

Network Management at PAHO/WHO Brazil: concepts, practices, and lessons learned

Preparation and technical and editorial coordination
PAHO/WHO Brazil Country Office



**Pan American
Health
Organization**



Regional Office of the
World Health Organization

COUNTRY OFFICE/BRAZIL





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Preface by the PAHO/WHO Representative in Brazil

Networking today constitutes an extraordinary personal and professional challenge, because mastering new communication techniques and using technological tools requires that sharing be a fundamental strategy for networking's growth, which implies changing individual development processes into collective ones.

In organizations, networking may be considered as a practical alternative that can present results that respond to demands for flexibility, connectivity and, decentralization of actions.

Given this, appropriate means need to be put in place for developing flows of information, and for organizing management and institutional communication. Moreover, it is essential to have an internal culture that allows for changing traditional power relationships and enables experiencing, in social and political relations, a collective discussion that is horizontal, decentralized and, aimed deconcentrating power.

In the field of health, the proliferation of networks shows that this sector has advanced towards democracy, diversity, and the establishment of common goals.

To this end, in supporting the development of networking, the PAHO/WHO Country Office in Brazil accepts the challenge to encourage new interpersonal and inter-institutional relations that are democratic and participative, are able to make decisions, and that share and foster multi-leadership initiatives.

Upon reporting in this publication its role and the strategies to improve the management of the networks in which it participates, the PAHO/WHO Brazil Country Office aims to contribute towards the promotion of the raw material of networks—the desire and willingness of individuals to experience this new way of working—so that increasingly consistent and relevant results in public health can be achieved. In addition sharing the Organization's experiences, this book provides an external contribution on the step-by-step proposal for implementing networks.

We expect the contents to raise debate in other countries about networking, understanding that only through sharing is it possible to attain efficient management in health and better quality of life for the populations.

Diego Victoria

PAHO/WHO - Brazil Representative

Acronyms and Abbreviations

ABC – *Agência Brasileira de Cooperação* [Brazilian Cooperation Agency]
ABDI – *Agência Brasileira de Desenvolvimento Industrial* [Brazilian Industrial Development Agency]
ABEM – *Associação Brasileira de Educação Médica* [Brazilian Association of Medical Education]
ABEN – *Associação Brasileira de Enfermagem* [Brazilian Nursing Association]
ABEP – *Associação Brasileira de Estudos Populacionais* [Brazilian Association for Population Studies]
ABES – *Associação Brasileira de Engenharia Sanitária e Ambiental* [Brazilian Association of Sanitary and Environmental Engineering]
ABRACIT – *Associação Brasileira de Centros de Informação e Assistência Toxicológica* [Brazilian Association of Toxicological Information and Care Centers]
ABRASCO – *Associação Brasileira de Pós-Graduação em Saúde Coletiva* [Brazilian Association of Collective Health]
ABRES – *Associação Brasileira de Economia da Saúde* [Brazilian Association of Health Economics]
ACI – *Associação Comercial e Industrial* [Commercial and Industrial Association]
ACT – *Aliança de Controle do Tabagismo* [Alliance for Smoking Control]
ACTO – Amazon Cooperation Treaty Organization
ADJ – *Associação de Diabetes Juvenil* [Association of Juvenile Diabetes]
AFRO – World Health Organization Regional Office for Africa
AIDIS – Inter-American Association of Sanitary and Environmental Engineering
AISA – *Assessoria Internacional de Saúde* [International Advisory Services for Health]
Alimentação e Nutrição [Department of Primary Care/General Coordination of Food and Nutrition Policy]
AMI – Amazon Malaria Initiative
AMRO – World Health Organization Regional Office for Americas
ANS – *Agência Nacional de Saúde Suplementar* [National Supplementary Health Agency]
ANVISA – *Agência Nacional de Vigilância Sanitária* [National Health Surveillance Agency]
ASSEMAE – *Associação Nacional dos Serviços Municipais de Saneamento* [National Association of Municipal Sanitation Services]
Assistência ao Diabético [Federation of Diabetes Associations/ National Association for Diabetic Care]
BIREME – Latin American and Caribbean Center on Health Sciences Information
CDC – Centers for Disease Control and Prevention
CEBES – *Centro Brasileiro de Estudos de Saúde* [Brazilian Center of Health Studies]
CEPEDOC – *Centro de Estudos, Pesquisa e Documentação em Cidades Saudáveis* [Center for Studies, Research, and Documentation on Healthy Cities]

CEPIS – *Centro de Produção Industrial Sustentável* [Center of Sustainable Industrial Production]
–CESTEH – *Centro de Estudos da Saúde do Trabalhador e Ecologia Humana* [Centre of Studies of Worker's Health and Human Ecology]
CETESB – *Companhia de Tecnologia de Saneamento Ambiental* [Environmental Sanitation Technology Agency]
CFE – *Conselho Federal de Enfermagem* [Federal Nursing Council]
CFF – *Conselho Federal de Farmácia* [Federal Pharmacy Council]
CFM – *Conselho Federal de Medicina* [Federal Medical Council]
CFO – *Conselho Federal de Odontologia* [Federal Dentistry Council]
CGEA/MPS – *Coordenação-Geral de Estatística e Atuária/Ministério da Previdência Social* [General Coordination of Statistics and Actuarial Sciences/Ministry of Social Welfare]
CGVAM – *Coordenação Geral de Vigilância em Saúde Ambiental* [General Coordination of Environmental Health Surveillance]
CISAMA/CNS – *Comissão Intersetorial de Saneamento e Meio Ambiente/Conselho Nacional de*
CLAP – *Centro Latino-Americano de Perinatologia* [Latin American Unit/Center for Perinatology]
CLAVES – *Centro Latino-Americano de Estudos de Violência e Saúde* [The Latin American Center for Studies on Violence and Health]
CNCDS – Chronic non-communicable diseases
CNEN – *Comissão Nacional de Energia Nuclear* [National Nuclear Energy Commission]
CNPq – *Conselho Nacional de Desenvolvimento Científico e Tecnológico* [National Council for Scientific and Technological Development]
CNS – *Conselho Nacional de Saúde* [National Health Council]
CONAMA – *Conselho Nacional do Meio Ambiente* [National Environment Council]
CONASEMS – *Conselho Nacional de Secretarias Municipais de Saúde* [National Council of Municipal Health Secretariats]
CONASS – *Conselho Nacional de Secretários Estaduais de Saúde* [National Council of State Health Secretaries]
CONCIDADES – *Conselho das Cidades* [Council of Cities]
CONSEA – *Conselho Nacional de Segurança Alimentar e Nutricional* [National Council on Food and Nutritional Safety]
CPLP – *Comunidade de Países de Língua Portuguesa* [Community of Portuguese Speaking Countries]
CRATOD – *Centro de Referência de Alcool, Tabaco e Outras Drogas* [Reference Center for Alcohol, Smoking and Other Drugs]
CT & IS – *Ciência, Tecnologia e Inovação em Saúde* [Science, Technology and Innovation in Health]
DAB/CGPAN – *Departamento de Atenção Básica/ Coordenação-Geral da Política de*
DAE – *Departamento de Atenção Especializada* [Department of Specialized Care]
DAPE – *Departamento de Ações Estratégicas e Programáticas* [Department of Strategic and Pro-

grammatic Actions]

DATASUS – *Departamento de Informática do SUS* [Information Technology Department]

DFID – Department for International Development

DOTS – Directly Observed Treatment Short Course

ENSP /FIOCRUZ – *Escola Nacional de Saúde Pública da Fiocruz* [National School of Public Health of the Fiocruz]

EPSJV /FIOCRUZ – *Escola Politécnica de Saúde Joaquim Venâncio* – Fiocruz [Health Polytechnical School Joaquim Venâncio - Fiocruz]

EVIPNET – Evidence-Informed Policy Network

FAO – Food and Agriculture Organization of the United Nations

FENAD/ANAD – *Federação Nacional de Assistência ao Diabético/Associação Nacional de*

FGV –Getúlio Vargas Foundation

FIESP – *Federação das Indústrias do Estado de São Paulo* [Federation of Industries of the State of Sao Paulo]

FIOCRUZ –Oswaldo Cruz Foundation

FUNASA – *Fundação Nacional de Saúde* [National Health Foundation]

FUNDACENTRO – *Fundação Jorge Duprat de Segurança e Medicina do Trabalho* [Jorge Duprat Foundation for Occupational Medicine and Safety]

GHL – Global Health Library

GMCP- Global Malaria Control Programme (GMP)

GTZ – German Technical Cooperation (*Deutsche Gesellschaft für Technische Zusammenarbeit*)

IBGE –Brazilian Institute of Geography and Statistics

ICICT – *Instituto de Comunicação e Informação Científica e Tecnológica em Saúde* [Institute of Scientific and Technological Communication and Information on Health]

IDEC – *Instituto Brasileiro de Defesa do Consumidor* [Brazilian Institute for Consumer Defense]

IICA – Inter-American Institute for Cooperation on Agriculture

ILO –International Labor Organization

INAP – *Instituto Nacional de Administração Pública* [National Institute of Public Administration]

INCA – *Instituto Nacional de Câncer* [National Câncer Institute]

IPEA – *Instituto de Pesquisa Econômica Aplicada* [Institute of Applied Economic Research]

IUHPE –International Union for Health Promotion and Education

JICA – Japan International Cooperation Agency

KMS – Knowledge Management and Sharing

MAPA – Ministry of Agriculture, Livestock and Food Supply

MCT – Ministry of Science and Technology

MDIC – Ministry of Development, Industry and Foreign Trade

MEC – Ministry of Education

MERCOSUR – Common Market of the South

MMA – Ministry of the Environment

MRE – Ministry of the Foreign Affairs
MS – Ministry of Health
MSH – Management Sciences for Health
NEPO – *Núcleo de Estudos de População* [Center for Population Studies]
NESCON – Núcleo de Estudos em Saúde Coletiva [Center of Studies on Collective Health]
NGO – Non Governmental Organization
PAHO/WHO - Pan American Health Organization/World Health Organization
PALTEX – Expanded Textbook and Instructional Materials Program
PANAFTOSA – Pan American Center for Foot-and-Mouth Disease (Panfood/Panzoonoses)
PSAC – Portuguese Speaking African Countries
PWR – PAHO/WHO Representative
RAVREDA – *Rede Amazônica de Vigilância da Resistência aos Antimaláricos* [Amazon Network for the Surveillance of Antimalarial Drug Resistance]
RENACIAT – *Rede Nacional de Centros de Informação e Assistência Toxicológica* [National Network of Information and Toxicological Care Centers]
RER – *Resultado Esperado Regional* [Expected Regional Result]
RIPSA – *Rede Interagencial de Informação para a Saúde* [Inter-Agency Health Information Network]
SAMU – *Serviço de Atendimento Móvel de Urgência* [Mobile Emergency Care Service]
SAS – *Secretaria de Atenção à Saúde* [Healthcare Secretariat]
Saúde [Intersectoral Commission on Sanitation and Environment/National Health Council]
SBMT – *Sociedade Brasileira de Medicina Tropical* [Brazilian Society of Tropical Medicine]
SCTIE – *Secretaria de Ciência, Tecnologia e Insumos Estratégicos* [Secretariat of Sciences, Technology and Strategic Inputs]
SEADE – *Sistema Estadual de Análise de Dados* [State System of Data Analysis]
SENAC – *Serviço Nacional de Aprendizagem Comercial* [National Service of Commercial Apprenticeship]
SEPPIR – *Secretaria Especial para a Promoção de Políticas de Igualdade Racial* [Special Secretariat for Promotion of Race Equality Policies]
SES – *Secretaria Estadual de Saúde* [State Health Secretariat]
SESI – *Serviço Social da Indústria* [Industry Social Service]
SGEP – *Secretaria de Gestão Estratégica e Participativa* [Secretariat of Strategic and Participatory Management]
SGTES – *Secretaria de Gestão do Trabalho e da Educação na Saúde* [Secretariat of Work and Health Education Management]
SMS – *Secretaria Municipal de Saúde* [Municipal Health Secretariat]
SUS – *Sistema Único de Saúde* [Unified Health System]
SVS – *Secretaria de Vigilância à Saúde* [Health Surveillance Secretariat]
TC – Technical Cooperation

