REVIEWS

Nursing care and health promotion competencies in cardiometabolic diseases: A scoping review

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ABSTRACT

Objective: The aim was to map, in the scientific literature, nursing care and health promotion competencies in cardiometabolic diseases in the light of the Galway Consensus.
Methods: This is a scoping review carried out in accordance with the JBI recommendations, from November 2021 to January 2022, in five databases. The studies were analyzed according to the Galway Consensus competency domains: catalysing change, leadership, assessment, planning, implementation, evaluation, advocacy and partnerships.
Results: A total of 85 studies were included in the review, and existing scientific production points out that nurses carry out comprehensive actions, which involve educational interventions, follow-up of nursing at home and at the health institution for individuals/families, health service management and partnership articulation to guarantee longitudinal, comprehensive, qualified and network-integrated care. The most highlighted domain was catalysing change, followed by assessment, planning, implementation, partnerships, advocacy and evaluation. Care such as health education, guidance on healthy eating habits, physical activity, weight reduction, smoking cessation and foot care/shoe use stood out, in addition to guidance on drug treatment, counseling, care/support for the family, home visits, follow-up by telephone and referral to a nutritionist and other professionals.
Conclusions: It is necessary to strengthen competencies such as leadership and health advocacy in health promoting nurses, considering that few studies related to such themes were identified.

Key Words: Nursing care, Professional competency, Chronic disease, Health promotion, Role of the nursing professional, Evidence-based nursing

1. INTRODUCTION

Cardiometabolic diseases (CMD) are represented by diseases such as diabetes mellitus (DM), hypertension, cardiovascular diseases (CVD), dyslipidemia and obesity. These pathologies represent a serious public health problem worldwide and are among the main causes of morbidity, mortality and disabilities worldwide.[1,2]

Research showed that illness due to CMD was associated with greater use of health services and the occurrence of hospitalizations. Moreover, the presence of multimorbidity

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was associated with an increased risk of frailty in subjects.[3] Linked to this is the low functional health literacy of people with CMD, a worrying situation that can interfere with subjects' perception of their disease, generating poor understanding of health guidelines and favoring inadequate compliance with pharmacological and non-pharmacological treatment.[4,5]

The importance of promoting and improving holistic monitoring of this population is highlighted, especially with regard to the development of nursing care. Nurses, as health team member, especially in the context of public health policies, such as those of the Brazilian Health System (SUS, Sistema Único de Saúde), play a crucial role in CMD prevention, promotion, education, health rehabilitation and management.[6]

Nurses' work in planning, implementation, and assessment of care for people with CMD must be based on specific competencies to be qualified and effective. In this context, the Galway Consensus theoretical framework, developed in 2008 in Ireland, at the Galway Conference, stands out. It aimed to promote international dialogue and collaboration as well as a broad scientific literature review for identifying and constructing fundamental competencies for health promotion and common approaches for accreditation of academic programs.[7]

The Consensus addresses eight domains of essential competencies for health promotion and education as well as for the workforce development and improvement worldwide, namely: catalysing change; leadership; assessment; planning; implementation; evaluation; advocacy; and partnerships.[7]

Such competencies have been the subject of discussion and investigation in several studies, with the aim of incorporating them into nurses' training and assistance process. With regard to CMD, through an unsystematic literature review, only three review studies were identified, two on nurses' competencies in promoting the health of hypertensive people[8,9] and the other focused on health promotion of people with chronic heart disease.[10]

However, there is a shortage of studies that address the investigation of nursing care/interventions in promoting the health of people with CMD, aligning them with the Galway Consensus competencies, which include other cardiometabolic diseases such as DM and obesity. Therefore, it is relevant to investigate nurses' care work process in the care provided to this public and the specific competencies that guide them.

When considering the demand for new scientific productions on this theme, the development of new studies aimed at mapping nursing care in CMD based on competencies may bring subsidies for this professional's work in care planning, implementation and assessment aimed at this vulnerable population. Furthermore, the present study provides an opportunity to analyze and critically reflect on nurses' practice in promoting health in CMD and the competencies that guide this action.

Considering the above, this study aimed to map, in the scientific literature, nursing care and health promotion competencies in CMD in the light of the Galway Consensus.

