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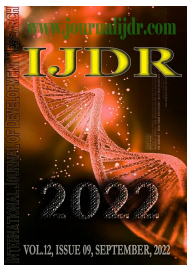

REVIEW ARTICLE OPEN ACCESS

NURSING DECISION-MAKING IN HEALTH SERVICES: SYSTEMATIC REVIEW

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ABSTRACT

Objective. This study proposes to perform an analysis of scientific publications about identify the fundamental elements that make up decision making of nurse. **Background.** Nurses' decision-making assumes a fundamental character on the final quality of care and the comprehensive impact it will have on the health organization, health professionals, individuals and the nursing itself, in general and specialized hospital settings, clinics, nursing homes, primary care in health, rural and urban units, as well as domiciliary services. How has the experience of nurses been in their care practice regarding decision-making on physical, material and human resources for the composition of care? **Results.** This review was performed according to the methodology of the Joanna Briggs Institute for systematic review of qualitative studies and its protocol is registered in PROSPERO - International prospective register of systematic reviews of the University of York under the number CRD42019127009. The analysis of the 23 selected studies presented a total of 178 findings in which four categories were created, according to the similarity of meanings: systematization of the decision process, determining elements of the decision-making process, participants of the decision making process, and type of power and focus that guides the decision.**Discussion.** O estudo identificou as contribuições dos enfermeiros para a configuração dos cuidados em ambientes multidimensionais em acções independentes, dependentes e interdependentes na procura de resultados de qualidade para o paciente. A tomada de decisões dos enfermeiros é um passo inevitável e determinante para a obtenção dos resultados esperados. Nenhuma acção é executada sem tomada de decisão, quer seja puramente intuitiva ou totalmente racionalizada.**Conclusions.** The categories identified in this review constitute essential elements for composition of the nurse decision-making process in the health services that aims for quality in nursing care. Decision-making represents a space for negotiation of the different interests involved in the care process and enables the direction of this process centralized in the patient by using a shared system.

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INTRODUCTION

What is already known about the topic?

The decision making of the nurse has been much discussed with reference to clinical supervision in several specific situations.

What this paper adds?

The adoption of a systematic decision-making model for the nurse is fundamental in his clinical and administrative actions.

Objective

This study's intent was to perform an analysis of scientific publications about identify the fundamental elements that make up decision making of nurse, in order to emphasize which elements are fundamental to retrieve the relevance by the object of the research. It will also indicate future specific thematic studies to diminish gaps in knowledge, which is indispensable to guarantee the quality of health care being provided. A previous literature search was performed, however no evidence was found to answer the questions established in this study.

Background

The challenge for quality in the services available is distributed across different levels of complexity that constitute care, as it involves everything from the development of public health policies, financing of the services, and the structure and organization of the institutions, through to the composition of the care centered on a patient, family or community [1–4]. The complex nature of these services unfold from multifactorial causes in a dynamic relationship with human, physical, and material resources, organized and oriented to the production of work [5,6]. The balance between supply and demand, while guaranteeing quality, constitutes a complex and dynamic process of the institutional environment[7,8]. In this way, risk management is

established as a parameter, so that prevention is perceived as a goal, the promotion of quality as a principle, and decision-making as an important managerial tool for determining the coherence between institutional values and the production of work in the macro-, meso-, and micro-organizational domains [9–11]. Decision-making now represents a space of negotiation between the institution and the individual, with direct and determinant effect on the composition of the work process and, ultimately, on the work object itself [12,13]. The dialogue established by supply and demand enables negotiation between patients, professionals and managers, in different aspects of care. These relationships move either in unison or with dissonant objectives, seeking case-resolution, as in health services, work that needs to be redone can be associated with a low quality product, which must be discarded[7,12,13].

The role of the nurse has a continuous and integrative character in the model of professional transdisciplinarity, and in the centrality of patient care. By continuous it is meant that, in the health services, the role of the nurse is related to continuity of care. Although their actions include punctual interventions, according to their professional role and associated with the clinical condition and needs of the patient, the bedside scenario is always associated with the nurse. The role is integrative, because nurses play an integrating role in the relationship with other professionals who provide care in terms of specific interventions[14–19]. Thus, nurses' decision-making assumes a fundamental character regarding the final quality of care, and the broad impact it will have on the health organization, health professionals, patients, and nursing itself [17–19]. The systematization of decision-making is essential in all the activities performed, and by all professionals, participating in any stage of the development of the proposed care. The Nursing Role Effectiveness Model (NREM) [20]was used to guide this study, as it addresses the specific variables of structure, process, and outcomes in the nursing care relationship, and its impact on the patient. This model recognizes a dynamic relationship between the variables involved in quality management and the role performed by nurses in care development within different health services [21].

