

MULTIDISCIPLINARY COLLABORATION IN CARE NETWORKS: THE ROLE OF HEALTH PROFESSIONALS IN THE INTEGRATION OF CARE



<https://doi.org/10.56238/arev6n4-117>

Submitted on: 11/10/2024

Publication date: 12/10/2024

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ABSTRACT

Interprofessional collaboration has been recognized as an essential element for the construction of more integrated, problem-solving care networks focused on the needs of patients. This study, based on a systematic review, investigated the main contributions, advances, and challenges related to this topic, using international databases such as PubMed, Scopus, Web of Science, SciELO, and Lilacs. Rigorous search strategies were employed, with controlled descriptors and Boolean operators, ensuring the identification of relevant and methodologically robust studies. The analysis of the results highlighted that collaborative practices are fundamental for the optimization of health services, promoting clearer communication between professionals, personalization of care and increased user satisfaction. The use of information and communication technologies (ICT) has shown particular promise, facilitating interaction between professionals and patients, especially in vulnerable populations, such as adolescents. The promotion of educational practices led by health professionals, such as nurses, was also widely evidenced, being considered strategic to address priority themes, such as breastfeeding and active aging. Another highlight was the relevance of social participation, associated with quaternary prevention, to ensure ethical, less invasive practices centered on the real needs of users. The integration between teaching and service proved to be an effective strategy to transform professional practices, strengthening the dialogue between academic institutions and health networks. Despite the advances, significant challenges were identified, such as structural and cultural barriers, the hierarchization of teams and the underutilization of specific skills, especially of pharmacists and other professionals with complementary roles in care. Such obstacles limit the full potential of interprofessional collaboration. It is concluded that, in order to overcome these limitations, integrated public policies, innovative approaches and educational strategies that promote the formation of more cohesive and prepared multidisciplinary teams are necessary.

Keywords: Interprofessional collaboration, Health care networks, Information and communication technologies.

INTRODUCTION

Interprofessional collaboration has been consolidated as a fundamental pillar for the organization of care networks that seek to integrate different professional categories in the promotion of a more efficient and patient-centered care. In a scenario characterized by the growing complexity of health demands and inequalities in access to services, the interaction between professionals from different areas allows for a comprehensive approach that improves communication, optimizes resources, and promotes patient satisfaction (Vendruscolo; Meadow; Kleba, 2016; Jesus; Paixão, 2022). These collaborative practices are particularly relevant in the context of the Unified Health System (SUS), where integration between levels of care and coordination between teams are constant challenges.

The use of information and communication technologies (ICT) emerges as a strategic tool to strengthen this integration, offering dynamic solutions for the personalization of care and the expansion of access to health information. As highlighted by Pinto et al. (2017), ICTs have the potential to improve patient engagement, especially in specific populations, such as adolescents, and to facilitate dialogue between health professionals at different levels of care. In addition, the promotion of educational practices led by health professionals, such as nurses, is pointed out as essential to address priority themes, such as breastfeeding and active aging, although there is room for more innovative and proactive approaches (Passos; Pinho, 2016; Freitas et al., 2010).

Another central aspect in care networks is social participation, which, according to Maeyama et al. (2017), reinforces the importance of users' protagonism in the management of their care process. This approach, associated with quaternary prevention, which seeks to avoid unnecessary or potentially harmful interventions, requires evidence-based practices and solid and ethical interprofessional communication (Camacho et al., 2016). In this way, it is possible to offer more humanized, less invasive care and aligned with the real needs of patients.

Despite the advances, structural and professional barriers, such as the lack of recognition of specific skills and the fragmentation of health systems, still represent significant challenges for the consolidation of effectively integrated networks (Jesus; Paixão, 2022). In this context, the present study, using the systematic review method, seeks to explore the scientific literature on interprofessional collaboration in care networks, with

the objective of identifying contributions, advances, and challenges that can support discussions and proposals for the improvement of health practices.

METHODOLOGY

The method used in this study is the systematic review, a rigorous and structured approach that seeks to identify, select, evaluate and synthesize the relevant scientific evidence on the topic in question. This methodology is widely recognized for its ability to ensure the transparency, reproducibility, and reliability of results, providing a solid basis for reasoned analysis and discussion. Data collection was carried out in internationally renowned electronic databases, covering high-quality scientific literature. Among the databases used are PubMed, which stands out for its wide coverage of biomedical and clinical studies; Scopus, with its multidisciplinary approach; Web of Science, known for including articles of great impact in various areas; SciELO, which brings together scientific publications from Latin America, the Caribbean, Spain and Portugal; and Lilacs, specializing in technical and scientific literature from Latin America.

