



Research Paper

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

Accepted 17th July, 2019

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.

Key words: Clinical record keeping, hospital, patients, remedy blunders.

Abdul Kader Mohiuddin

Department of Pharmacy, World
University of Bangladesh, 151/8,
Green Road, Dhanmondi, Dhaka -
1205, Bangladesh.

E-mail:
mohiuddin3@pharmacy.wub.edu.b
d. Tel: +8801716477485.

DISCUSSION

Transition of care on admission to the hospital and between clinical areas is risk a point 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 (Mazhar et al., 2018). Even one third of prescribing errors that occur in hospitals are a consequence of an incorrect medication history taken at the time of admission (Boostani et al., 2019; Petrov et al., 2018). Studies have shown that for 50 to 70% of admitted patients, the initial medication history contains at least one error (Schepel et al., 2019). In a recent similar study by Boostani et al. (2019), a nearly 90% of the patients experienced at least one medication error (ME) during their hospital stay which is lower than reported MEs rates by other studies in patients admitted to internal wards (Boostani et al., 2019; Petrov et al., 2018). Approximately half of all hospital medication errors (MEs) and one third of

ADEs occur as a result of miscommunication at interfaces of care (Petrov et al., 2018; Almasreh et al., 2016). In addition, almost 60% of MEs occur at admission, transfer, or discharge from the hospital (Abu Farha et al., 2018). 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 (Breuker et al., 2017). ADEs are a major cause of morbidity and mortality, with more than 50% of ADEs being preventable (Naicker et al., 2018). A thorough and accurate admission medical record is an important tool in ensuring patient safety during hospital stay (Amirian et al., 2014). Inaccurate medication history at admission to hospitals leads to preventable adverse drug events, which in turn increase mortality, morbidity, and health care costs (McShane and Stark, 2018). Medication discrepancies are

unintended differences between a patient's outpatient and inpatient medication regimens. The rate of discrepancy of medications is estimated to be between 38 and 50% for newly hospitalized patients (Abuyassin et al., 2011). 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 (Penm et al., 2019). They affect up to 60% of patients admitted to hospital (Stockton et al., 2017). 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 (Graabæk et al., 2019). Insight into potential risk factors associated with these discrepancies would be helpful to focus the second medication reconciliation on high-risk patients (Ebbens et al., 2018). 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 (Frisse et al., 2010). 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 (Berman and Chutka, 2016). A modest relationship exists between the quality of medical-record keeping and patient perception of hospital care (Dang et al., 2014). 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 (Toney-Butler and Unison-Pace, 2019). 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 (Benseñor, 2003; Roshan and Rao, 2000; Peterson et al., 1992). 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 (Oyedokun et al., 2016). 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) (Mathioudakis et al., 2016). Gathering sufficient medical data from a patient's history and empathetic communication are two completely separate sides of the coin of history taking (Ohm et al., 2013). 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 (Lown, 1999). 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 (Asif et al., 2017). Again, Patient history and physical examination cannot be used to limit the need of a diagnostic block (Maas et al., 2017). 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 (Bosma et al., 2018). 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 (Thomas, 2009). A properly obtained consent will go a long way in proving that the procedures were conducted with the concurrence of the patient (Kadam, 2017). 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 (Pandit and Pandit, 2009). 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 (Mathioudakis et al., 2016; Shenfield et al., 2001). 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 (Mathioudakis et al., 2016; Cockayne et al., 2005; Fitzgerald, 2009). Green tea showed 85% decrease in plasma concentration of nadolol, for example (Awortwe et al., 2019). 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% (Posadzki et al., 2013). 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 (Parvez and Rishi, 2019). 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 (Kadam, 2017; WHO, 2006; Al-Bassam, 2016). 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 (Nichol and Nelson, 2019). 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 (Kram et al., 2019). Between 70 and 95% of clinical records include inaccurate medication lists, and approximately 20 to 30% of all ambulatory patients experience an ADE annually (Bolster, 2019). Potential drug interactions and treatment duplications may result from prescribers being unaware of patients' complete list of home medications (Nester and Hale, 2002). Obtaining an accurate medication history is an essential part of medicine reconciliation and a process that pharmacists play a vital role in (Nickless and Davies, 2016). Several studies show that pharmacists, pharmacy technicians and pharmacy students have all demonstrated improved accuracy in completing the home medication history (Petrov et al., 2018; Bowman et al., 2019). 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 (Johnston et al., 2010). 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 (Fitzgerald, 2009; Yusuff et al., 2010). 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 (Cooper et al., 2014). 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 (Bolster, 2019). Any redistribution of duties has potential problems. 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 (Nester and Hale, 2002). 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 (Hughes, 2016). Accurate history collection is integral to medication reconciliation. Also, Pharmacist involvement in ED medication reconciliation leads to time savings during the admission process (Chhabra et al., 2018).

