



Patient history & medical record: Proper solution from accurate problem identification

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Abstract

Clinical record keeping is a fundamental part in great expert practice and the conveyance of value healthcare. Despite the type of the records (for example electronic or paper), great clinical record keeping should empower coherence of consideration and should improve correspondence between various healthcare experts. Medication histories have generally been reported in the 'Medication history' area of a specialist's clerking; if pharmacists recognized any blunders with this rundown, they would more often than not record these in ensuing advancement notes. Medication histories are significant in forestalling remedy mistakes and subsequent dangers to patients. Apart from avoiding remedy blunders, precise medication histories are likewise helpful in identifying drug-related pathology or changes in clinical signs that might be the aftermath of medication treatment. A decent medication history ought to incorporate all presently and as of late endorsed drugs, past ADRs including hypersensitivity reactions, any OTC medications, including herbal or alternative medicines, and adherence to treatment.

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Review

Transition of care on admission to the hospital and between clinical areas are risk points for medication errors. All type of medication errors can be reduced by improving communication at each transition point of care. Medication histories are often recorded inaccurately by physicians at the time of hospital admission [1]. Even one third of prescribing errors that occur in hospitals are a consequence of an incorrect medication history taken at the time of admission [2,3]. Studies have shown that for 50 to 70% of admitted patients, the initial medication history contains at least one error [4]. In a recent similar study Boostani et.al, 2019, a nearly 90% of the patients experienced at least one ME during their hospital stay which is lower than reported MEs rates by other studies in patients admitted to internal wards [2,3]. Approximately half of all hospital medication errors (MEs) and one third of ADEs occur as a result of miscommunication

at interfaces of care [3,5]. In addition, almost 60% of MEs occur at admission, transfer, or discharge from the hospital [6]. The average ME rate was 1.5 errors per patient at admission and 1.3 at discharge. The most common MEs were omissions, wrong dose and frequency, and inappropriate added medications. More than 35% of patients experienced serious or very serious MEs and almost 40% potentially moderate MEs [7]. ADEs are a major cause of morbidity and mortality, with more than 50% of ADEs being preventable [8]. A thorough and accurate admission medical record is an important tool in ensuring patient safety during the hospital stay [9]. Inaccurate medication history at admission to hospitals leads to preventable adverse drug events, which in turn increase mortality, morbidity, and health care costs [10]. Medication discrepancies are unintended differences between a patient's outpatient and inpa-



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tient medication regimens. The rate of discrepancy of medications is estimated to be between 38% and 50% for newly hospitalized patients [11]. Penm et al, 2019 reported that medication discrepancies occur in up to 80% of hospitalized patients during transitions of care, either at admission or discharge [12]. They affect up to 60% of patients admitted to hospital [13]. Older patients are especially at risk, as polypharmacy, comorbidities, and longer hospital stays are associated with increased MEs. Furthermore, it has been shown that incomplete medication lists at admission can result in medication errors at discharge [14]. Insight into potential risk factors associated with these discrepancies would be helpful to focus the second medication reconciliation on high-risk patients [15]. Patient history data from Electronic Medical Record (EMR) may not accurately represent a patient's full prescription drug profile. An infrastructure to provide medication history services appears essential [16]. In the patient's eyes, the ability to communicate well forms a major component of a provider's clinical competence. The ability to communicate effectively with patients can contribute significantly to improved patient outcomes [17]. A modest relationship exists between the quality of medical-record keeping and patient perception of hospital care [18]. The nursing assessment includes gathering information concerning the patient's individual physiological, psychological, sociological, and spiritual needs. It is the first step in the successful evaluation of a patient [19]. Some studies conducted in the United States, India, and Brazil also reported that history-taking was responsible for nearly 80% of all diagnoses made and that investigations played complementary roles in excluding other diagnostic options and increased physicians' self-confidence [20-22]. Additionally, a less equipped primary health care center may still arrive at a correct diagnosis in about 88% of cases following brief history-taking and physical examination, and treatment can be commenced based on these findings [23]. Clinical record keeping is an integral component in good professional practice and the delivery of quality healthcare. Consequently, clinical records should be updated, where appropriate, by all members of the multidisciplinary team that are involved in a patient's care (physicians, surgeons, nurses, pharmacists, physiotherapists, occupational therapists, psychologists, chaplains, administrators or students) [24]. Gathering sufficient medical data from a patient's history and empathetic communication are two completely separate sides of the coin of history taking [25]. According to the Nobel Peace laureate Bernard Lown medical history provides sufficient information in about 75% of patient encounters to make the diagnosis before performing a physical examination and additional tests [26]. Poor physical exam skills are a noteworthy threat to patient safety as they can lead to incorrect as well as missed diagnoses, causing delays in timely implementation of life-saving treatments [27]. Again, Patient history and physical examination cannot be used to limit the need of a diagnostic block [28]. Chronic medication is often temporarily stopped at the ICU. Unfortunately, when the patient improves, the restart of this medication is easily forgotten. Moreover, temporal ICU medication is often unintentionally continued after ICU discharge [29]. Medical records include a variety of documentation of patient's history, clinical findings, diagnostic test results, preoperative care, operation notes, post-operative care, and daily notes of a patient's progress and medications [30]. A properly obtained consent will go a long way in proving that the procedures were conducted with the concurrence of the patient [31]. Medical records form an important part of the management of a patient. A properly written operative note can protect a surgeon in case of alleged negligence due to operative

