

# Assessing medication history entries at a glance: how can we look for markers of quality?

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## Background

When considering the likely reliability of a documented medication history, health professionals may look for characteristics or indicators within the documentation that are more frequently associated with greater safety, accuracy and completeness.

## Aim

To develop a simple method for assessing the 'perceivable quality' of a Medication History Entry (MHE), when reviewed at face-value by a health professional who is not the original author.

## Methods

The MHE Perceivable Quality Scoring Tool was developed using a scoring rubric for three essential quality markers ('Legibility & Clarity', 'Completeness of Information' and 'Allergy/ADR Documentation') and three additional quality markers ('Information Source', 'Medication Management Information' and 'Reflective or Instructive Comments'). The tool was pilot tested and eight pharmacist reviewers received training in its application across 217 MHEs within a 660 bed principal referral hospital. Reviewers used the objective scoring tool and professional opinion to ascribe each MHE into a category of perceivable quality; Poor (High Risk), Uncertain (Indeterminate Risk), Sound (Lower Risk), and Excellent (Very Low Risk). Where a pharmacist-authored Best Possible Medication History (BPMH) was available, comparisons were made to ascertain whether perceivable quality might be a surrogate indicator for true quality.

Figure 1: Scoring rubric for the MHE Perceivable Quality Scoring Tool

ESSENTIAL QUALITY MARKERS		
Legibility & Clarity	0	≥ 1 legibility or clarity issues, with likely/possible risk of harm due to misinterpretation or delay
	1	≥ 1 legibility or clarity issues, however unlikely risk of harm due to misinterpretation or delay
	2	No legibility or clarity issues
Completeness of Information Provided	0	Critically important medication details are missing
	1	Some medication details missing, but still safe to make medication-related decisions and/or chart orders
	2	Full medication details included
Allergy / ADR Documentation	0	No allergy or adverse drug reaction information provided
	1	Offending agent(s) listed, but nil reaction details
	2a	Offending agent(s) listed + partial reaction details
	2b	Offending agent(s) listed + reaction details for all agents
	NKDA	Patient has nil history of allergies / adverse drug reactions
ADDITIONAL QUALITY MARKERS		
Information Source(s)	0	Nil documented medication information source(s)
	1	Medication information source(s) inferred only
	2a	One medication information source clearly stated
	2b	Two or more medication information source(s) clearly stated
Insights re Medication Management	0	Nil documented
	1	Some additional information documented
	2	Additional information documented that is likely to improve safety and/or medication-related decision-making
Reflective or Instructive Comments	0	Nil documented
	1	Author comments regarding the quality of medication information and/or recommended follow-up actions

## Results

The perceivable quality of 217 MHEs was categorised as Poor (30.4%), Uncertain (45.6%), Sound (12.0%) or Excellent (12.0%). There was a 94.0% concordance rate between reviewers providing 'professional opinion' judgements. The objectively-scored category matched the category assigned by professional opinion in 95.4% of all MHE reviews. Perceivable quality categories demonstrated some correlation with incidence of errors/omissions found via a BPMH, however too few patients had BPMHs available to establish a robust association.

30%

**Poor Quality (High Risk)**

Assessors found that these medication history entries had significant issues or omissions relating to one or more of the essential quality markers, meaning it appears unsafe to make medication-related decisions based purely on the information as it is documented.

46%

**Uncertain Quality (Indeterminate Risk)**

Assessors found no significant inadequacies in essential quality markers, however these entries lacked sufficient additional markers of quality which would help communicate the extent to which the history is reliable and safe. The lack of a documented information source was a key limitation for the vast majority of medication history entries in this category.

12%

**Sound Quality (Lower Risk)**

Assessors found no significant inadequacies in essential quality markers AND the entry stated or implied an appropriate information source. Medication history entries which were categorised as 'Sound Quality' did not meet the objective requirements of a Best Possible Medication History but were nevertheless considered reasonably safe, and were more likely to include additional insights regarding medication management.

12%

**Excellent Quality (Very Low Risk)**

Assessors found that these medication history entries met full requirements of a Best Possible Medication History; there were no perceivable inadequacies in legibility, clarity or completeness, allergy/ADR information was provided with reaction details, and documented use of two or more appropriate information sources. Entries in this category very frequently included additional comments regarding medication management.

## Conclusion

Objective assessment of a MHE using the MHE Perceivable Quality Scoring Tool closely aligns with pharmacists' professional opinion and has low inter-rater variability. The tool may be used to guide health professionals who are learning to interpret and refer to MHEs, and could be combined with other techniques to prioritise medication reconciliation activities in a resource-poor environment.



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