The search strategy was developed using keywords and controlled descriptors, such as those provided by the MeSH (Medical Subject Headings) and DeCS (Health Sciences Descriptors) vocabularies, ensuring precision and comprehensiveness. The formulation included the use of Boolean operators, such as "AND", to connect different aspects of the theme and refine the results; "OR" to broaden the search to include synonyms or related terms; and "NOT", to exclude irrelevant information. In addition, resources such as quotation marks, to search for exact expressions, and the asterisk, to capture word variations, were used. The main terms combined in the search included expressions such as "interprofessional collaboration" AND "care networks" AND "integration"; "health technology" OR "health education" AND "ICT"; "health promotion" AND "nurses" OR "health professionals"; "social participation" AND "quaternary prevention"; and "mental health" AND "social vulnerabilities".

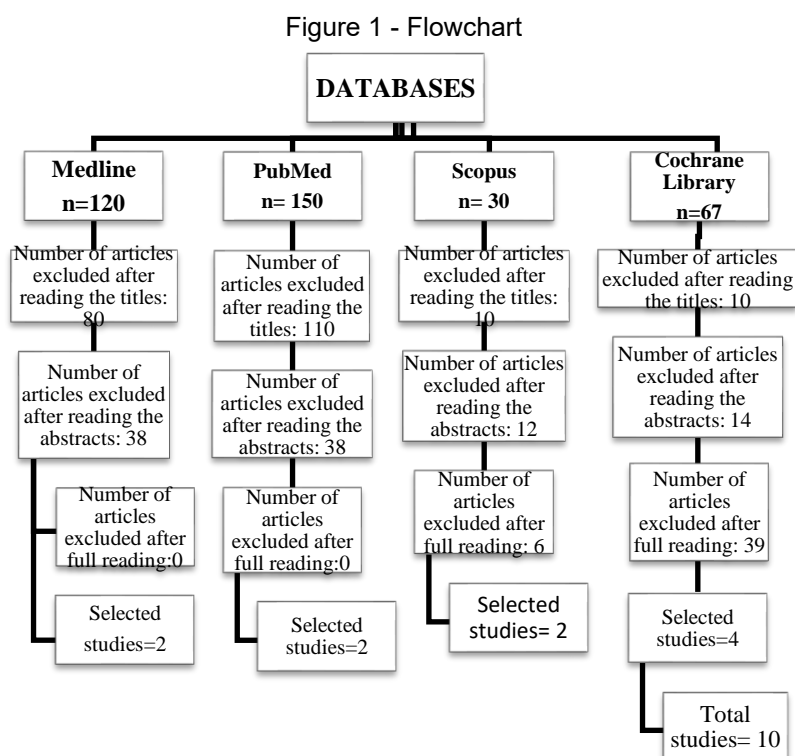
The searches were carried out systematically in each database, adapting the descriptors to the particularities of each platform. To improve the relevance of the results, filters were applied, restricting the studies to publications from the last 10 years, available in Portuguese, English or Spanish, and that were peer-reviewed. The inclusion criteria were defined to select only original articles, reviews or meta-analyses that addressed interprofessional collaboration in care networks and were published in indexed and peer-

reviewed journals. Only studies that presented full texts and clear methodology were also included. On the other hand, duplicate studies, opinion articles, editorials, or those with no direct relevance to the topic were excluded.

In the first phase of reading the titles, 367 studies were identified in PubMed, Embase, Scopus, and Web of Science. After reading the titles, 210 studies were excluded because they did not meet the inclusion criteria, resulting in 157 studies selected for the next phase. In the abstract reading phase, the abstracts of the 157 studies were analyzed in detail. At this stage, 102 studies were excluded due to a lack of specific data on *H. pylori* and gastric cancer, resulting in 55 studies. In the full text reading phase, the full texts of the remaining 55 studies were read and evaluated. 45 studies were excluded because they did not answer the guiding question or did not have sufficient clinical data. There remained 10 studies that met all the inclusion criteria and answered the guiding research question, as shown in the flowchart below.

RESULTS

Below, in figure 1, the flowchart that represents the methodological stages of this study.



Source: The authors (2024).

Below is a table showing the selected studies according to author, year, title, objective, method and results.