TCC – Technical Cooperation among Countries
TDR – Tropical Disease Research
UNAIDS – Joint United Nations Programme on HIV/AIDS
UNCT – United Nations Country Team
UNDAF – United Nations Development Assistance Framework
UNDP – United Nations Development Program
UNEP - United Nations Environment Programme
UNESCO – United Nations Educational, Scientific and Cultural Organization
UNFPA – United Nations Population Fund
UNICEF – United Nations Children’s Fund
UNIFEM – United Nations Development Fund for Women
UNODC – United Nations Office on Drugs and Crime
USAID – United States Agency for International Development
USP – United States Pharmacopeia
VHL – Virtual Health Library

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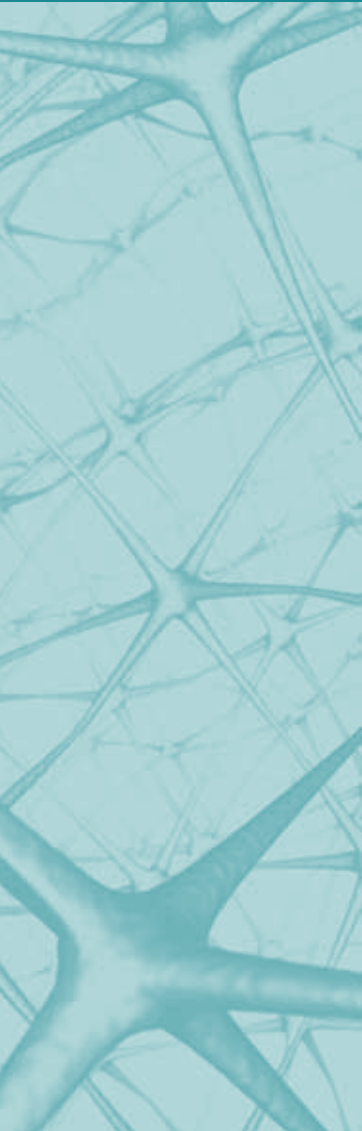
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SECTION 1:

THEORETICAL ASPECTS



Introduction - Concepts

Diego González Machín and Luciana Chagas

The Portuguese word *rede*, which means “network,” is very old and comes from the Latin *retis*, meaning a net-like arrangement of threads that intersect or are knotted at regular intervals to form a sort of fabric. This concept of an interweaving, mesh-like, and reticulate structure has lent new meanings to the word *rede*, which can now be used in different contexts (RITS, 2008).

There are multiple ways to define a network. The following are some definitions that best describe the experiences presented in this book.

- Networks are strategic mechanisms that promote the exchange of information, experiences, and knowledge and contribute to technical cooperation at national and international levels in different areas (ALBORNOZ; ALFARAZ, 2006).
- Networks are open structures that can expand endlessly and integrate new knots, so long as they can communicate within the network; that is, so long as they share the same communication codes (such as values or performance objectives). A social structure based on networks is a highly dynamic, open system that can accommodate innovation with no threats to its balance (CASTELLS, 2000).
- Networks are organizational systems that can bring together individuals and institutions in a democratic and participatory manner around common objectives and/or themes.
- A network is a set of formal or informal relations between individuals or independent organizations.
- A network is a mechanism for sharing information and knowledge; it aims to contribute to sustainable development by enabling communication and coordinated actions among its members. (GTZ, 2007).
- A network is an organizational model that is characterized by its horizontality and is designed to solve problems.
- A network is a cooperative organization designed to leverage synergy.

- A network is a group of participants of a specialized scientific field, usually gathered around a specific object of study.

Clearly, all definitions have to do with words that are key in networks: **open structures, horizontality, exchange, cooperation, synergy, coordination, common and shared objectives.**

Networks offer multiple advantages, because they:

- Help to create reliable relationships as a basis for information and knowledge sharing.
- Serve as a mechanism that enables mutual learning and the strengthening of capabilities.
- Activate the interface between knowledge and action.
- Offer an opportunity to bring together the government, the private sector, civil society, NGOs, and international and multilateral organizations without compromising independence which, in turn, helps to forge alliances.
- Contribute to improve decision-making and problem-solving processes (political impact).
- Enable access to more information and practical knowledge.
- Offer the possibility to learn from others.
- Enable a better understanding of needs and (political) agendas.
- Mobilize resources.
- Foster synergies and enable players to fulfill objectives that would be unachievable if they worked on their own.
- Enable the creation of new ideas and innovative solutions.
- Allow for a better division of work, thus preventing duplication of efforts.
- Allow a comparison of the players' strengths and weaknesses and facilitate a focus on specific strengths.

There are different ways to classify networks, and there is no need to really on a single one— hybrid classifications can be used to describe them. To this end, we chose two classifications that are closely related to our work:

the typology used by the *Rede de Informação para o Terceiro Setor - RITS* (2008) (Third Sector Information Network) that classifies networks in thematic, regional, and organizational types.

Thematic networks: These networks center on a theme, segment, or area of operation of member entities or individuals. The theme is the pillar of this type of network, be it a generic network

(for example, the environment or childhood) or a specific one (for example, recycling or child malnutrition).

Regional networks: These networks are organized to serve partners located in a region or sub-region: a state or province, a set of municipalities, a biome, a city, a set of neighborhoods, etc.¹

Organizational networks: These networks are usually linked to a supra-institutional organization that gathers independent affiliated institutions (such as federations, confederations, associations of legal entities, fora, etc.), or to very complex organizations made up of many independent units and/or by units scattered in a country. .

The GTZ (2007), in the publication *Work the net: um guia para gerenciamento de redes formais* [Work the Net: A Management Guide for Formal Networks] divides networks into three categories:

- **Social or informal networks.**
- **Communities of practice.**
- **Formal networks.**

Social or informal networks

These networks represent a set of autonomous participants who contribute ideas and resources based on shared values and interests (MARTELETO, 2001, p.72).

The main characteristics of these types of network are:

- Relations between people or organizations are informal.
- They lack well defined purposes or objectives.
- They develop in an organic manner and lack rigid planning or management.
- They arise and may disappear at any time.
- There is no facilitator that helps them grow.
- They stand above the academic or scientific environment and extend into other realms.

¹ In our publication, the term "Regional" has a broader connotation, since it refers to the Latin America and the Caribbean Region.

Communities of practice

According to the GTZ (2007), communities of practice are social groups created to develop expert knowledge and share learning based on discussions about practical experiences.

The main characteristics of this type of network are:

- Groups of people working together on a theme on a volunteer basis.
- They center on knowledge and experience and not on tasks that have to be carried out.
- they have informal organizations, that is, they do not require complex management procedures.
- Members have a defined purpose which is usually linked to a specific theme.
- Joining the network is on a volunteer basis and the only requirement is that the professional be somehow related to the network theme.
- Participants usually do not represent institutions.
- Communities of practice usually have a facilitator.

Reasons to create a community of practice include (NICKOLS, 2003):

- Allowing colleagues to learn from one another by participating and contributing themes, ideas, lessons learned, problems and their solutions, research results and other pertinent aspects of mutual interest.
- Sharing more and improving learning on a specific theme.

Mission and results of a community of practice (NICKOLS, 2003):

- Stimulating interaction.
- Fostering learning.
- Creating new knowledge.
- Identifying and sharing best practices.

Communities of practice can be used to solve problems, generate ideas, distribute knowledge among organizations and develop best practices. ²

² These elements will be dealt with in greater depth in other chapters of this book.

Formal networks

- These networks are inter-related groups of independent institutions or organizations with a specific design.
- They have a shared vision, clear objectives, and a set of rules and activities.
- They aim to bring about changes in the environment where they operate, for instance, have political impact or raising awareness of a specific theme.
- They are dynamic and complex systems which bring different organizations together and contribute to greater coordination and joint action.
- Relations are less hierarchical than in other types of organizations.
- Members remain independent and use the services offered by the network in a “give and take” culture.
- They are highly decentralized; members tend to be scattered across a territory.
- A formal network may be a legal entity or may be created through a ministerial decree.

As a hybrid of these types, there are the following networks::

- A practice-based, theme-based, and regional community, such as the Network of Toxicology of Latin America and the Caribbean (RETOXLAC)
- A formal, sub-regional, and thematic network, such as the Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA)

Some elements may pose limits to the work in networks, such as::

- Trying to push its implementation when members do not have the necessary commitment.
- Establishing an electronic space first and searching for members later.
- A management style that is facilitating, controlling, and domineering.
- Expecting results soon; growth takes time.
- Excessive structure and formality.
- Having a regulating participation that prevents flexibility.

PAHO/WHO networks in Brazil

As seen in the previous sections of this chapter, defining a network is no easy task. There is more than one concept and, therefore, many definitions are adopted by different areas depending on the context where networks operate. In addition, these are relative concepts that depend on different points of view.

For the PAHO/WHO Country Office in Brazil, networks can be considered as mechanisms that allow for the sharing of information and experiences and the enhancement of the communication process.

This enables the knowledge of its players to be perpetuated. Accordingly, the work in networks becomes an important tool that supports activities and enables effective public health actions to be undertaken.

When considering this definition of networks, the PAHO/WHO stimulates the establishment of an ongoing continuous process of exchange of information and experiences among the many players that make up the networks by addressing the challenges encountered. The Organization also supports the development of networks that can work towards implementing the basic principles proposed by the Brazilian Unified Health System (SUS) as regards the provision of health care services.

Therefore, this concept of network also entails an articulated way of acting and thinking and a new culture where new information technologies and digital tools are incorporated into traditional forms of interaction, based on the presence of participants. This new attitude requires new institutional practices.

The PAHO/WHO Country Office in Brazil has integrated this approach into its daily routine to improve the Organization's visibility and reliability by sharing information on actions implemented and results achieved. It also pursues faster response in the development of processes by leveraging the knowledge generated by other initiatives and the possibility of making partnerships. Therefore, the actions implemented can advance beyond institutional boundaries.

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Working in Networks: A Paradigm Shift

José Paranaguá de Santana

A computer connected to cyberspace enables us to obtain any information at any time. This is why today's society has been called the knowledge society. But, what is the real value of information? Information's relevance arises from its contextualization; in other words, from its utility to produce goods and services or to produce the knowledge that drives these production processes. It is very important to ponder these issues in the field of health, as we are witnessing profound changes in health service systems and in health care practices that are driven by new information technologies. This chapter focuses on working in networks, highlighting the fact that this endeavor precedes the Internet and does not depend on it. It will also examine the difficulties currently found in how these two terms relate to one another.

I take as my starting point Thomas Kuhn's concept of network as being equivalent to scientific community; in other words, a network is a group of participants of a certain scientific field that usually has a specific object of study. In this sense, it can be said that human health is the focus of a large scientific community or a large network of experts who devote themselves to this issue. This network is then divided into grids, or smaller networks, made up of scientists or professionals who focus on specific aspects of health, such as pharmacology, clinical issues, or public health. These networks, in turn, may be further subdivided into other networks, depending on how the players segment their object of interest. The institutionalization of these networks in Brazil dates back to the end of the 19th century, although they have proliferated only recently. In the last decade they have multiplied and now include academia, scientific societies, associations, trade unions, and professional associations (federal councils) in areas or disciplines in the field of health.

Another category of networks includes those groups interested in the same objects as the scientific communities or professional associations mentioned above, but where participants are different in nature, with different origins or with different social, political, and economic affiliations; often, these networks clash with communities of experts. Although there have been examples of this sort of network in the past, they have arisen quite recently, and include consumer protection networks, community groups, and non-governmental organizations.

The operation of these networks requires the use of distance communication means, not only to disseminate information, but also to build consensus and even to consolidate paradigms as

Kuhn understood them; that is, as something shared by the members of such communities. In this sense, it is possible to establish a parallel track in the advent of these networks and the development of mechanisms to transmit voice and image messages, such as the telegraph, telephone, telex, radio, television, fax, and, more recently, the Internet.

The greater proliferation of networks that took place concurrently with the growth of the Internet, and which was fed by the possibilities offered by this means of communication, often leads us to conflate the term “net,” used as short hand for referring to the World Wide Web, with the concept of network as a group of those interested in a certain object, such as a scientific community. It is worth remembering that the term network also applies to many other fields of interest besides science, regardless of the means of communication usually used by participants. These fields include technology development and industrial production networks, or networks of workers, educational and health services, cultural pursuits, government areas, political parties, and even criminal groups.

