

Contributions of national health conferences to the definition of public environmental and health information policy

Nilva Lúcia Rech Stedile ¹
Maria Cristina Soares Guimarães ²
Alcindo Antonio Ferla ³
Rafaela Cordeiro Freire ⁴

Abstract *The relationship between health and the environment has been the object of increased interest from researchers in recent decades with information being the phenomenon that makes it possible to construct a tessitura between the 2 areas. The goal of this article is to examine how the recommendations of the National Health Conferences treat the issue of the environment and information and how they link these two areas with health. The present study is a documentary investigation of a qualitative nature. The documents that comprise the research's corpus are the official reports of the Conferences, from the 1st (1943) to the 14th (2011). The results show that environmental issues have always been present, especially since the 8th Conference in 1986, after which there is an increasing amplification of discussions about the theme. The themes of "health" and "the environment" discussed in the 12th and 13th Conferences demonstrate clear progress toward defining their relationship with quality of life. "Health Information" is referenced as fundamental in almost all the Conferences, achieving the status of priority axis in the 11th Conference. The inclusion of several propositions presented and discussed in the Conferences seems to influence the establishment of public policies in the areas of the environment and information.*

Key words *Environment, Information systems, Public policies, Environmental health*

¹ Departamento de Enfermagem, Centro de Ciências Biológicas e da Saúde, Universidade de Caxias do Sul. Rua Francisco Getúlio Vargas 1130, Petrópolis. 95001-970 Caxias do Sul RS Brasil. nilvarech.s@gmail.com

² Instituto de Comunicação e Informação Científica e Tecnológica em Saúde, Fiocruz.

³ Escola de Enfermagem, Universidade Federal do Rio Grande do Sul.

⁴ Faculdade de Medicina, Universidade Federal da Bahia.

Introduction

Increasingly, more professionals from different areas, healthcare managers, governments, and the general population recognize the need for actions, programs, projects, research, and public policies that support dignity and quality of life (and of health). Among these policies, those concerning health and education have been prioritized throughout the world. Similarly, the environment is increasingly being understood as a defining factor in quality of life. The information is the phenomenon, in terms of content and flow, that allows for the construction of a tessitura between these areas, allowing one to find points of convergence and divergence between them.

The concept of health has been the subject of study throughout history. In Brazil, mainly since the 8th National Health Conference (Conferência Nacional de Saúde - CNS) in 1986, the limited understanding of health as the absence of illness has progressively been replaced by a broader understanding that defines it as a result of the conditions of nutrition, housing, education, income, the environment, work, transportation, employment, leisure, freedom, access to and possession of land, and access to healthcare services¹. Thus, health, above all, is the result of the forms of the social organization of production, which can create large inequalities in living standards. This concept, although not encompassing all determinants of health conditions, broadens the concept, bringing it closer to the complexity that it is.

Thus, already in the 8th Conference, the concept of health signals the relationship between health and the environment because the body is constituted in the relationship that it permanently maintains with the environment. Therefore, a healthy environment is reflected in quality of life and is intimately related to the health of individuals. The relationship between health and the environment has 2 basic assumptions: 1) the essential nature of the relationship between human beings and the environment, and 2) the concept of environment presupposes human action². If the relationship between human beings and the environment is essential, then one influences the other in the definition of the likely degree of quality of life. Similarly, if the environment influences but simultaneously is influenced by human action, then this action needs to become protective, otherwise it negatively influences health to the point of threatening the equilibrium necessary for the maintenance of life and the biosphere.

The relationship between health and the environment has been the object of increasing

interest for researchers in recent decades, such that the concept of environmental health has been formulated, which, according to the World Health Organization (WHO)³, consists of all those aspects of human health, including quality of life, which are determined by physical, chemical, biological, social, and psychological factors in the environment. This relationship is increasingly more evident in scientific studies⁴⁻¹⁰ that, using different methodologies, help reveal the aspects of this relationship and discuss and conclude that quality of life, health conditions, and environmental preservation are influenced in a complex and dynamic manner.

Understanding this complex relationship can be facilitated by information systems (IS) because they allow accessing data to better understand the phenomena and additionally, in the case of environmental indicators, supply a historical sequence to the behavior of the variables present in this relationship. Public policies in these areas should be proposed to ensure the right to quality healthcare, a healthy environment, and access to information.

Social public policies are expressions of both the state's duty and the rights of the citizen, and they are characterized as an integrated set of judicial-legal rights enacted by the professional intervention of different agents through the delivery of benefits, services, programs, and projects tied to sectoral policies (welfare, education, healthy living, public safety, and work, in addition to healthcare, science, and information technology) that should have a set of measures and programmatic and financial resources¹¹.

