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Concept of health care network and its key characteristics: a scoping review

Conceito de rede de atenção à saúde e suas características-chaves: uma revisão de escopow

Concepto de red de atención de salud y sus características clave: una revisión de alcance

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Abstract

Objective: To map national and international scientific evidences about the characteristics present in the concept of health care network. **Method**: This is a scoping review based on the PubMed, Lilacs, Scopus and CINAHL databases. The search was carried out from September to October 2017, concurrently in all of them, producing a total of 820 records. After applying filters and inclusion and exclusion criteria, 10 manuscripts composed the sample. **Results**: The results showed 29 characteristics present in concepts of health care network, namely: integrality, defined territory, cooperation, coordination, equity, quality, integration, variety of services, rationality, interdependence, guarantee of right, intersectorality, efficiency, effectiveness, interconnection, humanization, common objective, longitudinality, access expansion, access guarantee, articulation, regulation, adaptability, flexibility, openness, fluidity, horizontality and formalization by contract. **Conclusion and implications for practice**: The characteristics expressed complementarity in the formation of the concept of health care network. However, there is not a totalizing concept for health care network capable of presenting its real scope and meaning. Understanding the concept and its characteristics is believed to influence the operationalization, governance and performance assessment of the health care network.

Keywords: Health System. Health Services. Concept Formation. Review.

Resumo

Objetivo: Mapear as evidências científicas nacionais e internacionais acerca das características elencadas no conceito de rede de atenção à saúde. **Método**: Trata-se de uma revisão de escopo, realizada a partir da consulta nas bases de dados PubMed, Lilacs, Scopus e CINAHL. A busca foi realizada de setembro a outubro de 2017, de forma concomitante em todas elas, tendo retornado um total de 820 registros e, após aplicação de filtros e critérios de inclusão e exclusão, 10 manuscritos compuseram a amostra. **Resultados**: Mapeou-se 29 características-chave presentes nos conceitos de rede de atenção à saúde, tais como: integralidade, território definido, cooperação, coordenação, equidade, qualidade, integração, variedade de serviços, racionalidade, interdependência, garantia de direito, intersetorialidade, eficiência, eficácia, interligação, humanização, objetivo comum, longitudinalidade, ampliação do acesso, garantia de acesso, articulação, regulação, adaptabilidade, flexibilidade, abertura, fluidez, horizontalidade, formalização por contrato. **Conclusão e Implicações para a prática**: As características expressaram complementaridade na formação do conceito de rede de atenção à saúde. No entanto, nota-se a ausência de um conceito totalizante para rede de atenção à saúde capaz de apresentar sua real abrangência e significado. Acredita-se que a compreensão do conceito e suas características influencie a operacionalização, governança e avaliação de desempenho da rede de atenção à saúde.

Palavras-chave: Sistema de Saúde. Serviços de Saúde. Formação de Conceito. Revisão.

Resumen

Objetivo: Mapear la evidencia científica nacional e internacional sobre las características presentes en el concepto de red de atención de salud. **Método**: Esta es una revisión de alcance basada en las bases de datos PubMed, Lilacs, Scopus y CINAHL. La búsqueda se llevó a cabo de septiembre a octubre de 2017, simultáneamente en todos ellos, produciendo un total de 820 registros. Después de aplicar filtros y criterios de inclusión y exclusión, 10 manuscritos compusieron la muestra. **Resultados:** Los resultados mostraron 29 características presentes en los conceptos de red de atención de salud, a saber: integridad, territorio definido, cooperación, coordinación, equidad, calidad, integración, variedad de servicios, racionalidad, interdependencia, garantía de derecho, intersectorialidad, eficiencia, eficacia, interconexión, humanización, objetivo común, longitudinalidad, ampliación del acceso, garantía de acceso, articulación, regulación, adaptabilidad, flexibilidad, apertura, fluidez, horizontalidad, formalización por contrato. **Conclusión e Implicaciones para la práctica:** Las características expresaron complementariedad en la formación del concepto de red de atención de salud. Sin embargo, no existe un concepto totalizador para la red de atención de salud capaz de presentar su alcance y significado reales. Se cree que comprender el concepto y sus características influye en la operacionalización, la gobernanza y la evaluación del desempeño de la red de atención de salud.

Palabras-clave: Sistema de Salud. Servicios de Salud. Formación de Concepto. Revisión.

