Prevention of Drug Allergy Related Errors at Accident and Emergency

Singapore Healthcare Management 2014

Changi General Hospital

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Background

CGH Accident and Emergency (A&E) sees about 12,000 patients every month. Identification of drug allergy is a critical, high risk process at A&E and a failure would compromise patient safety and result in a serious reportable event. Hence this process was selected to systematically study the potential failures and the consequences.

Aim

To prevent drug allergy related medication errors at A&E. The study focus was on patients triaged with priority 2 and 3 status in the consultation area and the patient's journey in A&E from the time of registration to the time of admission/ discharge.

Methodology

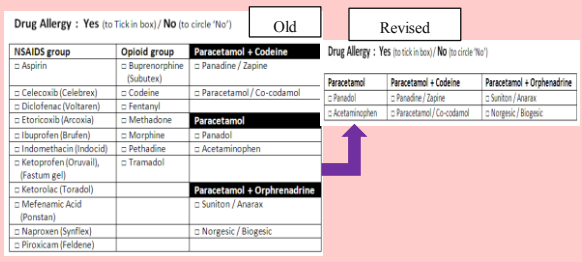
Each step of the patient's A&E journey were examined using the Healthcare failure mode effect and analysis (HFMEA) risk assessment tool to systematically identify potential failures. Processes with a hazard score 8 and above were highlighted and action plans were put into place.

Analysis

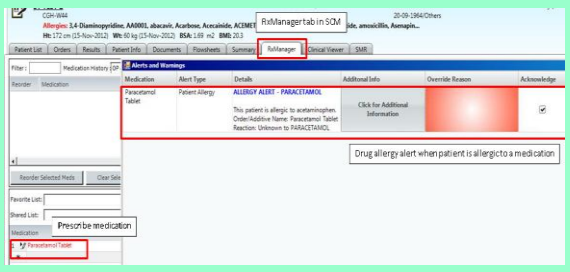
From the analysis, the main problems identified were incomplete drug allergy information, staff forgetting to check electronic records for drug allergy information, knowledge deficit with regards to medications in the same drug class, especially Non Steroidal Anti-inflammatory Drugs (NSAIDs) and transcription errors.

Risk Mitigations

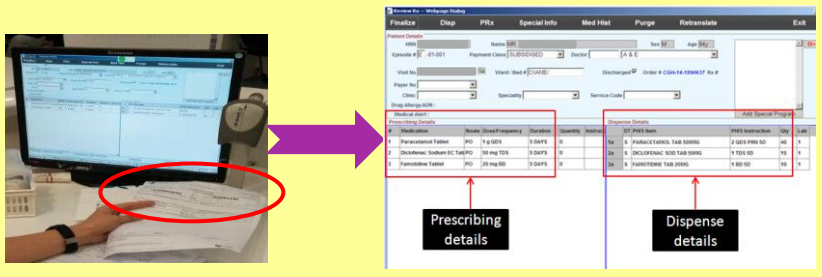
1. Removal of NSAIDs from the existing pain protocol at triage (Dec 2013)



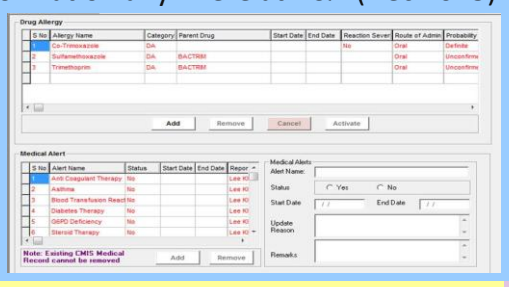
2. Ordering of discharge medication using Rx Manager enhanced with clinical decision support tool and alerts for drug allergy errors (Dec 2013)



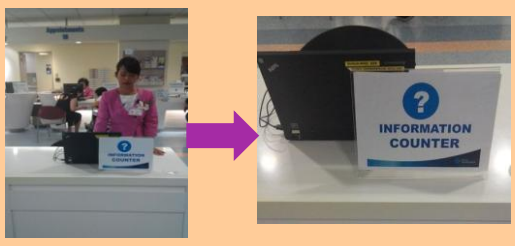
3. Prescription details are interfaced into pharmacy dispensing system to reduce the risk of transcribing the wrong drug (which patient may be allergic to) (Dec 2013)