Accordingly, social policies, when formulated and implemented in this manner, are guarantors of citizens' rights and typically, in democratic societies, are preceded by a discussion on and analysis of the subjects involved with the issue at hand. In the case of healthcare, the National Conferences are the spaces of encounter (managers, governments, the general population, workers, specialists, users, society) that allow for these reflections and that enable consensus building to create contributions and the respective conceptual constructions that sustain them. This knowledge is systematized in reports that may (or should) serve as a reference and guidelines for the implementation of projects, programs, and actions that help in the functioning of the Unified Health System (Sistema Único de Saúde - SUS) itself.

Based on these benchmarks, this article starts from 3 structural assumptions: 1) there is an increase in the visibility of the importance of the

environment in the definition of the levels of health and quality of life; 2) healthcare information is a basic tool that emanates from policy and guides healthcare practices; and 3) the CNS reports influence the establishment of policies in information, healthcare, and the environment.

The purpose of this study is to examine how the CNS recommendations, developed from 1941 to 2011, treat the issue of “the environment” and “healthcare information” and how they articulate these 3 areas: health, the environment, and healthcare information. This goal will be reached through the construction of answers to the following 2 principal questions: What proposals are presented in the Conference reports to link these 3 areas? What do the Conferences leave as a potential guide for public policy?

Identifying these relationships is important to clarify the level of influence of one area in relation to the others and for the definition of public policies that guide the manner in which healthcare professionals can incorporate IS and the variables of the natural environment in their daily tasks because the professionals do not seem to sufficiently consider them in healthcare processes. What is hoped for is to contribute so that the “environment” and “information” dimensions might be considered at the nexus of the healthcare system to consistently feedback to public policies and, simultaneously, the performance of healthcare work.

Methodological approach

The present study is documentary research of a qualitative nature that is based on the search for information in documents such as reports, newspaper articles, letters, films, recordings, and photographs, among other published materials, which are considered a primary source of data¹². The implication is that the document under review is related to the facts or situations that become the researcher’s object of study. The richness of information that can be extracted and salvaged from the documents justifies their use in the humanities and social sciences because it allows for the broadening of the understanding of the objects, whose understanding requires historical and sociocultural contextualization¹³.

Thus, these record sources are considered documents. A document is a support that contains recorded information, forming a unit, which can serve for consultation, study, or evidence¹⁴. It is worth highlighting that conceptual-

izing what is a document is not an easy task¹⁵, given that documentary research is somewhat close to bibliographic research. The differentiating element is the nature of the sources: bibliographic research refers to the contributions of different authors on the subject, focusing on secondary sources, whereas documentary research draws on materials that have not received analytical treatment; i.e., they are constructed, in this perspective, on primary sources¹³.

Therefore, the Conference reports can be considered trustworthy documents that allow the historical capture of the evolution of the importance of and the relationship between health, the environment, and healthcare information. They enable the broadening of the understanding of concepts, and they facilitate the observation of the evolutionary process of, for example, individuals, groups, concepts, knowledge, behaviors, mentalities, and practices¹⁴.

The following precautions should be taken: locating the pertinent texts and evaluating their credibility; adequately understanding the message’s meaning; exercising caution and evaluating the documentation to be analyzed; analyzing the historical context in which the document was produced; checking its provenance; taking into account the nature of the text; adequately defining the works’ and the concept’s meaning; producing or restating ideas and creating new forms of understanding for the phenomena; constructing units and categories of analysis; and making judgements and interpretations¹³.

The documents that comprise the research’s *corpus* were the official reports from the CNS, from the 1st (I) to the 15th (XV) conference, accessed on the official site of the Ministry of Health (<http://portalsaude.saude.gov.br/index.php/biblioteca>). In the case of the 2nd CNS, there were no formal reports; thus, in this case, a secondary source was used¹⁶. The data were systematized, observing the guidelines below and the following stages: 1) search for the Conference reports on the official site of the Ministry of Health; 2) preliminary analysis of the documents by skimming the reports; 3) identification of the terms “environment” and “healthcare information” in the reports or identification of terms used as synonyms, i.e., in the case of “environment”, the term “environmental setting” and, in the case of “healthcare information”, the terms “data”, “epidemiological data”, “database”, and “information systems”; 4) selection of the extracts of the documents that relate to the study’s objectives; 5) grouping together of the extracts by

similar meaning and the construction of units of analysis for each Conference; 6) performance of judgements and interpretations; and 7) editing of a text that expresses the synthesis of the elements initially extracted.

Results and discussion

A total of 14 CNS have been held in Brazil, the first being in 1943 and the latest in 2011. Their importance is unquestionable in the sense of orienting healthcare practices and the elements that make this area indispensable for life, although the level of importance of each is different in relation to the impact that they produced. The first conferences held basically involved government *staff*, healthcare managers, and invitees. Over time, healthcare workers and non-governmental entities were included; in addition, there were pre-conference discussions at the levels of municipalities, regions, and states¹⁷. The 8th CNS exemplified this mobilization, involvement, and participation, to the point that it is considered one of the most important held in Brazil and decisive in the implementation of the Brazilian Health Reform and the implementation of the SUS.