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INTRODUCTION

Health systems have the objective of promoting, restoring and maintaining a population's health. They are composed of a set of services that communicate with one another, aiming at social protection.[1] The historical analysis of health systems has shown that, up to the first half of the 20th century, they focused on infectious diseases and, in the second half of that century, on acute conditions. The advances in biomedical science and the implementation of public health metrics have reduced the impact of countless communicable diseases in the majority of the developed countries. Therefore, the current health systems were organized to treat acute problems and pressing needs of patients. However, at the beginning of the 21st century, when chronic conditions have become more significant, a disparity can be seen when the model of acute treatment is adopted to deal with chronic problems.[2]

On the other hand, it is a fact that there has been substantial progress in the approach to health conditions in recent decades, with worldwide reduction in mortality rates and improvement in life expectancy. However, in many countries, the epidemiologic transition remains registered in the magnitude of chronic diseases and their undesirable effects to individuals, families and health systems. This situation implies the need to adapt the approach to these health conditions, with the objective of attaining quality of life and a better performance of the health systems.[3]

In the Brazilian context, the health situation is marked by the triple burden of disease (chronic non-communicable diseases and their risk factors, external causes and the persistence of communicable diseases), allied with the accelerated aging of the population and a health system that, despite its achievements, has not been totally organized to face this scenario yet.[4,5]

This situation constitutes a threat in the economic and health perspectives. The health systems must be reorganized to face challenges related to the efficiency and effectiveness of their actions by adopting efficacious strategies, to handle, mainly, chronic conditions.[2]

In this sense, the health systems should protect themselves from the fragmentation of services, as the treatment of chronic conditions requires integration to guarantee the sharing of information among their different components over time and the coordination of funding in all the spheres of the system. It emphasizes that integrated services result in better health quality and reduce waste in the use of physical, material and professional resources. Thus, the services become more efficient and provide a satisfactory experience for users.[2]

The future of health systems consists of their integration as Health Care Networks (known in Brazil as RAS), functioning in a more cooperative way that is operationalized under a shared vision, with the elimination of redundancies, implementation of clinical guidelines, horizontal and vertical integration of services, and focus on quality[6]. Evidences have shown that the implementation of health care networks produces positive results, such as reduction in the fragmentation of care, improvement in the system's global efficiency, non-multiplication of infrastructure and services, better response to peoples' needs and expectations, improvement in the health services' cost-effectiveness, reduction in unnecessary hospitalizations, decrease in the excessive utilization of services and exams, reduction in the length of hospitalization periods, production of economies of scale and scope, increase in the system's productivity, improvement in the quality of care, production of a balanced offer of general and specialized care, facilitation of people's use of different levels of care, and increase in user satisfaction and self-care.[7]

In Brazil, although the concept of health care network, from the organizational perspective of a health system, is included in the precepts of the Brazilian National Health System (SUS) and in its operational rules, it started to be more frequently applied with the 2006 Pact for Health, integrating the proposal for the strengthening of regionalization, interdependence and direct relationship between the three spheres of its management.[8,9] With the publication of Directive no. 4279/2010 of the Ministry of Health[10] and Decree no. 7508/2011[11], a movement was triggered in the health regions, heading towards the construction and operationalization of the health care network, with the publication of guidelines for its organization.

However, at least in Brazil, although there is, in SUS, a definition of the concept of health care network, it can be understood in different ways by the actors that work in the health area, as the word for "network" in Portuguese (*rede*) has different meanings. In its origin, the word *rede*, which derives from the Latin word *retem*, defines a structure that has a characteristic pattern.[12]

Considering the challenge of the reorganization of the health care systems and having the health care network as a strategy for this reorganization, this study aims to map national and international scientific evidences of the characteristics present in the concept of health care network.

METHOD

The scoping review was chosen for the development of this study, as a method to group data and synthesize knowledge that can be used to map the main concepts that underpin a research area or to clarify working definitions and/or conceptual boundaries of a topic or field of study.[13,14] Thus, a systematic scoping analysis was carried out and the data were analyzed and synthesized in a narrative form.

Using the population, concept and context framework (PCC),[13,14] this scoping review included studies: a) regarding population: from any group or country of origin; b) regarding concept: that presented explicitly the concept of health care network and its characteristics; c) regarding context: belonging to the context of organization of the health system. This framework was employed to answer the following question: What are the national and international scientific evidences about the characteristics present in the concept of health care network?

As for the type of studies, the following were included: studies with quantitative and qualitative approaches, primary studies, systematic reviews, meta-analyses and/or meta-syntheses, books and guidelines, published in English, Spanish or Portuguese,

in indexed sources or in the gray literature, available online in the consulted databases. Publications in other languages and publications that did not present the concept of health care network in an explicit way were excluded. The period chosen for the research ranged from the beginning of the operation of SUS (1990) to the end of the first semester of 2017.

The following databases were used: National Library of Medicine (PubMed), Latin American & Caribbean Health Sciences Literature (Lilacs), SciVerse Scopus (Scopus) and Cumulative Index to Nursing and Allied Health Literature (CINAHL). The search in these databases was performed from September to October 2017, concurrently in all of them, by two reviewers.

