Clinical & Scientific letters

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Medical admission records can be improved by the use of a structured proforma

Doctors on call for emergency medical admissions spend a great deal of time recording and retrieving data in hospital case notes. Audit has shown that important data may be omitted or difficult to find quickly but good-quality medical records are excellent tools for structured audit.[1–4] The medical teams at Hope Hospital, in Salford, Greater Manchester, have used a structured eight-page proforma for acute medical admissions since 1997. This proforma improves medical admission documentation and is preferred by the doctors who use it.[5] The present study compared the performance of the Hope Hospital proforma with medical records documented on blank history sheets (free-text histories) used at the Manchester Royal Infirmary.

Methods: A total of 242 medical admission notes were audited in a structured manner by a single observer. Case notes of emergency admissions referred by general practitioners and the emergency department were audited at least six hours after being seen by the admitting doctor to allow test results to be processed and available in the records. The difference in time taken to audit each record was evaluated using a stopwatch. The clerking-in process for 63 patients was timed from start to finish by the same observer and all interruptions were noted. Post-take ward rounds were observed at both hospitals. A total of 231 patients were presented to consultant physicians during these rounds. The observer recorded if important information was missing. Questionnaires were issued to doctors and nurses at both sites to discern their opinions on both types of admission documentation (examples of both were given).

Results: The study audited 122 proforma records and 120 free-text records. Several key issues were documented more frequently or more clearly on proforma records (Table 1 below). The median time taken to retrieve audit data from proforma records was 88 seconds and the median for free-text records was 138 seconds (Mann-Whitney U test $p < 0.0001$). (Free-text records were 57% slower for data retrieval, eg post-take ward round or transfer).

Table 1. Comparison of hospital records recorded on free-text history sheets or admission proforma.

Audit item	Free-text (%) (n = 120)	Proforma (%) (n = 122)	Significance (p) (test of proportions)
Legible identity of admitting doctor	68	94	<0.0001
Legible job description of admitting doctor	71	98	<0.0001
Clear record of past medical history	95	99	0.052
Clear and complete smoking history	91	100	0.0006
Clear and complete alcohol history	85	97	0.0015
Clear medication history	98	99	0.55
Clear history of drug allergies	88	91	0.38
Clear family history	68	89	0.0001
Clear systems review	50	76	<0.0001
Clear diagnosis/differential diagnosis	90	100	0.0003
Clear management plan	98	100	0.15
Clear record of physical examination findings	100	100	
Clear record of laboratory test results	90% (108/120)	94% (112/119)	0.23
CXR result recorded clearly (if done)	55% (54/99)	76% (72/94)	0.0013
ECG result recorded clearly (if done)	62% (53/86)	76% (68/89)	0.034
Patient's name recorded correctly on all sheets or on bound proforma	96	99	0.094
Median number of words in section headed 'History of presenting complaint'	70 words	65 words	*Mann-Whitney U test* p = 0.43

CXR = chest X-ray; ECG = electrocardiogram.

The time taken to clerk 30 patients and record their history using free-text records (median 24 minutes) and 33 patients using the proforma (median 27 minutes) was not significantly different (Mann-Whitney $p = 0.33$). Doctors at both sites had an average of 6–7 interruptions which added a median of 12 additional minutes to each clerking. Interruptions were due to the following; 43% questions or interaction with staff; 20% answering bleeps; 12% looking up information; 7% filling in forms or getting results; 6% phone calls.

Of 117 patients clerked using free-text sheets, 21% had important information unavailable during post-take ward rounds, whereas only 8% of the 114 clerked using the proforma had missing information ($p = 0.0039$). The most common missing data were blood test results. (At Hope Hospital 70% lacked only the result of 8-hour creatine kinase or 12-hour troponin T tests but at the hospital using free-text notes, it was common for all results to be unavailable.)

We also sought the opinions of doctors and nurses at both hospitals concerning the two types of medical records. Of 32 doctors questioned at Hope Hospital, 84% preferred the proforma. Reasons for this preference included speed of use, completeness, efficiency of post-take rounds, ease of receiving transfers from the admissions unit and ease of emergency review of ill patients. Thirty-five doctors at the hospital using free-text history sheets were shown the Hope Hospital proforma and asked if they would prefer it to plain history sheets: 39% preferred the Hope proforma, 39% preferred plain history sheets and 22% were undecided. Of 77 nurses questioned on both sites, 90% preferred the proforma method of recording clinical information.

Comment: The medical admissions proforma improves the quality and quantity of documentation of medical admissions with no increase in the time spent on this activity. It facilitates and speeds up data retrieval and is preferred by most staff who use it or could use it. The proforma is an important tool for audit and may be used as a template for computerisation in the future. The other striking finding of this study is that junior doctors who are trying to deal with ill patients spend one-third of their time dealing with interruptions. The Hope Hospital admission proforma is available on the Royal College of Physicians website at www.rcplondon.ac.uk/college/hiu/recordsstandards. Readers may use this document (or the RCP document based on the Hope proforma – available on the same website) in their own hospitals.

Contributors: ROD devised the medical admissions proforma guided by feedback from medical colleagues at Hope Hospital. ROD and DAN designed this study; DAN collected data and both authors interpreted the results and wrote the manuscript.

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Impact of the two-week referral guideline on time to diagnosis and treatment in oesophago-gastric cancer

Upper gastrointestinal cancers have a poor survival rate of approximately 20% at one year in the UK.[1] The Department of Health in England therefore introduced national guidelines in 2000, indicating that all patients with relevant symptoms should not wait longer than two weeks before being seen by a specialist team. The clinical value of the guidelines, however, is unclear and opinions are mixed as to their value.[2–5] We report here the results of an audit on the times from GP referral to first hospital visit, diagnosis and treatment extracted from the records of all patients referred with oesophago-gastric cancer to the University Hospital, Nottingham, in the 12 months before guidelines and the 15 months post guidelines. We also compared the numbers going on to surgery and the six-month survival rate in the two groups.

Results: Of 235 cases identified, 55% (60/109) pre-guidelines and 41% (52/126) post guidelines were referred as outpatients by their GP. It can be seen from Table 1 (page 387) that, after the guidelines were introduced, the time from GP referral to first hospital visit was reduced significantly (median 8 days *vs* 26 days, $p < 0.001$), as was time to diagnosis (median 11 days *vs* 36 days, $p < 0.001$) and treatment (median 64 days *vs* 105 days, $p < 0.001$). Both cases referred for routine and urgent outpatient appointments were seen and investigated more quickly post guidelines. In the post guideline group 21 (40%) went onto surgery compared to 26 (40%) of the pre-guideline group. At six months, no significant increase in survival was detected (54% *vs* 68%).

Discussion: The introduction of the guidelines was associated with modest but statistically significant reductions in times to first visit, endoscopy and diagnosis (90% of patients were seen by 18 days, had endoscopy by 32 days and started treatment by 94 days, compared to 59, 82 and 215 days previously). Despite this, there was no increase in the proportions having surgery, chemotherapy or radiotherapy