Its importance is recognized by studies on the history of the Public Healthcare System¹⁸⁻²⁰. It occurred in a decade of profound social changes, marked by the ability of the population to relearn and reclaim its rights, fight for the country's re-democratization, and collectively expose the need to change the course that the dictatorship had imposed on all citizens. It was a struggle of the streets, unions, universities, religious organizations, and political parties. In this sociopolitical framework, healthcare workers were able to place the debate on the Public Healthcare System as central and lead the planning of this important Conference, making it the most participatory and democratic in Brazil's history and a "model" for convening the subsequent events. The 8th Conference represented a technical advancement for the field of health and a political pact; civil society in transition was critical for the political acceptance of the policies arising from it.

Thus, in the Conferences, concepts are defined, priorities are agreed upon, responsibilities are assumed, etc.; however, the primary achievement is not so easily measurable. It consists of the possibility of the conceptual (re)construction and awareness of what needs to be done and how to improve healthcare in Brazil. Among all the aspects presented as Conference recommenda-

tions, 2 are the object of analysis: those related to the environment and those related to healthcare information, as shown in Chart 1.

The CNS can be analyzed in 2 large sets: those held before and those held after the 8th CNS, which represents a milestone both in terms of its results and in terms of how it was planned with the broad participation of the populace, organized professionals, and civil society, in addition to municipal, regional, and state councils in the organization of themes and discussions prior to the Conference. The first set includes the 1st through the 7th Conferences, with the need to produce profound changes in the manner in which they were organized already being signaled in the 7th.

Environmental issues are present in each of these 2 periods but in a different form. In the first set, they appear summarized in issues related to "garbage", the control of vectors of prevalent diseases, and basic sanitation, especially in reference to water. These issues are only tangential in the 2nd, 4th, 5th, and 6th Conferences. Although it did not expound on the theme, the 8th Conference includes a healthy environment as one of the conditions and determinants of health. Subsequent to that conference, all address aspects related to the environment in addition to the basic sanitation issue, highlighting the need for environmental education, sustainable development, intersectoral actions, and environmental quality. The 8th CNS stands out for highlighting the role of the environment in quality of life in all of its thematic axes.

The 1st CNS, in 1941, was focused on 4 basic themes: state and municipal sanitary organization; the expansion of national campaigns against leprosy and tuberculosis; the determination of the means for the development of basic sanitation services; and the plan for the development of the protection of motherhood, childhood, and adolescence²². Even in this period, sanitation was considered a determinant of health. In the 2nd CNS, held 9 years later in 1950, the central theme was legislation regarding hygiene and safety at work¹⁶. Thirteen years later in 1963, the 3rd CNS was held, which brought the following to the fore: the sanitary situation of the Brazilian people; the distribution and coordination of medical-sanitary activities at the federal, state, and municipal levels; the municipalization of healthcare services; and setting a national healthcare plan²³. It is worth highlighting that this was the first time that the municipalization of health theme was broached.

Chart 1. Aspects discussed in the National Health Conferences related to the Environment and Health Information.

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
1 st National Health Conference / The health and welfare situation of the states	1941	The goals were targeted at management by state health service administrators. Themes related to the environment: national campaigns against leprosy and tuberculosis; and the situation of the country's cities with regard to water and sewage services. There is reference to the quantity, collection, removal, and disposal of garbage.	Developed together with education, the single reference to health information is the question: From which municipalities of the state are bio-statistical data obtained?
2 nd National Health Conference / Legislation regarding hygiene and occupational safety as well as providing medical assistance and preventive healthcare for workers and pregnant women	1950	There are no formal reports concerning this conference, but according to CONASS (2009), its agenda sought to analyze the dominant viewpoints among healthcare workers. Medical and preventive care for workers and pregnant women were discussed without any relevant reference to the environment.	There are no formal reports concerning this conference.
3 rd National Health Conference / Decentralization in the area of health	1963	The focus was on the analysis of the health situation and the reorganization of the health system, with proposals for decentralization, the redefinition of the roles of government powers, and the proposal of a National Health Plan. The report shows 4 themes: a) the sanitary situation; b) the distribution of medical-sanitary activities; c) municipalization; and d) the National Health Plan. The environment is cited in relation to the need for the execution of sanitation measures, specifically the water and sewage supply. The municipality is responsible for performing the environment-supply activities, the control of waste and garbage.	The report points to the difficulties of the "Statistical Services existing at the top of the Ministry of Health" in maintaining and organizing the scarce data derived from the states and that could be used for statistics on the overall national environment. For the correction of this situation, it proposes the creation of national "Registration Areas", in addition to the consolidation of national bio-statistical and health-statistical services. In the conclusions, it cautions that the statistical services are one of the problems for health in Brazil. Yet, in the recommendations, it establishes that it is up to the municipality to collect statistical data.
4 th National Health Conference / Human resources for activities in health	1967	The theme was not an object of analysis, but one of its advancements was the implementation of the National System of Epidemiological Monitoring.	Because it centered on the formation of the RH, professional development, and the creation of a National Health Policy, the "information" theme did not contain records that warrant highlighting.

