Design and introduction of a clerking proforma improves clerking data quality and leads to increased documentation of key escalation decisions at admission

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Aims:

To determine whether the introduction of a clerking proforma would improve the completeness of documentation of a number of indicators among acute medical admissions in a district general hospital.

Background:

The current quality of medical record keeping varies largely throughout the UK[1] but research has shown that bringing structure to note taking may have beneficial effects on both patient outcomes and medical professionals performance[2].

In 2008 the Health Informatics Unit (HIU) of the Royal College of Physicians developed standards for the structure and content of medical records[3, 4] giving guidance as to what information should be included in admission clerking notes.

Although widely used, there is very little published data regarding the use of medical clerking proformas and whether they improve/alter the quality of documentation.

Methods:

32 quality indicators were chosen that were considered to reflect best practice in documentation (see table 1).

50 random casenotes were then reviewed prior to introduction of a clerking proforma, to assess completeness of documentation.

A further 50 random casenotes were reviewed immediately after introduction of the clerking proforma, and then again at 3 months to look for sustained changes in practice.

Statistical analysis:

A Z-test was undertaken to look for significant differences in the completeness of documentation initially and at 3 months (two-tailed, 95% confidence interval, $p < 0.05$)

Results:

25/32 (78.1%) of categories were more completely documented after introduction of the proforma, rising to 28/32 (87.5%) categories at 3 months.

4/32 (12.5%) categories were less completely documented initially, falling to 2/32 (6.2%) at 3 months (see graph 1).

Results (continued):

17/32 (53.1%) categories showed a *statistically significant* improvement with introduction of the proforma. There were no categories significantly less well documented.

The most striking improvements were seen in the following categories at 3 months:

- DNAR/escalation decisions (6% to 44%; $p<0.05$)
- AMTS scores (30% to 80%; $p<0.05$)

Discussion:

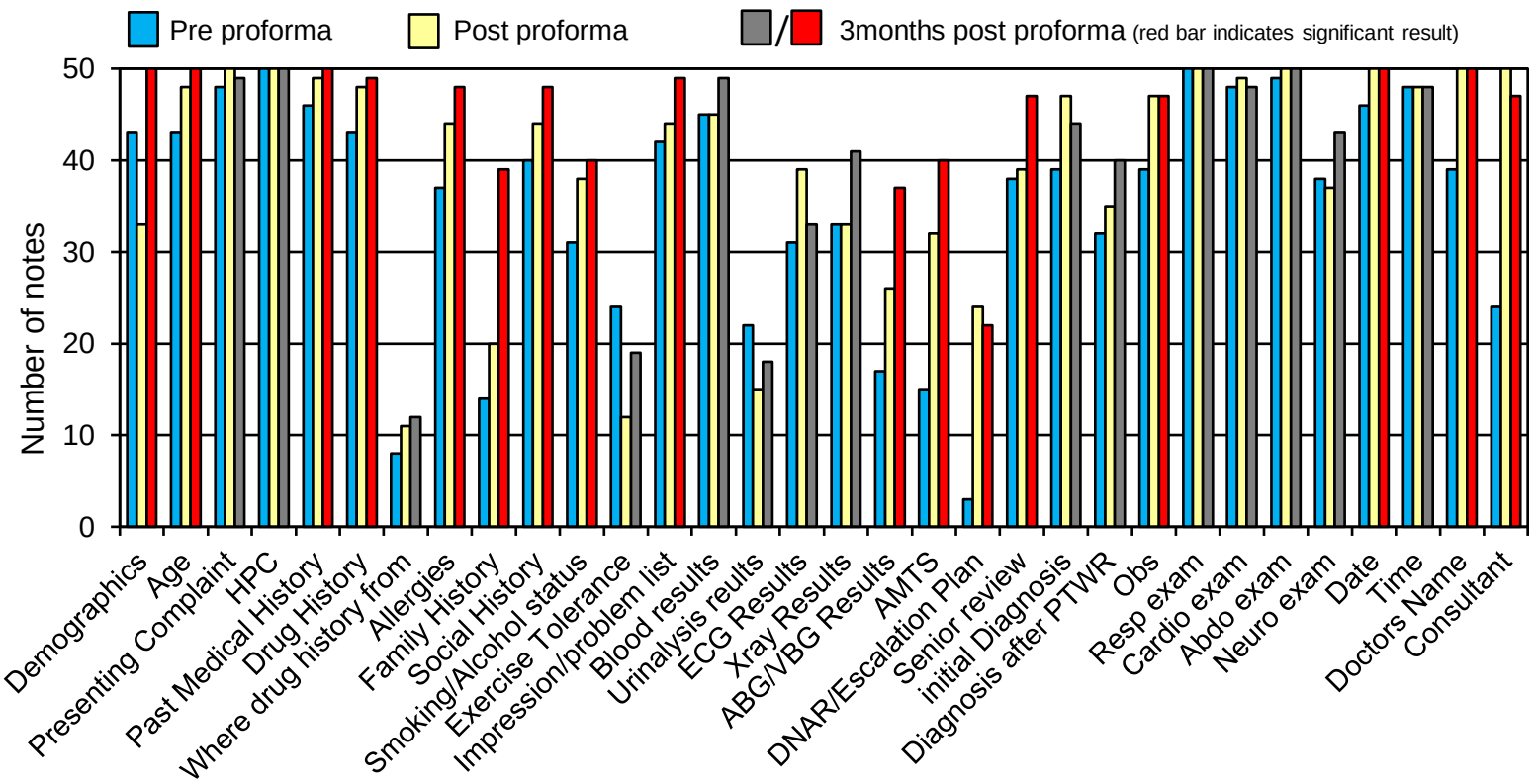
Introduction of a clerking proforma improved medical note-keeping in a majority of areas when compared with clerkings written on standard medical history sheets. There was no significant deterioration in documentation.

