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Computerized tool to calculate nursing quality indicators: a methodological research

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ABSTRACT

This is a dissertation project undertaken as part of the Professional Masters in Healthcare Nursing, Fluminense Federal University. **Aims:** To develop a computerized tool for measuring quality indicators of nursing care; to identify indicators of care quality from the viewpoint of nurses in medical clinics; to build a computerized spreadsheet for indicator calculation; to elaborate the standard operating procedure (SOP) for the completion of the worksheet; to test the computerized spreadsheet and its application in the measurement of the proposed indicators. **Method:** This is a research methodology that refers to the investigations of the methods for obtaining, organizing and analyzing data. The subjects are nurses from clinical units of a university hospital. Ethical aspects will be respected, as required by CNS Resolution 466/2012.

Descriptors: Quality Indicators, Health Care; Nursing processes; Health Information Systems; Total Quality Management.

SITUATION PROBLEM AND ITS SIGNIFICANCE

The object of this study is the development of a computerized spreadsheet for data collection and for the calculation of indicators for assessing the quality of nursing care. It was possible to realize, through a systematic search of the literature on the subject, that the hospitals that implement an indicators management system use a computerized tool and it turned out to be a facilitator in the collection and processing of data to calculate certain indicators.

Indicators are management tools, used to measure, monitor and evaluate the results of a process, project or policy from logged data in an organized and structured manner as part of information systems. Thus, increasingly, the implementation of programs to evaluate and improve the quality of health care has become a priority for governments, and projects are being created for the development of indicators that can facilitate the production of information for managerial decision making, in order to ensure safer health care⁽¹⁾.

Based on these assumptions, the comparative evaluation of indicators of health care is an important tool for monitoring the performance of institutions that provide hospital care. Therefore, the use of quality indicators to guide actions in the management plan of health facilities is increasingly valuable.

To assist in this work process the use of technology and informatics has been adopted through the creation of computerized management indicators for nursing care systems. This feature gives the nurse a working tool that allows the measurement of indicators and the development of an easily handled database, thus contributing to the continuous improvement of the quality of the service⁽²⁾.

Studies estimate that the concomitant use of electronic records and standardized languages provide a complete and accurate documentation, significantly aiding the quality of nursing records. Therefore two issues are highlighted: firstly, the quality of nursing care is directly related to the quality of records made by the professionals; secondly, the appropriate use of standardized language, combined with electronics tools, assist hospitals and their nursing staff in the care provided⁽³⁾.

GUIDING QUESTIONS

What are the health care indicators of the Nursing Indicators Manual of the Support Center for Hospital Management (NAGEH)/2012, which are based on the evaluation methodology employed in the Hospital Quality Commitment program (HQC), maintained by the Medical Association of São Paulo and aimed for and focused on by the nurses of the medical clinic? How could the indicators be clearly and reliably measured? How effective is the use of a spreadsheet in the measurement of indicators?

AIMS

To develop a computerized tool for measuring the quality indicators of nursing care; to identify the quality indicators of nursing care from the perspective of nurses working in female and male medical clinics of a university hospital in the state of Rio de Janeiro; to build a computerized spreadsheet to record the events related to the processes and application of formulas for calculating the indicators; to elaborate the standard operational procedure (SOP) to guide the completion of

the data in the computerized spreadsheet; to test the computerized spreadsheet and its application in the measurement of the proposed indicators.

METHOD

This work fits in the context of research in health care. This is a methodological research that refers to the investigation of methods for obtaining, organizing and analyzing data.

The research scenario will be the medical clinics of a university hospital in the state of Rio de Janeiro. The subjects, who are nurses working in these units, must meet the following inclusion criteria: nurses effectively belonging to the monthly schedule of these clinics in the period of data collection, from March to June 2014. Exclusion criteria: nurses on vacation or away from their duties due to illness or maternity leave.

The phases involved are: data collection through semi-structured interviews with the subjects and theme analysis for identifying indicators; elaboration of the worksheet using Microsoft Excel, from which a web application will be developed in Java and made available on the intranet of the hospital; preparation of SOP for guidance on the fulfillment of the worksheet; test of the effectiveness of the spreadsheet in the calculation of the proposed indicators to be held by the application

of this tool in medical clinics, after training nurses with regard to recording data in the spreadsheet, monitoring these data and subsequent analysis of the indicators. Project approved by the Ethics and Research Committee of the Faculty of Medicine, Fluminense Federal University under opinion number 458 862.

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