ACKNOWLEDGEMENTS

The author is grateful to all pharmacists, officials, journalists, magazine analysts and associates for their assistance. Dr. Mamun Rashid, Assistant Professor of Pharmaceutics, Appalachian College of Pharmacy Oakwood, Virginia is gratefully acknowledged for his precious time to review this article and for his thoughtful suggestions. Also, to the seminar library of Faculty of Pharmacy, University of Dhaka and BANSDOC Library, Bangladesh for providing necessary books, journal and newsletters. The efforts of students and colleagues who continually provide information on different types of cosmetics in use and their support in collecting data from books, journals and newsletters are also acknowledged.

REFERENCES

- Abu Farha R, Abu Hammour K, Al-Jamei S, AlQudah R, Zawiah M (2018). The prevalence and clinical seriousness of medication discrepancies identified upon hospital admission of pediatric patients. *BMC Health Serv Res.* 18(1): 966. doi: 10.1186/s12913-018-3795-1. PubMed PMID: 30547782; PubMed Central PMCID: PMC6295069.
- Abuyassin BH, Aljadhey H, Al-Sultan M, Al-Rashed S, Adam M, Bates DW (2011). Accuracy of the medication history at admission to hospital in Saudi Arabia. *Saudi Pharm. J.* 19(4): 263-7. doi: 10.1016/j.jsps.2011.04.006. Epub 2011 May 7. PubMed PMID: 23960767; PubMed Central PMCID: PMC3745046.
- Al-Bassam SM (2016). Misconduct in Medical Records Documentation of Patients Admitted to Surgical Department at Basrah General Hospital. A Cross Sectional Study Of 250 Medical Records. *Bas. J. Surg.* Available From: <https://www.iasj.net/iasj?func=fulltext&aid=111179>
- Almanasreh E, Moles R, Chen TF (2016). The medication reconciliation process and classification of discrepancies: a systematic review. *Br. J. Clin. Pharmacol.* 82(3):645-58. doi: 10.1111/bcp.13017. Epub 2016 Jun 29. Review. PubMed PMID: 27198753; PubMed Central PMCID: PMC5338112.
- Amirian I, Mortensen JF, Rosenberg J, Gögenur I (2014). Admission medical records made at night time have the same quality as day and evening time records. *Dan. Med. J.* 61(7): A4868. PubMed PMID: 25123118.
- Asif T, Mohiuddin A, Hasan B, Pauly RR (2017). Importance Of Thorough Physical Examination: A Lost Art. *Cureus.* 9(5):e1212. doi: 10.7759/cureus.1212. PubMed PMID: 28589061; PubMed Central PMCID: PMC5453739.
- Awortwe C, Bruckmueller H, Cascorbi I (2019). Interaction of herbal products with prescribed medications: A systematic review and meta-analysis. *Pharmacol. Res.* 141:397-408. doi: 10.1016/j.phrs.2019.01.028. Epub 2019 Jan 17. Review. PubMed PMID: 30660822.
- Benseñor IM (2003). Do you believe in the power of clinical examination? The answer must be yes! *Sao Paulo Med. J.* 121(6): 223. Epub 2004 Jun 28. PubMed PMID: 14989136.
- Berman AC, Chutka DS (2016). Assessing effective physician-patient communication skills: "Are you listening to me, doc?". *Korean J Med*

