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INTEGRATIVE REVIEW ARTICLE

APPLICABILITY OF ELECTRONIC MEDICAL RECORDS IN HEALTH SECTOR: AN INTEGRATIVE REVIEW

APLICABILIDADE DO PRONTUÁRIO ELETRÔNICO NA ÁREA DA SAÚDE: REVISÃO INTEGRATIVA

LA APLICABILIDAD DE LOS REGISTROS MÉDICOS ELECTRÓNICOS EN LA AREA DE LA SALUD: UNA REVISIÓN INTEGRADORA

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ABSTRACT

Objective: identifying the main contributions of the electronic record for patient care. **Method:** an integrative review guided by the question << *What is the contribution of the electronic record for patient care?* >> held in database LILACS and SciELO Virtual Library in the period June-December 2013. The studies were analyzed and presented descriptively and in tables. **Results:** ten studies were the sample. It was observed that the technological resource through the use of electronic medical records helps in improving patient care and organization of the health service. Some limitations of professional order, the structure of the service and technical constraints were also highlighted. **Conclusion:** the electronic patient record corresponds to an essential technological resource to health services, as it allows benefits to the organization and to the patient. **Descriptors:** Electronical Record; Information Technology; Health.

RESUMO

Objetivo: identificar as principais contribuições do prontuário eletrônico para a assistência ao paciente. **Método:** revisão integrativa norteada pela questão << *Qual a contribuição do prontuário eletrônico para a assistência ao paciente?* >> realizada na base de dados LILACS e na Biblioteca Virtual SciELO no período de junho a dezembro de 2013. Os estudos foram analisados e apresentados de modo descritivo e em tabelas. **Resultados:** dez estudos constituíram a amostra. Observou-se que o recurso tecnológico por meio do uso do prontuário eletrônico contribui na melhoria da assistência ao paciente e na organização do serviço de saúde. Algumas limitações de ordem profissional, da estrutura do serviço e limitações técnicas também foram destacadas. **Conclusão:** o prontuário eletrônico do paciente corresponde a um recurso tecnológico essencial aos serviços de saúde, uma vez que possibilita benefícios à organização e ao paciente. **Descritores:** Prontuário Eletrônico; Tecnologia da Informação; Saúde.

RESUMEN

Objetivo: identificar las principales aportaciones del registro electrónico para la atención al paciente. **Método:** revisión integradora guiada por la pregunta << *¿Cuál es la contribución del registro electrónico para la atención al paciente?* >> celebrada en la base de datos LILACS y Biblioteca Virtual SciELO en el período junio-diciembre de 2013. Los estudios fueron analizados y presentados de forma descriptiva y en tablas. **Resultados:** diez estudios formaron la muestra. Se observó que el recurso tecnológico a través del uso de registros médicos electrónicos ayuda a mejorar el cuidado y la organización del servicio de salud de los pacientes. Algunas limitaciones de orden profesional, de la estructura del servicio e limitaciones técnicas también se pusieron de relieve. de las restricciones y. **Conclusión:** el registro electrónico del paciente corresponde a una característica tecnológica esencial a los servicios de salud, ya que permite los beneficios a la organización y al paciente. **Descriptores:** Registro Electronico; Tecnologías de la Información; Salud.

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INTRODUCTION

Technological advances have made knowledge in health care more affordable, with the possibility of widespread use and sharing of information, highlighting the ubiquitous computing that aims to bring computing devices for day-to-day man. In this sense, concern for the welfare of our client, the increasing speed at which advances scientific knowledge and the consequent need for a process of optimal decision, put health in different position in relation to other fields dependent on the handling of information.¹

The use of information technology in health care includes a variety of applications, from typical systems of management information to systems of automation and support of diagnostic tasks. A typical application and relatively widespread information management is the Electronic Health Record (EHR), which, in principle, helps in bureaucratic tasks and information retrieval of patients, a process that incorporates a user logs into a computer system, in order to generate information for diagnosis and treatment, documenting the monitoring and facilitating planning assistance.²

The PEP can be defined as a set of information regarding the patient, stored digitally, whose main objective is to enable the quality of service, accuracy of information and health care in places and different scenarios.³ The PEP is one of the innovations that have been adopted in health services as part of this movement for the introduction of Information and Communication Technology (ICT), in order to achieve gains in efficiency and effectiveness in the management of these organizations.⁴

There are numerous advantages and possibilities arising from the use of PEP, such as faster access to health history and interventions; simultaneous use of several services and health professionals; absolute clarity of the information; elimination of redundant data and requests for additional tests; integration with other information systems; continuous processing of data, making them immediately available to all actors involved in patient care and organized information more systematic.⁵ Besides these advantages, the PEP provides access to knowledge updated with consequent improvement of the decision-making process and effectiveness of care.^{6,7}

Its vast body of information is capable of generating knowledge and can be understood as its main database, from which all systems are built of information, whether managerial,

decision support, teaching support, and statistical for research. Thus, the PEP enables the distributed data access and information, promotes knowledge of all health care activities and allows a better performance of the activities, creating a new way of working for health services and changes in management because it allows access to distance information.⁸

PEP may represent a new treatment concept in health information and serves as a tool to assisting in the diagnosis and treatment of health of a person; however, one realizes that the studies on this topic leave gaps relating to the contributions that use of this instrument brings to patient care.