METHODS

The protocol for this review was registered in the PROSPERO - International prospective register of systematic reviews of the University of York - under the number, CRD42019127009 [22]. The systematic review was performed according to the Joanna Briggs Institute (JBI) methodology for systematic review of qualitative studies [23]. It was developed in the JBI Sumari platform and based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement [24]. The Qatar Computing Research Institute - Rayyan QCRI platform [25], was used to organize and select the review studies.The search was conducted and updated in March 2022.

Search Descriptions: https://www.crd.york.ac.uk/PROSPEROFILES/127009_STRATEGY_20190228.pdf

Review design: The method is described in a modified and expanded version of the PRISMA flowchart[24], as described in Figure 1:

Data synthesis: Data analysis followed the model proposed by Stevick-Colaizzi-Keen, and modified by Moustakas [26]. The collected data were initially organized into a narrative synthesis, aiming to answer the guiding questions of the review. The general critical assessment of all of the studies was classified as good and excellent, and the 178 synthesized findings were considered acceptable with regard to reliability. As it was a review of qualitative studies, the identified categories were organized to compose a comprehensive conceptual framework that describes the nurse's decision-making process in the health services, as well as any correlated factors. Subsequently, the data were organized into a conceptual map, guided by the NREM, to facilitate examination of the results of the literature synthesis.

