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Use of health indicators in the hospital management process

Uso de indicadores de salud en el proceso de gestión hospitalaria

Utilização dos indicadores de saúde no processo de gerenciamento hospitalar

ABSTRACT

Objective: To analyze the use of health indicators in the hospital management process. **Method:** Bibliographic search, such as literature review. Conducted by searching three databases: Latin American and Caribbean Literature; System of Analysis and Recovery of Online Medical Literature and Database in Nursing (BDEFN), for articles published in the years 2010 to 2018, in Portuguese. The combined descriptors were used: "management indicators", AND "health care quality indicators" AND "hospital administration". **Results:** The studies are structured in three axes: 1. Evaluation of health indicators in hospitals; 2. Perception of managers; and 3. Innovation in the analysis of indicators. It was found that errors in filling out hospital records or the absence of information, compromise the veracity of the information. **Conclusion:** Health indicators play a decisive role in drawing a diagnostic profile of the health situation in the hospital management process.

DESCRIPTORS: Management indicators; Quality indicators in health care; Hospital administration.

RESUMEN

Objetivo: Analizar el uso de indicadores de salud en el proceso de gestión hospitalaria. **Método:** Búsqueda bibliográfica, como revisión de la literatura. Realizado mediante la búsqueda de tres bases de datos: Literatura latinoamericana y caribeña; Sistema de Análisis y Recuperación de Literatura Médica en Línea y Base de Datos en Enfermería (BDEFN), para artículos publicados en los años 2010 a 2018, en portugués. Se utilizaron los descriptores combinados: "indicadores de gestión", "indicadores de calidad de la atención sanitaria" Y "administración hospitalaria". **Resultados:** Los estudios se estructuran en tres ejes: 1. Evaluación de indicadores de salud en hospitales; 2. Percepción de los gerentes; y 3. Innovación en el análisis de indicadores. Se encontró que los errores en el llenado de los registros hospitalarios o la ausencia de información comprometen la veracidad de la información. **Conclusión:** Los indicadores de salud juegan un papel decisivo en la elaboración de un perfil diagnóstico de la situación de salud en el proceso de gestión hospitalaria.

DESCRIPTORES: Indicadores de gestión; Indicadores de calidad en salud; Administración hospitalaria.

RESUMO

Objetivo: Analisar a utilização dos indicadores de saúde no processo de gerenciamento hospitalar. **Método:** Pesquisa bibliográfica, tipo revisão da literatura. Realizada através da busca em três bases de dados: Literatura Latino-americana e do Caribe; Medical Literature Analysis and Retrieval System Online e Banco de Dados em Enfermagem (BDEFN), por artigos publicados nos anos de 2010 a 2018, no idioma português. Foram utilizados os descritores combinados: "indicadores de gestão", AND "indicadores de qualidade em assistência à saúde" AND "administração hospitalar". **Resultados:** Os estudos se estruturam em três eixos: 1. Avaliação dos indicadores de saúde nos hospitais; 2. Percepção dos gestores; e 3. Inovação na análise dos indicadores. Verificou-se que erros no preenchimento de registros hospitalares ou a ausência de informações, comprometem a veracidade da informação. **Conclusão:** Os indicadores de saúde cumprem papel determinante ao traçar um perfil diagnóstico da situação de saúde no processo de gerenciamento hospitalar.

DESCRITORES: Indicadores de gestão; Indicadores de qualidade em assistência à saúde; Administração hospitalar.

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INTRODUCTION

Information systems can be defined as a set of interrelated components that collect data, with the purpose of making information available for analysis, understanding the main health problems of the population, guiding decision making.⁽¹⁾

For an effective progress of health information systems, it is necessary to ensure the production of reliable and timely information regarding the health status of the population, its determinants and the performance of the health system. However, it is also necessary to perform analyzes to direct the activities in the different blocks of the system. Likewise, health statistics need to allow managers, at all levels of the system, to recognize advances, problems and needs, to make evidence-based decisions about health policies. In this process, the use of health indicators makes the manager's activity simpler.⁽²⁾

The indicators are intended to guide decision making, as they indicate the time, time, time and place for an action to take place; that is, the indicator is the critical index capable of guiding decision-making in favor of evidence or measures.⁽³⁾

The indicators are intended to provide data to analyze health services, facilitating and allowing the supervision of health objectives and goals, and with this, the possibility of monitoring the quality of care, instigating the strengthening of the analysis capacity

of health teams, identifying opportunities for improvement, positive changes in service and the development of intercommunicated health information systems.⁽⁴⁾

Health management requires making decisions with high responsibility and social relevance. The information from the health indicators provides the necessary basis for planning, executing and evaluating the actions carried out, as they provide knowledge about relevant aspects of the population, reduce the degree of uncertainty about their health situation and support the search for possible solutions and measures.⁽²⁾

Vieira, Detoni and Braum⁽⁵⁾ in their study "Quality Indicators in a Hospital Unit", they state that the use of indicators to evaluate health services is one of the bases of success in guaranteeing quality in hospital services. In this way, the indicators become another tool for health institutions to improve assistance to the population.

