Failure Mode Effect Analysis (FMEA)/ Risk Assessment of the Prescribing System

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Objectives

- Background
- Trials and Tribulations of getting started
- Process
- Learnings to Share
May 17 medication incident occurred in PICU

Patient prescribed a 5 times overdose of Linezolid, given on 4 occasions and picked up by Dispensary prior to 5th dose. Resulted in extra monitoring and concern by parents.

Transcribing error when chart rewritten:
- The Cephalexin dose was transcribed in the Linezolid Dose
- There was failure in the checking process in prescribing, administering and ward pharmacist review.

Reviewed by the Serious Events Review Committee (SERC) and an RCA was undertaken.

A number of recommendations were endorsed following the RCA.
Recommendations:

Mediation Safety Committee were assigned 2 recommendations in February 18:

1. The Medication Safety Committee (MSaC) is to conduct a Failure Mode Effect Analysis of current medication prescribing systems across WCHN to identify potential risks and areas for improvement until such a time as when electronic prescribing is available.

2. The procedure Medicines Management – Prescription and Medication Ordering Requirements be reviewed and revised to include information on dosing guidelines when prescribing, transcribing and administering medications
What even is a Failure Mode Effect Analysis (FMEA)?
Trials and Tribulations

- Tabled at MSaC and DTC
- Identified as a huge task which required:
  - Resources – time
  - Medical involvement
- Attempts were made to convene a FMEA were unsuccessful
- Invited participants questioned the process and potential benefits gained.
August 18 DTC wrote back to SERC not supporting the recommendation but noted MSaC’s new initiatives to improve prescribing:

1. Recruitment of more medical staff to MSaC hoping to improve medical officer engagement with organisational medication safety
2. Increased education sessions to focus of quality of prescribing with the Training Medical Officers
3. Hospital wide audit of prescribing in October as part of the NSMC Audit
SERC noted the work that MSaC had been doing, acknowledged the challenges but felt it was **critical** to continue to improve patient safety outcomes.

Suggested the following:

- Following the NSMC Audit, identify and further analyse the 'critical' elements of the prescribing process.
- Seek assistance with the Risk Management Consultant
- Continue efforts to convene a Multi-Disciplinary subcommittee that includes junior doctors.
Medicines Information Service completed a Lit Search of FMEA on Prescribing in Paediatrics

Met with the Risk Manager
- Note the Risk manager has changed 3 times since the recommendation was endorsed – all with differing opinions

Meeting held with Key Stakeholders and risk management to develop a plan

Medical Heads of all divisions were contacted to nominate Junior doctors

No Response
Different Strategies to Engage Medical Staff

- Discussion with the Consultant for Medical Education - put it on the agenda of the Medical Education Committee
- Flyer
- Recruited Senior Doctor on Med Safety Committee who was very enthusiastic and has great rapport with junior doctors sent out flyer to all Training Medical Officers (TMO’s)
We did it!

Team of 13

- 1 nurse
- 1 Pharmacist
- 2 Risk Managers
  - 1 familiar with FMEA process and
  - 1 familiar with tradition system Risk Assessment
- 11 Medical staff
2 meetings of 2 hours – challenging to get non-contact time for medical staff at the same time.

**Meeting 1**
- Broke down the Prescribing Process into 6 stages
- Identified possible fail points at each stage

**Meeting 2**
- Risk rated each section
- Identified current controls and any possible treatments to strengthen the process.

Information has been reviewed in both FMEA and Risk Assessment templates
FMEA vs Risk Assessment

- Not a lot of difference – personal preference
- Both looks at systems and look at fail points
- FMEA may pin point more specific areas as each failure mode is given a unique Risk Profile Number (RPN) determined by
  - Likelihood of Occurrence
  - Likelihood of Detection
  - Severity
- Actions with the highest RPN would be favourable to focus on for any improvements
Outcomes

Still in the final stages

Have obtained a lot of really great information.

Require a further meeting with Key Stakeholders and Junior doctors.

Look at our outcomes and areas of focus for improvements.
Learnings

- You think you have a plan – smooth sailing
  - **But** in reality, there are lots of hurdles

- Persistence is required

- Valuable process

- Medical officers were very engaged, just needed to know how to tap into them

- System Risk Assessments are expected in order to meet accreditation.
Discussion

How do you engage medical staff in Medication Safety?

What strategies have you used to facilitate this?