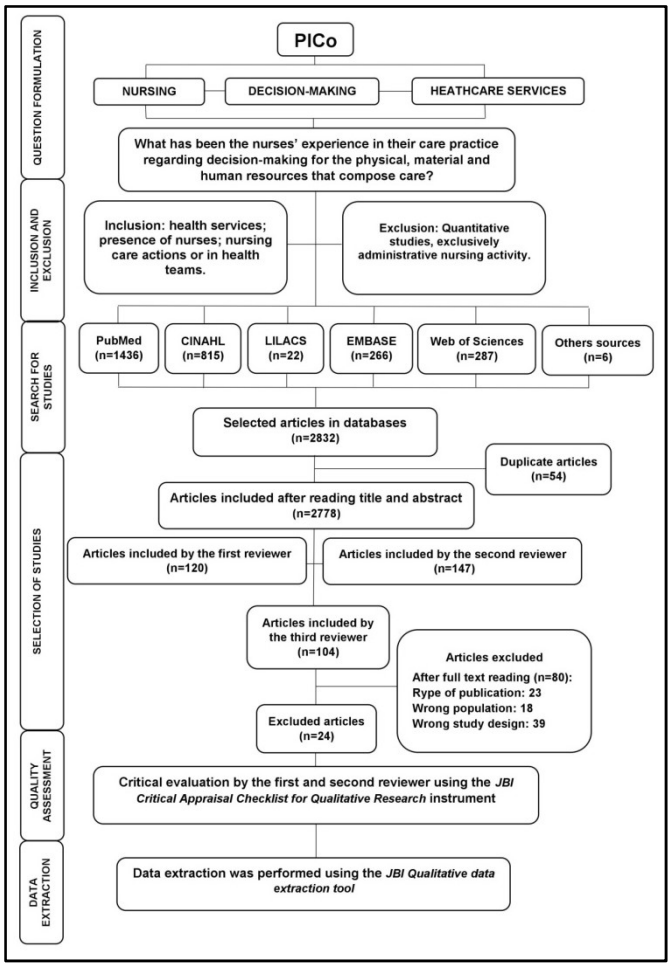

Figure 1. PRISMA flowchart adapted by the author, 2019

RESULTS

Figure 1 shows the flowchart of the results of the search and selection process for articles in this study. The 24 selected articles[27–49]were reviewed with regard to methodological quality; no study was excluded based on the results obtained. All studies showed congruence between the research methodology and the proposed questions and objectives and obtained a score indicative of either moderate or high quality. The 12 studies were acceptable, according to the ten critical assessment criteria; nine studies met nine criteria, and three studies met eight criteria. The most frequent criterion was the congruence between philosophical perspective and research methodology, with an absence of this criterion identified in seven studies. The second criterion most frequently absent was the influence of the researcher in the research, which was not identified in five studies. The articles included in the sample for this review were published between 2002 and 2018, and were characterized as: 21 studies in English, two in Portuguese, and one in Spanish. With regard to the location where the studies were developed, ten articles were from United Kingdom; three studies were found from Sweden, and three from Brazil, while the United States of America had two studies. Denmark, Norway, Canada, Spain, and Australia, had one study each, in addition to a multicenter study between Switzerland and Italy. Regarding the study population, 15 had only nursing professionals; professionals other than those, within nursing composed seven studies. One study included patients and nurses, and another, patients, nurses, and other professionals. The theoretical-methodological framework was not presented in most studies. Among those, which addressed this aspect, Grounded Theory was noted more frequently, and was identified in four studies. Phenomenology and ethnography appear in two studies each. Other theories that appeared in the studies were: General Systems Theory, Ethical Theory of

Michel Foucault, and Information Processing Theory. The remaining studies did not state the theory used to support the research. As a tool for data collection, interview was present in 21 studies, either alone (9), or associated with other techniques, such as non-participant observation (7), focus group (4), and the use of realistic simulation scenarios (1). In terms of data analysis, different resources for data organization and interpretation were identified, but content analysis (13) was predominant; the NVIVO- NUD*IST, (5) a software for qualitative data analysis, was the most frequently used. The contexts identified in the studies were presented in a diversified manner in general and specialized hospital settings, clinics, nursing homes, primary health care in rural and urban units, as well as domiciliary services. This set of results was fundamental to achieve the objective of this study, as the presented findings are representative of a significant diversity of health services that have the nurse's role in the management and composition of the care. The object of this investigation is nurse decision-making in the health services. The analysis of the selected articles contributes to grouping of categories that describe fundamental characteristics of this process, as seen in Table 1.

Table 1. Categories extracted from the review related to the decision-making of nurses

Findings	Subcategories	Categories	Synthesis of findings
22	Process		The systematization of the decision-making process enables the best planning and organization of the
33	Support	Systematization	necessary steps for decision-making and identification of support systems useful for its execution.
11	Assumptions		Elements that support or hinder the decision-making process.
30	Barriers	Determinants	
46	Facilitators		
10	Client		The management model used determines the participants in the decision-making process.
07	Family	Participants	
13	Professionals		
05	Power		The final configuration of the decision-making process will be defined by the type of power and focus
04	Focus	Type	that guides it.

We identified 178 findings; according to the similarity of meanings, ten subcategories and four underlying categories were created. This meta-aggregation enabled the synthesis of findings and the characterization, in a broad manner, of several factors involved in nurses' decision-making process in the health services, as summarized below.

Synthesis 1: Systematization of the decision-making process

The category referring to systematization is related to the planning and organization of the necessary steps for decision-making, and the identification of individual and institutional support systems, useful for its execution. Several supports were presented with different nomenclatures. At the moment of meta-aggregation, they were defined as: manuals and protocols, management tools, information available on the internet, co-workers (human sources), history of situations, evidence-based practice, personal experience, databases, books and software[24,27,29,30,32,36,37]. The process for nurse decision-making in practice was also described with specific characteristics of different realities, but, by analysis of similarity, was composed of the following steps: definition of the problem, data collection, identify options, assign scores to the expected outcomes, verification of related risks, consideration of the impact of all, making the decision, acting, and evaluating [32,39,40,42].

Synthesis 2: Determinant elements in the decision-making process

The determinant category presents elements that directly interfere with the quality of decision-making. The evidence was grouped into three subcategories: assumptions, facilitators, and barriers. Assumptions refer to the minimum conditions created for success in decision-making, named as organizational coherence, planning of and adjustments in care, adequacy between needs and resources, situational and mutual reflection, risk management, definition of competencies, professional protagonism, and ethical conduct[34,35,37–39,45,47,48]. Assumptions should be considered as prerequisites for effective decision-making, as well as the strict observation of factors that can or cannot support the expected outcome. As facilitators, the authors presented a prior definition of each participant role, health education, peer appreciation of the decisions to be made, establishment of confidence, construction of the therapeutic relationship, and maintenance of focused communication[29,32,38,39,41,43,44,46,47]. Some barriers that hindered success in the decision-making process were also identified: work overload, insecurity in one's professional activities, little time to decide, economic interest, professional stereotypes, functional dependence, unorganized information, culture of decision-making without information, limitations in communication and in the use of technology, isolated work, a great deal of responsibility, and little power[31,33,38,41,43,45,47,48].