2. METHOD

2.1 Study design

This is a scoping review that used the Galway Consensus as a theoretical-methodological framework. The review was built using the JBI Reviewer's Manual recommendations, as described throughout this section. This study followed the following steps: research question definition; identification of relevant studies; study selection and mapping; data extraction; interpretation of results; and review presentation.[11]

Furthermore, we used the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist[12] to verify the methodological quality of the review. The scoping review protocol was registered on the Open Science Framework website, with an access link as follows: `https://osf.io/ja2re/`.

To create the study's guiding question, the Population Concept Context (PCC) strategy was adopted,[11] in which P (Population) was: adults and older adults with cardiometabolic disease; C (Concept): nursing care; C (Context): health promotion. Thus, the following research question emerged: What nursing care is needed to promote the health of adults and older adults with CMD?

2.2 Selection criteria

Studies that addressed nursing care to promote the health of adults and older adults with CMD, published without time delineation and study design, available in Portuguese, English or Spanish, were included. Studies that did not respond to the research question, duplicates and those that did not have full text available were excluded.

2.3 Data collection

Study search was carried out between November 2021 and January 2022, in the following nursing databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL); Scopus; Medical Literature Analysis and Retrieval System OnLine (PubMed/MEDLINE); Scientific Electronic Library Online (SciELO); and Latin American and Caribbean Literature on Health Sciences (LILACS). The bases were accessed through the Journal CAPES Platform,

through access carried out by the Federated Academic Community (CAFe), from login by the Federal University of Ceará (UFC, Univerisdade Federal do Ceará).

For study search, the terms and keywords of Descriptors in Health Sciences (DeCS), CINAHL Headings and Medical Heading Subjects (MeSH) were used as well as keywords identified through previous reading of articles on the subject in question, in order to expand the search results in each database. Thus, the following search strategies described in Table 1 were used, according to the databases.

Table 1. Scoping review databases and search strategies

Database	Search strategies
LILACS and SciELO	(Obesity OR "Diabetes Mellitus" OR Diabetes OR Hypertension OR "High Blood Pressure" OR "Cardiovascular Diseases" OR "Cardiovascular Disease" OR "Cardiometabolic Diseases" OR "Cardiometabolic Disease") AND ("Nursing Care" OR "Nursing Care Plan")
PubMed/MEDLINE	(Obesity OR "Diabetes Mellitus" OR Diabetes OR Hypertension OR "Blood Pressure, High" OR "Blood Pressures, High" OR "High Blood Pressure" OR "High Blood Pressures" OR "Cardiovascular Diseases" OR "Cardiovascular Disease" OR "Disease, Cardiovascular" OR "Diseases, Cardiovascular" OR "Cardiometabolic Diseases" OR "Cardiometabolic Disease") AND ("Nursing Care" OR "Care, Nursing" OR "Nursing Care Plans" OR "Care Plan, Nursing" OR "Care Plans, Nursing" OR "Nursing Care Plan" OR "Plan, Nursing Care" OR "Plans, Nursing Care")
Scopus	(Obesity OR "Diabetes Mellitus" OR hypertension OR "Cardiovascular Diseases" OR "Cardiovascular Disease" OR "Cardiometabolic Diseases" OR "Cardiometabolic Disease") AND ("Nursing Care" OR "Nursing Care Plan")
CINAHL	(Obesity OR "Diabetes Mellitus" OR Hypertension OR "Cardiovascular Diseases" OR "Cardiometabolic Diseases") AND ("Nursing Care" OR "Nursing Care Plan")

Study search, selection and analysis was conducted by two independent researchers using Rayyan software. This tool allows researchers to blindly and independently select articles, reducing the risk of publication selection bias.

Initially, the studies were exported to Rayyan, where, later, initial screening was carried out by reading the articles' titles and abstracts. After this step, the selected potentially eligible studies were completely read and those that made up the final sample were selected. It is worth noting that in cases of disagreement between the two researchers, a third reviewer made the final decision to include or exclude the study.

After selecting the publications, the articles selected for the final sample were thoroughly analyzed. Data extraction was carried out using a semi-structured instrument that contained variables such as year of publication, country of origin, study design, sample and main results regarding the nursing care developed.

2.4 Data analysis

The nursing care extracted from the studies was analyzed and presented according to the Galway Consensus health promotion competencies described in Figure 1.[7] Furthermore, the information extracted from the studies was synthesized and organized into descriptive tables, in order to facilitate understanding.