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Chart 1. continuation

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
5 th National Health Conference / Formation of the National Health System and its institutionalization	1975	The only relationship that it establishes with the environment is a suggestion that colonization, agriculture, and irrigation projects should be submitted to the Ministry of Health so that they met the minimum requirements to prevent the outbreak or spread of endemic diseases.	It recommends developing mechanisms of information integration and that municipalities should supply comparative statistics on vital, epidemiological, operational, and cost information at central levels. It recognizes the need of a good IS and that importance of the information, decision, and control triad, in addition to the inexistence of an information collection, registration, consolidation, analysis, and distribution system and of professionals able to operate it.
6 th National Health Conference / Control of large endemic diseases and the internalization of health services	1977	In the first axis of discussions, it very tenuously presents the relationship between the environment and the main endemic diseases that ravaged the country and points to the need for the expansion of the sanitation services (understood as a basic service).	In the second thematic axis, it recommends the maintenance of an acceptable IS to guide actions and programs and the exchange of information. This was the first time that the expression “information systems” appears in the reports.
7 th National Health Conference / Extension of healthcare actions through basic services	1980	It sought the strengthening and definition of AB, which considers the services rendered to the environment as an integral part of the primary health services and sanitation, especially regarding water quality priorities. It advocated the creation of the National Plan of Basic Services. It considers basic medical care as an “unwavering” right of a human being.	In the discussions of the basic text “The extension of action and services by means of primary care”, the need for a unified, cross-institutional IS that adheres to not only administrative need but also user tracking in reference and counter-reference services was recommended. It stresses the need to improve the quality of information.
8 th National Health Conference / Health as a right, reformulation of the National Health System, and sectoral financing	1986	It includes the environment as a fundamental variable in the concept of health, in addition to defining health as a right that can only be effective, among other factors, by the availability of the “acceptable quality of the environment” (p.5). In the financing of the health sector, it suggests additional taxes on polluting firms and firms engaged in deforestation.	The issue of health information was not a focus of the discussion.

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Chart 1. continuation

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
9 th National Health Conference / Municipalization is the way	1992	It recommends enacting the National System of Health Monitoring and ensuring to the population information related to environmental risks and the adverse effects of products and services for monitoring water and other inputs. The link between health policy and basic sanitation was considered indispensable.	It recommends ensuring local health councils have access to information and all the data sources. The access to (quality, clear, and accessible) information was considered fundamental to ensuring the democratization and feasibility of the SUS. It advocates the creation of a National System of Health Information and the allocation of specific resources for this purpose.
10 th National Health Conference / Construction of a healthcare model	1996	The environment is not a central focus, but in the defense of health as a right and quality of life, it establishes that federal, state, and municipal governments should define a sanitation policy that is integrated within the National Health Policy. It recommends the organization of a National Conference of Health, Sanitation, and the Environment. It emphasizes the importance of the collection and allocation of radioactive waste and the municipal management of water and sewage, investments in basic sanitation (water, sewage, street cleaning, the ultimate fate of waste, urban drainage), bringing these actions under the purview of the SUS. It recommends the development of education and environmental protection, (health services, domestic, and industrial waste treatment, in addition to recycling). In item 6, which addresses primary healthcare, it shows the need to promote environmental monitoring.	It advocated that “access to information and knowledge is the citizen’s right and should be guaranteed by the state” (p. 19). Item 2.6 integrally addresses “health Information, education, and communication”, emphasizing the need for the definition of a National Policy of Health Information, Education, and Communication that covers the interests of users, professionals, and research centers that pursue the public interest and that have a strategic character in the organization of all the activities and services of the SUS. Moreover, it recommends the implementation of a National System of Health Information that covers the production, organization, and release of data on the many aspects related to health. This system requires the development and integration of all data from existing Information Systems.
11 th National Health Conference / Making the SUS effective: access, quality, and humanization in healthcare with social control	2000	The environment theme appears as one of the basic elements in terms of basic sanitation, but it is not the central focus of analysis. do saneamento básico, mas não é foco central de análise.	It restated that communication, education, and information are essential components for equality, quality, and the humanization of services and for supplying social control in the SUS. It indicated the needs for the creation of networks between society and governments, the socialization of information (especially in the Health Councils), and the importance of this socialization for the process of the political maturation of social control in all spheres.