For the search in the four databases, the following keyword was considered: "rede de atenção à saúde" (health care network) and its intersection with the controlled descriptors "Health Services"; "Delivery of Health Care, Integrated"; "Health Care Delivery"; "Health Promotion"; "National Health Programs"; "Health Systems Plans"; "Regional Health Planning", with the use of the Boolean operator "OR". These controlled descriptors were referred by DECS/MESH. The search in the Lilacs database was trilingual (Portuguese, English and Spanish) and, in the other databases, descriptors and the keyword were used in the English language. The search was performed in an integrated way in the title, abstract and subject fields. The search strategies according to each database are presented on Chart 1.

Articles and technical documents were selected through the title and abstract. Subsequently, they were fully read, so that the final selection of the material could be performed to answer the guiding question. Two researchers read the material independently and filled in a data collection instrument, in order to minimize possible biases in the selection of the studies. Impasses related to the inclusion or exclusion of articles were solved by means of discussions so that the researchers could reach a consensus, or by consulting with a third reviewer (all three are authors of this review). The data collection instrument extracted the following information from the selected studies: identification of the article/technical document, year of publication, type of document, type of study, origin (place where the study's data were collected) and the concept of health care network. After the selection of the final sample of articles/documents, the key characteristics present in the concepts of health care network were extracted, with the purpose of identifying similarities, differences and complementarities.

The search in the four databases mentioned above resulted in 820 articles/technical documents. Of these, ten articles/documents met the inclusion criteria and composed the initial sample of this study. Subsequently, with the purpose of increasing the possibilities of identification of characteristics present in the concept of health care network, a new search was performed in the bibliographic references of the articles/documents that composed the initial sample. The reverse

Chart 1. Search strategy in the databases and number of results.

Databases	Strategy	Number of articles
Pubmed	(((((“Health Services”[Mesh:NoExp]) OR “Delivery of Health Care, Integrated”[Mesh:NoExp]) OR “Delivery of Health Care”[Mesh:NoExp]) OR “Health Promotion”[Mesh:NoExp]) OR “Regional Health Planning”[Mesh:NoExp]) OR “Health Systems Plans”[Mesh] AND “Health Care Networks” Filters: From 1990/01/01 to 2017/12/31, Spanish, Portuguese, English.	47
Scopus	(TITLE-ABS-KEY ((“Health Services” OR “Health Care Delivery, Integrated” OR “Health Care Delivery” OR “Health Promotion” OR “National Health Programs” OR “Health Systems Plans” OR “Regional Health Planning”)) AND TITLE-ABS-KEY (“Health Care Networks”)) AND PUBYEAR > 1989 AND (LIMIT-TO (DOCTYPE, “ar”) OR LIMIT-TO (DOCTYPE, “re”) OR LIMIT-TO (DOCTYPE, “cp”) OR LIMIT-TO (DOCTYPE, “ip”)) AND (LIMIT-TO (LANGUAGE, “English”) OR LIMIT-TO (LANGUAGE, “Portuguese”) OR LIMIT-TO (LANGUAGE, “Spanish”))	200
Lilacs	(“servicos de saude” (health services) or “atencao a saude” (health care) or “regionalizacao” (regionalization) or “promocao da saude” (health promotion) or “assistencia a saude” (health assistance)) [Subject descriptor] and redes (networks) [Words] and “1990” or “1991” or “1992” or “1993” or “1994” or “1995” or “1996” or “1997” or “1998” or “1999” or “2000” or “2001” or “2002” or “2003” or “2004” or “2005” or “2006” or “2007” or “2008” or “2009” or “2010” or “2011” or “2012” or “2013” or “2014” or “2015” or “2016” or “2017” [Country, year of publication]	549
CINAHL	(MH “Health Services”) OR (MH “Health Care Delivery, Integrated”) OR (MH “Health Care Delivery”) OR (MH “Health Promotion”) OR (MH “National Health Programs”)) AND “Health Care Networks”	24

Source: Study's data.

search enabled the selection of nine articles/documents based on the titles and, after the exclusion of repetitions and the full reading of the articles/documents, it was found that three presented the explicit concept of health care network. However, the concept approached in these three works was the same of articles/documents from the initial sample, which justified their non-inclusion in the present review. Thus, the final sample was composed of ten articles/documents, and the material selection stages are presented in the flowchart, according to the PRISMA Model,[15] presented in Figure 1.

RESULTS

The countries of publication of the studies that composed the sample (n=10) were: Brazil, four studies (40%), United States, two (20%), Argentina, Canada, Chile and United Kingdom, one study each (10%) (See Chart 2). Of these studies, six (60%) are review articles, one (10%) is a case study and three (30%) are technical manuals.

In Chart 2, it is also possible to see that there was regularity in the publication frequency of the articles that composed the study's final sample. Two articles were published in 2004, two

Figure 1. PRISMA Flowchart (adapted) of the article selection process.
Source: Study's data.