Although working through networks is not a new concept in modern society or in the field of health, we must also recognize that the development of information and communication technology has in recent years affected the processes of collective intelligent development of networks of different social players.

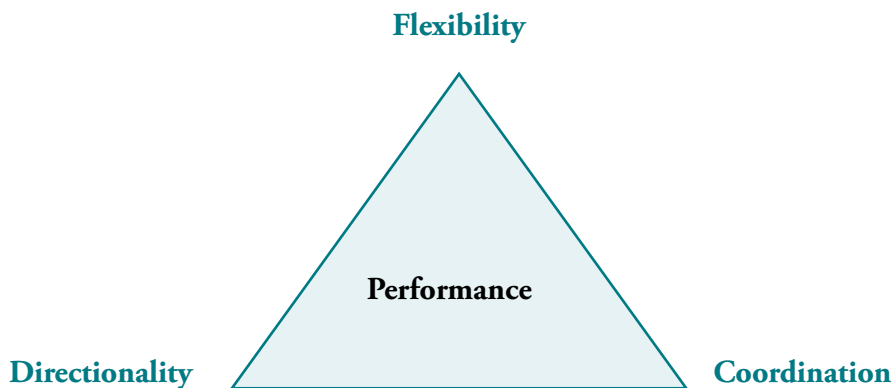
Without doubt, the Internet has had many effects on society’s production processes, be they of material or non-material goods. In the field of health, too, there are many possibilities, and estimates say that applications will increase in the future. New perceptions about reality—the global village metaphor, virtual reality, artificial intelligence, and hypertext—are potentially rich dimensions for the application of telemedicine, as well as in other health care areas (telehealth), such as disease control, the organization of health care service systems, and the availability of information to people.

Operating in networks is an ancient practice in human societies, but something new and very energetic arose when networks started to operate within the logic of the Internet. Social organizations traditionally operated according to more rigid, hierarchical schemes, which guaranteed directionality and ensured the coordination of activities to the detriment of flexibility, so as to maximize performance while pursuing objectives and goals. The image that best illustrates this mode of operation is a pyramid: the central command, located at the summit, establishes directional chains of directional control and operational coordination towards the base, ensuring the best performance in pursuit of the organization’s mission. At present, organizations are learning to work in networks leveraged by the Internet, and can adopt flexible schemes

where directionality in the pursuit of objectives and coordination of tasks are horizontal and, surprisingly, performance is enhanced.

The three above-mentioned factors relate to the organizational performance—directionality, coordination, and flexibility—could be placed at the angles of a triangle, whose sides represent the tension attributed to each of these factors:

Figure 1: Performance Triangle



According to this pyramid metaphor, the organization's energy is distributed between the vertices of directionality and coordination, and tension builds at the triangle's base, with weak dispersion towards the flexibility vertex. In the Internet era, the potential for communication has increased exponentially, thus leveraging the three factors of organizational performance, especially knowledge and the assessment of alternatives (flexibility). Accordingly, energy builds at the vertex of flexibility, from where it is distributed to the other performance factors, transforming the performance triangle in such a way that it becomes compatible with the network operation model.

The future of networks in the field of health and in other fields of human activity is increasingly influenced by the Internet, although we are all still very much influenced by the pyramid-based organizational model of work. This is a time of transition: while many tools from this era full of new technology have been adopted, we still cling to traditional operational models. We must break this cultural barrier and adopt the logic of network organization and functioning and replace pyramid-based hierarchies and unidirectional coordination models. However, breaking these boundaries should not be understood as a mechanical process that would take us to a new

world. This is especially true if we consider what Manuel Castells says, that everything depends on context and process and that the Internet is a particularly malleable technology that can be deeply changed through social practice and is conducive to a series of potential social results that will be discovered through experience and cannot be announced beforehand.

In which contexts and processes are networks in the field of health operating? In scientific communities, the other indicated above and the ones we are currently trying to invent? I leave these questions to those who want to debate them.

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A Step-by-Step Guide to Implement Networks: Proposal of a Management Model

Peter Pfeiffer

Many networks arise spontaneously from the shared interest of a group of people. These groups often continue to operate for some time as a social network, without any explicit rules and for the benefit of all its members. However, when a certain number of people is involved, and especially when organizations join a network, some degree of formality is required to allow for the discussion of problems, the definition of players' roles, and the establishment of cooperation and interaction rules.

Some networks avoid such formality because they fear losing the advantages of spontaneity and informality. However, as a network grows, so does its complexity, and informality usually causes relevant information to be lost. The challenge for a network is to balance formality vis-à-vis informality, organization vis-à-vis decentralization, and systematic processes vis-à-vis spontaneous ones.

Although the steps suggested below may serve as a framework for implementing and managing networks, they should not be viewed as mandatory rules. This proposal is based on the premise that a network's life is cyclical and encompasses many various stages: concept, proposal, establishment, planning, implementation, and evaluation.

Although a network usually is not designed for a limited time, this does not mean that it cannot change once it is established. On the contrary, it is very likely that, at the end of a cycle, the initial phases will be reviewed to make the necessary or pertinent updates and adjustments.

Network management is not a phase within the cycle, as it is required to some degree or another throughout all the phases. The type of management chosen naturally depends on the model chosen and adopted, which can be more or less centralized. Management can be assigned permanently to some people or a team, or it may be assigned on a rotational basis. The descriptions of networks the Pan American Health Organization participates in Brazil include different models.

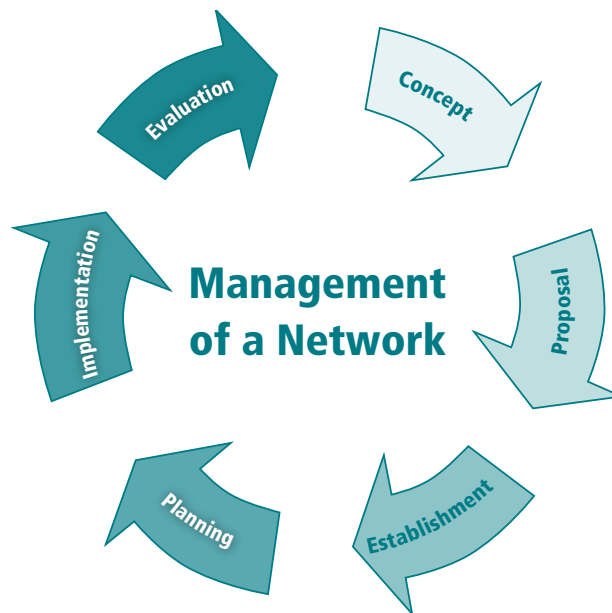
Often, sponsors influence or determine the management model according to their administrative requirements and institutional rules. The application of certain reporting or accounting tools

may, therefore, be imposed on the network. This interference may hurt the network functioning, however, because its management model should be determined by the network itself.

The importance of management cannot be underestimated. If the processes of generating and sharing knowledge are not systematized and managed, the interests shared by network members may not be sufficient to hold the network together for a long time.

The model presented below demonstrates the major phases of a network cycle and the main processes within each phase. The model is not exhaustive, nor does it suggest that all the processes take place in all cases. Rather, it was designed to offer an approach that enables the construction of a management model.

Figure 1: Management Model of a Formal Network



In addition to the phase model and the processes within each phase, it is necessary to build a toolbox that can be used in each phase. Without the appropriate tools and the competencies required to apply them, expected outcomes will not be achieved. Network management thus becomes more efficient with professionalization.

Concept

Networks can arise out of many different situations and for many reasons. For example, they can emerge out of a concrete need to obtain information or build collective knowledge, or they may be inspired by a shared experience. In any case, a network arises when a group of people with shared interests is willing to share their knowledge and experience to improve what they have been doing. But not every group has the drive to become a network and not all interests can support long-term exchanges. Thus, it is useful to check early on whether there is enough space and need to constitute a given network.

It also is important to assess if there are enough people willing to invest time and energy in constructing a network with no predictable success.

It is helpful to develop a Concept Paper to demonstrate, to the authors themselves and to potential members or sponsors, that the idea is valid and viable in principle. It is often the case that the bases are not sufficiently strong to enable the production of a compelling document and that the attempt is not advanced. But if the authors are able to structure ideas in a consistent document, the first step will have been made.

Proposal

The second phase of the cycle has two main objectives: the refinement of the design and the search for sponsors.

The purposes of the network become more evident as its mission is defined, as a future vision is developed, and as objectives are established. Likewise it is important that the network begin to consider the organizational model it intends to adopt and, in connection with it, define a communication model, since such a model is key to ensure proper network functioning. It also is important to show which types of services and products the network will offer to its members and how they are created and funded, if necessary. The proposal shows what is intended, how the intended objective will be pursued, and to whom the network is geared. An appropriate instrument to this end would be a Business Plan. The word ‘business’ in this case has no commercial connotation; rather, it refers to the original sense of the word, that is, “occupation” or “work,” and, as such, this document deals with the area and type of operation. The Business Plan is a management instrument that includes the network’s strategic and operational elements, such as the organization and the resources needed. This plan is not a detailed work plan, since

it is designed to provide guidance to the network and communicate facts about it to potential members or sponsors.

In addition to developing the Business Plan, sponsors (those who will provide resources or funding) and advocates (those who provide political or institutional support) must be identified. Their role should be included in the Business Plan.

Establishment

Once the Business Plan has been approved and a minimum of resources are available, the network can begin to be established. Although most network activities are virtual by nature, in-person meetings can ensure success. After all, every e-mail or document is issued by real people, which is why a kick-off meeting usually is a good investment when building a network, although the cost of such meeting is relatively high.

In this phase, an organizational model, as well as rules and regulations, should be agreed upon and approved by the stakeholders. It also is essential to obtain the players' commitment to make contributions that will enable at least some services to begin.

Planning

Once the organizational bases have been established and a consistent Business Plan has been designed, the Operational Planning can begin. It is advisable to define a planning methodology with a toolbox and a set of processes. A consistent language is essential to ensure efficient planning, not only for technical but also for communication purposes.

Because of the nature of a network, care should be taken regarding operational planning in dynamic systems: there should not be too many details; planning should not be for the long term; planners should not try to control the uncontrollable; and different dynamics and capabilities should be respected. Modesty with realism is more a better recipe than ambition with fantasy, because being able to effectively reach some results is very important for maintaining a high level of motivation.

The operational plan usually consists of a series of partial plans. The two main components of the plan are the operational routines and projects (enterprises with defined timeframes). In addition, emphasis should be placed on internal and external communication.

Operational planning is typically conducted by a network's coordinator, secretary, facilitator, or manager. Developing an operational plan in a collaborative manner and monitoring it appropriately requires sensitivity and skills, considering that the members of a network are not employees who are subordinated to a manager, but volunteers.

Implementation

With the guidance provided by the Business Plan and based on the Operational Plan, the network can begin to implement its routine activities and projects. Clearly, implementation does not start on a given date; rather, it is a process that is developed in other phases. After a network has been formally established and once the operational plan has been completed, the network can concentrate its efforts on its purposes.

Good communication is key. Therefore, appropriate information and communication tools should be in place. This does not mean that such tools have to be the most sophisticated ones. It is also important to bear in mind that communication is not a mechanical process that can be carried out with tools, but is rather an extremely complex process that requires great care and skill and has to be continuously facilitated. This is why a facilitator is essential to ensure the proper functioning of a network.

By nature, networks operate in a decentralized fashion. But coordination is needed to ensure complementarity, as is some degree of control to ensure the convergence of certain activities. After all, the network will wish to deliver certain services and products to its members. Remember that it is because of the benefits a network provides that people are attracted to it and remain there.

At the same time, the network's coordination should be aware of the changes in the environment to identify threats and opportunities. A frequent threat is the loss of interest and consequently a reduction in contributions. Thus, it is essential to cultivate internal and external rapport.

Evaluation

From time to time, it is advisable to carry out an evaluation of not only the outcomes, but also of the organization as a whole. If there are resources available, it is a good idea to have an outsider carry out the evaluation, as this can bring different insights and ideas into the organization. An evaluation also is an excellent time to bring together those involved in the functioning of the network and to look at the past and design future scenarios.