complications [32]. Medical recording needs the concerted effort of a number of people involved in patient care. The doctor is the prime person who has to oversee this process and is primarily responsible for history, physical examination, treatment plans, operative records, consent forms, medications used, referral papers, discharge records, and medical certificates [24,31]. Hypersensitivity reactions, ADRs and all forms of Complementary and Alternative Medicine (CAM) are often poorly documented or not explored in detail, which may lead to unnecessary avoidance of a drug [33-35]. Green tea showed 85% decrease in plasma concentration of nadolol, for example [36]. Although some patients may not consider these as medicines, their use is fairly common – a review of published surveys identified an average prevalence rate of 37% [37]. This result in herb or herb-drug interaction induced unfavorable clinical outcomes without crucial documentation on their temporal relations and concomitant use. Herb-drug interaction related morbidity is thus an emerging serious public health issue with broad implications for clinicians, pharmaceutical industries and health authorities [38]. There are also many records that are indirectly related to patient management such as accounts records, service records of the staff, and administrative records, which are also useful as evidences for litigation purposes. Medical recording needs the concerted effort of a number of people involved in patient care [31,39,40]. Documenting the medical history can be lifesaving as well. An encounter with an awake patient who is able to answer all questions which are subsequently recorded on the electronic medical record, could prove to have vital information in the event the patient mental status changes, or during a later encounter if the patient is unable to give their history such as in a traumatic accident [41]. Critically ill adults often have extended hospital lengths of stay and are at high risk of having medication-related adverse events. A pharmacy personnel-based medication history program in the ICU is feasible and assists in the discovery of medication discrepancies with the potential for patient harm [42]. Between 70% and 95% of clinical records include inaccurate medication lists, and approximately 20% to 30% of all ambulatory patients experience an ADE annually [43]. Potential drug interactions and treatment duplications may result from prescribers being unaware of patients' complete list of home medications [44]. Obtaining an accurate medication history is an essential part of medicine reconciliation and a process that pharmacists play a vital role in [45]. Several studies show that pharmacists, pharmacy technicians and pharmacy students have all demonstrated improved accuracy in completing the home medication history [3], [46]. Both pharmacists and trained pharmacy technicians were significantly superior to the other Allied Health Professionals (AHPs) in terms of unintentional discrepancies and success index for medication reconciliation [47]. Pharmacists-acquired medication histories are often free of error of commission, omission and more frequently document past prescription/ OTC medicines, allergy history and use of alcohol [35,48]. Pharmacy technicians are supervised by pharmacists, using a defined accountability plan based on a set of medical staff approved rules for what medications comprise a best possible medication history. Medication history accuracy and completeness rates have been consistently over 90% and rates of provider compliance with medication reconciliation rose from under 20% to 100% since medication history program implementation [49]. Medication histories have traditionally been documented in the 'Drug history' section of a doctor's clerking; if pharmacists identified any errors with this list, they would usually document these in the subsequent progress notes [43]. Any redistribution of duties has potential prob-

lems. If nurses feel that pharmacists' desire to provide this service stemmed from the belief that nurses were doing it inadequately, they might feel alienated or insulted. On the contrary, the nursing staff strongly supported the prospect of pharmacists' role and expertise in conducting medication history interviews [44]. The aptitude of a patient as a historian of medications can vary depending on a multitude of factors, including but not limited to physical condition upon ED admission. Some patients have their medications managed by a facility or family member, while others come in with bottles of their medications. Even when these puzzle pieces are presented, however, they must be reviewed with a discerning eye given to dates, dosage regimens, and details [50]. Accurate history collection is integral to medication reconciliation. Also, Pharmacist involvement in ED medication reconciliation leads to time savings during the admission process [50].

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