- Educ. 28(2):243-9. doi: 10.3946/kjme.2016.21. Epub. PubMed PMID: 26913771; PubMed Central PMCID: PMC4951737.
- Bolster L (2019). Technician Medication Reconciliation in Primary Care Is An Overlooked Opportunity. *Pharmacy Times*®.
- Boostani K, Noshad H, Farnood F, Rezaee H, Teimouri S, Entezari-Maleki T, Najafiazar R, Hassanpouri-Olia A, Gharekhani A (2019). Detection and Management of Common Medication Errors in Internal Medicine Wards: Impact on Medication Costs and Patient Care. *Adv. Pharm. Bull.* 9(1):174-179. doi: 10.15171/apb.2019.020. Epub 2019 Feb 21. PubMed PMID: 31011571; PubMed Central PMCID: PMC6468220.
- Bosma LBE, Hunfeld NGM, Quax RAM, Meuwese E, Melief PHGJ, van Bommel J, Tan S, van Kranenburg MJ, van den Bemt PMLA (2018). The effect of a medication reconciliation program in two intensive care units in the Netherlands: a prospective intervention study with a before and after design. *Ann Intensive Care.* 8(1):19. doi: 10.1186/s13613-018-0361-2. PubMed PMID: 29417295; PubMed Central PMCID: PMC5803169.
- Bowman C, McKenna J, Schneider P, Barnes B (2019). Comparison of Medication History Accuracy Between Nurses and Pharmacy Personnel. *J. Pharm. Pract.* 32(1): 62-67. doi: 10.1177/0897190017739982. Epub 2017 Nov 6. PubMed PMID: 29108459.
- Breuker C, Macioce V, Mura T, Castet-Nicolas A, Audurier Y, Boegner C, Jalobert A, Villiet M, Avignon A, Sultan A (2017). Medication Errors at Hospital Admission and Discharge: Risk Factors and Impact of Medication Reconciliation Process to Improve Healthcare. *J. Patient. Saf.* doi: 10.1097/PTS.0000000000000420. [Epub ahead of print] PubMed PMID: 28877049.
- Chhabra A, Quinn A, Ries A (2018). Evaluation of Time Spent by Pharmacists and Nurses Based on the Location of Pharmacist Involvement in Medication History Collection. *J. Pharm. Pract.* 1:897190017753783. doi: 10.1177/0897190017753783. [Epub ahead of print] PubMed PMID: 29357729.
- Cockayne NL, Duguid M, Shenfield GM (2005). Health professionals rarely record history of complementary and alternative medicines. *Br. J. Clin. Pharmacol.* 59(2): 254-8. PubMed PMID: 15676051; PubMed Central PMCID: PMC1884759.
- Cooper JB, Lilliston M, Brooks D, Swords B (2014). Experience with a pharmacy technician medication history program. *Am. J. Health Syst. Pharm.* 71(18):1567-74. doi: 10.2146/ajhp130590. PubMed PMID: 25174017.
- Dang VM, François P, Batailler P, Seigneurin A, Vittoz JP, Sellier E, Labarère J (2014). Medical record-keeping and patient perception of hospital care quality. *Int J Health Care Qual Assur.* 27(6): 531-43. PubMed PMID: 25115055.
- Ebbens MM, Gombert-Handoko KB, Al-Dulaimy M, van den Bemt PMLA, Wesselink EJ (2018). Risk factors for medication errors at admission in preoperatively screened patients. *Pharmacoepidemiol. Drug Saf.* 27(3): 272-278. doi: 10.1002/pds.4380. Epub 2018 Jan 10. PubMed PMID: 29318695.
- Fitzgerald RJ (2009). Medication errors: the importance of an accurate drug history. *Br. J. Clin. Pharmacol.* 67(6):671-5. doi: 10.1111/j.1365-2125.2009.03424.x. PubMed PMID: 19594536; PubMed Central PMCID: PMC2723207.
- Frisse ME, Tang L, Belsito A, Overhage JM (2010). Development and use of a medication history service associated with a health information exchange: architecture and preliminary findings. *AMIA Annu. Symp. Proc.* 13;2010:242-5. PubMed PMID: 21346977; PubMed Central PMCID: PMC3041403.
- Graabæk T, Terkildsen BG, Lauritsen KE, Almarsdóttir AB (2019). Frequency of undocumented medication discrepancies in discharge letters after hospitalization of older patients: a clinical record review study. *Ther. Adv. Drug. Saf.* 16;10:2042098619858049. doi: 10.1177/2042098619858049. eCollection 2019. PubMed PMID: 31244989; PubMed Central PMCID: PMC6580721.
- Hughes A (2016). Obtaining a Best Possible Medication History in Hospitals. *Pharmacy Times*®.
- Johnston R, Saulnier L, Gould O (2010). Best possible medication history in the emergency department: comparing pharmacy technicians and pharmacists. *Can. J. Hosp. Pharm.* 63(5): 359-65. PubMed PMID: 22479003; PubMed Central PMCID: PMC2999367.