3. Results

A total of 4,839 publications were identified in the databases, of which 85 were selected for the final sample, as described in Figure 2.

With regard to geographic location, studies were found from 21 countries, predominantly from Brazil (n = 45, 52.95%)[9,13–56] and Mexico (n = 7, 8.04%).[57–63] They also highlighted countries such as Iran,[64–67] United States,[68–70] Spain,[71–73] United Kingdom,[74–76] Chile,[77–79] Canada,[80,81] Colombia,[82,83] New Zealand,[84,85] Turkey,[86] Taiwan,[87] Italy,[88] Norway,[89] Germany,[90] England,[91] Netherlands,[92] Australia,[93] Israel,[94] Costa Rica[95] and Kenya.[96]

Regarding the year of publication, the studies ranged between 1999 and 2021 so that a greater number was observed in 2017 (n = 11, 12.94%) and 2018 (n = 8, 9.41%). Regarding study design, randomized clinical trials predominated (n = 13, 15.29%), followed by case studies with 10 (11.76%) publications, descriptive studies and expert guides with five (5.88%) each.

Nursing care for health promotion in CMD that were identified in the studies are grouped in Table 2 in the eight competency domains established by the Galway Consensus. The catalysing change domain had the highest number of nursing care (n = 70, 58.83%).

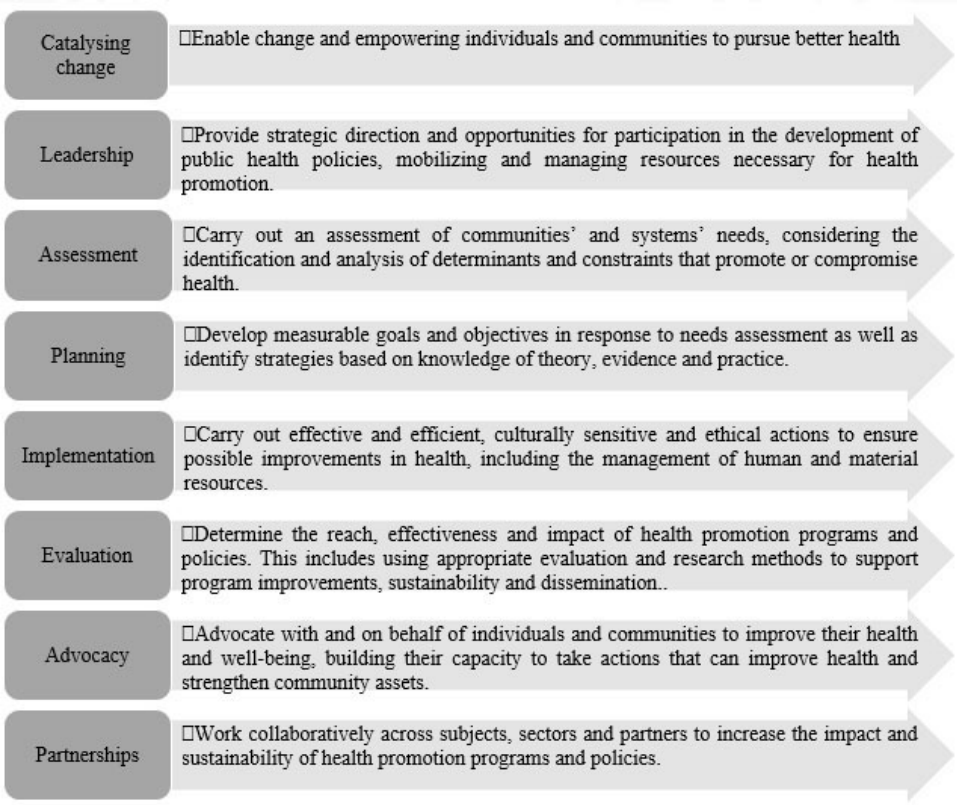

Figure 1. Galway consensus health promotion competencies.[7] Sobral, CE, Brazil, 2022