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Chart 1. continuation

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
12 th National Health Conference / Health as a right of all and a duty of the state: the healthcare that we have, the SUS that we want	2003	The report is organized into 10 thematic axes, but none is specifically about the environment. Nonetheless, in the general directives, it includes the healthy environment as one of the aspects to be covered in broad and intersectoral social policies. This theme becomes transversal and passes through several axes, reinforcing the relationship between health, the environment, and quality of life (e.g., item 42 of the general directives, which exhibits aspects to link and to ensure actions that promote a healthy environment, based on those established in Agenda 21). There is stress on the use of pesticides, the quality of water, the protection of flora and fauna, waste control, and environmental education. It highlights the need for links between epidemiological monitoring, sanitation, the environment, food, and nutrition.	The report is organized into 10 thematic axes, the 10th of which addresses health communication and information. It argues in favor of the development and implementation of joined policies on information and communication; information access; strengthening and integrating IS in the 3 spheres of government; quality information and access to it for supporting users, professionals, managers, and SUS entities. It reiterates the need for the permanent development of the system and intersectoral integration. General directives include: increasing Information Systems, promoting the implementation of decentralized systems of geo-processing in health, researching, systematizing, and publicizing epidemiological and statistical data related to the promotion of health.

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The 4th CNS, convened in 1967, focused its discussions on the human resources for health activities¹⁶. In the 5th CNS, in 1975, the following participated: 217 delegates, 77 observers, and the president of PAHO (Pan American Health Organization- Hector Acuña) as an invitee¹⁶. The following 5 themes were discussed: the implementation of the National Healthcare System; the Program for Maternal and Infant Health; the National System for Epidemiological Monitoring; the Program for the Control of Large Endemic Diseases; and the Program for the Expansion of Healthcare Actions to Rural Populations²⁴. In this Conference, there was barely any relationship established between health and environmental conditions, and the information is regarded as important for epidemiological monitoring.

The 6th CNS, in 1977, did not go further in relation to the previous Conference in regard to referencing the environment and an Information System (IS) in health, and it addressed the following themes: the situation of large endemic

disease control; the execution of new legal instruments; and the internalizing of health services²⁵. The 7th CNS focused on the “expansion of health actions through basic services”. In this Conference, 400 people, in 16 working groups, took part with minimal participation from representatives not directly linked to the public administration²⁶, and the environment and health were not significantly addressed.

As a benchmark in the history of the national Conferences, the 8th CNS established the basis for Brazilian health reform. The expansion of the understanding of the concept of health allowed for the establishment of the unmistakable relationship between health and the environment.

Thus, “health results from the conditions of housing, food, education, income, the environment, transportation, leisure, access to and possession of land, and the access to healthcare services”¹. After the 8th CNS, the SUS became a reality both by the Federal Constitution, which states that healthcare is a right of all and a duty

Chart 1. continuation

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
13 th National Health Conference / Health and quality of life: state policies and development	2007	<p>The Conference was organized into thematic axes I, II and III, highlighting the following environmental issues: a) implementation of policies for environmental intervention with self-sustainable labor; reduction in the generation of pesticides and “garbage”, its packaging, pickup and disposal; expansion of health surveillance actions; respect for nature and the preservation of the environment; the development of intersectoral actions for the implementation of practices and public policies for sustainable development in municipalities; construction of an intersectoral network of support for health and for socio-environmental justice; development of studies about the action of pollutants; and warnings to populations exposed to environmental risks (Axis I); b) approval of legislation for sanitary responsibility for the implementation of the Policy of Basic Sanitation and the Protection of the Environment and for environmental monitoring of air and soil quality for protection from risks; inclusion of the mapping of areas used by the PAC (Axis II); and c) supervision and control of pesticide and chemical product use and recommending the inclusion of the environmental health thematic in the 3rd National Environmental Conference, in addition to recommending that the directives of the National Policy of Environmental Health be defined in the 1st National Environmental Health Conference (which would occur in 2009).</p>	<p>The issue was addressed in 3 axes. In the first, the following were focused on: the need for the development of the National System of Control, Evaluation, and Monitoring of the indicators of health and the System of Mortality Information (Sistema de Informação de Mortalidade - SIM); and access to updated indicators. It recommends improvements in the scope and quality of information and the creation of a national database, made available by networks for the use of professionals. Axis II addresses the execution of the SUS charter and the digitization of user care (electronic medical recordkeeping); ensuring and investing in the Integral Information Systems for the SUS in all municipalities and integrating the existing databases (SIM, Sinasc, Sinan, SIA, SIH, SIAB, Sismasus). Among those unpublished, it addresses the editorial policies of information in the SUS, the reformulation of the IS of primary care and that of MS, by means of Datasus, resuming the discussion of PNIIS; resuming and expanding the National Network of Health Information Project (Projecto RNIS - Rede Nacional de Informações em Saúde); seeking conformity in the technological infrastructure of the health sector with the standards of interoperability of electronic governance and promoting effective accessibility to information. For the CNS and its state and municipal councils to ensure financial resources, axis III recommends that the Commission of Health Communication and Information of the CNS work intersectorally and that commissions of health communication, information and informatics be created in state and municipal councils.</p>

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of the state, and by Law 8080/1990, which enacted it.