In view of the foregoing considerations, the interest in this study arose from the perception that health indicators represent more than a set of data, as they add values to them, converting them into information to be used by managers. In this way, this study can contribute to the knowledge in hospital management, enabling the knowledge of the information produced within the assistance, identification of both the weaknesses and the positive points in the health services, subsidizing the teams and managers in the reflection

for the taking of strategic decisions and efficient with a view to permanent and continuous improvement in quality of care.

In this perspective, this study proposes to analyze the use of health indicators in the hospital management process.

METHOD

It is a bibliographic research, which consists of an important methodological procedure in the production of scientific knowledge capable of generating, especially in little explored themes, the postulation of hypotheses or interpretations that will serve as a starting point for other research,⁽⁶⁾ such as review of the literature.

The research was carried out from July to November 2018. Delimited the time frame for the search of articles from the years 2010 to 2018, through the search in scientific journals, available in three databases: Latin American and Caribbean Literature (LILACS); Medical Literature Analysis and Retrieval System Online (MEDLINE) and Nursing Database (BDENF), found in the Virtual Health Library (VHL), in Portuguese. The combined descriptors were used: "indicadores de gestão", AND "indicadores de qualidade em assistência à saúde" AND "administração hospitalar".

The inclusion criteria used to select the articles were: studies available electronically that addressed the use of health indicators in the hospital mana-

gement process. And as an exclusion criterion, duplicate articles that did not meet the objective of the study.

After selecting the articles that met the previously defined eligibility criteria, the following steps were taken: exploratory reading, selective reading, choosing the material that contemplated the objectives of this study, analyzing the texts, performing interpretive reading. The findings were analyzed according to the research question, presented by means of a table, synthesized in a narrative form and critically discussed with the relevant literature.

RESULTS

The number of complete articles found through the descriptors: management indicators, quality indicators in health care and hospital administration, available in the Health Scien-

ces Descriptors (DeCS). It resulted in a total of 39 articles, in the following provision: LILACS (26), MEDLINE (04) and BDEF (09).

When considering only studies published between the years 2010 and 2018, 12 studies were eliminated. After analyzing the titles and abstracts and applying the inclusion and exclusion criteria, 27 studies remained. However, 06 did not meet the proposed criteria and, finally, 21 abstracts were accepted so that their full articles could be read later. Of these, 5 articles were included for review.

To facilitate the interpretation of the data, the articles included were grouped into three axes, according to the most discussed subjects. In Table 1, the axis, the title of the article, the type of study and the outcomes of each study are specified.

Of the articles analyzed, most pre-

sented axis 1 as the main theme, which deals with the evaluation of health indicators. In axis 2, which portrays the managers' perception, only one article was found. Then on axis 3, which alludes to innovations in the analysis of indicators, it is noted that there was also little scientific evidence in this regard, with only one study delimited.

Regarding the types of studies, there was a predominance of descriptive research with a qualitative approach. To a lesser extent, quantitative research and critical review appear.

DISCUSSION

Regarding the evidenced results, it is observed that most of the studies followed a methodical system, when carrying out the analysis following previously established steps, discriminated by: selection of the variables, the

Chart 1. Identification of selected articles that deal with health indicators.

AXIS	SOURCE/ YEAR	TITLE	TYPE OF STUDY	OUTCOME
1. Evaluation of health indicators in hospitals	Medicina (Ribeirão Preto) ⁽⁷⁾ 2017	Practice description for hospital pharmacy management	This is a descriptive, longitudinal study on the evolution of the key indicator of the Rate of Lack of Standardized Medicines in the care of inpatients, from March 2004 to December 2013.	The process-based management approach was effective for the hospital pharmacy. The premise adopted is that administrative changes (interferences), with a focus on improving processes and selecting and monitoring indicators, have an influence on processes, reducing variability and improving quality.
	Rev Bras Enferm ⁽⁸⁾ 2016	Analysis of managerial and care indicators after adequacy of nursing staff.	Descriptive, retrospective study with data obtained from the computerized record systems of a university hospital in southern Brazil.	The adequacy of the number of personnel had a positive impact on management and care indicators, and contributed to qualify care and improve the working conditions of the nursing team.
	CuidArte Enfermagem ⁽⁹⁾ 2016	Criteria for evaluating the nursing service in hospital accreditation programs: a critical analysis.	Critical review, carried out after the selection of the text on accreditation.	There is a greater emphasis on the administrative area, however, it can be said that all areas are interconnected and need investment in order to achieve service excellence.
2. Perception of managers	Saúde Soc. ⁽²⁾ 2015	Perception of managers on the use of indicators in health services.	This is a descriptive and exploratory study with a qualitative analysis approach.	It was found that, in the majority, the managers interviewed do not appropriate the health indicators for their managerial actions.