The main purpose of the evaluation is to learn from experience and draw lessons for the future which may lead to different avenues: the network may continue to work the same way, or there could be suggestions to change its direction or focus, or even terminate it. It is always advisable to think about reinventing and adapting the network, since the environment always changes: sometimes to the network's favor, sometimes against it and its activities.

New Cycle

After a full cycle from concept to evaluation has been completed over time, which varies according to the concrete conditions of each case, stakeholders may decide to begin a new cycle. This requires reviewing the initial proposal and updating the Business Plan, the organizational structure, and its functioning until a new plan is designed with a new focus and projects.

At this juncture there also would be a review of the processes and tools adopted to improve and adapt them to the network needs, and to gather the competencies required to manage it.

Network Management Phases and Processes

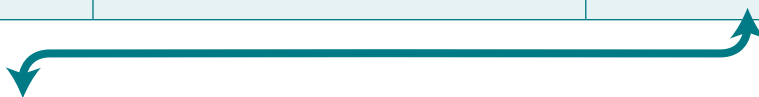
The following charts were designed to demonstrate how the phases are articulated in a logical and sequential manner and what are the main activities and managerial products in each. It is important to remember, however, that this is a model and, as such, it schematically describes elements for purposes of clarity. In practice, there is no linear sequence of phases, that is, parts of processes from different phases can take place simultaneously.

The model below also shows some of the competencies required for network coordinators, facilitators, or managers. The model can be adapted as regards phases and processes.

Since it is a general model, it does not include specific products relating to the themes or the technical competencies required to ensure the network success.

Chart 1: Network Management Phases and Processes

Network Phase	Processes		
	Input	Main Activities	Outputs
Concept	Idea Interests Needs	<ul style="list-style-type: none"> Identify a niche for the network. Set up the initial team. Survey needs. Identify potential resource sources. Identify potential institutional support. Develop an introductory document. 	Concept paper



Network Phase	Processes		
	Input	Main Activities	Outputs
Proposal	Support to the Concept Document. Support of sponsors or advocates	<ul style="list-style-type: none"> Develop mission, vision, and objectives. Develop a draft of the organizational model. Develop a draft of products and services. Develop a communication model. Develop and strengthen the team. Develop a Financial Plan. Develop a Milestones Plan. Develop a Business Plan. 	Business Plan



Network Phase	Processes		
	Input	Main Activities	Outputs
Establishment	Approved Business Plan	Promote kick-off event. Agree upon the organizational structure. Agree upon rules and regulations. Obtain formal commitment to contributions. Start to provide services.	Formalized organizational structure



Network Phase	Processes		
	Input	Main Activities	Outputs
Planning	Approved Business Plan Formalized organizational structure	<ul style="list-style-type: none"> • Define planning processes and instruments. • Plan operational routines. • Plan projects. • Plan internal and external communications. 	Operational Plan (plan for routine activities) Project Proposals Communication Plan



Network Phase	Processes		
	Input	Main Activities	Outputs
Implementation	Organizational Resources Operational Plan Projects	<ul style="list-style-type: none"> • Implement information and communication tools. • Actively facilitate communication. • Coordinate and control activities of the Operational Plan. • Build internal and external rapport. • Monitor environment to identify opportunities and threats. • Promote expansion of the network. • Deliver services and products. 	Different products according to the plan Progress Reports



Network Phase	Processes		
	Input	Main Activities	Outputs
Evaluation	Different products according to the plan Progress Reports Information on the environment	<ul style="list-style-type: none"> • Conduct external evaluation. • Review Business Plan. • Conduct workshop on lessons learned. • Conduct workshop (or study) on future scenarios. 	Lessons learned Proposal for the future (continuity, changes, termination).

Network Management

Formal networks are hybrid organisms and, as such, they confront specific challenges. Networks are mechanisms for sharing information and knowledge that reside in people and organizations and are usually characterized by spontaneity, decentralization, and a lack of hierarchy. When networks are very strong, these characteristics no longer translate into advantages only. Formal networks have defined structures, responsibilities, and decision-making processes.

The challenge facing formal networks is to maintain a degree of spontaneity that allows people to be creative while not jeopardizing the network focus. The activities should be decentralized so that each site or group can leverage its unique characteristics, while preventing total dispersion. There should not be paralyzing hierarchies; instead, someone should manage the network's diversity and facilitate communication and interaction.

Every network has to find the most appropriate management model. But efficient management clearly is related to the professionalization of organizations and of those who manage networks.

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PAHO/WHO's vision on networks: contextualization.

Marcelo D'Agostino

At the beginning of the century, the Pan American Health Organization (PAHO/WHO) celebrated its first centennial; throughout its years of operation, human health in the Region greatly improved, which has had a considerable impact on health indicators of Member States populations. These improvements were possible thanks to the access to information and to the generation, exchange, and application of knowledge that aimed at addressing incipient problems. Despite these gains, however, inequities persist in the Region in terms of health and access to technologies, sources and flow of information, and how these should be used, applied, and shared in order to reach a state of digital literacy, and so that we could develop functionally within the Information Society and improve health of the peoples in the Americas.

Accordingly, the Organization has acknowledged that it should respond to new and old challenges and, to this end, PAHO/WHO is aware that it should address processes, beliefs, and behaviors related to the value of exchanging knowledge and the efficient use of emerging technologies.

The Organization's essential mission is to cooperate technically with Member States and to promote cooperation between them, so that by maintaining a healthy environment and advancing toward sustainable human development, the population of the Americas can attain health by all and for all. PAHO/WHO accomplishes this mission in collaboration with ministries of health, other government and international entities, non-governmental organizations, universities, social security agencies, community groups, and many others.

The World Summit on the Information Society identified that there is a gap between knowledge and practice in public health, a gap between what we know about health sciences and what we do in terms of public health interventions and in the formulation of policies and programming.

In 2003, PAHO/WHO began to undergo a process of organizational change called “Hoja de ruta para el cambio institucional,”³ which included eleven cross-sectional work groups constituted by staff from all levels of the Organization.

3 Translator's Note: this corresponds to “Guideline for institutional change”

Study Group No. 4—Knowledge and information exchange—was charged with “the definition of key functions and policies, strategies and interventions related to information and knowledge management.” Its overall purpose was to understand the issues and the changes required so PAHO/WHO could become a more efficient and effective knowledge-based organization. Thus, it defined four “Desired States” that should guide the Organization’s projects associated with knowledge management, namely:

PAHO/WHO as an authoritative source of knowledge and health information

The Organization serves, in collaboration with its Member States, as a primary, secondary, and tertiary source of reliable knowledge, data, information, and analysis on health in the Americas. This collaboration encompasses establishing the needs and requirements for health information, and the acquisition of information and the promotion of information and knowledge production in response to these needs, in strict compliance with scientific and technical standards. The Organization shares information and knowledge among its members through several systems and coordinated strategies that use available and emerging technologies to ensure a cost-effective and equitable access.

PAHO/WHO as an effective, collaboration-based organization

The Organization promotes an environment in which global data, information, experience, successful practices, and publications are gathered and shared according to the formation of internal networks and efficient collaboration. Human resources are thus enriched and developed, ensuring that PAHO/WHO continues to play a central role as a technical cooperation entity in support of health initiatives in the Americas.

PAHO/WHO as a learning organization

In order to maintain its position as an authoritative source of knowledge and information on health, the Organization is committed to an ongoing learning process. It supports learning and regards it as a permanent key activity that allows human resources to efficiently cooperate with countries in the forecasting of and response to challenges in the health area. This learning process is based on exchanging ideas, lessons learned, and experiences among its staff and numerous associates.

PAHO/WHO as a partnership- and network-building organization

The Organization recognizes that, in order to efficiently operate in an increasingly complex global environment, it should seek, forge, and strengthen alliances, networks, and strategic associations with other entities: academia, research centers, nongovernmental organizations, bilateral and multilateral cooperation organizations, international financial institutions, and others. The resulting associations create opportunities for advancing human resources, compiling and exchanging of knowledge and information, and improving the state of health of the peoples of the Americas.

In support of this overall strategy of information and knowledge exchange and strengthening of networks, PAHO/WHO is adopting the concept of communities of practice and virtual collaboration for information and knowledge management, both within the Organization and in technical cooperation activities. PAHO/WHO's methodology for conducting communities of practice (CoP) encompasses a thorough description of process that includes three phases: design, implementation, and evaluation. Furthermore, it includes reference documents on how to identify potential CoP, how to promote CoP, what are the best practices for CoP moderators and facilitators, and what are potential tools for CoP. Although the priority goal in creating a CoP is to share tacit knowledge and, thus, help to share knowledge among its members, the objectives of a CoP may address such characteristics as problem solving, generation of ideas, dissemination of knowledge among the entities, development of best practices, and others.

Communities of Practice for problem solving

These communities may allow CoP members to formulate questions or raise problems and get answers from their colleagues within a professional experience area. In addition, the real-time question and answer system among members within a common environment allows for faster resolution of any issue.

Communities of Practice for the generation of Ideas

These communities allow their members to be in touch with people outside their common work environment but who share the same knowledge area (for instance, people from other offices). This mechanism allows community members to work more creatively, sharing ideas that can result in greater innovation.

Communities of Practice for knowledge dissemination among entities

These communities create a favorable environment that generates more ideas and work areas thanks to the facilitation of communication and collaboration processes among entities.

Communities of Practice for the development of best practices

These communities allow assigned people to develop best practice models for the resolution of problems arising in the community of practice. Although the communities are not specifically designed to extract the best practices automatically, they can offer important details on general knowledge of the best practices existing within the Organization, and thus allow members to further improve.

Digital Literacy at PAHO/WHO, a requirement for networking

For health workers to be able to fully work with networks, and adopt the best methodologies and emerging information technologies for knowledge management, PAHO/WHO has established the “Digital Literacy” program, which aims to strengthen the set of abilities and skills required for health workers to develop functionally within the Information Society. The concept of “Digital Literacy” is substantially different from that of Informational Literacy, in that a component of “knowledge building” is added, providing constant evidence in multiple sources of information.

“Digital Literacy,” therefore, represents a substantial change in the meaning of “Literacy,” taking it beyond a mere ability to read and write and adapting it to the new demands of the Information Society. We, therefore, define literacy as the acquisition of the necessary skills to connect to the indispensable information for surviving in society (SILVERAL, 2005; UNESCO, 2002).

Consequently, this concept was complemented with the so-called “Skills Literacy,” a concept developed to refer to the increasingly complex information and to current technologies and their implication in the working world (BAWDEN, 2002), an issue that can only grow in importance.

Objectives of the PAHO/WHO Digital Literacy Program

- To develop capabilities for the construction and implementation of a personal and/or institutional program of *constant knowledge renewal* in the use of applied information and communication technologies, as well as in methodologies for accessing information and exchanging knowledge;
- To provide tools and methodologies that allow for the understanding of the conversion process of *tacit knowledge into explicit and functional knowledge*;
- To develop capabilities for the application of *new knowledge*, considering the psychological impact on the adoption of new information and communication technologies in people's daily lives;
- To reinforce individual and institutional capabilities in applied information and communication technologies, as well as in methodologies to access information and exchange knowledge, so that the organizational changes resulting from the new reality imposed by the *Information Society* can be confronted and pursued;
- To acquire new working habits in view of three major changes:
 - new types of documents;
 - new forms of communication;
 - new communication and education environments.
- Preservation and recirculation of the knowledge generated in new sources of information supported on evidence and lessons learned;
- Application of knowledge with innovation to solve new problems, whether emerging and/or unknown;
- Effective and efficient application of knowledge in a process of ongoing improvement and innovation in routine activities;
- To gain confidence and full control of key concepts for the use of technological and methodological resources;
- To acquire new working habits regarding:
 - the ability to analyze complex situations.
 - the identification, analysis, and solution of problems.
 - planning.
 - organization.
 - critical evaluation of unusual working situations.

Abilities required for an individual to be considered digitally literate

- Mastering the “art of critical thought,” by making informed and balanced value judgments, distinguishing content from form;
- Reading, writing, and comprehension within a non-sequential and dynamic hypertext context;
- Building knowledge: to construct a set of reliable information arising from different sources, with the ability to collect and objectively evaluate, as far as possible, the fact and the opinion;
- Searching abilities using Internet search tools;
- Creating a “personal information strategy,” including source selection, distribution mechanisms, and understanding of new technologies that facilitate access to multiple sources of information without manual interaction;
- Actively participating in virtual communities in order to contact other people, discuss topics, share lessons learned, and know how to ask for help;
- Ability to understand a problem and follow the steps to solve it;
- Learning ability: to know how knowledge is organized, how to find information and how to use the information so that others can learn (knowledge recirculation).