4. IT upgrades for staff to access drug allergy information anywhere at A&E (Dec 2013)



5. Enquiry counter was created to minimize the distraction to the nurses (Feb 2014)



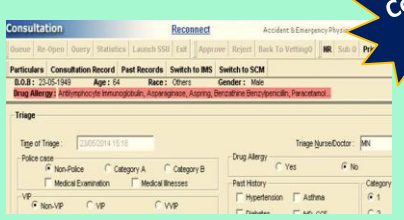
6. Review list of drugs with high risk of causing drug allergy and reduce access of these by having Pharmacy served as an additional layer of check (Mar 2014)

7. Red labels bearing the word 'NSAIDS were added to the existing drug labels in medication cupboard (Mar 2014)

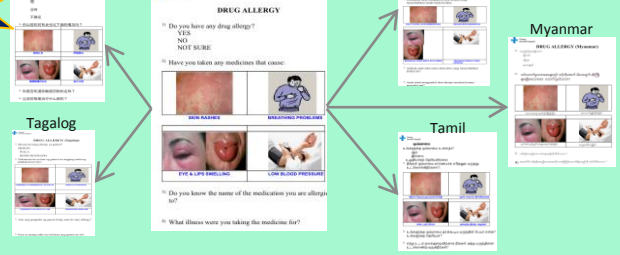
Red color drug allergy banner in all A&E module

8. Prominent red stickers on patients with drug allergy (Mar 2014)

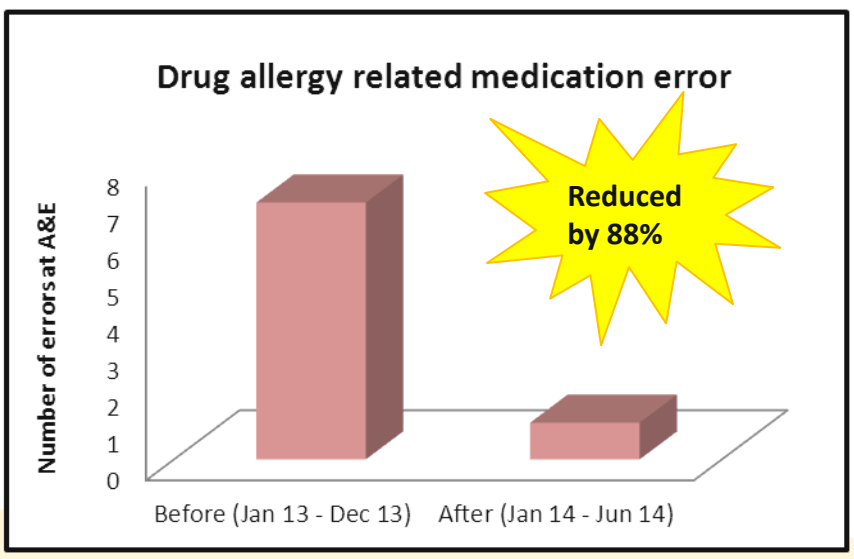
9. Red color drug allergy banner in all A&E module (Aug 2014)



10. Drug allergy chart in different languages (July 2014)



Results



Conclusion

Mitigation measures implemented have eliminated the drug allergy related medication errors. The following errors have also been eliminated

- ✓ Medication errors involving NSAIDs at triage has been eliminated
- ✓ Transcription error by pharmacy staff has been eliminated

Ordering of drugs through the Rx Manager that is equipped with clinical decision support tools and alerts ensure that drug allergies are noted by the doctors. Language charts help staff to get the drug allergy info from the patient/ visitors and red labels for drugs in the consultation room assist doctors to pick-up the correct drug.

Future steps

Drug allergy brochures and drug allergy awareness week is being planned to assist in the patient education. Further IT enhancements to make the system robust will also be done.

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