<p>3. Innovation in the analysis of indicators</p>	<p>Physis⁽¹⁰⁾ 2013</p>	<p>Strategic Démarche: innovative and effective way of analyzing the institutional mission.</p>	<p>The study was carried out from June to September 2009 in a state public maternity hospital, used as a method of management analysis and as an evaluation of the hospital institution in a perspective of a coordinated service network.</p>	<p>The study showed the potential of the approach as an instrument of situational diagnosis and hospital management tool to review the institutional mission in the search for quality and solidarity within the network and in the commitment to serving the user in a universal and equitable way. However, the commitments expressed in the propositional synthesis must be constantly reviewed and renegotiated among the actors, in order to achieve permanent institutional changes.</p>
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construction of simple indicators; establishing value for simple indicators; the elaboration of composite indicators; the valuation of composite indicators; the development of the completeness index and, finally, the definition of the value for the index.

However, some chose to apply the Donabedian theory, whose indicators include the structure, the process and the results. The structure evaluation indicator was the most evident in the productions, one of the aspects evaluated is the training index of the professionals.⁽¹¹⁾

Still in the perspective of evaluating indicators in hospitals, it is worth highlighting permanent education as a fundamental element for maintaining the service quality standard. The team needs to be trained and updated continuously in order to improve assistance. The nurse, in particular, who is sometimes responsible for managing the team, needs constant involvement in training programs to encourage other members.⁽¹²⁾

This evidence corroborates a study produced by Kurcgart⁽¹³⁾ when he stated in a survey in the management area that nurses have this ability to transform the practice based on the knowledge, values and holistic view obtained during their professional training.

Health care quality is defined as an association of good practices based on updated theories, which aims to produce services consistent with the needs and particularities of patients. The organization of care can be aided

by the application of the Nursing Care Systematization (NCS) that makes this union between theory and practice in its actions.⁽¹⁴⁾

In this context, health indicators contribute positively to the various services that use it, by allowing the identification of problems that need to be prioritized and assisting in the establishment of goals to be achieved. However, in order to have accurate data, it is necessary to register correctly. For an indicator to be considered good, some characteristics must be met in order to ensure greater data reliability. Being the same expressed by objectivity, when bringing simple and direct information; simplicity, easy access; validity, with the ability to point out problems; sensitivity, able to perceive details and have low cost.⁽¹⁵⁾

It has been found in some studies, that errors in filling in records or the absence of information, are factors that compromise the integrity of the results and the veracity of the information. Thus contributing to the underreporting of health problems and little investment aimed at preventing adversities, which reflects in the permanence of risks.⁽²⁾

It appears that among the main causes related to the inadequacies in filling out the registration of the indicators, the singular characteristics of the subject stand out, which refers to the lack of attention, lack of time and little knowledge about the system. In

addition, they are also associated with the structural profile of the units and management, such as the deficiency of human resources, which is less than the demand.⁽¹⁶⁾

In this sense, a study carried out in the hospital⁽¹⁷⁾ demonstrates that document management shows itself as a tool capable of improving the use of documents in a qualified way, in addition to reducing the time in the recreation or search for lost documents, thus allocating these resources to the provision of other services for patient care.

In accordance with the study developed by Silveira,⁽¹⁶⁾ which deals with the opinion of nurses in hospital institutions about the use of quality indicators of nursing care, carried out in two philanthropic hospitals in the interior of Minas Gerais, it was possible to delimit some impasses caused by the lack of application of health indicators.

Regarding the perception of managers, the transfer of information about the work process between employees and communication, can be pointed out as a challenging element at work, since the information may not reach everyone uniformly. The importance of the satisfied and motivated professional is emphasized by the acquisition of desired goals and indicators, which tends to produce more and better, having an impact on the improvement of the service for the patient.^(18,19)

In the perspective of innovation in the analysis of indicators, Démarche

Strategic shows an effective way to problematize work processes and to analyze hospital management, with the possibility of pointing out action strategies validated by the different actors. The method can be considered an innovative and effective way to produce health teams that are more supportive and co-responsible with movements to change practices.⁽¹⁰⁾

The importance of understanding the health indicators by managers and staff is emphasized, which facilitates the analysis of the results and incorporation of the acquired information, in order to generate changes and improvement according to the goals previously determined by the health institutions.

CONCLUSION

Therefore, it is observed that health indicators play a decisive role in drawing a diagnostic profile of the local health situation and assessing care, whether in hospital or outpatient. Thus, assisting in the early identification of problems.

It is observed that health institutions and managers need to ensure assistance with higher quality to the population, by encouraging permanent education, by providing courses for the improvement and updating of knowledge, in order to generate an impact that culminates in changing the beha-

avior of professionals. Other relevant aspects are the importance of correctly completing the records to maintain the quality of management and health care, and the dimensioning of personnel, according to the demand of each sector, in order to reduce overload and reduce the chances of human errors.

It is believed that through these measures, better records can be achieved, increasing the level of reliability of health indicators and, consequently, gaining greater relevance in public policies.

It is evident that the use of health indicators by hospital establishments has shown promising results, being important for decision making and planning strategies for implementing changes. ■

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