Information Society

One of the first persons to develop the concept of an information society was the economist Fritz Machlup. The phrase was first used in his 1962 book, *The Production and Distribution of Knowledge in the United States*, in which he concluded that the number of jobs related to information manipulation and management is greater than those related to some type of physical effort. However, the current concept of the Information Society is influenced by the work of Yoneji Masuda, a Japanese sociologist, who published *The Information Society as Post-Industrial Society* in 1981.

Even if a universally accepted concept of the so-called “Information Society” does not exist, most of the authors agree that the way societies work began to shift around the 1970s. This change refers basically to the fact that the means of wealth creation are gradually being displaced from the industrial sectors to the service sectors. In other words, in modern societies most of the jobs are supposed to be no longer associated with factories that produce tangible products, but rather with

the generation, storage, and processing of all kinds of information. Sectors related to information and communication technologies (ICT) play a particularly important role within this scheme.

In terms of the current global economy, the information society attributes to ICT the power of converting themselves into the new development and progress engines. If in the second half of the 20th century the processes of factory industrialization marked the agenda in the economic development of western societies that operated under a market economy, in the beginning of the 21st century, “the chimneyless industries”—service sector and, especially, information industries—have been more frequently addressed.

Some authors suggest that this development model had a more precise origin in the early 1990s, in the so-called Washington Consensus, whereby the group of developed countries defined some of the main economic drafts that should be adopted to face the problem of the so-called “developing countries” and the failure of their economies.

The World Summit on the Information Society

The World Summit on the Information Society (WSIS) was an international event organized by the International Telecommunications Union (ITU). It focused on the social aspects of the Information Society, whose objective was to expose strategies to eliminate the digital gap existing in access to information technologies and communications worldwide, specifically in access to telecommunications and the Internet, and to prepare action plans and policies to reduce this inequality.

The First World Summit on the Information Society, held in May 2004, issued a declaration of principles called “Building the Information Society: A Global Challenge in the New Millennium.” In this declaration, Member States state their vision on the information society, its key principles, and the commitment for an “Information Society for All.”

The Member States acknowledged that building an integrating Information Society would require new modalities of solidarity, partnership, and cooperation among governments and other stakeholders, such as the private sector, civil society, and international organizations. In their declaration of principles, they stated that their objective was to bridge the digital divide and ensure a harmonious, fair, and equitable development for all. This would require a strong commitment from all stakeholders, calling for digital solidarity at the national and international levels.

Likewise, Member States established that their challenge would be to be able to drive the potential of information technology and communication so as to promote the development goals of the Millennium Declaration—to eradicate extreme poverty and hunger; to achieve universal primary education; to promote gender equality and empower women; to reduce child mortality; to improve maternal health; to combat HIV/AIDS, malaria, and other diseases; to ensure environmental sustainability; and to develop a global partnership for development would enable the construction of a more peaceful, fair, and prosperous world.

They considered that ICTs are making their best to ensure the participation of an much more numerous population than ever before in the amplification and exchange of the bases of human knowledge, thus contributing to its growth in all sectors of the human activity, as well as its application in education, health, and science. ICTs offer great possibilities to increase access to quality education, promote literacy and universal primary education, and facilitate the learning process, which will thus establish the bases for the creation of an open Information Society for all that is focused on development, and of a knowledge economy that respects cultural and linguistic diversity.

Major role-players and their responsibilities in the process:

- Governments: political authority in terms of public policy related to the Internet is a sovereign right of the States. They have rights and responsibilities in international public policy issues related to the Internet;
- The private sector: has played and will go on playing a key role in the development of the Internet, both in the technical and economic fields;
- Civil society: has also played and will go on playing a key role in issues related to the Internet, especially at a community level;
- Intergovernmental organizations: have played and will go on playing a facilitating role in the coordination of public policy issues related to the Internet;
- International Organizations: have played and will go on playing a key function in the elaboration of technical standards and related policies concerning the Internet.

It is considered that public domain information should be easily available to support the Information Society and that it should be protected from misappropriation. Public institutions such as libraries and archives, museums, cultural collections, and other points of community access should be strengthened in order to promote documentary preservation and free and equitable access to information.

WSIS (World Summit on the Information Society) Proposals

All organizations involved in the health area are recommended to:

- Promote collaboration among governments, planners, health professionals, and other entities, with the participation of international organizations, to create reliable, timely, high-quality, and accessible information and health care systems, and to promote ongoing capacity building, teaching, and investigation in medicine by using ICTs, while always respecting and protecting the right of citizens to privacy;
- Facilitate access to global medical knowledge and to local content in order to strengthen research in health and public prevention programs, and to promote men and women's health; this content may be about sexual and reproductive health, sexually transmitted infections, or diseases requiring global attention, such as HIV/AIDS, malaria, and tuberculosis;
- Warn about, observe, and control the spread of communicable diseases by improving common information systems;
- Promote the development of international standards for the exchange of health data, duly considering privacy;
- Encourage the adoption of ICTs to improve and extend health care and health information systems to remote regions without care, as well as to vulnerable populations, considering women's role as health care suppliers within their families and communities;
- Strengthen and promote initiatives supported by ICTs to provide medical and humanitarian care in disasters and emergency situations.

International and regional cooperation:

The UN fosters international cooperation among all stakeholders as a key way to make its action plan feasible, whose most relevant recommendations are the following

- That international and regional organizations use ICTs in their working programs and help, at all levels, developing countries to participate in the preparation and application of national action plans aimed at supporting the achievement of the goals indicated in the Declaration of Principles and in the present Action Plan, taking into consideration the importance of regional initiatives.
- To create and put into operation a website on best practices and projects with satisfactory results based on a compilation of contributions from all stakeholders, with a concise,

accessible and attractive format that conforms with internationally accepted web accessibility standards. This website could be periodically updated and be turned into a permanent mechanism of for exchanging experiences.

- To ensure that all stakeholders, especially those from developing countries, have the opportunity to participate in the adoption of Internet management policies, and promote and support this participation.
- To implement and follow up WSIS results, thus facilitating activities among different stakeholders, including the business sector and civil society, in order to help governments implement tasks.
- To collaborate in incorporating policies and standardizing self-regulating norms and other efficient norms and policies that aim to protect children and young people from abuse and exploitation thanks to ICTs in the action plans and national cyberstrategies.
- To promote the creation of advanced investigation networks at the national, regional, and international levels, as a way to improve collaboration in scientific, technological, and higher education arenas; promote the use of ICTs to make working methods, including teleworking, more flexible, in order to boost productivity and job creation.

Conclusion

In order to carry on with the Organization's knowledge management strategy, Dr. Mirta Roses Periago, the Director, established a Knowledge Management and Communication area (KMC). Its mission consists of supporting the production of knowledge concerning public health, promoting equitable access to knowledge and information for decision making, and creating networks with external organisms and Organization areas to foster tacit and explicit knowledge exchange, synergy among data, and information processing technologies, in addition to establish staff's creative and innovative ability as the bases for an Organization based on knowledge.

The Pan American Health Organization, along with its Member States and supported by the World Health Organization and other partners, has been working to facilitate the access to the most important sources of technical and scientific information in the world. It has implemented national, regional and global projects and programs such as the Virtual Health Library (VHL), Global Health Library (GHL), Scientific Electronic Library Online (SciELO), Global Information Full Text (GIFT) to strengthen its own intellectual capital, as well as the HINARI, OARE, and AGOURA, which are programs established along with the major publishers to facilitate the access to the most extensive collections of biomedical and health literature for developing countries. Almost 3,800 journals are available for health institutions in 113 countries

worldwide, benefiting thousands of health workers and researchers, thus contributing to better global health.

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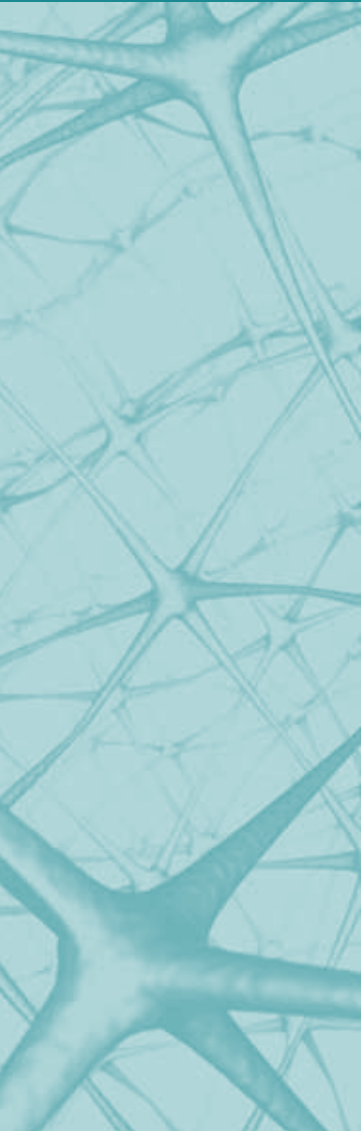
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SECTION 2:

APPLYING CONCEPTS IN PRACTICAL EXPERIENCES



Communication in Networks: the RETOXLAC experience

Diego González Machín

Communication is one of a network's main pillars, as it is the means to exchange information, experiences, and ideas about a given topic among a group of professionals. It is impossible to conceive of a network without having good communication among its members. Communication is, in fact, one of the key success indicators of a network.

It is important to consider that, early on, one may feel that a network does not work because there is little communication among its members. This is part of the natural cycle of a network, however, since—as we must remember—there are several obstacles to overcome when working in networks. One of them is that members must break away from the myth that “the person who has the information has the power” and adopt a new culture of “giving and receiving,” of sharing experiences, of writing or talking without the fear of being criticized. As these obstacles are overcome and members begin to trust the network, communication will start to flow and dialogue among participants becomes increasingly fruitful.

Communication among network members can be face-to-face or virtual. They both have their advantages and disadvantages, and a combination of the two actually is ideal. How the communication takes place depends on how it puts together the network, however; whether it is a national or regional network, whether it comprises representatives of institutions, or whether it is a network of persons interested in a specific topic, regardless of institutional affiliation. Virtual communication increasingly is being used in network operations, because of all its advantages: it is fast and low-cost, it can overcome distance barriers, it enables the transfer of a great deal of information in different formats (documents, videos, images), it can reach out to more people, and it can use many more resources to communicate. The disadvantages of virtual communication also should be kept in mind, for example, there are places that do not have internet access, slow and intermittent connections, access may be costly in some places, also not permitted non-verbal language and may cause misunderstanding resulting from cultural differences in some expressions.

Certain communication rules must be followed while working in networks, and it is very important to make them very clear at the onset, to avoid problems among members. Some rules

may be generic, such as that everyone should have an equal opportunity to express his or her opinions and should take full responsibility for how they express these opinions and content. Other rules may prohibit offensive statements or declarations that harm the professional integrity a network member. When the network is sponsored by an institution or includes members of public or private institutions or international agencies, it is important that there be a legal notice that clearly states that any information circulating through the network does not necessarily represent the opinion of these institutions, only that of the person that issued it. A legal notice of one of the networks made available by the Pan-American Health Organization, RETOXLAC (Latin American and Caribbean Toxicology Network) can be seen at: <http://www.bvsde.paho.org/bvsaser/e/legal.html>. The webpage states the full content of the legal notice. We would like to highlight the following:

Neither PAHO/WHO, nor the participants (or their organizations), nor the administrators of this discussion list are accountable for the accuracy of the content distributed here. As a rule, information exchanged in this list represents the opinion of its authors, not necessarily the opinion of the organizations or entities they work for.

There are different methods and tools to support communication in networks, both formally and in their communities of practice, some of which include:

Face-to-face methods: meetings, forums, workshops.

For example:

- RIPSAs (Interagency Network for Health Information) holds a workshop twice yearly to establish strategic directions and participatory planning.
- RAVEDRA (Amazon Network for the Surveillance of Antimalarial Drug Resistance) holds annual assessment meetings and technical group meetings.
- Brazil's Network Observatory of Human Resources for Health (OBSERVARH) holds annual meetings.
- The Virtual Health Library (VHL) Network holds the following meetings:
 - Meeting of the VHL Regional Coordination every two to three years;
 - Regional Congress on Health Sciences Information (CRICS) every two to three years;
 - Meetings of national and thematic networks;
- Meetings of technical work groups and committees.