In particular, escalation decisions at the point of admission (where patients may well be unstable) were more completely documented. This is important as this is a group of patients who are, by definition, acutely unstable and often need consideration for higher levels of care (or set limits of care, if appropriate).

In addition, the improvement in AMTS scores may have relevance where it forms part of a delirium screen, an important national CQUIN target.

Recommendations:

- All hospitals should implement a standardised clerking proforma for acute medical admissions (in keeping with RCP guidance[3])
- The design of clerking proformas should be regularly reviewed to ensure they remain up to date and relevant (for example reflecting most recent risk stratification scores)
- Trusts should consider including escalation decisions on admission proformas to improve documentation +- decision making in this acutely unwell population



Graph 1: completeness of documentation of 34 quality indicators before and after introduction of a clerking proforma

Demographics	Xray Results
Age	ABG/VBG results
Presenting Complaint	AMTS
History of presenting complaint (HPC)	DNAR/Escalation plan
Past medical history	Senior review
Drug History	Initial Diagnosis
Where drug history elicited from	Diagnosis after PTWR
Allergies	Observations
Family history	Resp exam
Social history	Cardio exam
Smoking/Alcohol status	Abdo exam
Exercise Tolerance	Neuro exam
Impression/problem list	Date
Blood results	Time
Urinalysis reults	Doctors name
ECG Results	Consultant

Table 1: 32 quality indicators considered 'best practice' in documentation by the authors

References:

1) Carpenter I, Bridgelal Ram M, Croft GP, Williams JG. 2007. Medical records and record-keeping standards. Clinical Medicine: 7:(4);328-331.

2) Mann R, Williams J. 2003. Standards in medical record keeping. Clinical Medicine; 3:329-32.

3) http://www.rcplondon.ac.uk/sites/default/files/clinicians-guide-part-1.pdf

4) https://www.rcplondon.ac.uk/sites/default/files/documents/clinicians-guide-part-2-standards.pdf