Reducing Medication Errors – A Tripartite Approach
Small Steps – Better Outcomes

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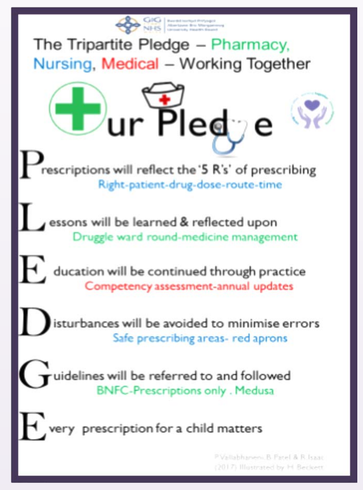


Background

Paediatric medication errors have everyday potential to cause unintended harm[1], possibly due to the extra challenges of prescribing and administering medication to this patient group. According to the Health and Care Standards Framework (2015), every person in Wales has the right to receive excellent quality care. This includes minimising unintended harm during hospital admissions. In January 2015, ABMU quality strategy was published identifying the steps taken to improve the quality of our services by ensuring that quality assurance and quality improvement is embedded in everything we do.

Aim

To reduce paediatric medication errors on a busy general medical ward

Method

Audit

- A prospective audit was undertaken using a data collection form, looking at the number and severity of errors from May 2016 to July 2016.
- The errors were graded as per the EQUIP[2] study.
- Results were analysed using Microsoft Excel.

Action

- A study afternoon was arranged in August 2016 to highlight the common themes behind the medication errors.
- A multidisciplinary brainstorming exercise was conducted to gather suggestions on reducing medication errors.
- A tripartite (three-party) education package (Figure 1) was introduced.

Re-audit

- After six months of intensive education, a prospective re-audit was undertaken between December 2016 and January 2017 using a data collection form.
- The results were analysed using Microsoft Excel.

Figure 1: The Tripartite Education Package

Medical (All Trainees)

- Complete a **mandatory** online module designed by the Royal College of Paediatrics and Child Health, which provides an overview of the need for safe prescription practice in children and common themes leading to errors.
- Further teaching was provided in departmental teaching meetings and the lead paediatric pharmacist undertook targeted teaching.

Nursing

- An in house competency package was developed based around the principles of the '5 rights' of medication administration, the Health Board controlled drug policy and the All Wales Policy for Medicines Administration, Recording, Review, Storage and Disposal.
- Through one on one sessions with the practice development nurse, staff were coached to follow the **five Rs** of Right Drug, Right Dose, Right Time, Right Route, and Right Patient.

Pharmacy

- Lead pharmacist introduced an education tool as advocated by Meds IQ called '**Druggle**'[3] on the ward.
- At the end of the safety 'huddle' the pharmacist discusses medication interventions on a daily basis that may have happened on the ward.
- Through this tool formative education was provided to junior doctors and nurses.

Results

Figure 2: Graph Showing Percentage of Children who had Medication Errors during the Audit & Re-Audit

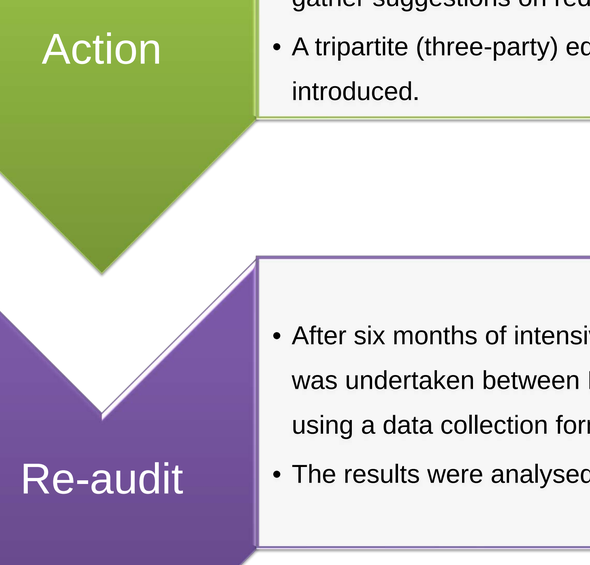
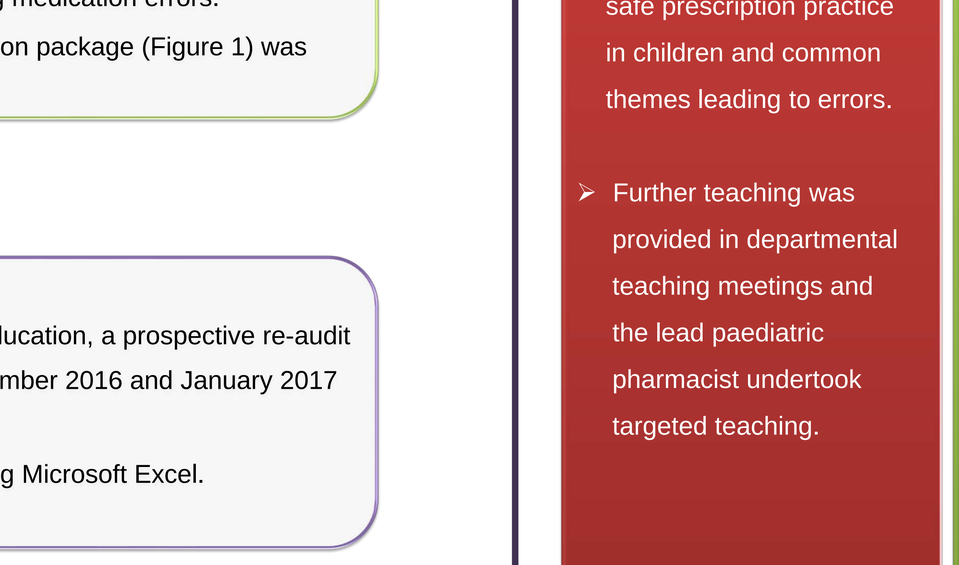


Figure 3: Graph Showing Severity of Errors during the Audit & Re-Audit



Discussion

- The results of the initial audit showed that 88.6% (141/159) of children admitted had medication errors. 61.2% (87/141) of errors were minor, 34.7% (49/141) significant, 2.8% (4/141) serious and 1.3% (1/141) potentially lethal.
- The results of the re-audit showed that 12.1% (57/470) of children had medication errors. 77.2% (44/57) of errors were minor and 22.8% (13/57) were significant. There were no serious or potentially lethal errors reported.
- **This showed an overall reduction of 76.5% medication errors in the children admitted following the introduction of the education package.**

Conclusion

In conclusion, the education package through the tripartite approach has achieved a substantial change in the overall rate of prescription errors. We believe medication errors are a significant but preventable cause of harm in children and young people. To ensure this change of practice is sustained we aim to continue the emphasis on education and change management to improve patient safety.

References

1. Cass H. Reducing paediatric medication error through quality improvement networks; where evidence meets pragmatism. *Arch Dis Child*, 2016;101:414-416.
2. EQUIP final report. http://www.gmc-uk.org/FINAL_Report_prevalence_and_causes_of_prescribing_errors.pdf_28935 150.pdf (accessed 01/08/16).
3. DRUG-gle (Druggle). http://www.medsiq.org/tool/drug-gle-druggle (accessed 01/08/2016)