Some networks take advantage of congresses for ad-hoc meetings or to hold thematic forums or capacity-building workshops for network members.

Although face-to-face methods are used and have advantages, they are increasingly being replaced by virtual communication. The latter offer many possibilities. Choosing the best means of communication to be used by a network should not be based on how sophisticated the tool is, but rather which tool is the most practical for a particular network.

Some of the **means of virtual communication** include electronic mail lists, news groups, videoconferences, conference calls, discussion forums, blogs, and wikis.

Blogs

These are webpages whose posts are chronologically organized (much like a history record or diary). Posts may or may not belong to the same type of writing, may or may not refer to the same subject, or may or may not have been written by the same person. Most blogs are heterogeneous, and bloggers have complete freedom to write as they wish.

Wikis

This is free software that enables people that are well acquainted with computers to create their own web pages.

Videoconferences

A videoconference occurs when two or more (few) people establish a common connection using audio and video resources. In a videoconference, all connected participating sites send and receive audio or video signals.

Conference calls

This is a generic term for any form of communication in real time between people who are far from one other.

Discussion forums

These constitute an opportunity for people to debate relevant themes asynchronously.

Discussion groups

Messages are exchanged within one group of users on the Internet, with each group usually tackling a specific topic.

Listserv

This is a server for discussion lists.

Source: Universidade Estadual de Campinas - Unicamp, 2007.

PAHO/WHO has been using two tools that may be of interest to networks: *Elluminate*, a multilingual communication space for holding virtual meetings that can be used for distance education, and *SharePoint*, a tool designed to foster collaboration and the creation of workspaces aimed at the exchange of information and experiences.

The following example is that of a network that has been very successful in using virtual communication among its members: RETOXLAC (Latin American and Caribbean Toxicology Network).

RETOXLAC was created in August 1999 by demand of participants of the Toxicology Congress of the Latin American Toxicology Association, held in Havana, Cuba. They asked PAHO/WHO to offer support for generating seamless communication among Latin American and Caribbean toxicologists. And so this community of practice emerged [OK?], designed to foster information exchange and to generate knowledge. As it developed, additional objectives were added. The network now also focuses on sharing successful experiences, which facilitates professional mobilization in emergencies and contributes to spread information related to consumers' health and to the health of the overall population by promoting the prevention of poisonings and chemical safety and by helping to warn and mobilize physical and material resources in cases of massive acute poisonings.

RETOXLAC includes professionals from Latin American and Caribbean toxicology information centers, as well as from other countries in the world, and professionals from public and private institutions that deal with the issue of chemicals, mass media professionals, nongovernmental agencies, and students pursuing careers related to toxicology.

For its communication, RETOXLAC uses Listserv software to manage electronic mail lists that offer such functions as distributing messages to all network members, automatic filing of messages

exchanged in the network, as well as enabling users to conduct operations such as subscribing to the network; searching by date, topic, or author; and canceling their subscription. To perform these operations, network users go to the web page at the following electronic address and enter a password for access: <http://www.bvsde.paho.org/bvstox/e/retoxlac/retoxlac.html>.

Since one of the network's objectives is to spread information related to chemicals, PAHO/WHO, through its Sustainable Development and Environmental Health Area and BIREME, offered to support the implementation of the Virtual Toxicology Library. This library will serve to store, sort, and promote information, as well as a tool to incorporate topics under discussion in the network (such as clinical cases of poisonings), which will be entered into the virtual library as educational material, thus contributing to generate knowledge.

It is interesting to point out that the existence of the RETOXLAC has served as a driving force to replicate this sort of initiative more formally in other countries, for example:

- REDARTOX (Argentinean Toxicology Network): <http://www.msal.gov.ar/redartox/>
- Rita (Chilean Poison Information and Warning Network): <http://www.ritachile.cl/>
- RETOMEX (Mexican Toxicology Network): <http://www.salud.gob.mx/idades/retomex/>
- RENACIAT (Brazilian Network of Information and Toxicological Care Centers): <http://tox.anvisa.gov.br/html/pt/home.html>

These national networks use both face-to-face and virtual methods to communicate.

The facilitating role of networks

In networks participants do not merely receive information. They also produce, share, and interpret information to generate knowledge. Even when the network has matured and reached stability, even when all this happens in a seamless manner, a facilitator's or a team of facilitators' drive is always very important. A team of facilitators may include a content facilitator (known in many networks as facilitator or moderator) and a process facilitator (known as network administrator). Such facilitators play the following roles:

- Keeping the network united;
- Moderating and facilitating discussion and exchange;
- Keeping the network alive, detecting moments of silence that require immediate intervention;

- Constantly putting communication skills into practice;
- Fostering the design of multicenter projects and/or horizontal collaboration among countries and monitoring their development;
- Keeping the network operating plans updated;
- Promoting the network;
- Maintaining the network web page;
- Preparing face-to-face or virtual meetings;
- Conducting periodical assessments of the network.

Conclusions

Experience has shown that the following elements contribute to a network's success:

1. In terms of network organization, maintaining a permanent flow of interactive information;
2. In terms of content: accounts, abstracts and contributions of interest for network users;
3. Selective dissemination of technical content;
4. Offering good services, with timely answers and trust between network members;
5. Good communication is a key success indicator of networks;
6. Facilitators perform a key role in networks, often ensuring their sustainability

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Producing Network Information: the RIPSA experience

João Baptista Risi Junior

Introduction

There are many examples of networking collaborative works in the field of health that involve professionals, institutions, or social groups. Among them there are different organizational configurations, which vary according to the action's objective, the nature and extent of the participation, the types of knowledge produced and conveyed, the mechanisms for mobilization and management, the means of communication used, among other factors. Information, in its broadest sense, constitutes the essence of communication in these networks, and it can have different connotations depending on each network's peculiarities.

This paper focuses on one of these possible configurations, one that deals with the ongoing systematization, qualification, and enhancement of information for decision-making processes in health. In this case, the network components are various institutional entities that produce, analyze, and disseminate specialized information, with each entity representing its own perceptions, interests, and vocation. The conceptualization of network in this particular configuration corresponds to the political, institutional, organizational, and functional reality of the health system the network is bound to.

Our case study involves a network with those characteristics developed within the Brazilian Unified Health System (SUS). Certain aspects of the Brazil's Unified Health System share some aspects with systems in other countries, thus allowing for future adaptations. SUS is a legitimate model within its political-legal framework and technical-operational conceptualization, even though it is under construction and consolidation. In this regard, although SUS' information area has developed considerably, it nonetheless faces difficulties and challenges inherent to the historical operational fragmentation of the Brazilian health system, which affects the appropriation of information for use in the decision-making process.

National context and cooperation technical

To strategically manage such a complex and important element as a country's health sector, one cannot disregard the information that provides the evidence that will guide the performance of

essential public health functions. Information is required to promote: (i) policies and activity priorities; (ii) a better use of human, material, and financial resources; (iii) programmatic synergism of health actions; (iv) industry's interactions to intervene in health conditions and their determinants; (v) the follow-up of projects and activities; (vi) the assessment of process results and action impacts; (vii) the dissemination of knowledge to social segments who are responsible for and demand health services; and (viii) national and international technical cooperation processes.

These premises imply the need for a set of initiatives in the area of information directed to: (i) understand the main health issues and the factors that explain them; (ii) identify regular sources of thematic content; (iii) produce and systematize data and indicators; (iv) validate the consistency of information sources, processes, and products; (v) improve the quality of data produced in the service network by making records, flows, and processing compatible; (vi) incorporate suitable technologies; (vii) structure bibliographic reference bases; (viii) conduct situational and trend analyzes about the selected themes; (ix) legitimize conclusions and recommendations resulting from analyses; (x) produce reports directed to the decision process; (xi) design contents for transparency and public oversight; (xii) contribute with international cooperation processes.

The articulated development of so many complex functions requires that there be a suitable institutional and programmatic order, which SUS has not yet achieved because of structural and situational difficulties that delay management professionalization and the complete long-term planning of actions. Such limitations are replicated in the structure of health information, which internally faces growing challenges in meeting new demands. The need for managerial, functional, and technological reorganization has been widely acknowledged.

Simultaneously, non-systematic production initiatives and the availability and use of health data emerge to configure a potential for information development that is expressed along three dimensions: (i) data and information generated by the health system itself, including research on the population base; (ii) data and information produced within the scope of the government's inter-industry attributions, which necessary for health analysis; (iii) and health-related technical and scientific documentation that is expanding exponentially on the Internet.

Within this political and institutional context, the challenge for the SUS—and for international technical cooperation—consists of developing the means to foster among managers making better informed decisions in the realm of public policies. The multiple bases of information available have their own limitations, which impair the analysis and extraction of objective elements for management. Therefore, it is essential to develop special work processes to handle information

properly, which necessarily involves institutions that produce information, as well as others with that are engaged in analyzing data on health.

The gathering of qualified representatives from each of these institutions is a key step to reach a common understanding and to be able to do joint work. To this end, the Brazil's Ministry of Health and PAHO/WHO created the **Inter-agency Health Information Network (RIPSA)** in 1996. This network environment favors products built collectively and consensually through formal, managerial, and technical mechanisms of operation. Each institution contributes its expertise and resources to fulfill its regular functions.

Information Content

The ongoing analysis of the health situation and its trends requires that two sets of basic information be organized, in order to provide instruments to the SUS decision process: (i) a consistent base of indicators that is periodically revisited and updated; and (ii) regular reports on relevant health issues that are based on analyses oriented to the full management of the sector.

Conceptually, health indicators are synthetic measures that facilitate the quantification and assessment of information about the population's health status in terms of mortality, morbidity, disability, access to services, quality of care, living conditions, and environmental factors.

The set of **Basic Data and Indicators (BDI)** should reflect the population's health situation and serve as the basis for monitoring health conditions. In addition to providing essential material for analyzing the health situation, this set can help monitor objectives and goals, in turn, fostering the technical teams' analytical capacity and promoting the development of interconnected health information systems. The BDI are also a key instrument for providing the network with tactical unit, because they can make the specific responsibility of each institution explicit in the collective construction process.

The selection of indicators adheres to the following criteria: (i) relevance for understanding the health status and its causes and consequences; (ii) validity to guide policy decisions and support public oversight; (iii) identification with work processes in SUS management; and (iv) possibility of regular construction from databases, information systems, or national studies.

The **Situation and Trend Reports** were conceived as an ongoing process for interpreting current conditions and prospects for the evolution of the population's health status in terms of society's organized response capacity. They are meant to support SUS management and other entities

involved in the analysis of relevant themes in their efforts to strategically manage the system. The fact that this type of approach has not been pursued traditionally, hinders its development and the use of the content produced.

Reports with these characteristics imply stages such as: (i) selecting priority themes that have intersectoral scope; (ii) defining the methodologies to be used; (iii) understanding the limitations and inconsistencies of the available information sources; (iv) transversally analyzing indicators to establish objective associations between them; (v) scientifically supporting conclusions or the analysis; (vi) extracting the key content of interest for management in the information processed; (vii) projecting health trends and model future scenarios; (viii) proposing intervention measures for concretely identified problems and analyzing alternatives and technical, administrative, and political implications; (ix) summarize conclusions and recommendations and present them in a language that decision makers can easily absorb; (x) legitimizing contents and motivating the agents in charge of utilizing them.

To support these two products, RIPSAs promote the enhancement of information that is specifically required. Needs are identified in the network's collegial deliberation process, and the corresponding studies are distributed to the technical groups organized for this purpose. The subjects considered may refer to the health situation and information systems and databases, as well as to related information processes and technologies. Recommendations collectively approved by the participants should be implemented by the corresponding institutions.

There are many examples of such initiatives: (i) standardization of common attributes in information systems; (ii) infant, perinatal, and maternal mortality; (iii) training of information professionals; (iv) analysis of spatial health data; (v) health situation room; (vi) health, social security, and work; (vii) food and nutrition; (viii) health of the elderly; (ix) follow-up of national health plans; (x) accidents and violence; (xi) information on the population base; (xii) sexual and reproductive health; (xiii) health situation and trends reports; (xiv) RIPSAs initiative in states; (xv) regulation of access to care; (xvi) food and nutrition indicators; (xvii) health and the environment.