Table 1 - Demonstrative table of the selected studies

Author(s)	Year	Title	Objective	Method	Results
Pinto et al.	2017	Use of information and communication technologies in adolescent health education	Identify technologies used in adolescent health education.	Integrative review with databases such as CINAHL, SCOPUS, MEDLINE/PUBMED and LILACS.	The use of technologies such as text messaging and social media, with emphasis on the role of nurses.
Volpato et al.	2010	Drug and health professional package inserts	Evaluate the impact of package inserts on patient understanding.	Literature review based on Medline data.	Technical language in package inserts makes it difficult to adhere to treatment, with suggestions for improvements.
Passos & Pinho	2016	Health professionals in the promotion of breastfeeding	To identify the role of professionals in promoting breastfeeding.	Integrative review of 11 studies.	Nurses are primarily responsible, but there is a passive approach.
Vendruscolo et al.	2016	Teaching-service integration in Pro-Saúde	To examine the teaching-service integration in Pro-Saúde.	Integrative review of 41 publications.	It shows changes in education and professional practice through dialogue and partnerships.
Jesus & Passion	2022	Obstacles to pharmaceutical care in the UBS	To evaluate the participation of pharmacists in the UBS.	Integrative review of studies published between 2007 and 2020.	It identifies barriers to the insertion of the pharmacist, highlighting their relevance.
Freitas et al.	2010	Health promotion for active aging	To analyze nursing actions to promote active aging.	Integrative review based on 4 articles.	It highlights the importance of the interpersonal relationship between nurses and the elderly.
Camacho et al.	2016	Quaternary prevention in primary care	Discuss the insertion of quaternary prevention in primary care.	Integrative review with analysis of 8 articles.	It emphasizes less invasive actions and greater ethics in practice.
Maeyama et al.	2017	Social participation in the SUS	Explore social participation in the SUS.	Integrative review of 55 articles.	It identifies distortions in the application of concepts of social

					participation.
Loura et al.	2020	Learning in research projects in nursing	To evaluate the learning of nursing students involved in research projects.	Integrative review with analysis of articles in databases such as EBSCO and Scopus.	Engagement improves skills such as communication and critical judgment.
Rocha et al.	2022	Anxiety in high school students	Review anxiety in high school students.	Integrative review of 20 studies.	It points to social and academic pressures as the main factors for anxiety disorders.

DISCUSSION

The comprehensive analysis of the reviewed studies highlights several aspects of multidisciplinary collaboration in care networks, highlighting the central role of health professionals in the integration of care. One of the most striking points is the use of information and communication technologies (ICT), as addressed by Pinto et al. (2017). These tools have been shown to be fundamental in personalizing care, especially in specific populations such as adolescents. The ability of ICTs to offer dynamic and accessible resources has expanded the possibilities of patient engagement, facilitating interventions that are more individualized and connected to their realities. In this scenario, nurses take a leading role in leading educational initiatives that not only improve users' knowledge, but also consolidate a more integrated and participatory basis for health care. By exploring this potential, professionals promote a greater connection between categories, integrating different perspectives and competencies in the care process.

This integration is further strengthened by effective communication, a crucial aspect highlighted by Volpato et al. (2010). Clarity in the sharing of health information, such as the simplification of drug package inserts, is an emblematic example of how communication can positively impact treatment adherence. The lack of clarity, on the other hand, can generate insecurity and even abandonment of care, especially among more vulnerable populations. In this context, collaboration between pharmacists, doctors, nurses and other professionals becomes indispensable to translate technical information into accessible and practical language. This cohesive communication not only promotes greater understanding on the part of patients, but also strengthens trust in the health system and the professionals who are part of it.

Health promotion, as pointed out by Passos and Pinho (2016) and Freitas et al. (2010), emerges as another fundamental axis of this analysis. Themes such as breastfeeding and active aging exemplify the importance of educational practices in the construction of preventive and sustainable care. Health professionals, especially nurses, often take on the role of educators, sensitizing and guiding communities on healthy behaviors. However, the effectiveness of these initiatives could be even greater with the use of more proactive and innovative approaches, such as the use of active teaching methodologies or integration with technological resources. Health promotion should not be limited to a set of informative actions; It needs to be a continuous process, adapted to the cultural, social and economic needs of each population group.

