Safety Comes First: Are Doctors Attentive Enough to their Initial Clinical Assessment Notes?

Abstract:
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Abstract

Accurate hospital admission/initial history and physical examination (H&P) notes are vital to support patient care. We aimed to assess the quality of H&P notes and to compare medical/surgical, and inpatient/outpatient H&P notes. A cross-sectional study examined 154 initial H&P notes for the adherence to a standard protocol in a tertiary referral hospital in accordance with the hospital’s policies. We recorded the names of the patients’ medications. 106 (68.9%) recorded the names of the patients’ medications. Six doctors (3.9%) omitted an objective record of their own identity. Surgeons were superior at recording admission type (p=0.0001) and past surgical history (p=0.002) only. The data in this study show that a high standard of completeness of the H&P documentation among doctors is suboptimal. We recommend the introduction of a standardised H&P template to reduce errors.

Introduction

The medical record is valuable for research, audit and medico-legal purposes. It is the primary function is to support patient care. Admission and first visit clinical H&P notes are the most frequently referenced evidence of a clinical encounter. Inaccuracies/omissions at this time can lead to multiple errors. While there is a justified move towards electronic medical records, the reality is that the majority of hospitals in Ireland, have limited resources. There is, therefore, an ongoing need to maintain the quality of existing handwritten records. Many individual hospitals have guidelines governing the documentation of H&P notes. With this background, we asked the question, how complete is the doctors H&P note in an Irish tertiary referral hospital, where a local policy exists; how frequently are potentially serious omissions encountered; how do the H&P notes of physicians compare to surgeons; and how do inpatient notes compare to outpatients?

Methods

A cross-sectional survey method was chosen for the study design. The most recent H&P note from 154 active medical records was selected, from all inpatients on eight wards, at a given time, to minimise selection bias. Twenty active outpatient notes were randomly selected from the first referral and the second referral record of the H&P. Two variables reflecting fields relevant to the institutions policy for H&P notes was designed (Table 1). The clinical chart contains the medical record, which includes patient summary, progress note, admission note, and new outpatient note. Each H&P note was scored to identify documentation of each variable, and scored from 1 to 40. At the authors institution, H&P notes are written on continuation forms containing a request to label each page with the patient name/hospital number/date of birth either by writing or by attaching an adhesive addressograph label. Two-tailed Fishers exact tests were performed as appropriate in SPSSV18.

Results

154 H&P notes were examined. 53.9% were medical and 46.1% surgical (Table 2). Of the 154 doctors authoring these notes, 27.3% were senior house officers, 21.4% were interns, 19.5% were registrars and 1.3% consultants. 30.5% didn’t document any grade. Patient name/medical record number/date of birth was documented in 95.5% of notes. 4.8% of H&P had no unique identifier at all. Date of the assessment was recorded in 97.4% of instances, and time in 36.3%. Doctors name was written in 50%, however 6.5% of these names were illegible. 22.1% documented the admission type (e.g. elective).

Presenting complaint was purposefully documented in 75.3%. However, 92.2% detailed the history of presenting complaint. Medications were listed by name in 62.3% of records. However only 41.6% recorded medication dose. 3.9% noted smoking history and 46.1% alcohol intake. Patients general appearance/mental status was mentioned in 45.5% of instances. Vitals were entered inconsistently i.e. 49.4% recorded heart rate, 46.1% noted blood pressure, 38.9% recorded patient temperature, and 19.5% respiratory rate. 3.2% simply wrote “vitals stable”. 48.7% alluded to differential diagnosis of the patient’s illness. 95.5% documented a patient care plan. While 96.1% of doctors signed their note, only 20.8% described ability to self-care, though 53.5% of studied patients were 65 years old. 52.6% documented past surgical history, 37.7% mentioned occupation, 50% cited living arrangements and 35.1% outlined marital status.

Discussion

Results of this cross-sectional study show a majority of doctors are correctly adhering to the layout of how a doctors H&P should be documented. However, of the 154 H&P notes examined, not one documented all 40 variables reflecting fields relevant to the institution’s policy for H&P notes was designed (Table 1). 1.9% of new admissions were commenced on an old page (i.e. continued from a previous admission) and 5.2% were filed as loose pages (i.e. without the institutional medical record).

