

Electronic Prescribing with a Quick Look for Its Application in Al-Husein Hospital/ Jordanian Royal Medical Services (Jrms)

Rehab.K Salah¹, Jelnar .Z Alkalaldeh², Nadia Ahmad AL-Omari³

Sahar AL-Niemat⁴, Rasha Baninasur⁵, Toleen.I Bisharat³

Supply Pharmacy, Queen Alia Heart Institute¹, Supply Pharmacy, King Hussein Medical Center²

Clinical Pharmacy, Queen Alia Heart Institute³, Supply Pharmacy, Directorate of Royal Medical Services⁴, Clinical Pharmacy, King Hussein Medical Center⁵

Corresponding author: Rehab.K Salah .E-mail:Rehabalahat@yahoo.com.Phone Number: 00962795178447.

ABSTRACT

Aim of the study : electronic prescribing is the computer-based electronic generation; it allows a physician to electronically transmit a new prescription to the community or health facility pharmacy. The aim of this study was to evaluate an electronic prescribing patient and physician satisfaction at AL-Husein Hospital/(JRMS).

Patients and Methods:An electronic prescribing patient satisfaction survey was conducted a sample of 100 patient were randomly chosen.An electronic prescribing physician satisfaction survey was conducted a sample of 50 physician in the specialty clinics of AL- Hussein Hospital were randomly chosen .

Results:Around 77% of patient was satisfied that the clinic had adopted electronic prescribing, and around 80% of physician were satisfied that the clinic had adopted electronic prescribing. The feedbacks of patients and physicians were great.

Conclusion:This study approved that electronic medical record system improve the quality of patient care and decrease medical errors. Periodic assessment is needed to evaluate many aspect and consequences of e-prescribing and to measure the enhancement in patients and community in addition to achieve a good resource management .

Keywords: Electronic prescribing, patient, physician, pharmacist, satisfaction, computer, medication.

INTRODUCTION

Hippocrates, the father of medicine, already realized that "the physician must not only be prepared to do what is right himself, but also make the patient cooperate".⁽¹⁾ On a worldwide basis, the World Health Organization (WHO) projects that only about 50 percent of patients typically take their medicines as prescribed.⁽²⁾ Inadequate medication compliance and persistence are old age problems.⁽³⁾

Medical compliance is commonly defined as the extent to which a patient conforms to medical advice about lifestyle and dietary changes as well as taking medication as prescribed.^(1,4) It remains a challenge more than twenty centuries after Hippocrates.⁽¹⁾ Furthermore, lack of medication adherence leads to unnecessary disease progression, disease complications, reduced functional abilities, a lower quality of life, and even premature death.^(2,3)

Three partners, the patient, the physician and the pharmacist are needed for carrying out

drug therapy. However, there is quite little cooperation between the partners. The physician prescribes the drug, the pharmacist delivers the drug, and medication compliance depends on quite many things, e.g. the drug information the patient has received.

The implementation of a well-designed computerized prescription system is a viable policy option that can be done at a relatively small cost, and can bring substantial long-range benefits for monitoring and improving quality of care for public-sector clients.

For the hospital budget, the quality management of drugs, in terms of checking expirations of drugs in stock, is essential. The presence of professional and technological resources means that pharmacists are expected to do things "better, faster and cheaper", as well as "smarter." Technology would help and enable a pharmacist to be a healthy care provider under limited professional personnel size.⁽⁸⁾

The computer can identify the appropriate drugs and add them together in a systematic way to produce detailed printouts of the drug management in the practice.⁽¹³⁾ Use of computerized physician order entry (CPOE) systems could possibly address these issues.⁽⁶⁾

A fully electronic prescription is sent from a physician's computer to a pharmacist's computer. Standardized electronic prescriptions eliminate the need to manually enter the data at the pharmacy. It is important to note that neither the use of facsimile transmissions nor the transmission of computer image files (i.e., files containing a computer-generated or scanned image of each prescription) constitutes true e-prescribing.

METHODS

In August 2012 the implementation of an electronic prescribing in specialty clinics of Al-Hussein Hospital was initiated by order from the Director General of the Royal Medical Services Major General Dr Abdul Aziz Al Ziadat. In the first step, a stand-alone system is developed by which an electronic folder was created in the inpatient or outpatient pharmacy for patients that use chronic medications, this folder includes: names of all medication taken, unit of dose, doses, quantity and any alternative treatments.

After achieving a round 80-90% of old patients folders, the majority of clinics started to give the patients a computerized prescription rather than a handwriting one. By entering to the patient folders, doctors have the access to modify any dose or quantity of their patient's medications, also to delete or add any drugs they want.

