# INPLASY PROTOCOL

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#### **Review Stage at time of this**

submission: Formal screening of search results against eligibility criteria.

Conflicts of interest: None declared.

# Effect of the use of technology for humanized nursing care: A systematic review

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**Review question / Objective:** What is the effect of the use of technology for humanized nursing care in adults? Present a synthesis of knowledge about the elements that are part of humanized care and the use of technology.

Condition being studied: Although technology can be a valuable tool to improve nursing care, it can also present some challenges for humanized care. Some of them may be, on the one hand, the lack of human contact, due to excessive use of technology, which may result in a decrease in personal interaction between the patient and the nurse, affecting the

quality of care and patient satisfaction. On the other hand, when nurses become too dependent on technology, they can generate a lack of manual skills and a decrease in the ability to perform tasks without the help of it. Finding the right balance between the use of technology and humanized care is important to ensure that patients receive the attention and care they need in a safe and effective environment. In that sense, nurses must develop technological competencies effectively and responsibly, and to integrate it into their daily practice in a way that complements and enhances human care rather than replace it.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 May 2023 and was last updated on 05 May 2023 (registration number INPLASY202350023).

# **INTRODUCTION**

**Review question / Objective:** What is the effect of the use of technology for humanized nursing care in adults?

Present a synthesis of knowledge about the elements that are part of humanized care and the use of technology.

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Rationale: The use of technologies for health care has been increasing rapidly in recent years. This has allowed new forms of information in care. However, highly technological scenarios have meant a challenge for the care provided by professionals in the health area, particularly nursing, who, derived from care, maintains a continuous closeness to the patient in greater demand. In this sense, it is important to focus on studies that visualize the phenomenon that shares the use of technologies and their relationship with care.

Therefore, nursing must develop a technological competence that enhances the ability and knowledge to use soft and hard technologies in their professional practice. Technological competency in nursing is becoming increasingly important in modern healthcare as technologies are increasingly present in clinical settings. Nurses must be trained to use these tools effectively and safely, and to integrate them into their daily practice to improve patient care and quality of care.

Currently there are no systematic reviews that mark the evidence of the use of the instruments used to measure technological competence, or of the relationship between humanized care and technology. Existing, on the one hand; Reviews that make a scant analysis of the research that to date has considered the use of instruments for technological competence and humanized care, as well as lower-level scientific evidence such as opinion articles; or systematic reviews that consider humanized care in highly technological environments, such as intensive care units.

**Condition being studied:** Although technology can be a valuable tool to improve nursing care, it can also present some challenges for humanized care. Some of them may be, on the one hand, the lack of human contact, due to excessive use of technology, which may result in a decrease in personal interaction between the patient and the nurse, affecting the quality of care and patient satisfaction.

On the other hand, when nurses become too dependent on technology, they can generate a lack of manual skills and a decrease in the ability to perform tasks without the help of it.

Finding the right balance between the use of technology and humanized care is important to ensure that patients receive the attention and care they need in a safe and effective environment. In that sense, nurses must develop technological competencies effectively and responsibly, and to integrate it into their daily practice in a way that complements and enhances human care rather than replace it.

# **METHODS**

Search strategy: The systematized search was carried out in the following specialized databases: PUBMED, Web of Science, Scopus, LILACS, Scielo, until March 16, 2023. Due to the scarce generation of studies related to the subject, it was not applied. no filter, in order to allow the recovery of the largest number of scientific texts.

The search strategy, establishing the use of keywords, associated terms and Descriptores en Ciencias de la Salud (DeCS) y Medical Subject Headings (MeSH). For this, the combination of the following words was used ; A) "Technology" AND "Humanized care"; "Tecnología" AND "Cuidado humanizado", Estaretgia B) "Technological competence" AND "Humanized care" además de utilizar C) "Technological Competency as Caring in Nursing Instrument", as third search strategy.

Participant or population: Nurses in areas with highly technological environments.

Intervention: Use of technology.

Comparator: The non-use of technology.

Study designs to be included: Observational.

**Eligibility criteria:** Studies that use instruments to measure technological competence.

Information sources: PUBMED, Web of Science, Scopus, LILACS, Scielo

Additionally, the TesiUNAM repertoire and other data sources will be used.

Main outcome(s): Studies that were included within the search had to focus on the measurement of: -Technological competence -Humanized care

-Emotional competence

-Empathy to provide care.

Additional outcome(s): None.

Data management: Two investigators will independently screen the database to select studies to be included in the review based on the inclusion criteria. In case of discrepancy in the selection of both, a third person will intervene.

Quality assessment / Risk of bias analysis: We will use the Cochrane risk of bias tool for quality assessment.

Strategy of data synthesis: A systematic review table will be prepared considering the components of the PICO acronym.

In addition to the Revman version 5.4.1 software will be used for the possibility of carrying out a meta-analysis. The random effect mode will be used to estimate the effect size.

Subgroup analysis: Subgroup analyzes will be carried out to identify the causes of heterogeneity and the variation in effect size between the different instruments used to assess stress and anxiety, as well as the implementation period.

Sensitivity analysis: Sensitivity analysis is performed if the pooled result is at high risk of heterogeneity.

Language restriction: None.

Country(ies) involved: México.

Other relevant information: None.

Keywords: Technology, Humanized care, Tecnología, Cuidado humanizado, Technological competence, Humanized care, Technological Competency as Caring in Nursing Instrument.

**Dissemination plans:** At the end of the review, it will be published in an indexed journal and the results will be presented at national and international conferences.

### **Contributions of each author:**

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