Synthesis 3: The management model adopted determines the participants in the decision-making process

In this grouping, the evidence indicates individuals who can participate in the decision-making process. This participation extends from being a nurse's activity, and expands to the participation of the team of health professionals [28,29,44,47], patients [29,33,37–39,41,44,47], and the patients' families [29,33,37–39,41,44,47]. The findings points towardsthe possibility of a smaller or larger participation in the decision-making process, where the decisions taken in a unique manner by the nurse represent a vertical configuration in the structure of professional relationships, with little participation of other members in the composition of care. Insofar as the inclusion of other participants in the decision-making occurs, this structure becomes, increasingly, horizontal and participatory.

Synthesis 4: The final configuration of the decision-making process will be defined by the type of power and focus that guides it.

The last category identified aggregates the results related to a guideline-type of decision-making. The first was identified as "shared decision-making" and the second as "customer-focused decision-making". The first guideline refers to the power related to the one who decides. The majority of the studies do not include this discussion, assuming the predominance of the traditional model, where the decision is attributed to the one who provides the service; however some studies presented shared decision-making as an alternative to this model [29,33,37,38,41,43,46,48] in reference to inclusion of all those involved in the development of care in the decision-making process.

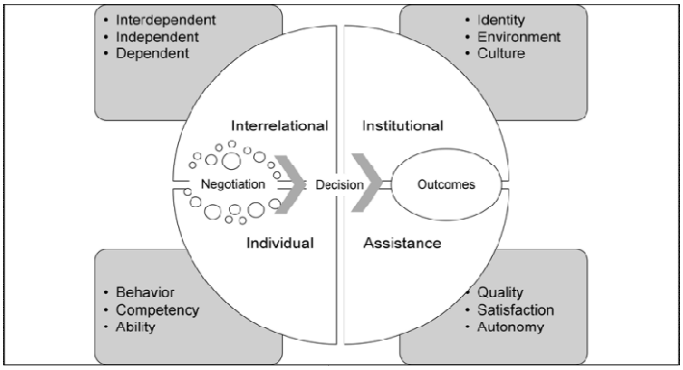

Figure 2. Organizational characteristics for nurse decision-making

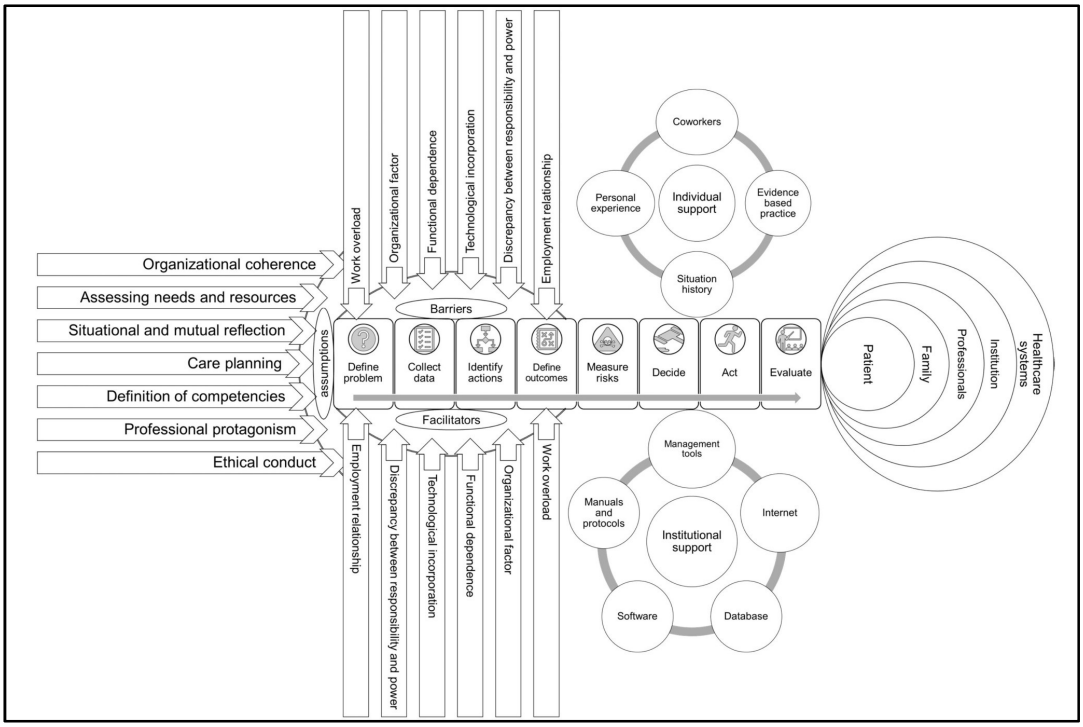

Figure 3. Synthesis of the essential elements for composition of nurse decision-making in the NREM Model

The second centered on the focus of the decision; that is, decisions are made based on the needs presented by the customer, which is known as customer-centered decision-making.[38,39,41,43,48]. From the adopted theoretical model and the evidences of this review, it is possible to visualize the decision-making inserted in a negotiation network in search of outcomes based on the quality of care. Figure 2 represents the organizational characteristic that makes up the nurse's decision-making in the healthcare services.

DISCUSSION

This systematic review was performed to understand the nurse's decision-making in the development of care in the health services. The 23 articles analyzed presented the decision-making developed in 12 countries, with different methodological designs in qualitative and mixed studies. The validity of the findings justifies their significance to guide nursing practice and attach increased importance to the nurse's decision-making process in health services. The NREM [20]identifies