OBJECTIVE

- Identifying the main contributions of the electronic record for patient care.

METHODOLOGY

This is a study using the integrative review method for allowance of the synthesis of multiple published studies and general conclusions about a particular area of study. To this end, we traveled six stages: identifying the topic, literature search, categorization of studies, assessment of the studies included in the integrative review, interpretation of results and synthesis of knowledge evidenced in the analyzed articles or presentation of the integrative review.

The guiding question of this integrative review is in << ***What is the contribution of the electronic record for patient care?*** >>

The selection of articles was conducted in the period from June to December 2013, the database of the Latin American and Caribbean Literature on Health Sciences (LILACS) and Virtual Library Literature Scientific Electronic Library Online (SciELO), using the following descriptors: "electronic patient record", "application area", "field" and "contributions in aid."

The following criteria for inclusion of articles were defined: to be published in Portuguese, contain the descriptor "electronic patient record" associated with one of the other descriptors in your title or in your resume, have been published in the last ten years and is available in full. Articles were excluded duplicates and those that did not contain summaries.

Initially, it was delimited descriptors as "electronic patient record" and "application area", from this search 12 listings were found in the database and the virtual library, six in six in LILACS and SciELO, four of which obeyed

aid in the treatment and diagnosis, as well as in disease prevention, and its greatest support in the treatment, represented in this study by five of the articles analyzed. Therefore, its

use can bring contributions both in patient care as well as in the organization of the service, as shown in Table 2.

CONTRIBUTIONS ARISING FROM USE OF PEP
In patient care
- Improves the Organization of data on the patient's clinical life assisting diagnosis and treatment;
- Have significant impact on the quality of patient care;
- Identifies the patient making errors due to hard-to-read handwriting;
- Offers better conditions of service to patients on the basis of the Organization of services and work processes;
- Enables faster access to information, simultaneous use of the information, readability, elimination of data redundancy and requests of scans, eliminating retyping of information, more systematic organization of customer data, improving the effectiveness of care and treatment;
- Reduces red tape by an accumulation of operational role in the chart;
-Improves the patient's adherence to the proposed treatment due to the overview that the team has of their clinical evolution and of their behavior as a user assistance network.
In the Organization of the service
-Facilitates communication and sharing of information in a country with continental dimensions and immense cultural diversity by supporting the management of services and providing more quality customer service and public administration;
-Provides better control of patients, drug usage and costs, gain more accuracy and correctness, since the information of patients are recorded in an information system that integrates the healthcare and administrative areas, with the possibility to generate key performance indicators for these areas.

Figure 2. Distribution of articles surveyed according to the contributions arising from the use of PEP.

It is possible, observing in the analysis of the articles that the use of PEP contributes significantly in patient care assisting in the diagnosis and treatment due to the more systematic organization of data, which has shown to improve the effectiveness of care, as well as treatment raising the quality of care provided to patients.

In addition to the contributions in patient care, the analysis of the articles revealed

advantages in the organization of health services, for example, facilitates communication and sharing of information between services, provides better control of patients, medication use and costs, generating indicators for planning assistance and administrative activities.

The articles analyzed also showed the progress achieved through the use of the PEP, as shown in table 3.

ADVANCES OBTAINED WITH THE USE OF PEP
-Digital Certification
-Dissemination of the implementation of the PEP in health services
-Dissemination of research and studies that analyze the PEP
-Reduction of paper usage
-Reduction of bureaucratic activities
-Improvement in health and information management
-Possibility of recovery and information sharing
-Cost reduction
-Improvement in the quality of patient care

Figure 3. Distribution of articles surveyed according to the progress observed through the use of PEP.

Observed in studies that comprised the sample, several advancements associated with the use of PEP, including: digital certification, dissemination of research addressing the issue, reduction of bureaucratic activities under the responsibility of health professionals, improving the management of

customer information , reduction of costs and, as a final result of its use, improved patient care.

Despite the many advantages presented by studies on the use of PEP, the technology has some limitations, as shown in Table 4.

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