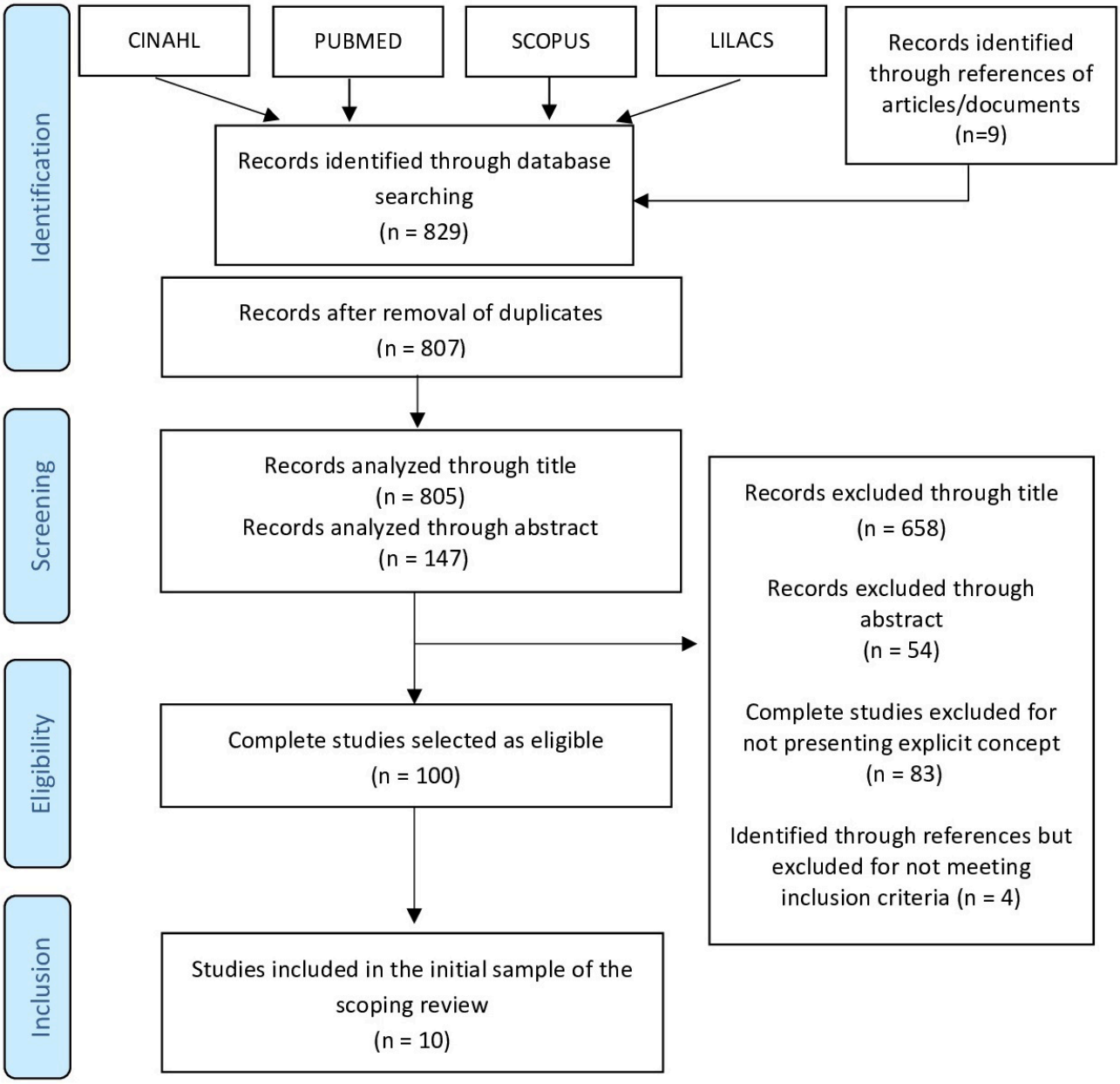


Chart 2. Articles and technical documents selected according to title, author, type of study, type of document, year of publication and country of origin.