Collective production methodology

Activities are based on an operational product planning, which is biannually approved and reviewed every six months by the network's deliberative collective comprised of representatives from partner institutions. The secretariat meets monthly to implement the plans upon utilization of specifically allocated resources.

The BDI construction process and its review and update is under the responsibility of the source institutions; it is carried out by committees made up in the following categories: demographic, socioeconomic, mortality, and morbidity indicators and risk factors, as well as resource and coverage factors. Several consultation phases ensure that the product is legitimized among partners and users. The BDI base is formally headquartered at the Ministry of Health information agency, and has a tabulator available to facilitate full Internet access, including of the raw data that generated indicators.

Each indicator is presented in a standardized form, which configures the conceptual unit to the set and instructs users on the meaning of the data. The form covers the conceptualization, interpretation, uses, limitations, sources of production, method of calculation, and categories of analysis. It also presents a table with comments that exemplifies the potential use of the indicator for the SUS national management. This instrument is accessible on the Internet database, and may be consulted when tabulating the indicator data.

the preparation of health situation and trend reports is the responsibility of a project executive group in charge of formulating the work methodology and terms of reference for the subject, with support from consultants. Documents requested from specialists enhance the analysis of the core components of each issue under study. From these technical documents, a synthesis is produced and, after review by the participants, it becomes the report *per se* to be submitted for the approval of the network's collective management. The only report that has been produced to date considers the implications of demographic transition for the development of the SUS.

Dissemination of information

In addition to being posted on the Internet, a summary of the annual BDI is issued in print, illustrated with graphs and figures dealing with the subjects chosen for the year. This subject is also presented as an expanded text, which also is posted on the Internet, that examines the subject more in depth technically.

BDI's complete technical content is published in a book that introduces the concepts used, the matrix of indicators, the qualification form, and a summary of the adopted sources of information. The electronic version of this publication may be accessed, in full or by chapters,

on the RIPSAs web page. Another product that is being gradually made available is an analysis of consistence of IDB historical series, to clarify possible doubts users may have.

In recognition of RIPSAs, Bireme created a specific Virtual Health Library (VHL-Ripsa), which promotes on-line, universal, and equitable access to specific contents about the products and inter-institutional processes of network operation, enabling their interaction with technical and scientific bases of information and with similar experiences at national and international scope.

It is important to note that network operation presupposes that its entire collective production is documented and available for consultation at the VHL, including publications, research, reports, reports of collective forums and technical committees, normative bases of network operation, and technical reference documents.

Conclusions

The systematic use of information in decision processes requires cultural changes that will come about only through persistent and ongoing efforts that enable the accumulation and consolidation of attained results. The formation of an interinstitutional network, in the context conceived and structured for RIPSAs, may represent a leap in this direction.

In RIPSAs case, PAHO/WHO cooperation has been decisive. The Organization not only provided a central function in network conception, formalization, and structuring, but it also has ensured the network's continuity for more than ten years. To this end, it relies on recognized and historically solid functions that facilitate dialogue and keep the network organizational forums active.

It is worth noting that the RIPSAs experience has been eliciting the interest of other countries, which motivates PAHO/WHO to undertake, in the broadest context of its cooperation in Brazil, initiatives to be able to meet these future demands.

Analyzing the advantages of electronic dissemination technologies

Experience of the Network on Equity, Health and Human Development

Ana Lucia Ruggiero, Marcelo D'Agostino

Electronic dissemination technologies are effective tools to reach target audiences: they expedite the dissemination of research conclusions and evidence for policy design. They organize information sources according to user needs by identifying specific selection criteria and other factors to provide useful content and support effective dissemination.

The Area of Knowledge Management and Communication (KMC) at PAHO/WHO Headquarters has been working with many electronic tools, one of them being the server list on Equity, Health and Human Development (Equity List). This server list covers a wide geographic area and reaches diverse audiences from many organizations, professional categories, and sectors.

KMC's experience has shown the importance of making the connection between regional and global networks to support the selective dissemination of information. The results of opinion surveys have been, on the whole, encouraging, confirming the validity of most of the essential assumptions and principles of the Equity List. Based on this experience, we recommend and support the use of electronic dissemination technologies and the learning they provide, because they contribute to create a more solid knowledge-sharing culture and communities of practice in public health.

Science-based strategies include having effective and fluent partnerships between the producers and the users of knowledge. According to Bernard Choi, from the Centre for Chronic Disease Prevention and Control, of the Public Health Agency of Canada [1], the three primary areas in science-based strategies are knowledge generation, exchange, and uptake.

The main knowledge exchange foundations were obtained through Internet and e-mail use to disseminate information. The Equity List is a daily free-access service that filters, structures, and disseminates the latest ideas on issues, processes, and results in equity and health, thereby making people aware of new concepts and recent experiences.

There is a wealth of information about equity and health in specialized papers and many reports that present experiences about the social determinants of health and how to deal with common challenges currently faced by health systems worldwide. The Equity List's purpose is to provide good quality, relevant, and convenient information to support public health processes and functions, such as research, policy design (planning, implementation, and evaluation), and the decision making process.

Selection is fundamental to expedite the dissemination of relevant knowledge with useful information. Generally speaking, the selection criteria include:

- A contribution that deals with issues relevant for improving equity, efficacy, effectiveness, efficiency, and quality of health services and systems.
- Quantitative and qualitative studies that demonstrate the design or application of appropriate research methods that justify a trust in their conclusion reliability and validity.
- A contribution that adds value to what is already known, providing innovative conclusions relevant to health services, health system policies, or practices.

The electronic mail (e-mail) is one of the most widely used communication tools among professionals, increasing the speed and ease of sharing information worldwide [1]. Given that KMC's goal is to provide online, high-quality and easy-access information (free access of full texts), the message content is selected by considering the following options:

- manual selection of online abstracts with free-access to full texts,
- manual selection of project summaries and descriptions of organizations,
- periodical revision of websites (more than 100 institutional sources),
- collection of e-mails, newsletters, and bulletins from the leading United Nations agencies, universities, and other research groups (grey literature, invisible on the internet).

The Equity List has been operating since February 2000. Its target audience is producers and consumers of information on equity and health, including researchers, policy-makers, donors, nongovernmental organizations working in development, and other public health workers. Students, teachers, and others interested in learning about equity and health also are part of this important audience. The Equity List serves more than 15,450 direct beneficiaries and is connected to more than 23 global networks and distribution lists in 167 countries, reaching an audience of roughly of 50,000 persons.

Considering the comments received in opinion surveys, the literature review and, according to the main network functions described by Stephen Yeo [3–7], the benefits of the List could be described as:

- A filter: it selects and filters many sources and a large amount of information.
- An amplifier: it contributes to disseminate concepts, research methods, and little-known quantitative and qualitative studies, thereby increasing understanding. It may be considered as a way to promote ideas.
- A caller: it provides information pertaining to conferences and events that gather people or groups of people.
- A facilitator: it provides health care workers with access to selected information that enables them to perform their activities more efficiently.
- A community supplier: it promotes ideas, concepts, research evidence, and standards that empower and give decision leverage to communities.
- An opportunity to raise funds: it connects ideas, people, and institutions and provides a fertile field to raise funds for a good cause.

The reports of the World Bank and WHO knowledge sharing programs about successful thematic groups reveal that a combination of activities is more effective to keep users well-informed and to meet their several information needs. This combination involves live events, websites, support to work teams, peer review, cross-sectional support, internal research, response to queries about specific technical issues, suggestions of consultants, advisory services, and online discussions [8].

Besides a literature review, the strategies and policy trends for improving the partnership between knowledge producers and users were examined, based on a report published by a group of international experts—“Towards 2020 Science”—that was formed to define and produce a new vision and provide guidance on the evolution, challenges, and potential of computer sciences in the coming decades. According to these experts, the Internet and the technical advancements it provides should greatly determine the form of scientific publication and communication in coming years. These changes are likely to occur in five main areas of development: (i) interactive figures and new navigation interfaces; (ii) configuration based on needs and customization; (iii) relationship between specialized journals and databases; (iv) user participation; and (v) search and warning services. [9]

These experts also found that the current performance can be improved in terms of quality, user response capacity, efficiency, and free access to papers, documents and databases. Changes can transform scientific communication by providing a higher degree of interactivity, permitting

configuration based on needs and customization; providing users with content at different volumes and depths depending on their interest and competence; making the link to databases; and creating “participation architectures” and new content localization technologies [9]. Many of the changes designed to organize the mobilization of knowledge are already in progress along with the use of electronic mail, improving the selection of information, and creating virtual collaboration spaces such as SciELO and the BIREME’s Virtual Health Library, a model of collaborative electronic publication in developing countries.

Based on this experience, the Equity List provides more than updates; it is also a form of educational extension for its beneficiaries. Moreover, it produces a large number of interactions between people who are seeking more opportunities to contribute with content and services, for example, through the blogs that make it possible to share comments on papers, studies, and articles. Finally, the use of electronic dissemination and learning technologies based on them is recommended and supported, because they contribute to create a more solid knowledge-sharing culture and communities of practice in public health. The four main uses of published content—research, updates, teaching materials, and technical cooperation activities—are expected to serve as motivation to support new advances and dissemination strategies.

Lastly, in order to enrich knowledge on what works best, it is necessary to promote free and open access of technical and scientific information resources so as to increase the advantages of electronic tools for the dissemination of information to a wider audience. The Equity List team is committed to continue doing its best to attain that goal.

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- **Communication technologies and health promotion: opportunities and challenges**

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Harmonization of projects, programs, and strategies: the RAVREDA experience

Roberto Montoya

In recent years, the participation of donors and new players in the funding and promotion of initiatives to control diseases of interest to public health has substantially increased. The case of financial support of the Global Fund to countries to combat malaria, tuberculosis, and HIV/AIDS is a case in point. Geopolitical aspects also have led countries to create new avenues for international cooperation, with new agendas and commitments. The development of science and technology in developed countries has fostered a growing interest in industry and academia to get the attention of public health authorities from developing countries.

Many of those initiatives are duly aligned with broader development landmarks, but it is undeniable that more and more often, and increasingly so, public health managers are called upon to link control programs to specific agendas that divert and deplete the capacity of programs on efforts that are not priorities for the services. The same health authorities and cooperation agencies favor the creation of parallel agendas and initiatives that sacrifice the process continuity, because they make changes in a technically irrelevant manner or because they join other “new initiatives.”

The attainment of Regional goals in public health requires that there be coordinated action between countries and with external stakeholders. Technical cooperation has, in that sense, multiple examples of successful models of joint work. For the past six years PAHO has participated in an international cooperation effort to control malaria in the Amazon Region, which follows a network model that permits the alignment of the efforts of many players around priority interventions and in harmony with the broader strategic landmarks that already have been defined.

Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA)

The United States Agency for International Development (USAID), through the Amazon Malaria Initiative (AMI) project has funded for the past seven years, the structure and operation of the Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA). The

network started in 2001 as a strategy to support countries in updating antimalarial drug policies based on monitoring the resistance of *Plasmodium falciparum* to antimalarial drugs; it has become an effective mechanism for technical cooperation in malaria, aligning control programs, donors, and technical assistance institutions around internationally recommended priorities, strategies, and tools.

Plasmodium falciparum's resistance to antimalarial drugs is an extremely important emerging event, in that it threatens the efforts to control malaria. In the late 1990s, in the Amazon Region, where more than 90% of malaria cases in the Americas concentrate, malaria programs did not have sound information about the efficacy of the regimens used for treating uncomplicated malaria caused by *Plasmodium falciparum*. Three countries still used monotherapy as the first-line treatment and three countries used combination regimens other than ACT,⁴ many times resorting to monotherapy because of problems of access or use. Two countries were already starting to use therapy combinations with artemisia products. In 2001, the countries, with PAHO and USAID support, formed the Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA), as a way to provide evidence and encourage changing the drug policy for combination therapies already promoted then by WHO for cases *Plasmodium falciparum* multi resistance.

