during medical HANDOVERS IN A PAEDIATRIC TEACHING HOSPITAL

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**Aims**

- To improve the quality of information communicated at medical handovers to reduce the risk of patient safety errors.
- To empower junior trainees to lead medical handovers with the intention of improving patient ownership.
- To reduce inefficiencies during medical handovers and maximise efficiencies whilst delivering clinical care.

**Methods** Problems and ideas were brainstormed with the Acute Receiving Unit (ARU) team, identifying key themes and targets for intervention. A series of changes were implemented utilising 12 Plan Do Study Act (PDSA) cycles with collaborative team reviews of data to determine the next cycle intervention. Key interventions were: facilitating a junior-led handover supervised by consultants; providing guidance regarding model patient handovers; improved task allocating utilising ‘mini teams’ and the introduction of an active pause following the post-take handover to ask questions or discuss staff or services issues (named ‘Robin’s Pause’).

Error data shared with the paediatric team via departmental instant text message group.

**Results** On average 185 prescriptions reviewed per week.

Mean error rate 5.2% and worst error rate 12.6%. The most common errors were incorrect or missing frequency and incorrect dose. There was an initial see-saw error rate and a period of improved prescribing in July and August 2017 which we felt was secondary to the teaching highlighting common errors.

However this improvement was not sustained. We noticed a decrease in errors when the ward was less busy which is consistent with prescribers reporting frequent interruptions and increased errors when there were new medical staff. As a result of feedback from prescribers we have made multiple interventions including

- sharing anonymous ‘error of the week’ examples on group text message service as a quiz with answer,
- new medication guideline for surgical and orthopaedic for their most frequently prescribed medications,
- departmental teaching, and
- prescribing station with prescribing resources to encourage prescribers to move to an interruption-free zone.

**Conclusion** Although we have not yet been able to demonstrate sustained improvements in prescribing error rates, we believe multiple small changes and a strong STAMP team are most likely to bring about a culture of safer prescribing within our department. We feel that our most significant steps so far are the teaching sessions and improved personal feedback to prescribers. We hope the new prescribing station will decrease interruptions during prescribing. We need to reach out to our junior surgical and orthopaedic colleagues who do not attend our teaching and may benefit from additional prescribing support.

STAMP: A LONG TERM, ONGOING PRESCRIBING QI PROJECT TO IMPROVE PRESCRIBING AND MEDICATION SAFETY

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**Aim** We describe an ongoing quality improvement project focusing on paediatric prescribing for medical, surgical and oncology patients in a district general hospital. The project is called STAMP – ‘Safe Treatment and Administration of Medicine in Paediatrics’. The aim of the project was to identify why local errors were happening, improve feedback to prescribers when errors were made and to decrease the rate of these errors through multiple interventions.

**Method** Divisional lead pharmacist collected weekly error data for nine months. Individual feedback given to prescribers.