The integration between teaching and service, explored by Vendruscolo et al. (2016), is also important in the transformation of health practices. Through the National Program for the Reorientation of Health Education (Pro-Saúde), it was possible to observe how the articulation between academic institutions and health services promotes interprofessional dialogue and encourages structural and cultural changes in care networks. This collaboration has the potential to train professionals who are better prepared to work in multidisciplinary teams, in addition to contributing to the continuous improvement of care practices. By integrating academic knowledge with the practical demands of the health system, a virtuous cycle is created that benefits not only professionals, but also users and the community as a whole.

However, challenges persist. Jesus and Paixão (2022) highlight the barriers faced by pharmacists to fully integrate themselves into health teams, highlighting problems such as the underutilization of their skills and limitations imposed by rigid and hierarchical structures. These challenges illustrate how professional and systemic barriers still constrain the potential of interprofessional collaboration, even in contexts that recognize the importance of this integration. Overcoming these barriers requires not only structural changes, but also a joint effort to value the specific competencies of each professional category, fostering a more collaborative and equitable work environment.

Other relevant aspects include social participation and quaternary prevention, addressed by Camacho et al. (2016) and Maeyama et al. (2017). These authors highlight the need to involve patients as protagonists in their care process, promoting an ethical and person-centered approach. Quaternary prevention, which seeks to avoid unnecessary or potentially harmful interventions, reinforces the importance of evidence-based practices

aligned with the real needs of users. This requires a solid interprofessional articulation, in which different perspectives are integrated to offer more complete and less invasive care.

Another point to highlight is the positive impact of participating in research projects, as demonstrated by Loura et al. (2020). These projects, especially when integrated into the curriculum of nursing students, promote the development of fundamental skills such as effective communication and teamwork skills. The research not only prepares future professionals for the challenges of interprofessional practice, but also encourages innovation and critical reflection on established practices. This type of initiative contributes to the strengthening of care networks and the creation of a health system that is more adaptable and responsive to the demands of society.

Finally, mental health emerges as a crucial topic, especially with regard to the most vulnerable populations. Rocha et al. (2022) point out that social, economic, and educational factors are determinant in the mental health of young people, emphasizing the need for integrated approaches that include both clinical care and psychosocial care. Well-articulated multidisciplinary teams are essential to offer interventions that consider the complexities of these conditions and ensure comprehensive and humanized care.

The reviewed studies strongly reinforce the relevance of interprofessional collaboration in the construction of more integrated, effective and people-centered care networks. Topics such as clear communication, strategic use of technologies, health promotion, social participation, and health education emerge as fundamental pillars for a more humanized and efficient health system. However, overcoming existing structural and professional barriers is indispensable to ensure that these networks are fully functional. Interprofessional articulation, accompanied by innovative educational and communicative strategies, emerges as a promising way to promote equity in care and meet the complex health demands of the population, establishing a fairer, more efficient, and more resilient health system.

CONCLUSION

The present systematic review revealed the importance and complexity of interprofessional collaboration in health care networks. The studies analyzed show that the integration between different professional categories, supported by educational practices, information and communication technologies (ICT) and patient-centered strategies, is essential to strengthen the quality and effectiveness of health services. Topics such as clear

communication, health promotion, social participation and quaternary prevention emerge as fundamental pillars for a more humanized and efficient service. However, structural barriers, such as the lack of recognition of specific competencies and the hierarchization of teams, still represent significant challenges for the consolidation of truly integrated networks.

The findings also highlight the central role of professionals such as nurses, pharmacists, and health educators, both in conducting interventions and in adapting practices to the specific needs of the populations served. The teaching-service integration, combined with participation in research projects, proved to be a promising strategy to train more qualified professionals, capable of acting in a collaborative and innovative way. In addition, the use of ICT is an indispensable tool for the personalization of care and the expansion of access to information, contributing to the overcoming of communicative and geographical barriers.

Although significant advances have been recorded, the study also points out important gaps, such as the need for greater inclusion of cultural, social, and economic perspectives in the planning of care networks. Overcoming these limitations requires integrated public policies and articulated actions between managers, health professionals, and the scientific community. In this way, it becomes possible not only to improve interprofessional collaboration, but also to build a health system that is more equitable, efficient, and adapted to the demands of a diverse and constantly changing population.

In summary, the review reinforces that interprofessional collaboration is not just a goal, but a necessity in the contemporary context of health. The construction of integrated care networks, supported by evidence-based practices, innovation, and inclusion, is essential to promote person-centered care and ensure effectiveness and equity in access to and quality of health services.

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