INTERNATIONAL JOURNAL OF MEDICAL INFORMATICS XXX (2014) XXX–XXX

journal homepage: www.ijmijournal.com

Review

Medical documentation: Part of the solution, or part of the problem? A narrative review of the literature on the time spent on and value of medical documentation

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ARTICLE INFO

Article history:
Received in revised form
23 November 2014
Accepted 5 December 2014

Keywords:
Medical records
Medical documentation
Electronic medical records
Quality of care

ABSTRACT

Background: Even though it takes up such a large part of all clinicians' working day the medical literature on documentation and its value is sparse.
Methods: Medline searches combining the terms medical records, documentation, time, and value or efficacy or benefit yielded only 147 articles. This review is based on the relevant articles selected from this search and additional studies gathered from the personal experience of the authors and their colleagues.
Results: Documentation now occupies a quarter to half of doctors' time yet much of the information collected is of dubious or unproven value. Most medical records departments still use the traditional paper chart, and there is considerable debate on the benefits of electronic medical records (EMRs). Although EMRs contains a lot more information than a paper record clinicians do not find it easy to getting useful information out of them. Unlike the paper chart narrative is difficult to enter into most EMRs so that they do not adequately communicate the patient's "story" to clinicians. Recent innovations have the potential to address these issues.
Conclusion: Although documentation is widespread throughout the health care industry there has been almost no formal research into its value, on how to enhance its value, or on whether the time spent on it has negative effects on patient care.

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http://dx.doi.org/10.1016/j.ijmedinf.2014.12.001
1386-5056/

Please cite this article in press as: N. Clynch, J. Kellett, Medical documentation: Part of the solution, or part of the problem? A narrative review of the literature on the time spent on and value of medical documentation, Int. J. Med. Inform. (2014), http://dx.doi.org/10.1016/j.ijmedinf.2014.12.001

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1. Introduction

In 1964 Dr Laurence Weed published his first article on the problem oriented medical record in the *Irish Journal of Medical Science* [1]. At that time a consultation in hospital from a medical specialist consisted of a detailed history that may have taken up to 20 min, followed by a comprehensive physical examination that usually took another 10 min. The junior doctor would then be asked if there were any abnormalities in the urine, and if he had looked at the blood smear. A chest X-ray may have been available for review, and there may have been a brief discussion on what an ECG tracing may or may not reveal, and if it were worth doing. The consultant would then write the patient's diagnosis in the chart and prescribe treatment. Over 90% of the total time spent on the consultation was at the patient's bedside. Compare this to a modern day consultation during which little time is spent with the patient [2–4], and most spent trawling through the patients chart, determining what investigations and treatments have already been done, what other physicians thought, what numerous paramedical assessments suggested, what medication the patient is on, has been on, and can or cannot take etc.

Over the years the amount of documentation routinely recorded at every medical encounter has grown exponentially so that it now occupies a quarter [2,4] to half [5] of doctors' time. At the Hospital for Sick Children's intensive care unit in Toronto documentation increased by 25% from 1999 to 2005 by which time 1348 items of information were documented on each patient every 24 h [6]. In the United Kingdom [7] and Australia [8] nurses spend approximately 20% of their time on documentation and in the United States every hour of patient care now requires from 30 min to 60 min of paperwork [7,9,10]. Even the most trivial clinical episode, which a generation ago would have warranted only a brief note scribbled on a small card, now requires several pages of forms containing voluminous information of dubious or unproven value [11–14]. Collection of this data is time consuming and, therefore, detracts from patient care. Time spent analyzing and completing documentation reduces the amount of quality time that a physician has to care for their patient and their relatives, not to mention teaching and clinical research [15]. Whilst there is an obvious need for medical documentation its recent increase has been driven by administrators and their legal advisors without any evidence that it improves medical care, and a culture is developing in which documentation of care has become more important than its actual delivery [16]. Much of this documentation has been mandated by the common but mistaken assumption that complex systems like health care can be made safer by adding more complexity [17]. Although originally introduced to help the clinicians' memory and organize their thought processes, the medical record now may often be more of a hindrance than a help to patient care. Even though it takes up such a large part of all clinicians' working day the medical literature on documentation and its value is sparse. Medline searches on May 7th 2014 combining the terms medical records, documentation, time, and value or efficacy or benefit yielded only 147 articles, most which were commentaries and editorials. This review is based on 43 relevant articles selected from this search and additional studies gathered from our personal experience and that of our colleagues – of these only 38 papers were peer reviewed original research (Table 1).

2. Information overload – getting less out of more

Traditionally only one doctor was the primary author of the medical record. As medical care has become more complex and fragmented medical records now have multiple contributors, so the record has become organized into different sections that each of the multiple users of the chart can quickly find. For doctors there is the admission note, the history and physical, progress notes, doctors' orders and consultations. Nurses in particular are now required to complete a considerable amount of documentation on every patient admitted to hospital, which may be further sub-divided into special sections addressing issues like bedsores, nutrition, bowels, sleep, emotional state etc. (Fig. 1). The social worker's section records socio-economic issues such housing, accommodation, family dynamics, religious and cultural difficulties, as well financial and employment related problems. Then there are the vital signs, laboratory and diagnostic imaging results, lists of allergies and the current medications that also include a record of when and by whom they were given and if they were taken. Finally there is a section for miscellaneous information that might contain multiple correspondence, do not resuscitate orders, letters of complaint, legal letters etc. Multiple symptoms and signs, hypotheses, problems, possible diagnoses, concerns, doubts, musings, opinions, suggestions, observations, progress notes, discussions and assessments

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