Now after a round three years period of heavy workload and crossing a lot of obstacles, we can say proudly that JRMS jump to a modern improvement in patient centered healthcare. As a policy in the management of any healthcare system, any achievement that is needed to be sustained and improved must be evaluated and documented. From this point, two types of survey were done in October 2015 at AL-Hussein hospital/(JRMS) :

A. Electronic prescribing patient satisfaction survey.

B. Electronic prescribing physician satisfaction survey

Data Analysis

Quantitative values were calculated as mean value. Frequency and percentage were calculated and presented. Data from observation were analyzed descriptively.

RESULTS

A) Electronic prescribing patient satisfaction survey: A sample of 100 patients were randomly chosen, seventy-seven percent of patients were happy that the clinic had adopted electronic prescribing. Positive and neutral answers combined for around 90% of the responses on all questions.(Table 1)

B) Electronic prescribing physician satisfaction survey: A sample of 50 physicians in the specialty clinics / Al-Hussein hospital was randomly chosen, around 80% of physician were happy that the clinic had adopted electronic prescribing .(Table 2)

DISCUSSION

As the practice of health care becomes increasingly more complex, incorporation of electronic prescribing systems into practice presents the opportunity to enhance efficiency and effectiveness in all areas of health care. It is the computer-based electronic generation; it allows a physician, nurse practitioner, or physician assistant to electronically transmit a new prescription or renewal authorization to a community or mail-order pharmacy.

Among the most common unfavorable responses, more than 34% of the physician believed that electronic prescribing did not lead to fewer prescription errors. Approximately 82% of physician indicated that electronic prescribing take less time than handwriting prescription.

Most physicians rated improved legibility as the greatest benefit of electronic prescribing because they believed that it reduced pharmacy errors in filling prescription resulting from poor handwriting or incomplete information, or both. This system can improve documentation and administration in the primary care setting. Computerized tools such as reminders or feedback and recommendations for treatment

based on guidelines can improve physician prescribing.

Physicians have positive attitudes and are committed to learning more about e-prescribing and other health information technology. Physicians and support staff have realistic expectations about the overall benefits of electronic prescribing and expect some technical difficulties of office workflow during implementation.

CONCLUSION

Electronic prescribing tools are currently available but most medical practices are not using them.⁽¹⁹⁾ Although that the implementation of an electronic medical record system in primary care can result in a positive financial return on investment to the health care organization. The magnitude of the return is sensitive to several key factors.^(15,14) Electronic prescribing is one of the meaningful use criteria to quantify electronic medical records for financial incentives.

computerized drug-interaction monitoring system can help increase physicians' awareness of possibly interacting drug combinations and provide them with useful information about the clinical management of patients for who such drug combinations have been prescribed.⁽¹⁸⁾

E prescribing software is cost-effective for all size practices with a more rapid return on investment in larger practices. It addresses many of the ills in the current paper-based system of getting drug orders from physicians to pharmacies. This new automation application shows tremendous potential for saving time and money and reducing the chance for medication errors. But many hurdles must be overcome before e prescribing is widely used. E prescribing can provide immense benefits to healthcare providers, patients, and managed care. Resolution of several obstacles that limit feasibility of this technology will determine its future, It is a promising technology that can reduce medication errors and improve operational efficiency and quality of prescribing. The use of this promising system by physicians is growing.

A “qualified” e-prescribing system must be capable of performing all of the following functions: Generating a complete active

medication list incorporating electronic data received from applicable pharmacy drug plans, Selecting medication, printing prescription, electronically transmitting prescription, and conducting all safety checks (safety checks include: automated prompts that offer information on the drug being prescribed, potential inappropriate dose or route of administration, drug-drug interaction, allergy concerns).

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Table 1: Electronic prescribing patient satisfaction survey.

Question	Yes	No	No difference
1.Does electronic prescribing makes obtaining my medications easier for me?	83.5%	7%	7%
2. Does Electronic prescribing results in fewer errors with my medications?	77.2%	12.6%	8.7%
3- Does Electronic prescribing makes obtaining my prescriptions easier for me?	82.7%	6.3%	9.4%
4. All things considered, am I satisfied that my doctor uses electronic prescribing?	76.8%	10.2%	11.8%

Table 2: Electronic prescribing physician satisfaction survey.

Question	Yes	No	No Difference
1. Does Electronic prescribing take less time for me than handwriting Prescriptions?	82%	14%	4%
2.Does Electronic prescribing lead to fewer clinic-hours medication questions,callbacks, and overall workload than I would have if I were handwriting all my prescriptions?	72%	20%	8%
3. Does Electronic prescribing lead to fewer office- hours medication questions, callbacks, and overall workload than I would have if I were handwriting all my prescriptions?	76%	20%	4%
4.Does Electronic prescribing lead to fewer prescription errors in our practice than written prescriptions?	64%	34%	2%
5.All things considered, am I satisfied we now use electronic prescribing?	80%	18%	2%