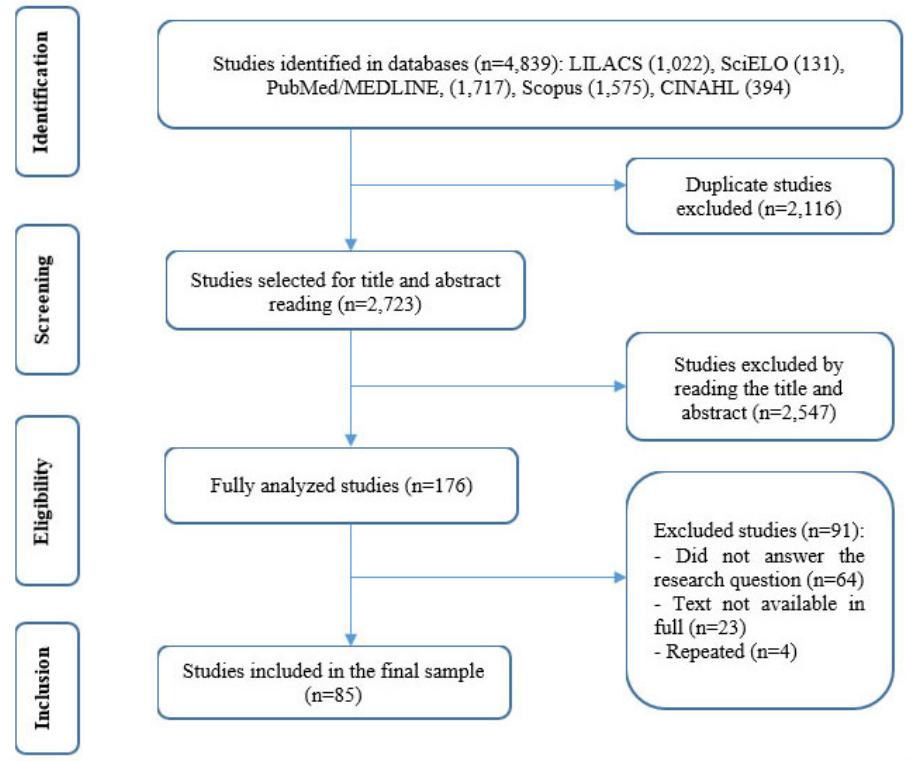

Figure 2. Study search flowchart. Sobral, CE, Brazil, 2022

Table 2. Nursing care synthesis by galway consensus competency domain

Competency domain	Nursing care	n (%)
Catalysing change	Health education[9,13-16,19,21,24,26,33,37,38,40,42,44,50-52,54,56-57,59,62-63-64,66,69,70,78-79,84-85,95] Guidance on healthy eating habits[13,18-19,21-22,25,28-29,34-36,38-39,42,44,47-49,52,54,57-59,61-62,65,69,73,74,76,78-79,83,84,89,92,94] Guidance on drug treatment[13,18-21,25-26,28-29,34-36,28-39,42,44,47,53-54,62,69,73,78-79,90-94] Guidance on physical activity[13,16,18-21,23,25,29,34-38,42,44-46,48-49,53,55-56,59,62,65,73-74,76,78-79,83,87,94] Guidance on weight loss[13,16,19,22,26,34,38,44,46-48,71-73,89,92] Guidance on smoking cessation[13,16,19,26,34,39,44,69,71,74,79,85,89,92] Guidance on foot care/shoe use[21,34,39-40,44-45,58-59,62,63,71,79-80,94] Emotional/spiritual support[9,17,19,24,58,72,88] Exercise promotion[17,24,30,35,44,72,82] Nutritional advice[24,28,30,45,58,50,72,83] Guidance on follow-up and compliance with treatment and/or professional follow-up[13,18-19,31,42,47,53,53,57] Stress reduction[13,16,19,39,44,64,73] Art therapy[17] Increased self-esteem[17,58,72,88] Anxiety reduction[17,35,73] Sleep improvement[13,60,65] Improved self-confidence[63] Encouraging religious belief[44] Hope promotion[59] Cognitive-behavioral therapy[85] Music therapy[17] Encouraging patients to engage in groups[83] Health education[58,71] Guidance: personal hygiene[20] Teaching: prescribed activity/exercise[15,24,58,72] Guidance on cardiovascular risk factors[37,62,83,92] Teaching: prescribed diet[20,24,35,58,63,82,88] Encouraging adequate fluid intake[13,18,23,44] Guidance on alcohol cessation[16,34,38-39,47,69,71,89] Guidance on combating sedentary lifestyle[19,26] Teaching: prescribed medication[13,24,30,44,53,58] Guiding patient to use alternative therapies such as teas[13] Guidance on follow-up and return visits[19,31,38,44,51] Teaching: procedure/treatment[24,71-72,58,44] Guidance on the disease[13,19,35,37,47,62,83] Teaching: disease process[24,34,58,63,71-72] Teaching process: diabetes[58] Explaining about the signs and symptoms of high blood pressure[35] Advising on regular monitoring of blood glucose and/or blood pressure[18,42,44,53,63,69] Managing hypoglycemia and hyperglycemia[30,72-73,44,63,82] Guidance on complications[21,28,34,38,45,53,73] Teaching: sexuality[24] Sexual counseling[9,58] Contract with patient[24,44] Fall prevention[37,38,45] Family assistance/support[13,18,20,24,31,35,42,55-56,58,72,85] Establishment of mutual goals[24,35,58,63] Increased willingness to learn[24,44,72] Teaching: individual[24,58,63] Counseling [24,41,44,58,68,72,75-77,81,89-90,93,96] Patient empowerment[9,49] Agreement with patient[58] Behavior modification[22,58,45] Increase coping[49,58] Making learning materials available to illustrate the information[35,62,54,84] Guidance on the health system[24,72] Learning facilitation[24,62,72] Teaching: psychomotor competency[24] Listen carefully[24] Patient-centered care[9,78] Support for the main caregiver[58] Assisting patient in accepting the disease[65] Facilitate self-responsibility[40,58,90] Assistance in self-care[44,63,73,95] Helping in modifying oneself[63] Establishing a relationship of trust with diabetic patients taking into account their reality[18,39] Nurse-patient/caregiver relationship/communication[9,25,32-33,78] Building a complex relationship[24] Problem-solving[42] Motivational interview[56,79]	70 (58.83)