nurses' contributions to the configuration of care in multidimensional environments in independent, dependent, and interdependent actions in the search for quality outcomes for the patient [50]. The nurse's decision-making is an inevitable and determinant step to obtain expected outcomes. No action is performed without decision-making, whether it is purely intuitive or fully rationalized. Thus, discussing the evidence, in the light of the NREM, supports a disposition of decision-making elements with a theoretical basis that realizes the importance of nursing in the composition and delivery of care [50], taking as limits the management of quality and as a principle, the centrality in the patient [34]. The NREM organizes the nursing care with quality into structure, process and outcomes. The structure refers to the variables that make up the care related to the patient, nursing and the institution and are determinant as to the forms of organization of the whole process and the expected outcomes[20].

Determinants of decision-making: Structure: When considering the context of work in the health field as living work, in which the work and consumption is immediately perceived, the perception of the decision-making process within any practice assumes a high level of complexity. Evidentemente que qualquer decisão assumida no contexto dos serviços de saúde não ocorre isolada de fatores adicionais relacionados a fatores individuais, relacionais e institucionais e que podem favorecer ou dificultar a atividade do tomador de decisão. Any decision made in the context of health services does not occur in isolation from additional factors related to individual, relational, and institutional factors that can support or hinder the decision-making activity [30,34,51,52]. Evidence, entitled as assumptions, was considered to be that which, in its absence, enables successful decision-making. This is because assumptions contribute to the establishment of an ethical and feasible process, and point decision-makers in the right direction and toward a position to fulfill their purpose [52]. Facilitators refer to relational aspects and are present both in professional interactions as well as in the nurse-patient relationship. This finding presents an indication of directly proportional correlation between quality of decision-making (choice and execution) and quality of established relationships[51,52]. The findings identified as barriers are related to the organizational and work process factors. These are aspects in which nurses have less possibility of interference, as they belong to the organizational macrostructure. However, their reflection is perceived in the activities performed, as they are determinant on the work process. In the analysis of the identified determinants, facilitators present themselves in the domain of actions that nurses have greater autonomy to modify, while barriers are related to situations that are outside their direct circle of influence [51].