	Title	Authors	Type of Study	Type of Document	Year	Country of Origin
1	Building legitimacy and the early growth of health networks for the uninsured.	Provan KG, Lamb G, Doyle M.[16]	Review	Scientific Paper	2004	United States
2	Integralidade da atenção e integração de serviços de saúde: desafios para avaliar a implantação de um "sistema sem muros" [Comprehensive health care and integrated health services: challenges for evaluating the implementation of a "system without walls"]	Hartz ZM, Contandriopoulos AP.[17]	Review/ Theorization	Scientific Paper	2004	Brazil
3	Organizing the public health-clinical health interface: Theoretical bases	St-Pierre M, Reinharz D, Gauthier JB.[18]	Review/ Theorization	Scientific Paper	2006	Canada
4	Understanding power relationships in health care networks	Addicott R, Ferlie E.[19]	Case study	Scientific Paper	2007	United Kingdom
5	Health care networks	Mendes EV.[5]	Review/ Theorization	Scientific Paper	2010	Brazil
6	Mejora de los cuidados crónicos a través de las Redes Integradas de Servicios de Salud [Improving Chronic Illness Care through Integrated Health Service Delivery Networks]	Barceló A, Luciani S; Agurto I, Ordúñez P, Tasca R, Sued O, Organización Panamericana de la Salud.[20]		Technical Document	2012	United States
7	Transformando los servicios de salud hacia redes integradas: elementos esenciales para fortalecer un modelo de atención hacia el acceso universal a servicios de calidad en la Argentina [Transforming health services into integrated networks: Essential elements to strengthen a model of care for universal access to high-quality services in Argentina]	Artaza Barrios O, coordenador, Organización Panamericana de la Salud.[21]		Technical Document	2017	Argentina
8	Redes de atenção à saúde: contextualizando o debate [Health care networks: Contextualizing the debate]	Kuschnir R, Chorny, AH.[22]	Literature Review	Scientific Paper	2010	Brazil
9	Redes interfederativas de saúde: um desafio para o SUS nos seus vinte anos [Interfederal health networks: a challenge to SUS in its twentieth year]	Santos L, Andrade LOM.[23]	Literature Review	Scientific Paper	2011	Brazil
10	Redes de atención GES y no GES [GES* and non-GES health care networks] *GES = Explicit Health Guarantees	Chile. Ministerio de Salud. Subsecretaría de Redes Asistenciales. División de Gestión de Redes Asistenciales. Departamento de Gestión de Garantías Explícitas en Salud.[24]		Technical Document	2013	Chile

Source: Study's data.

in 2010 and, in the other years, one article was published per year.

The key characteristics present in the concepts were extracted from the selected studies (Chart 3). It was possible to design a map of the results based on the number of studies that presented the same key characteristics (Figure 2). The map of results is a graphic representation, as suggested in the method adopted,[13,14] in which hexagons differentiated by colors and

Chart 3. Concepts of health care network extracted from the sample, country of origin of the studies and key characteristics extracted from the concepts.

	Concept of Network	Country of Origin	Key characteristics
1	Network utilized to describe cooperative arrangements between autonomous providers that are voluntary and not necessarily permanent but which may become increasingly formalized over time, whose integration of services can be extremely helpful and beneficial both to the provider organizations and to their patients and clients.[16]	United States	Integration Cooperation Formalization
2	Care delivery networks as an organization to achieve integrality, recognizing the interdependence of actors and organizations, in view of the fact that none of them has all the necessary resources and competencies to solve the health problems of a population in its different life cycles.[17]	Brazil	Integrality Interdependence Rationality
3	Network as the provision of various health care services in a more integrative manner in order to better meet the growing needs of patients and the general public.[18]	Canada	Integration Variety of services
4	Linked groups of health professionals and organisations from primary, secondary and tertiary care working together in a coordinated manner, unconstrained by existing professional (and organisational) boundaries to ensure equitable provision of high quality effective services.[19]	United Kingdom	Interconnection Cooperation Coordination Effectiveness Equity Quality
5	Health care networks are polyarchic organizations of sets of health services, connected to each other by a single mission, by common objectives and by cooperative and interdependent action, which enable to offer continuous and comprehensive care to a given population, coordinated by primary care - provided at the right time, in the right place, with the right cost, with the right quality and in a humanized way -, and with public health and economic responsibilities for this population.[5]	Brazil	Cooperation Integrality Efficiency Defined territory Interdependence Coordination Quality Humanization Variety of services Common objective
6	Integrated health service delivery networks are understood as a group of organizations that provide or arrange equitable and integrated health services for a defined population. These networks are comprehensive, which means they provide services that cover all prevention levels in a coordinated way, integrated into all care levels and care provision units.[20]	Latin America Pan American Health Organization	Integration Integrality Defined territory Equity Longitudinality
7	Integrated Health Service Delivery Networks (RISS) are a "[...] set of organizations that provide health services in a coordinated, comprehensive and equitable way for a defined population, willing to account for their clinical and financial results and for the health status of the population they serve". These networks require a series of special attributes to guarantee the fulfilment of the right to health, by means of comprehensive actions with and to communities and people, guaranteeing access, opportunity, continuity of care and high-quality assistance.[21:22]	Argentina	Efficiency Integrality Defined territory Coordination Equity Quality Guarantee of right Access guarantee Variety of services

