

USE IT OR LOSE IT

THE ROLE USER UNFAMILIARITY WITH ELECTRONIC MEDICATION SYSTEMS PLAYS IN MEDICATION ERRORS



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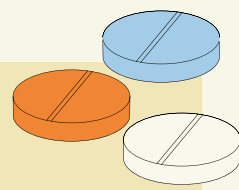
INTRODUCTION

Paper-based medication charts in hospitals have been replaced by **Electronic Medication Management (EMM)**

The **benefits of EMM** include:

- Legible, complete and uniform prescriptions
- Ease of access to patient records
- Real time clinical decision support
- Lower rates of medication errors (1-4)

However, **EMM simultaneously introduces new system-related errors** - errors that were highly unlikely or unable to occur with the use of paper records



AIM

To explore how incident reports of system-related errors related to user unfamiliarity with EMM change over time

No research has examined:

- 1 How system-related errors change over time
- 2 Whether errors related to user unfamiliarity with EMM decrease over time

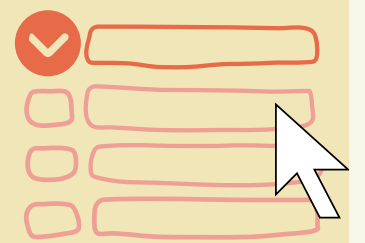


METHODOLOGY

EMM-related incidents occurring at three hospitals in a Local Health District between 1 January 2010 and 31 December 2019 were extracted from the NSW Health Incident Information Management System

Incidents where it was clear that the EMM was involved

For example: Clinician selected the wrong item from a drop-down menu



Each hospital had introduced the EMM at different time points (one, three and 12 years prior)

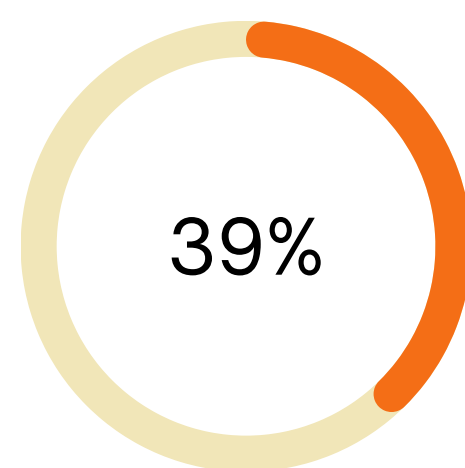
Factors contributing to these EMM-related incidents were extracted and classified, including user 'misunderstanding or unfamiliarity with EMM or EMM workflow' and 'inadequate training or education'

RESULTS

444 EMM-related incident reports identified described 694 contributing factors

After hospital-wide EMM implementation, user unfamiliarity and inadequate training were associated with **at least 6 incidents every year (range 6 – 38 incidents)**

In 2019, user unfamiliarity and inadequate training were **still contributing to 41% of reported incidents** in the hospital that had had EMM in place for over 12 years



The percentage of EMM-related incident reports that were classified with either user unfamiliarity, inadequate training or both



The number of EMM-related incident reports related to user unfamiliarity or inadequate training **fluctuated over time but never dissipated**

20% - 86%



The range of EMM-related incident reports each year associated with user unfamiliarity, inadequate training or both

EXAMPLE INCIDENT REPORT DESCRIPTIONS

USER UNFAMILIARITY

'Discussion with the nurse involved highlighted **being unfamiliar with the system** as a key component and misreading the order'

INADEQUATE TRAINING

'**Education and training** for system use were specifically identified as weak point amongst several medical officers'

CONCLUSION

EMM become more embedded in hospitals with long-term use, but our results indicate that user unfamiliarity with the system is an ongoing issue, despite long-term use

EMM are not set-and-forget systems

Organisations are required to invest in:

- Ongoing training for new and rotating staff
- Refresher training with the addition of new or updated functionality to systems

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