Nurse decision-making outline: Process: In addition to the course to be followed, the process represents the opportunity for adequacy between the present structure and the expected outcomes. It represents something achievable that aligns the available resources with the needs identified [20,21]. Therefore, the analysis and composition of the process is favored by sometimes perceiving it to be in direct relationship with the structure, and sometimes in relationship to the outcomes, which reinforces the dynamic and integrative character of all the decision-making activity. The systematization of decision-making presents the process that is designed when defining a problem, collecting data, identifying options, assigning scores to expected outcomes, checking related risks, considering everyone's impact, making the decision, acting, and evaluating [51,53,54]. Decision-making is inevitable for nurses in the development of care. Decisions can be simple or complex, urgent or programmed, regardless of their characteristics. This process carries likely and unlikely consequences. In the health services, uncertainties are accentuated by the specificity of the work that is provided in the act of consumption, and varies on the threshold of a scheduled or urgent service[28,30,53,54].

The decision-making process is an instrument for the nurse, as it supports the integration of technical knowledge to the specific situation, mediated by critical and reflexive reasoning. In addition to the decision-making process, the findings identified many types of support, both individual and institutional, that have been used by nurses in their daily lives, such as: manuals and protocols, management tools, information available on the internet, co-workers (human sources), situation history, evidence-based practice, personal experience, database, books, and software. In general, the identified tools have, as a common feature, the relationship with knowledge management. Therefore, it is supposed that proper organization and development of decision-making is closely related to the quality of information provided by the institution, the institutional information management mechanisms, and the nurses' ability to manage this information in their favor[52,53,55–57].

Decision-making participants: Outcomes: The concept of outcomes in the NREM is driven by indicators applicable to several specific situations of nursing work [20]. According to the NREM, the outcomes of a health unit are grouped in quality/cost, length of stay, mortality, and readmission rates. These expected outcome dimensions represent the multidimensionality of nursing work, and highlight the importance of the nurse's role in health services in dependent, independent, and interdependent activities[50,58]. In the decision-making addressed in this review, the results were represented by the interest groups involved in the care process, grouped by their identity and representation, and named as user, family, professionals, institution, and health system. The categories related to the types of decision-making, and to the participants of the process, were grouped for combined analysis; when decision-making power is analyzed, the individual that is a part of this process must be analyzed, as well. Therefore, when opting for a shared decision, the decision about how participatory this process will be becomes mandatory, which can include members of the nursing staff, health professionals, family members, and the patient himself [54,59]. The context and specificity of the activity and environment will define the limits of this model. In addition to power, the focus of the decision also guided the type of decision to be made. In this sense, patient-centered decision-making was evidenced in the findings of this review.The patient's centrality to the decision-making process has two aspects, the first refers to the object of care and drives attention to the needs found in the patient. The second preserves their autonomy and recognizes their possibility for active participation in the development of care. The needs presented by the patient should not exclude individuality or inhibit personal capabilities [55,57]. When considering the NREM theoretical model, and the evidence in this review, the model in Figure 3 is configured for nurse decision-making in health services. The study is limited in that there are differences in the nurse's role, and in the composition of teams around the world, which means that, in terms of professional activity, some specificities require a thorough situational analysis.

CONCLUSION

The decision making-process has been presented as always associated with specific objectives, in the literature. In this review, decision-making was managed as the object of the study itself. Thus, it could be observed and understood as a management tool available for nurses to properly perform their activities in the administrative as well as in the assistance domain, whether in individual or collective performance, and in any environment where its decision is necessary for the composition and effectiveness of care. When guided by the NREM, decision-making significantly contributes to the optimization of the available structure, and the development of an adequate and executable process to obtain the expected outcomes. The adequacy to the theoretical model supports the perception of the nursing role, and its contribution to the consolidation of quality management and its professional identity.

Recommendations: The results indicate some relevant trends for organization of the nursing work process that support decision-making.The first trend identified relates to teamwork. The quality and safety of decision-making is directly proportional to the involvement of other participants in the process, and the inclusion of nursing and health professionals, patients, and their families. The second trend identified is related to the translation of knowledge. Studies present the need to incorporate evidence-based practice to support the decision-making process. Evidence-based practice provides benefits to the individual and collective sphere, because its incorporation establishes a reference for practice, in order to substantiate, organize, and ensure an action with greater possibility of success. The third trend identified related to the nurse's role as a mediator of interests. The events related to decision-making place the nurse as the main element of mediation of the many interests involved in the care process, especially about the institutional interests and the individual interests of the patient. In this sense, the mediation process is guided by ethical care that seeks the best-expected outcomes, aligned with organizational coherence in its principles and guidelines.

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