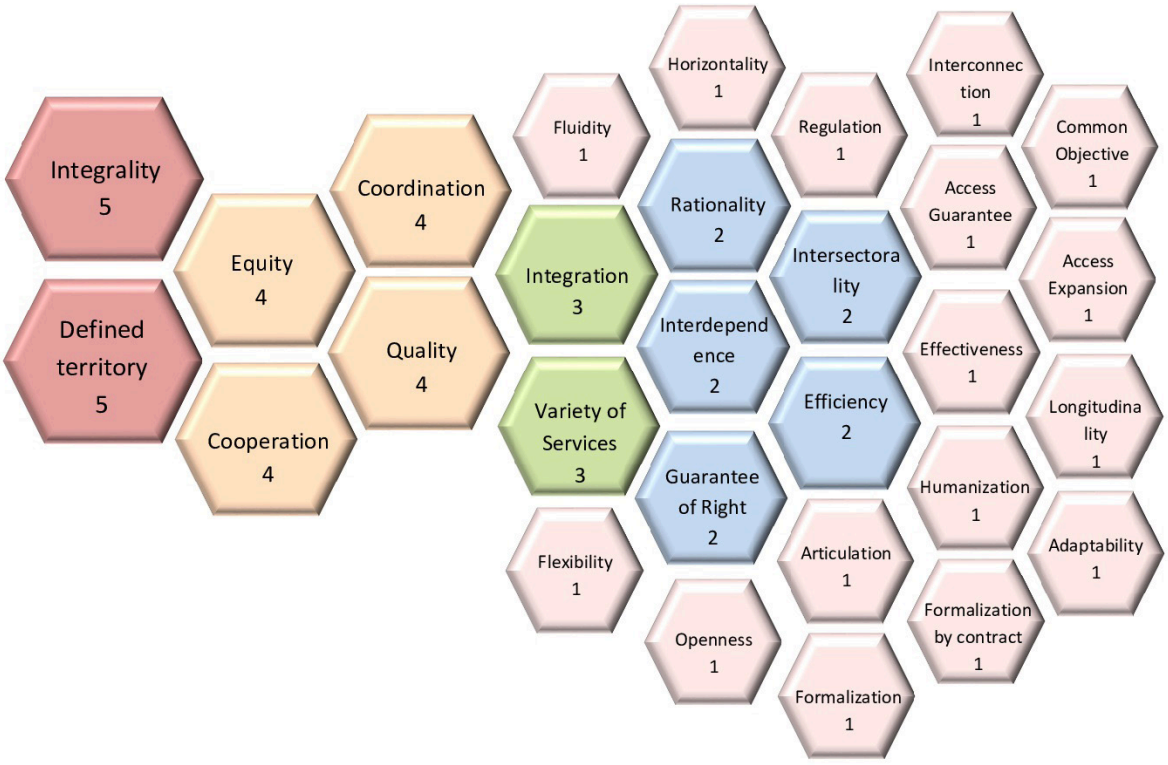
Source: Study's data.

Chart 3. Continued...

	Concept of Network	Country of Origin	Key characteristics
8	Networks are the instrument that guarantee the right to health, expanding access and reducing inequalities.[22]	Brazil	Equity Access expansion Guarantee of right
9	A health service network or a health care network is the form of organization of actions and services of health promotion, prevention and recovery, in all levels of complexity, of a given territory, that enable the articulation and interconnection of the knowledge, technologies, professionals and organizations existing there, so that the citizen can access them according to his/her health needs, in a rational, harmonic, systemic and regulated way, in accordance with a technical-sanitation logic.[23]	Brazil	Articulation Integrality Defined territory Intersectorality Equity Regulation Rationality
10	The Health Network is an organizational and managerial modality adopted by connected members and its dominant characteristics are adaptability, flexibility, openness, horizontality, fluidity. The concepts that govern a networked system are: common language, established rules, relevant information, coordination and quality. Therefore, it is defined as a set of organizations connected in the health-disease process that interact in a coordinated way within a designated territory, by means of institutional or contractual relationships. The generated relationship is horizontal, peer-based and delimited by the normative agreements that are established between them, outside the bureaucratic regulations of the respective institutions to which they belong or can belong.[24]	Chile	Adaptability Flexibility Openness Fluidity Horizontality Defined territory Cooperation Intersectorality Coordination Quality Formalization by contract

Source: Study's data.

Figure 2. Map of results according to the number of studies in the review that presented the same key characteristics.
Sources. Study's data



sizes (in decreasing order from the left to the right) were used to indicate each characteristic and the number of studies in which it was present.

DISCUSSION

This study proposed to analyze the key characteristics present in the concept of health care network, used in the context of health, as the word "*rede*" (network) has many meanings, especially in Portuguese. Although it is an expression with many perspectives, all of them are based on a common image: that of interconnected points.[25]

It is important to mention that the first complete description of a regionalized network was provided by the Dawson Report, published in 1920, which presented a proposal for the organization of health services provision for the entire population of a given region. The reading of the report remains important to this day and is recommended by the international health organizations as it was adopted as reference by some countries that instituted universal health systems.[2,26]

The Dawson report introduced the idea of territorialization and formulated the concepts of levels of care, front door, connection, referral and coordination by primary care. Moreover, it considered integration mechanisms such as information and transportation systems. Although it described the network as a new and extended form of organization, distributed according to the needs of the community, in its representation it considered, basically, health services of different levels of complexity.[26]