73.6% noted investigations ordered but only 51.3% documented investigation results. 48.7% alluded to differential diagnoses of the patient’s illness. 95.5% documented a patient care plan. While 96.1% of doctors signed their note, only 62.9% wrote their pager number and 30.5% documented their medical council registration number, a uniquely assigned identification number for regulatory purposes. Regarding overall adequacy of H&P documentation, 87.1% presented the information using a majority of the variables (as per the reference standard in Table 1). 1.9% of new admissions were commenced on an old page (i.e. continued from a previous admission) and 5.2% were filed as loose pages (i.e. without the institutional medical record).

Concerning differential rates of documentation by physicians versus surgeons, physicians recorded significantly more medications, systematic physical examination findings, investigation results and clinical impressions (p<0.006 all compared). While 86.9% of surgeons were the best at recording admission type (p=0.0001) and past surgical history (p<0.002). While many parameters were recorded at significantly higher rates in inpatient compared with outpatient episodes, notably time and pager number (p=0.0001), vital signs were better recorded in outpatient notes (p=0.0001, Table 3).

A quarter of hospital prescribing errors are attributable to incomplete medication histories at the time of admission. Although >50% of doctors recorded medication names, the frequent failure to document dose, route, strength and frequency can lead to prescribing errors, which in the extrem, invite harmful, indefensible mistakes. In addition, poor documentation of drug allergy risks serious consequences. Many H&P parameters were better documented by physicians versus surgeons, suggesting a need for more detailed H&P notes in physician practice compared to surgical,
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Peixoto described the physical examination as the physicians trademark, however, many H&P notes bypass a thorough record of the patient examination, making diagnostic mistakes less defensible if subsequently challenged. Documentation of vital signs has proved to be inconsistent, especially in inpatients versus outpatients, likely reflecting nurse involvement in outpatient settings. Respiratory rate notation is often omitted, or replaced by pulse oximetry despite evidence showing it is a less accurate measurement of respiratory distress. Interestingly, gastrointestinal examination was performed most frequently, likely reflecting a common clinical priority among physicians and surgeons. Many new outpatient notes documented a targeted exam only, e.g. a hand examination at a plastic surgery clinic, which some may be reasonable given the time constraints in these consultations.

Regarding author identity, while more than 95% signed their H&P, most names were illegible and two-thirds omitted a pager number. The most recent Medical Practitioners Act in Ireland requires doctors to document their medical council registration number for practitioner identification, yet in this study less than one-third of doctors abided by this regulation. Interestingly, there was no correlation between documentation comprehensiveness and grade of professional seniority. Electronic medical records can incorporate mandatory fields of data entry that must be completed in order to proceed. The use of password encryption could circumvent issues of author identity/timing. In the absence of such technology, doctors could involve patients by having them complete a template form comprising the main fields of a standard patient history, which is then augmented during the consultation. Ideally these efforts should be coordinated through high-level committees charged with responsibility for improving documentation, and be widely promoted within individual healthcare institutions.

The present study shows that the completeness of the H&P, set out by the authors institutional policies, is suboptimal among admitting doctors. While some results are encouraging, the majority of H&Ps are incomplete and there is considerable potential for improvement. There is a continued need, for the benefit of all, to promote more comprehensive documentation of the new patient encounter. The introduction of a prepared template encompassing all the above variables may help to achieve this. Future work in this area could investigate the factors that make one doctor write less complete notes than others, such as prior training and academic performance, how onerous or structured their current post is and awareness of relevant institutional policies. This information might help to prevent adverse outcomes arising from incomplete documentation of clinical encounters.

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References

with surgeons focusing more on elective/emergency admission type, and past surgical history. Social history is often overlooked in favour of less holistic aspects of the H&P. Patient discussions concerning return to work/financial and family pressures are informed by knowledge of their occupation, marital status and family composition. The patient’s family history and tobacco/alcohol intake are relevant to risk assessment for atherosclerosis and cancers’ yet only a minority of admissions studied documented these variables.