Growing knowledge on factors influencing medication-related error reporting:

A survey of Australian healthcare professionals

Central Coast Local Health District

AUTHORED BY: Milla Morrison[1,2] , Claire McCormack[3]

[1] *School of Biomedical Sciences and Pharmacy, University of Newcastle, NSW, Australia*

[2] *Dubbo Hospital, Western NSW Local Health District*

[2] *Pharmacy Department, Central Coast Local Health District*

Correspondence to: milla.morrison@health.nsw.gov.au

Background

- Medication-related errors are common and can have significant impact on patient morbidity, mortality, and healthcare resources[1,2].
- Reporting systems are implemented to document errors and manage risk reduction strategies to prevent reoccurrence.
- Numerous factors are proposed that that can act as barriers or facilitators to healthcare professionals (HCP) using error reporting systems.
- Downturns in reporting rates and/or increases in medication-related Hospital Acquired Complications (HACs) can prompt the need for healthcare facilities to review the factors impacting on HCPs reporting of medication-related errors.
- Currently there are no clear validated tools to collect this information and little research on the influencing factors in an Australian context

Aims

1. **To investigate awareness and use of medication-related error reporting systems among HCPs**
2. **Explore key facilitators and barriers influencing a HCPs willingness to report such errors in an Australian hospital setting**

Method

An anonymous, cross-sectional survey of HCP was conducted over a two-week period in August 2022 in a 900+ bed Local Health District (LHD).

In the absence of a previously validated survey tool, questions were constructed following a literature review and consisted of 5-point Likert scales, ranking factors and multiple-choice options.

Data was collected using an electronic survey platform (Microsoft Forms®) that was piloted for face validity and then distributed to HCP via email/QR codes.

Microsoft® Excel was used to observe common trends in the data spread and Fisher's Exact test was undertaken to determine statistical correlations across the different data sets.

The study was reviewed and approved by CCLHD Research Office as LNR-exempt (Reference 0722-060C).

Results

156 survey responses

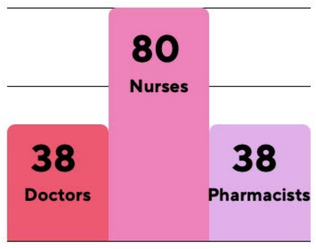

Figure 1: Survey respondents by profession

Figure 2: Overall medication error reporting experience

Figure 3: Overall medication error reporting knowledge and awareness

Table 1: Medication error reporting experience and knowledge by profession

	Doctors	Nurses	Pharmacists	p-value
Have reported an error	42% *(n=16)*	90% *(n=72)*	82% *(n=31)*	<0.001*
Know how to report an error	45% *(n=17)*	94% *(n=75)*	82% *(n=31)*	<0.001*

* Shows statistical significance

58% of early career HCP with <2 years experience knew how to report an error

Table 2: Overall percentage level of agreement (as represented by 'Agree' or 'Strongly Agree') by respondents that listed **'Barrier'** is a concern for HCP hindering reporting an error

Statement	Percentage (%)
Lack of support from colleagues	15%
Believe takes too much time	57%*
Believe completion is too difficult	32%*
Scared of consequences	22%
Believe lack of action will be taken	27%
Not undertaken by peers	36%*
Don't think it's their role	4%
Believe they are too busy	52%
Believe peers will dislike them	26%

* Statistical differences were noted when comparing profession or experience with Fishers' exact test (p-value = <0.05)

78% of respondents ranked 'heavy workload' as the top **barrier** to reporting

Table 3: Overall percentage of the level of agreement (as represented by 'Agree' or 'Strongly Agree') that listed **'Facilitator'** is a motivator for HCP to report an error

Statement	Percentage (%)
Errors that have more serious harm	88%*
For medico-legal reasons	60%
Actively seeing report progress	60%
Receive feedback on prevention process	76%
Believe that improves patient safety	62%
When prompted by senior colleague	60%*
When prompted by pharmacist	52%*
Feeling safe in the workplace	72%

* Statistical differences were noted when comparing profession or experience with Fishers' exact test (p-value = <0.05)

49% of respondents ranked 'error causing serious harm to the patient' as the top **facilitator** to reporting

Results cont.

Awareness and use of reporting systems

p<0.001 — statistically significant correlation between reporting rates of doctors compared to nurses and pharmacists

p=0.02 — statistically significant correlation between reporting based on 'more serious harm to the patient' and profession

Barriers

p<0.025 — statistically significant correlation between reporting 'takes too much time' and 'too difficult' and experience

Facilitators

p=0.009 — statistically significant correlation between years of experience and reporting rates

Discussion

- Over 1 in 5 HCPs surveyed were unaware of how to report a medication error.
- Professional experience <2 years (p=0.002) and medical profession (p<0.001) showed a correlation to lower rates of error reporting awareness which is reflected in other studies in the literature[3,4].
- The common barriers identified of time, difficulty of reporting and low involvement of peers was slightly at odds with other studies[5,6] that reported fear of consequence as a top barrier.
- Key facilitators identified were the relative perceived level of patient harm, receiving feedback and feeling safe within the workplace which were consistent published literature[4-6].
- Differences between professional groups was evident when ranking common barriers and facilitators.

Conclusion

Suboptimal knowledge of medication-related error reporting was evident, particularly among medical and early-career HCP.

This is a potential target in local improvement initiatives, in addition to key barriers and facilitators relating to reporting time, workload, role-modelling and error feedback.

Further study and tool validation to compare and track HCP perceptions on how local factors and safety culture impacts medication-related error reporting over time and between sites would be valuable to improve knowledge and collective safety efforts.

References

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