It is important, here, to differentiate health system from health services system. The first is defined as a coherent set of diverse interrelated components, either sectoral or intersectoral, that produce an effect on the population. Its configuration is influenced by its objectives and fundamental values[1]. The health services system, in turn, can be defined as a unisectoral sub-system that is responsible for health actions per se.[27]

Thus, in this article, the expression "health system" is employed to indicate the set of elements that have a more comprehensive impact on health status, taking into account not only actions developed by the health services, but also actions that consider other social determinants of health - in other words, the organization that indicates the need of intersectoral actions for the maintenance of the health condition. The expression "health services", in turn, is employed to refer to the organization that considers actions and services restricted to the health sector, that is, it indicates a unisectoral organization.[28]

It is also important to present the meaning of intersectorality, understood in this study as incorporating the idea of integration, of territory, of equity, of social rights, transcending one single social sector. Thus, the construction of intersectorality occurs from the articulation of several sectors and involves distinct social actors, such as the government, civil society, social movements, universities, local authorities, the economic sector and the media. Its principle is the collection of various knowledges and possibilities of action, in the sense of enabling a broader look at the complexity of the object, allowing for the analysis of problems and needs in a given territory.[29,30]

The key characteristic 'integrality' was present in 50% of the concepts of the studied sample. Integrality of care is one of the principles of SUS and is understood as the articulated and continuous set of preventive and curative actions and services, individual and collective, required for each case in all the system's levels of complexity.[31] Focusing on health assistance and comprehensive care in all the care provision units, which are understood here as primary, secondary and tertiary care, integrality can be restricted to aspects of the health sector and be associated with a specific view of care, composing the organization field in the management of the clinic, which brings the notion of the vertical integration dimension.[32] On the other hand, it can be more comprehensive and be related to the vertical and horizontal dimensions, guaranteeing, in addition to access to the different points of the network, focus on health promotion, protection and recovery.[33]

The characteristics 'cooperation', present in 40% of the sample, 'integration', in 30%, 'interdependence', in 20%, and 'interconnection' and 'articulation', in 10% of the sample, complement the meaning of integrality, referring to the interdependence of the actors and organizations of health care networks, in view of the finding that none of them has all the necessary resources and competencies to solve the health problems of a population in its different life cycles.[17]

Some authors bring the discussion of network to the context of integration between public health services and clinical health services, as in the Canadian health system, these services, for the most part, have been provided by separate organizational components that have evolved in an autonomous way. Clinical health has focused on users, centering its activities on curative and rehabilitational dimensions, while public health has directed its attention at the population as a whole and its subgroups, particularly the more vulnerable segments, in the interest of disease prevention and health promotion[18]. Others, in turn, highlight the health care network to refer to the set of service providers and health professionals that, together, can readily offer a variety of services, guaranteeing comprehensive care by means of a well-coordinated system of referrals, billing, and record keeping[16].

'Variety of services' was a constant characteristic in 30% of the sample and complemented the understanding of the health care network as a broad and complex structure of services. The technical document from Chile presents this idea, as the health care network is defined as organizations connected with the approach to the health-disease process, which interact in a coordinated way within a designated territory and must be involved in and committed to cooperative solutions to the needs of individuals and communities.[24] The interaction can occur by means of institutional or contractual relationships, and it is important to notice the horizontal nature of the connection that is generated: a relationship between peers, delimited by normative agreements established between them.[24]

Researchers also propose that the integration of services into a health care network should be organized by specialty, level of care, life cycle or other criteria, with the purpose of improving the efficiency and rationality of the services, generating economy, expansion of the services, improvement in access, and reduction in duplicity of services and in repetition of procedures and exams. Therefore, these authors recommend that the health care network should be efficient, rational, economic and equitable[23].

'Rationality' and 'efficiency' were characteristics found in 20% of the sample. The efficiency in health is the relationship between the cost and the impact of the services on the population's health, when a given level of quality is maintained. Thus, the meaning of efficiency is complemented by the inclusion of the characteristic 'rationality' in the health care network, as it is related to optimization in the use of resources, by means of concentration of less frequent services (specialized services and those with high technological complexity) and dissemination of more prevalent services (primary care and specialties of medium and low technological complexity). Therefore, such characteristics are related to a type of organization that favors economies of scale, contributing to the sustainability of the health care network.[34]

'Regulation', registered in 10% of the concepts, can be understood as a tool that promotes equity, accessibility and integrality, with the objective of producing direct and final health care actions. It is directed at public and private health services providers.[33] Although the term 'regulation' is polysemic, it is in the economic area that it finds greater resonance as an instrument of balance between supply and demand, in order to offer efficiency to the system, generating positive results.[35]

Following this organizational logic, the formalization of relationships and roles of services and actors, as well as the 'formalization by contract' (present in 10% of the concepts), also emerged as important characteristics for the establishment and organization of the health care network. In the selected sample, communication and the importance of dialog were mentioned in only one of the works. Also, little relevance was given to information and communication technologies (ICT) as a means to aid the satisfactory performance of the health care network. The low importance given to ICTs is unusual, as their utilization is strategic to coordinate and regulate the health care network.