The 9th CNS occurred in 1992, with the central theme being municipalization is the path,

Chart 1. continuation

National health conferences/themes	Year	Aspects related to the environment	Aspects related to health information
14 th National Health Conference/“Everybody uses the SUS! The SUS in social security, public policies, and the Brazilian people’s heritage”	2011	Directive 9 of the 14th CNS contains 20 proposals in which 12 directly relate to environmental issues, reinforcing the unmistakable relationship between health, environmental conditions, promotion and prevention, and quality of life. Among the primary deliberations is the reinforcing of responsibility for environmental damage of any institution or person who harms the environment. It broadens the need for intersectoral actions, interlinking and tying health, education, the environment, welfare, and sanitation for the protection of the environment, the increase in basic sanitation services, water quality, adequate disposal of waste and garbage, including rural areas. It reinforces the importance of the implementation of the National Policy of Solid Waste, citizens in the use of pesticides, the implementation of public policies for sustainable energy and the eradication of dumps and the reclamation of damaged areas. It urges Brazil to support national and international initiatives in environmental protection. It recommends, even if mandatory, presenting health councils with public health impact reports.	Report organized into 15 directives. In proposal 25 (Directive 1), it recommends unifying the databases of the sectoral policies that compose the social security system (CAD-SUS/Saúde, CAD SUAS/ Assistência Social e Base da Previdência [Social Care and Welfare Basis]/BPC), and proposal 7 (Directive 2) stresses the guarantee of transparency in services and control pacts. It emphasizes the importance of financing for informatics teams, the reevaluation of data and health indicators by the SIAB, the computerization of the units, and the implementation of electronic medical record keeping. In Directive 12, of the 15 proposals approved, 11 relate to the SIS, with an emphasis on: improvement and integration of the various Information Systems (implementation of a single database); training and the computerization of services, interlinking health, social security, and social assistance; the guarantee of financial, technical, and technological resources for the implementation of the SUS charter; the creation of national medical records; the implementation of the Telehealth and Telemedicine Program; the guarantee of connectivity for all municipalities (EAD); the construction of a Strategic Communication Plan; the enactment of a system of computerized control (Sisreg); the maintenance of updated data for users; the restructuring of the Information Systems enrolling the services of AB.

Source: Constructed based on information from the Health Portal, National Health Conferences, available at http://portal.saude.gov.br/portal/saude/cidadao/area.cfm?id_area=1041, accessed on 12/01/2013, and the final reports of the National Health Conferences, available at <http://conselho.saude.gov.br/biblioteca/Relatorios.htm>¹⁷.

and specific themes included society, government, and health; implementations of the SUS; and social control²⁷. The 10th CNS organized its discussions and recommendations along 6 axes: health, citizenship and public policy; the management and organization of health services; healthcare financing; social control in healthcare; human resources; and comprehensive healthcare.

It argued for the strengthening of the SUS and the defense of quality of life, stating that it depends on the “ability of the state to respond to social demands through its public policies”²⁸, in the defense of rights and a healthcare that contributes to the promotion of citizenship. As noted above, the Conference emphasized the strengthening of the SUS and social control, its financing,

and its functioning on all levels. The 11th CNS, in 2000, also brought out a central theme: making the SUS effective – access, quality, and the humanization of healthcare with social control. This theme was divided into 5 axes: social control; the financing of healthcare; the healthcare model and management to ensure access, quality, and the humanization of healthcare with social control; and human resources; information, and communication policies in the SUS²⁹.

Based on the analysis of the themes, the conferences that followed the 8th CNS were focused on the consolidation of the SUS and the execution of social control because this phenomenon is unique to the healthcare system in Brazil. In the 11th Conference, for the first time, “Information” achieved the *status* of a priority axis in discussions.

The 12th CNS, in 2003, organized the report into 10 thematic axes, including one axis (the 10th) concerning health communication and information, with 91 proposals. In the 5th axis, there was a sub-item concerning environmental health with 4 items, i.e., information and the environment were the object of important reflections and pacts at this Conference. In the 10 axes, there were a total of 713 propositions¹⁶. This conference also brought out a central theme: healthcare as a right of all and a duty of the state, the SUS that we have and the SUS that we want³⁰.

The 13th CNS organized its report into Axes I, II, and III, each divided into propositions by axis and a sub-axis, with unpublished proposals. In total, 857 propositions were defined; the environment appeared in 29 and the expression “information in health or information system” in 17³¹. Its central theme was health and quality of life, policies of the state and development. This Conference was essential for the realization of the relationship between health and the environment, so much so that it introduced discussions on the importance of interdisciplinary and intersectoral labor for the control of environmental variables that affect health conditions, the control of the use of chemical and pesticide products, and the rational and sustainable uses of natural resources. Other contributions included the following: the establishment of the unmistakable relationship between health, the environment, development, and quality of life; the recognition of the need for intersectoral acts and the organization of National Conferences about the environment; and the consolidation of the concept of environmental justice. Accordingly, it can be considered a conceptual advancement with regard to the in-

ter-relationship between these concepts and for the definition of action strategies to execute them in the health services.