Assessment	Assessing health-related quality of life[95] Identifying current health knowledge[35] Assessing knowledge about the disease[71] Risk identification[16,44,72] Perform screening of high-risk groups[33] Assessment of risk factors: foot ulceration/amputation[80] Assessment of cardiovascular risk factors[50,59] Identifying health threats[78] Lifestyle assessment[18,78] Assessing the psychosocial context[78] Checking medication use[19] Assessing the routine of self-care activities necessary for treatment[24] Health status assessment[44,54,78] Assessing obstacles to exercise[37] Identifying problems[18]	15 (12.6)
Implementation	Management of clinical cases[9,55,66,68,70,85] Care coordination and management[9,33,57] Systematically use assessment and diagnostic instruments[33] Group work[93] Conducting home visits[18,31-32,50,55,62,69,79,82,85-87,91] Using ICT* for education and health promotion[33,79,82] Telephone follow-up[14,24,41,64,66-67,69,72,85,91-92] Consultation by phone[67,71,72] Providing feedback on learning content[37] Supervising compliance with treatment[13,58] Implementing an Epidemiological Surveillance Program in	11 (9.25)
Partnerships	Patient defense[9] Family mobilization[13,17,19,29,37,58,61,88] Increased support system[17,44,58,78] Referring patient to psychological support groups[13] Partnerships between health professionals and patients[9] Referring to nutritionist and other professionals[9,13,20,22,33-35,42,44,48] Referring to other health institutions[9] Multidisciplinary team[9] Promoting articulation between the public and private systems[78] Articulation of actions with the health network services[54]	10 (8.40)
Planning	Establishing the routine of self-care activities necessary for treatment[35,47] Health team planning for health promotion[9] Using theoretical frameworks in care planning[9] Making use of nursing taxonomies in care planning[9] Adapting instruction to patients' level of knowledge and understanding[35,37,42,49] Using evidence-based protocols and guidelines for clinical practice[33] Developing cardiovascular rehabilitation program[56]	7 (5.88)
Evaluation	Hypertension[18] Evaluation of health promotion activities[9] Evaluation of the effect of educational interventions[82]	3 (2.52)
Advocacy	Meeting to evaluate multidisciplinary care[44] Support in decision-making[49,58,72] Protection of patient rights[24,72]	3 (2.52)
Leadership	-	-

* ICT = Information and Communication Technologies.

Care such as health education, guidance on healthy eating habits, physical activity, weight reduction, smoking cessation and foot care/shoe use stood out, in addition to guidance on drug treatment, counseling, care/support for the family, home visits, follow-up by telephone and referral to a nutritionist and other professionals.