In turn, for other author, the health care network is much more than a computerized system, referral and counter-referral norms and agreements for the referral of ill patients.[21] Rather, it is a permanent construction of articulated people and organizations, involved in and committed to the cooperative solution to the needs of individuals and communities[21].

Some articles also approached the role of health professionals in the health care network, in order to reduce the distance between individual and collective concerns and interventions, and to give legitimacy to the health care network.[16,18] The same way, others authors argue that health professionals must understand their duty inside the health care network as part of a whole that will function satisfactorily if there is integrated action, allowing a free flow between its different points, which is manifested in the strength of teamwork.[36]

The elements that constitute the health care network are: population, operational structure and health care model. The author argues that the essential characteristic of the network is that its attention is based on the population, that is, it is able to establish the health needs of the population it serves according to risks, to implement and evaluate health interventions related to this population, and to provide care for people in the context of their culture and preferences. In view of this, the author introduces the importance of the 'definition of the territory', a characteristic present in 50% of the concepts, considering that the population lives in singular spaces and organizes itself socially in families; therefore, these families must be known and registered. Still in relation to the population, the author emphasizes that it must be subdivided into subpopulations, according to risk factors, and stratified by risks in relation to the established health conditions.[5]

'Coordination', present in 40% of the concepts, was presented as a relevant characteristic of a health care network. Some studies indicate that the organization of health systems in health care networks coordinated by Primary Care can have a significant impact on the community's health, with bearable costs, being engendered in the legal and political framework of SUS.[37] So that Primary Care can be considered the coordinator of health care networks, it is necessary to invest in technologies at health care units, to adapt the physical infrastructure, to introduce logistics and support systems, and to implement health education, among others.[38]

'Intersectorality', present in only 20% of the sample - the concept adopted in this study was presented above -, is a fundamental characteristic to demonstrate the scope of the concept of health care network. The concepts that registered, in a clear way, intersectorality as a characteristic, are more comprehensive and converge to the understanding of the health care network as a strategy to organize the health system. The concepts that did not present this characteristic became less extensive, being limited to unisectorality; therefore, they incorporated the conception of health care network as a strategy to organize health services.

In short, the characteristics that formed the more comprehensive concept of health care network expressed a form of organization that aims to guarantee rights by means of access expansion and organization of intersectoral health services, in a longitudinal and humanized way, within a defined territory. This organization can occur through the formalization of labor relationships and processes and through integrated information systems that contribute to the regulation of services and coordination of care, preventing duplications. It has a greater capacity to solve health problems and can present the various dimensions of integrality, efficiency and effectiveness - results obtained because of exchange, collaboration and interdependence.

We emphasize the large amount of studies about the structuring and format of the health care network, as the initial search, in this review, produced 820 publications, the majority of which did not present its conceptualization in an explicit way. It is important to

mention that, in this universe and even in the sample selected for this article, the management of the health care network is viewed as a great challenge. Therefore, it is imperative that investments are made in the governance of health care networks, in view of the relational and power complexity that exists among actors from the spheres of government, community, organizations and agreement and decision levels, in the field of health. In this perspective, the collaborative network[39] is a more effective path to reach the objectives of the health systems.

FINAL REMARKS

This scoping review enabled us to access the current state of knowledge about the key characteristics present in concepts of health care networks, such as: integrality, defined territory, cooperation, coordination, equity, quality, integration, variety of services, rationality, interdependence, guarantee of right, intersectorality, efficiency, effectiveness, interconnection, humanization, common objective, longitudinality, access expansion, access guarantee, articulation, regulation, adaptability, flexibility, openness, fluidity, horizontality, and formalization by contract.

The analysis of the key characteristics mentioned in the articles that composed the study's sample revealed, as the main discrepancy in the characterization of the health care network, a macro view, in the logic of organization of the health system, or a micro view, as a strategy to organize the health services.

It was possible to conclude that the distinct characteristics existing in the concepts translated complementarity and that the main disagreement between them consisted of comprehensiveness, characterized by the inclusion or exclusion of intersectorality. Therefore, there is not a totalizing concept of health care network, capable of presenting its true scope and meaning, which may influence its operationalization, governance and performance assessment.

Another important fact is the high amount of studies about the structuring of the health care network that do not explain its concept, which restricted the number of studies included in the review. This fact may have hindered the identification of other characteristics that could be present in the concept of health care network.

We believe the article provides contributions to health and nursing, in the domains of education and action, as it systematizes and summarizes a range of knowledges about the key characteristics specified in the concepts of health care network. This synthesis of evidences favors the understanding of the comprehensiveness and scope of the ideas related to the theme, subsidizing professional practice, in the logic of the organization of integrated health systems.

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AUTHORS' CONTRIBUTIONS

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