

evidence was then communicated to the consultant who directly discussed it with the individual responsible, either face-to-face, or via email. Individuals' results were published monthly. The intervention was timed so that it would there would be no staff change over.

The information was relayed back to the multi-disciplinary team in a teaching session, highlighting the numbers and types of errors using graphical evidence.

Strategy for change The implementation was simple once agreement had been reached with the pharmacy team who wished to prioritise a reduction in prescribing errors. The main stakeholders involved were the pharmacy team, senior nurses and consultants. Results were disseminated as previously described. It was expected that change would occur slowly initially, with the project needing to be ongoing as medical staff rotate every four months.

Measurement of improvement A total of 204 errors were identified in the four months prior to the zero tolerance policy being implemented, and assigned according to staffing posts. These included 26 errors at consultant level, 53 at registrar, 74 SHO errors, and 51 for other prescribing posts.

In the first month of our project being initiated, there were a recorded 74 errors, with the biggest reduction being between this and the second month (34), with a further 34 errors in the third month, reducing to only 10 by the fourth month. This demonstrated a clear trend in reduction of prescribing errors.

Effects of changes There was a dramatic decrease by 81% in total errors.

Additionally there has been a generalised perceived but unmeasurable improvement in efficiency of distribution of medication.

Lessons learnt This was a surprisingly simple intervention with excellent results. However it has been hard to maintain momentum at continuing this analysis.

Message for others This was a simple project to implement and to demonstrate improvement. It improves individual accountability and self-awareness.

There is potential to develop a phone application capturing errors and sending feedback to prescribers, producing a league table.

Since incorrect medical prescribing has been identified as being the single most preventable cause of patient harm (previous studies identifying errors in one in eight charts), this could form part of a formal assessment in the e-portfolio, with doctors providing annual error reports.

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IMPROVING PAEDIATRIC PRESCRIBING PRACTICE IN A DISTRICT GENERAL HOSPITAL THROUGH IMPLEMENTATION OF A QUALITY IMPROVEMENT PROJECT

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Context This quality improvement project was carried out in the paediatric ward of a district general hospital in Northern Ireland. This work was carried out as part of a cross-border patient safety collaborative organised by the Co-operation and Working Together Group (CAWT).

Problem Prescribing errors are a recognised cause of adverse incidents having a direct effect on patients. They impact on the doctor-family relationship and result in breakdown of trust. The

existing incident reporting system underestimates medication prescribing errors.

Assessment of problem and analysis of its causes A retrospective analysis of prescribing errors between January and December 2013 identified two errors, felt to be secondary to underreporting. Subsequently a baseline audit was performed reviewing patient demographics, allergy status, generic prescribing, drug dosage, timings, drug reconciliation, antibiotic prescribing (indication and duration) and legibility. Twelve drug charts were analysed highlighting 32 errors. A driver diagram identified three components contributing to prescribing errors and relevant tests of change were developed. The three primary drivers included; education and communication, practical prescribing changes and medicine reconciliation.

Intervention Seven tests of change were implemented comprising of: presentation of baseline data, staff completion of an online learning module, introduction of a safety notice board, inclusion of data to the nursing safety brief, introducing a medication administration checklist, ensuring staff access to a regional patient information system, appointment of a ward pharmacist and finally developing a pocket-sized antibiotic reference tool.

Study design This was a quality improvement project performed using plan-do-study-act (PDSA) cycles and multiple audit cycles.

Strategy for change Each intervention was implemented sequentially over a 6 month period and effectiveness assessed by ongoing audit. Ten drug charts were selected at random by the staff nurse allocated to medications on the day of audit. Results were collated in a run diagram in order to disseminate progress to the team.

Measurement of improvement The charts were audited using a pre-designed proforma and the total number of errors counted. These were subcategorised and results displayed in graphical format after each intervention. In total seven audit cycles were completed. The number of errors including percentage change following each intervention is as follows: Intervention 1; 32 (+19%), Intervention 2; 31 (+15%), Intervention 3; 17 (-37%), Intervention 4; 12 (-56%), Intervention 5; 15 (-44%), Intervention 6; 7 (-74%), Intervention 7; 10 (-63%).

Effects of changes The changes led to a global improvement in paediatric prescribing- a reduction in errors of 63%. This represents a significant improvement in prescribing practice thereby reducing the potential impact on patients of prescribing errors. The main difficulty encountered during the PDSA cycles was regarding resistance to change and buy-in from junior medical staff. Continued encouragement helped to address these issues.

Lessons learnt There were two unsuccessful PDSA cycles; presentation of baseline data and completion of an online learning module. This quality improvement project was performed in the six months prior to changeover of staff. It would have been a beneficial project during the initial six month period in order to improve sustainability and patient safety within the trust.

Message for others We need to introduce permanent and successful measures to reduce prescribing errors in order to minimise the impact of staff changeover and knowledge deficits. The most significant change followed the introduction of a patient safety notice board which reduced the number of errors from 31 to 17. This represents a percentage reduction of 45% following a single intervention. It follows from this that education and awareness is paramount to continued professional development and quality improvement.