The 14th CNS organized its final report into 15 directives, with several proposals approved in each. In this Conference, the themes concerning health and the environment discussed in the 12th and 13th Conferences were strengthened and reinforced with clear movement toward defining that quality of life directly depends on the environment and on health. Among the 20 proposals presented, 12 were related to environmental issues. For example, Directive 9 stands out, which, for a society in defense of life and the stability of the planet, argues that it is necessary to broaden and strengthen social policies, intersectoral policies, and the consolidation of monitoring and the promotion of health³². This perspective was allied with various strategic goals of the Ministry of Health, particularly “implementing actions of basic sanitation and environmental health, in a sustainable manner, for the promotion of health and the reduction of social inequalities”³³.

It is difficult to state if and when the Conferences would influence public policies concerning the Environment because interest in this theme has increased considerably in recent decades as a result of natural catastrophes and global warming. At the global level, many specific events concerning the environment had been occurring, especially after the United Nations Conference about the Human Environment, held in 1972, which resulted in the Stockholm Declaration. Two of these large conferences were convened in Brazil, Rio 92 and Rio + 20, in 1992 and 2012, respectively, with many contributions to the understanding of the environment for life. From Rio 92 resulted, among other things, 2 important documents: Agenda 21 and the Earth Charter³⁴. Sustainable development became the goal of the United Nations, as did social development, environmental preservation and conservation, social inclusion, and eco-efficiency. The environment came to be considered a pre-requisite for quality living on the planet. Thus, it is presumed that the Conferences on health would both influence and be influenced by the particulars of the environment.

The 14th CNS, in 2011, reinforced the unmistakable relationship between health, environmental conditions, promotion and prevention, and quality of life, in addition to the need for intersectoral actions to protect the environment. As a result, Rio + 20, reiterated that the future depends on intersectoral actions and collective effort. These 2 examples seem to illustrate that

the Conferences in the field of health take into account aspects related to the environment and vice-versa.

Independently of who influences or who is influenced, various public policies concerning the environment have been established in Brazil and take into account what has been arranged in these discussion spaces, culminating in the development of orienting documents and proposals for actions to ensure life with health and quality. Thus, a relationship between the conceptual maturation catalyzed by the Conferences and the establishment of the respective public policies can be assumed. Many examples may translate this relationship, but the following stand out: the National Directives of Basic Sanitation³⁵, the National Solid Waste Policy (Política Nacional de Resíduos Sólidos - PNRS)³⁶, and the National Program of Fostering Action in Environmental Health Education³⁷. As 1 of its directives, the first example incorporates (V) “improving the quality of life and environmental and public health conditions”, and one of its principles is (III) “water supply, sewage, urban sanitation, and solid waste management performed adequately for public health and environmental protection”, which has similarly been studied and discussed in several Conferences. In the PNRS³⁶, health services waste appears as a category specifically to be considered for the maintenance of health conditions, as does the need to protect the environment through actions of shared responsibility and reverse logistics for hazardous wastes; these concepts have also been discussed in health and environmental conferences. Finally, the National Program of Fostering Action in Environmental Health Education proposes the implementation of environmental education within the national educational system, which has been presented and advocated in the 10th, 12th, and 13th CNS.

With the exception of the 1st, 2nd, 4th, and 8th Conferences, information on health has always been considered a priority. Table 1 shows that the Conferences have paid special attention to issues related to information, especially since the 9th CNS. The first few CNS clarify the precariousness of information, the database, and IS. The logic of structuring, another weakness of IS, has been centered on the provision of information by municipalities to the federal government. It has also been clarified that the goal of information is to support administrators and governments in health-related decision making.

Starting with the 9th Conference (1992) and especially in the 11th (1996), information

achieves a new *status*: it comes to be considered fundamental not only to the administration and governments but also to health councils, professionals, and the general public. The concern for data quality becomes clear, as does the need for the integration of the different information systems constituting a National Health Information System. Starting precisely in this decade, the need for the establishment of a National Policy of Health Information and Communication is emphasized, with this proposal being made in 2004 and broadened and matured in a new version in 2012³⁸. Since this time, several incentives have been developed to improve the quality of information and its use, in addition to the integration of information systems. Two examples illustrate this effort: a) the redefinition of the Committee of Health Information and Informatics (Comitê de Informação e Informática em Saúde - CIIN-FO/MS) in 2012 and b) the recent restructuring of Room for the Support of Strategic Management (Sala de Apoio à Gestão Estratégica - SAGE), which, in conjunction with the Ministry of Health, is responsible for a movement toward the integration of national databases.