- Kadam RA (2017). Informed consent process: A step further towards making it meaningful! *Perspect Clin. Res.* 8(3):107-112. doi: 10.4103/picr.PICR_147_16. Review. PubMed PMID: 28828304; PubMed Central PMCID: PMC5543760.
- Kram BL, Trammel MA, Kram SJ, Wheeley SE, Mancheril BG, Burgess LD, Schultheis JM (2019). Medication Histories in Critically Ill Patients Completed by Pharmacy Personnel. *Ann. Pharmacother.* 53(6): 596-602. doi: 10.1177/1060028018825483. Epub 2019 Jan 17. PubMed PMID: 30654616.
- Lown B (1999). *The lost art of healing: practicing compassion in medicine.* New York: Ballantine Books.
- Maas ET, Juch JN, Ostelo RW, Groeneweg JG, Kallewaard JW, Koes BW, Verhagen AP, Huygen FJ, van Tulder MW (2017). Systematic review of patient history and physical examination to diagnose chronic low back pain originating from the facet joints. *Eur. J. Pain.* (3): 403-414. doi: 10.1002/ejp.963. Epub 2016 Oct 10. Review. PubMed PMID: 27723170.
- Mathioudakis A, Rousalova I, Gagnat AA, Saad N, Hardavella G (2016). How to keep good clinical records. *Breathe (Sheff).* 12(4): 369-373. doi: 10.1183/20734735.018016. PubMed PMID: 28210323; PubMed Central PMCID: PMC5297955.
- Mazhar F, Haider N, Ahmed Al-Osaimi Y, Ahmed R, Akram S, Carnovale C (2018). Prevention of medication errors at hospital admission: a single-centre experience in elderly admitted to internal medicine. *Int. J. Clin. Pharm.* 40(6):1601-1613. doi: 10.1007/s11096-018-0737-2. Epub 2018 Oct 26. PubMed PMID: 30367379.
- McShane M, Stark R (2018). Medication Reconciliation in the Hospital: An Interactive Case-Based Session for Internal Medicine Residents. *MedEdPORTAL.* 9;14: 10770. doi: 10.15766/mep_2374-8265.10770. PubMed PMID: 30800970; PubMed Central PMCID: PMC6342339.
- Naicker P, Schellack N, Godman B, Bronkhorst E (2018). Creating and evaluating an opportunity for medication reconciliation in the adult population of South Africa to improve patient care. *Hosp Pract (1995).* 46(3):110-120. doi: 10.1080/21548331.2018.1461528. Epub 2018 Apr 16. PubMed PMID: 29619837.
- Nester TM, Hale LS (2002). Effectiveness of a Pharmacist-Acquired Medication History in Promoting Patient Safety. *Am. J. Health Syst. Pharm.* 59(22).
- Nichol JR, Nelson G (2019). *Medical History.* [Updated 2019 Jan 19]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK534249/>
- Nickless G, Davies R (2016). How to take an accurate and detailed medication history. *Pharm. J.*
- Ohm F, Vogel D, Sehner S, Wijnen-Meijer M, Harendza S (2013). Details acquired from medical history and patients' experience of empathy--two sides of the same coin. *BMC Med Educ.* 9-13:67. doi: 10.1186/1472-6920-13-67. PubMed PMID: 23659369; PubMed Central PMCID: PMC3661386.
- Oyedokun A, Adeloye D, Balogun O (2016). Clinical history-taking and physical examination in medical practice in Africa: still relevant? *Croat Med J.* 57(6): 605-607. PubMed PMID: 28051286; PubMed Central PMCID: PMC5209934.
- Pandit MS, Pandit S (2009). Medical negligence: Coverage of the profession, duties, ethics, case law, and enlightened defense - A legal perspective. *Indian J Urol.* 25(3):372-8. doi: 10.4103/0970-1591.56206. PubMed PMID: 19881134; PubMed Central PMCID: PMC2779963.
- Parvez MK, Rishi V (2019). Herb-Drug Interactions and Hepatotoxicity. *Curr Drug Metab.* 20(4): 275-282. doi: 10.2174/1389200220666190325141422. PubMed PMID: 30914020.
- Penm J, Vaillancourt R, Pouliot A (2019). Defining and identifying concepts of medication reconciliation: An international pharmacy perspective. *Res. Social Adm. Pharm.* 15(6): 632-640. doi: 10.1016/j.sapharm.2018.07.020. Epub 2018 Aug 1. PubMed PMID: 30100200.
- Peterson MC, Holbrook JH, Von Hales D, Smith NL, Staker LV (1992). Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. *West J. Med.* 156(2):163-5. PubMed PMID: 1536065; PubMed Central PMCID: PMC1003190.
- Petrov K, Varadarajan R, Healy M, Darvish E, Cowden C (2018). Improving Medication History at Admission Utilizing Pharmacy Students and Technicians: A Pharmacy-Driven Improvement Initiative. *P T.* 43(11): 676-684. Pub Med PMID: 30410283; Pub Med Central PMCID:

- PMC6205119.
- Posadzki P, Watson LK, Alotaibi A et al (2013). Prevalence of herbal medicine use by UK patients / consumers: a systematic review of surveys. *Focus on Alternative and Complementary Therapies*. 18(1):19-26. doi: 10.1111/ftc.12006
- Roshan M, Rao AP (2000). A study on relative contributions of the history, physical examination and investigations in making medical diagnosis. *J. Assoc. Physicians India*. 48(8): 771-5. PubMed PMID: 11273467.
- Schepel L, Lehtonen L, Airaksinen M, Ojala R, Ahonen J, Lapatto-Reiniluoto O (2019). Medication reconciliation and review for older emergency patients requires improvement in Finland. *Int. J. Risk Saf. Med*. 30(1):19-31. doi: 10.3233/JRS-180030. PubMed PMID: 30103352; PubMed Central PMCID: PMC6294607.
- Shenfield GM, Robb T, Duguid M (2001). Recording previous adverse drug reactions--a gap in the system. *Br J Clin Pharmacol*. 51(6):623-6. PubMed PMID: 11422023; PubMed Central PMCID: PMC2014491.
- Stockton KR, Wickham ME, Lai S, Badke K, Dahri K, Villanyi D, Ho V, Hohl CM (2017). Incidence of clinically relevant medication errors in the era of electronically prepopulated medication reconciliation forms: a retrospective chart review. *CMAJ Open*. 5(2): E345-E353. doi: 10.9778/cmajo.20170023. PubMed PMID: 28476877; PubMed Central PMCID: PMC5498425.
- Thomas J (2009). Medical records and issues in negligence. *Indian J. Urol*. 25(3): 384-8. doi: 10.4103/0970-1591.56208. PubMed PMID: 19881136; PubMed Central PMCID: PMC2779965.
- Toney-Butler TJ, Unison-Pace WJ (2019). Nursing Admission Assessment and Examination. [Updated 2019 Jun 3]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; Available from: <https://www.ncbi.nlm.nih.gov/books/NBK493211/>
- WHO (2006). Medical Records Manual: A Guide for Developing Countries. Available From: <http://www.herai.in/admin/upload/resouce/7751185308Medical%20Records%20Manual.pdf>
- Yusuff KB, Tayo F, Aina BA (2010). Pharmacists' participation in the documentation of medication history in a developing setting: An exploratory assessment with new criteria. *Pharm Pract (Granada)*. 8(2): 139-45. Epub 2010 Mar 15. PubMed PMID: 25132882; PubMed Central PMCID: PMC4133068.

Cite this article as:

Mohiuddin AK (2019). Patient history and medical record: Proper solution from accurate problem identification. *Med. Med. Sci*. 7(7): 082-086.

Submit your manuscript at

<http://www.academiapublishing.org/journals/mms>