4. Discussion

As evidenced in the publications included in this review, nursing care to promote the health of adults and older adults with CMD involves educational, assistance and managerial actions. Such care is essential to promote access to qualified, comprehensive and longitudinal health care. When based on health promotion competencies, they enable continuous professional development and the provision of qualified and effective care in improving the population's quality of life and preventing complications.[10]

It was evident that the catalysing change domain stood out with the highest number of nursing care, focused on assistance and educational care, where health education and guidelines aimed at compliance with non-drug treatment were the predominant care.

Studies reinforce that people with CMD have low compliance with non-pharmacological measures such as weight control, physical activity and diet.[97,98] Nurses act in the development of individual and group educational interventions that promote knowledge and competency construction and acquisition by patients, consequently, such nursing interventions encourage individuals' co-responsibility and self-efficacy in their self-care process, favoring compliance with healthy behaviors, achievement of improvements in biopsychosocial well-being and control of biochemical and anthropometric indicators.[41,53,66,77,79,89,92]

Care aimed at promoting compliance with drug treatment also stood out in the catalysing change domain. It is known that compliance with pharmacological therapy, in association with non-pharmacological measures, it is crucial in controlling glycemic, blood pressure and lipid levels and, therefore, in preventing complications linked to these indicators.

However, the correct use of medications is still a challenge for patients with CMD, especially with regard to older adults. Research highlights that factors such as polypharmacy, difficulty in managing medication use, low functional literacy and low education are associated with inadequate compliance with pharmacological treatment.[99,100] Due to being influenced by factors related to patients, socioeconomic aspects and family context, drug treatment follow-up requires regular monitoring by nurses and other health professionals to favor adequate, safe and therapeutic compliance with drugs.[20,26] In this regard, nurses, both in the consultation at the health service and in the home visit, must verify medication use by patients, investigate the difficulties experienced by them in this process, identify and encourage sources of social and family support that can strengthen the correct medication use, as it implements educational strategies that facilitate understanding this care and attitudes by individuals towards medication use.[18,19,34,39]

Care mentioned above, still in the catalysing change domain, interventions that seek to empower individuals about the health-disease process, following care plan, monitoring health in care services, strengthening bonds and communication between professional and patient stood out. The lack of knowledge about these aspects can make it difficult to accept the disease and comply with health monitoring. Having the nurses play a role of promoting clarification to patients regarding the illness that affects them and the complications it can cause, the benefits and the particularities of treatment so that they understand them and become active participants in this process.[101]

The assessment domain had the second highest number of nursing care, among which the following stood out: health status assessment, risk identification and lifestyle assessment. These interventions make it possible to identify and assess the health determinants and conditions that influence individuals' behaviors and decisions. Moreover, they facilitate the assessment of self-care deficits and patients'/family's learning needs, risk stratification and identification of barriers that hinder access to health services.[18,24,72]

Interventions are in line with the planning domain, in which care to adapt instruction to patients' level of knowledge and understanding and establish the routine of self-care activities necessary for treatment prevailed, highlighting the importance of developing educational and care actions adapted to patients' and to level of education to facilitate their understanding of what is discussed and/or performed.[37,49]

Implementing this care enables nurses to plan qualified and participatory care, which considers the social, physical and emotional vulnerabilities that interfere with the self-care of people with CMD. In addition to this, they provide opportunities for establishing culturally sensitive goals and care strategies to meet the assessed needs.[8,9]

With regard to the implementation domain, interventions such as home visits, telephone follow-up, management of clinical cases, coordination and care management were the most notorious. Home visit is a longitudinal health care and promotion tool widely adopted within the scope of Primary Health Caare and Family Health Strategy (FHS), where

it allows investigating the family reality and identifies of demands that do not reach the health services. Thus, it subsidizes planning and implementing interventions in the family context.[8]

However, it presents challenges for implementation, mainly related to the high spontaneous demand in Basic Health Units and even lack of professionals. With this, it should be noted that the combination of home visits with other care strategies, in order to expand follow-up and monitoring of patients and their family, such the health service itself and by telephone, is relevant.