CIINFO is organized into 3 subcommittees: Information and Communications Security (Segurança da Informação e Comunicações - SGSIC); Administration of Information and Communication Technologies (Governança das Tecnologias da Informação e Comunicação - SGTIC); and Administration of Health Information (Governança da Informação em Saúde -SGIS). The latter has the following powers: proposing directives for the production of strategic information; contributing to the development of the Electronic Health Registry (Registro Eletrônico em Saúde - RES) with proposals for the combining of data, rules, operating modes, and appropriate standards to compose a national base of Electronic Health Registries; and proposing criteria for making constant information available in the Ministry of Health databases, respecting the privacy and confidentiality of SUS users³⁸. SAGE redefines the flows and forms of strategic information storage and sharing and the methods of obtaining, systematizing, and sharing data with a view toward decision making, management, and the production of knowledge. The SAGE portal, restructured by the Ministry of Health in 2012, has more than 100,000 hits per month³⁸.

It is still worth stressing that the 10th CNS (1996) recognized access to information as a right of the citizen and argued for the creation of a National Policy of Health Information, Educa-

tion, and Communication, reiterating the importance thereof in the subsequent Conferences. The 11th CNS (in 2000) reaffirmed that information is an essential element for the functioning of the SUS and discussed the importance of information in the network. The 12th CNS reiterated the need for the constant development of the intersectoral integration system, and the 13th Conference (2007) strengthened and enhanced the demands of previous conferences, in addition to recommending the resumption of the National Policy of Health Information and Informatics, which finally occurred in 2012.

Thus, the need for a National Policy of Health Information and Informatics was clear in the 11th CNS; a first version was launched in 2004; and it was updated in 2012. It was originally implemented in a fragmentary manner, without monitoring or evaluation, and gradually, it will qualify as and be strengthening as an indispensable tool for health actions. It uses tools (Telehealth, the Portal of Health with more transparency, and SAGE) and interoperable systems (the National Registry of Health and the National Health Card). It has become essential for better governance (Electronic Government), increasing the quality of services, the execution of social control, and the democratization of information and communication in health.

Although it is difficult to precisely identify the degrees of influence of the CNS in the implementation of public policies regarding the environment and information, in addition to whether and how much the specific conferences in these areas have influenced the CNS, the above examples indicate that the Conferences affect and determine the development of public policies and that intersectional work is fundamental to their implementation.

Conclusions

The number of studies developed in the central areas that this article addresses and the public policies that have been proposed and implemented in the field of health, the environment, and information make it possible to state that there is an increase in the visibility of the importance of both the environment and information in the definition of the health levels and the public's quality of life, although there are many knowledge gaps that prevent a more precise understanding of the depth and extent of these relationships.

The CNS reports seem to influence both the day-to-day practice of professionals by discussing and incorporating their precepts and recommendations and the establishment of public policies in the areas of health itself, the environment, and information because the central aspects proposed in the Conference ultimately form the foundation of public policies in these fields. Stated differently, the proposals raised at the Conferences have led to public policies or have been taken into account when proposing public policies to the point of, for instance, advancing the discussion of the role of information, especially after the 9th Conference, the need for the socialization of information studied in the 11th Conference, and the recommendation for the development of a Policy of Health Information and Informatics in the 12th Conference, having influenced the proposal of the policy itself, in 2012.

In this context, information has a dual function: it emanates from public policies by being systematized and socialized, and simultaneously, it guides health practices. These practices, in turn, produce new information, transform it, and nourish it, creating a continuum that produces information, uses it, and improves it to employ it again in day-to-day health actions.

Something similar occurs with the environment, especially after the 8th Conference, which located it as one of the defining elements of health. The theme comes to be discussed intensely and broadly, to the point that in the 12th and 13th Conferences, the relationship between health and global sustainability had, more precisely, begun. The culmination of these discussions occurs in the 14th Conference, with the maturation of the themes of health and the environment and the clear advancement toward defining quality of life as being directly dependent on the environment. These propositions, in turn, appear in public policies related to the environment.

Finally, it is worth highlighting, based on daily practices, that healthcare workers have barely been concerned with the environmental variables that affect the conditions of life and that they have not used information as an input for care management. Further efforts need to be undertaken so that environmental variables and the manner in which professionals relate to information can be introduced in clinical practice (curricular changes, the development of Permanent Health Education, professional practices aimed at the identification of environmental risks, etc.), especially in primary care, as a method for overcoming the fragmentary manner in which the human being is assisted in meeting his or her health needs.

Collaborations

NLR Stedile participated in the overall organization of the article, performance of the content analysis of the National Health Conferences, development of the general table for the display of the summaries of the reports, discussions, and interpretations. MCS Guimarães participated in defining and guiding the work's methodology, the general editing of the article, the evaluation of the aspects related to public policies addressing health information, discussions, and interpretations. AA Ferla participated in the general editing of the article and the analysis of the aspects related to public policies concerning the environment and health. RC Freire deepened the literature review and the aspects related to health and formatted the article to journal norms.

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