

## Nursing information systems and quality indicators: contributions and challenges

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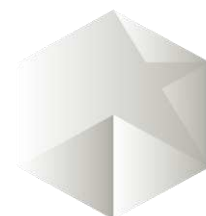
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### 1 Abstract

The information systems, where the quality indicators are found, aim to standardise health records. Their provision translates into challenges and contributions, so we propose a reflection on this theme. With this research, you have access to the literature on their analysis, and a literature review on this issue has been published in the literature to obtain an indication of the literature on the quality information systems of nursing care, which have a positive impact on the quality of care, measuring the quality of the tests and, in addition, the comparability between them, with an impact in practice.

According to the European Commission (2019), most European countries have performance measurement strategies aimed at improving the quality of health services. These strategies typically include sets of indicators that are measured over time; The number of indicators ranges from less than 30 (Austria) to over 1,000 (Finland). Information systems can be understood as a set of procedures that aim to transmit information between individuals and organs by any means (Amélia, Benito, & I, 2009). According to Tan (1995, p. 6), information systems are “the application of a total systems perspective in linking relevant theoretical principles with practical methodologies for the effective management of information technologies and their applications to improve the provision of information services. Health in the context of current and future healthcare environments.” Information systems, however, such as DREAM, SINUS and the user card are maladjusted from a functional and technological point of view, presenting several weaknesses (Espanha, 2010). About nursing information systems, the Order of Nurses (2007, p.1) warns of the relevance, not only of “the legal and ethical imperatives of information systems as well as those arising from its importance for clinical decisions, continuity and quality of care, management, training, research and decision-making processes.”

Studies estimate that concomitant use of standardised computer support and language provide complete and accurate information, contributing to the quality of nursing records (Pinto, Cruz, & Ferreira, 2003). The same authors argue two preponderant questions, in the first instance, that the quality of care is directly related to the quality of nursing records and secondly that the use of standardised language combined with computer tools contributes to better decision making. The nurses' conceptions highlighted that this is a system that facilitates practice, considering access, availability of information, speed, practicality, clarity and optimisation of physical space (Fran et al., 2011). Nurses empirically understand the importance of information systems, from the perspective of resource optimisation as well as the ease of access and increased security of recorded information.



According to Long & Mha (2003), we are in a phase of human resources reduction, budgets reduction, activity increase, complexity and with the existence of new technologies, it is essential that services understand how they care and determine how these are effective and efficient. This reality corroborates the current Portuguese reality, despite more than a decade of difference. Thus, nurses must be held responsible for, rather than their interventions, for their results, thus allowing more significant concern for their performance. From the same perspective, Akachi, & Kruk (2017) define that health information systems provide incomplete and often unreliable data, with many indicators of uncertain utility. Thus, existing metrics may not have the sensitivity to translate the care process and user experience into the health system. User outcomes that are sensitive to health care practices are a pillar of quality assessment and rarely collected. These authors propose six policies to improve the quality of care measurability and amplify its policy impact: (i) redouble efforts to improve and institutionalize vital sign recording; (ii) conduct research on reform facilities and strengthen information systems; (iii) promote new quality measures for low resource settings; (iv) obtain the user's perspective on the quality of care; (v) invest in national quality data; and (vi) translate quality into evidence with policy impact. According to Ahmadian, Dorosti, Khajouei, & Hajesmaeel Gohari (2017), the most critical challenges in the use of information systems are factors related to the human environment and human factors so that the involvement of professionals in the processes of improvement of information systems is inseparable. The literature corroborates those that are the reflections made by us in a perspective in which information systems are configured as the future, which needs to be cemented about the translation of results for an effective and real change in health policies. It is also essential that mechanisms be developed to enable greater interoperability between the various systems while enhancing the ability to be user-friendly, listening to health professionals at various levels of care.

Regarding the methodological limitations of the study, the existing literature does not yet allow a more in-depth analysis of the subject, and it is, therefore, relevant to develop research that bridges this gap in scientific evidence. Thus, the recognition of this existing gap is relevant, which allows us to suggest future investigations in this area, to deepen the phenomenon under analysis and consequent improvement of praxis. It is concluded that the most intense clinical and health practices are related to the difficulty of professionals to perceive the impact of the data and indicators in nursing as the time spent for it.

**Keywords:** clinical practice; nursing information systems; quality indicators

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