Regarding care coordination and management, it aims at the efficient management of health services and human and material resources. This practice enables providing collaborative care with the establishment of mutual goals necessary to achieve disease control, in order to promote patients' autonomy and self-efficacy.[64] It also allows closer patient monitoring, providing educational interventions and coordinating care with greater multidisciplinary team integration and articulation.[55,70]

It is relevant for nurses to have leadership and empowerment in this work, since their role in managing and providing care to the population makes it possible to improve health systems, while promoting increased access to comprehensive, innovative and duly qualified health actions.[102] Nurses' role in articulating partnerships is emphasized as an essential strategy to promote comprehensive and longitudinal multidisciplinary care.

In this action, we can find the interventions scored in the partnerships domain, such as family mobilization, referral to a nutritionist and other professionals and increase in the support system. The family is an important mediator in care plan and must have its participation encouraged in this process.[19,61] Understanding patients' support network, their family context, as well as perceptions, anxieties and difficulties of family members linked to the care process, allows for better targeting of care to meet these individuals' needs. This makes it possible to contribute to their better adaptation and achievement of goals related to compliance with treatment and improved quality of life.

Seeking partners to promote care in a network based on a multidisciplinary approach provides resoluteness, comprehensiveness and longitudinality to care, as favors communication between professionals who work at different levels of health care. It also facilitates dialogue and sharing of behaviors.

Nurses' role in the face of the aforementioned aspects optimizes the care provided, fosters patients' rights by performing care and management actions that favor equitable access to equipment and qualified care. Advocating in defense of patients is a competency that expands their access to information and favors their co-responsibility, support in decision-making, active participation in the care process and in problem-solving.[24]

Thus, this advocacy role requires understanding the vulnerabilities that permeate patients' reality, expectations and desires as a way of seeking to defend their interests and improve quality of life.[9,10,24]

About the evaluation domain, nursing interventions aimed at assessing health promotion activities and meeting to assess multidisciplinary care. Understanding the impacts of nursing care and the multidisciplinary health team makes it possible to critically reflect on caregiving and established micropolitical relationships, as it contributes to identifying the strengths, weaknesses and gaps that permeate these processes.

Finally, the leadership domain is highlighted, which is understood as directing strategies that favor participation in the formulation of public policies, the mobilization and management of resources necessary for health promotion and capacity building.[7] No interventions were identified for this domain, according to the Galway Consensus definition.

It should be noted that nurses are professionals trained as leaders, whose actions can contribute to changes in health systems to establish partnerships and improve communication with the population in order to favor their engagement in the construction and improvement of care policies and strategies.[103] Therefore, considering nursing as a driving force that sustains health systems around the world, the importance of nurses seeking greater empowerment of this competency in their professional practice is reinforced.

Considering the above, as contributions to nursing and health, the present study provides a set of nursing care for people with CMD based on the essential competencies of health promotion, favoring the visibility of interventions that can support autonomous practice based on scientific evidence. Furthermore, it makes it possible to contribute to the range of knowledge related to the care provided by nurses in the context of CMD, becoming an aid in implementing the nursing process in different health contexts.

It is relevant to develop new studies that seek to validate with expert judges the nursing interventions identified, according to the Galway Consensus competencies, as well as experimental research that assesses the impact of these interventions in promoting the health of this people and nurses' work regarding the leadership health promotion domain.

Limitations

Limitations include the inclusion of articles published only in three languages and studies not available electronically in full format, which may have precluded the inclusion of other relevant studies for the scoping review. However, the results of this study can contribute to the development of new research based on the Galway Census, aiming to fill the gaps identified.

5. Conclusion

Existing scientific production points out that nurses carry out comprehensive actions, which involve educational interventions, follow-up of nursing at home and at the health institution for individuals/families, health service management and partnership articulation to guarantee longitudinal, comprehensive, qualified and network-integrated care. The most highlighted domain was catalysing change (58.83%), followed by assessment (12.6%), planning (9.25%), implementation (8.40%), partnerships (5.88%), advocacy (2.52%) and evaluation (2.52%).

These findings encourage nurses' work in health care for people with CMD as well as help them in decision-making and conduct in promoting the health of this clientele. The body of evidence identified through this review can also contribute to creating nursing care protocols in CMD and with nursing students' training, since it addresses aspects and competencies of nurses' practice in health promotion in CMD.

Based on these results, it is emphasized the importance of favoring nurses' qualification and continuing training in this care context, which will favor creating empowered and autonomous professionals, sensitive to the reality in which they work and committed to empowering the population as actors capable of carrying out health promotion actions.

Conflicts of Interest Disclosure

The authors declare that there is no conflict of interest.

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