RAVREDA emerged out of an extremely concrete need on an issue that required a network operation model. It had been impossible to conduct surveillance of resistance to antimalarial drugs in that region because of the difficulty in standardizing procedures and in continuing to exchange information and to pursue policy unification. A “network of sentinel sites” was created to conduct efficacy studies (Figure 1) through an epidemiological approach based on the transmission of *Plasmodium falciparum* and guided by the existence of contributing centers and teams that took on the responsibility for conducting the studies in the countries.⁵ At the country level, malaria programs led the effort; PAHO provided technical support including, upon a cooperation agreement with the USAID, coordinated the execution of resources in the countries with technical personnel from the Communicable Disease Control Unit and the creation of a technical coordination mechanism for the Network in one of the countries. The Centers for Diseases Control and Prevention (CDC) participated in the beginning, supporting the design

4 ACT = Artemisinin Combination Therapy. The combinations with artemisinin products are currently recommended by WHO for treating malaria with no complications of *Plasmodium falciparum* multiresistance.

5 Instituto de Pesquisas em Patologias Tropicais (IPEPATRO), Instituto Evandro Chagas, Fundação de Medicina Tropical do Amazonas, AMTROPICA, Universidade Federal do Maranhão, Serviço Nacional de Controle da Malária (SNEM - Equador), Centro de Investigación de Campo Francisco Vitanza, Universidad de Antioquia, Centro Internacional de Entrenamiento e Investigaciones Médicas, Secretaría de Salud de Antioquia, Instituto Departamental de Salud de Nariño, Ministerio de Salud de Guyana.

and assisting in the execution of studies. The process was monitored by WHO's technical officer on this matter. Routine annual evaluation meetings of AMI and RAVREDA were established, unifying formats for the information that should be presented and discussed. As studies yielded results, a database, an information management system, newsletters, and a webpage were gradually created. In this process, the AMI project also supported technical meetings to standardize protocols and provide training on good clinical practices (Table 1) and activities at country level to strengthen the microscopists and technical staff in charge of the sentinel sites. National and inter-country meetings also were held to discuss changes in policies based on study results.

Table 1. International protocols, guides, and workshops promoted by the AMI project within the RAVREDA

Antimalarial drug resistance

- Monitoring protocols on the therapeutic efficacy of antimalarial drugs in the Amazon Region;
- Practical guide for studies on the efficacy of antimalarial drugs;
- Workshop for the standardization of efficacy studies in the Amazon Region;
- Workshop on bioethics and good clinical practices;
- Workshop on techniques for *in vitro* tests of resistance to antimalarial drugs;
- Guide and protocol for *in vitro* tests in RAVREDA;
- Technical workshop on the measurement of serum levels of antimalarial drugs for efficacy studies;
- Technical meeting to define work priorities for the use of molecular epidemiology techniques for the monitoring of antimalarial drug resistance

Access and use of antimalarial drugs

- Workshop on the change of antimalarial drug policies;
- Workshop on antimalarial drug management;
- Technical meeting on antimalarial drug compliance studies;
- Guide for antimalarial drug compliance studies;
- Protocol for antimalarial drug compliance studies;
- Workshop on methodology for studies on the access and use of antimalarial drugs;
- Guide for the monitoring of access and use of antimalarial drugs in the routine of facilities;
- Workshop on antimalarial drug supply system;
- Workshop on the quantification of antimalarial drug needs;
- Workshops on analytical techniques for the quality control of antimalarial drugs;
- Workshops on the use of basic tests (Minilabs) for quality control of antimalarial drugs.

Diagnosis access and quality

- Technical meeting on malaria diagnosis quality management;
- Guide for malaria diagnosis quality management systems;
- Technical meeting on the operational investigation for the implementation of rapid diagnostic tests.

Vector control

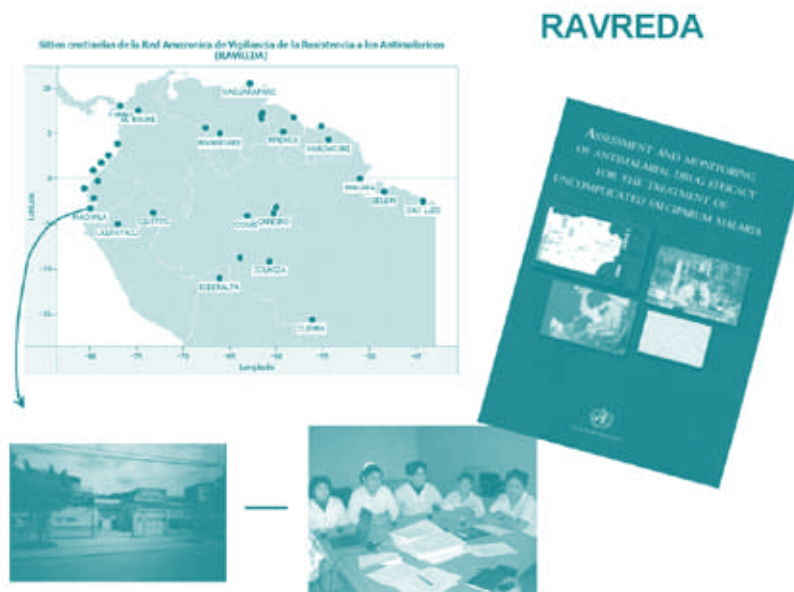
- Technical meetings to design a strategy to improve decision making on malaria vector control and entomological surveillance systems;
- Workshops on the bottle assay for the monitoring of anopheline insecticide resistance;
- Guide to rationalize decision making in malaria vector control,
- Entomological evaluation protocol for study sites;
- Operating requirements for the implementation of long-lasting impregnated mosquito nets.

Information management

- Workshop to improve information management in malaria control programs;
- Analysis processes for malaria information systems based on the management of individual records and evaluation of control vector actions;
- Analysis processes for information of the RAVREDA activities in the following fields: therapeutic efficacy monitoring in *in vivo* studies, entomological evaluations of study sites, and insecticide resistance monitoring.

USAID's support, along with the countries' efforts, essentially carried out with local human and logistic resources, led to the conduct of some 50 studies between 2002 and 2007. By the end of 2006, all Amazon countries were familiar with first- and second-line antimalarial drug resistance patterns and had replaced their medication policy with artemisinin combination therapies. In late 2007, malaria due to *Plasmodium falciparum*, significantly dropped in the Region; this decrease was related to many factors, among which the change of therapy regimens played a prominent role.

Figure 1: Network of sentinel sites to monitor resistance to antimalarial drugs (RAVREDA).



The rapid results from the efficacy studies and the success of the working model with the countries participating in RAVREDA, led agencies and countries, to reassign the network's priorities and the support avenues for the AMI project. In 2004, as countries were revising their care policies, the network introduced work lines related to the management, access, quality, and use of antimalarial drugs. Between 2005 and 2006, with technical support from the *Management Sciences for Health* (MSH/RPM Plus) and PAHO/WHO, malaria programs conducted studies on the compliance, availability, and use of antimalarial drugs that were important to foster interest within control programs on this issue and that served to guide the best practices for offering and prescribing medication in some countries. The issue of timely access to medication remains a key concern. So much so that, in recent years, there have been renewed efforts to correct within each country shortcomings in purchase and distribution processes and to implement work processes to monitor shortage, medication use, and quality of care in health care facilities.

The United States Pharmacopeia and PAHO/WHO's Area dealing with medications actively joined the network in 2003, pursuing actions to build capacity and to strengthen national reference laboratories that analyze the quality of antimalarial drugs, as well through the promotion of strategies on basic quality monitoring techniques for the medications available in facilities.

In 2005, the AMI project introduced a line of work that addressed the issue of vector control. Initially, this effort was undertaken in response to some of the countries' concern over organizing the entomological surveillance system in malaria control programs and developing, as had been done with antimalarial drugs, a surveillance system to track insecticide resistance based on the implementation of a methodology developed by the CDC in Atlanta. Keeping the RAVREDA method and strategic landmark as a joint work mechanism, a consensus was attempted to be reached among the more than 20 entomologists and experts from the region, designing an approach that was implemented through pilot projects in many countries. This methodology enables the local level to select and evaluate interventions in a rational manner, based on epidemiological and entomological information. Simultaneously, a database on entomological and epidemiological parameters required by central levels was generated and a network information management system was established. The work model that led to rapid changes in policies in antimalarial drug resistance with a model of network operation encountered much more difficulty on the issue of vector control, but little by little progress is being attained.

RAVREDA thus became an effective mechanism for developing an agenda of south-south technical cooperation among countries of the Amazon region, cooperation agencies, and specialized technical institutions. It is an experience that emerged from the a very concrete issue of malaria control and served as a model to address other priority issues, in line with WHO's

strategic guidance and country priorities (Table 1). The value added by the operation of the network proved to be clearer on some issues than in others. The creation and maintenance of standardization procedures over many years and the information-sharing mechanisms have been very relevant for issues related to surveillance, which clearly benefited from being able to make time and space comparisons between countries and regions on resistance patterns to medications or insecticides, or in variations in vector behavior. In other topics that were more specific to local contexts (such as medication compliance and shortage), the process was different. The stimulus generated by the advancement of others and the joint prioritization of work lines is something that the network model facilitated, as it did south-south cooperation and the unification of policies and strategies.

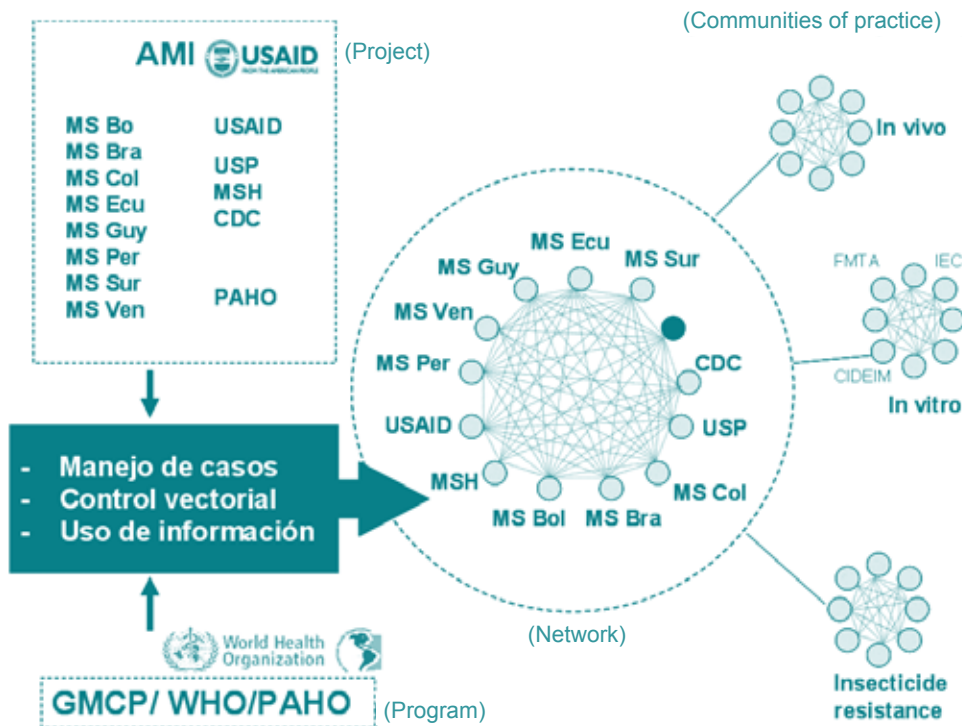
The AMI project has clear objectives within USAID's technical cooperation strategy in Latin America and the Caribbean. The project works under three intermediate objectives that deal with the policy improvement process based on documentation, dissemination, and evidence use. For each line of work, the project promotes an initial phase to develop tools and standardize protocols documented by evidence, an operational investigation phase and pilot projects to validate new approaches, and a final institutionalization phase. This approach also was adopted by RAVREDA. The network can be conceived of as the operational structure of the AMI project, which includes institutions in the countries, counterparts in ministries of health and communications between country malaria programs and technical AMI partners. RAVREDA plans continue life on its own, even when the USAID catalyzing resources are no longer available.

An important aspect of this network was that lines of work remained aligned with the strategies and interventions that are currently recommended for malaria internationally. From the beginning, the AMI project has remained aligned with the strategic lines promoted by WHO's Global Malaria Program, renewing in the countries efforts already made to guide programs according to the elements of the Global Control Strategy (1992). For example, therapeutic efficacy protocols have been standardized with a methodology in use in other endemic regions; artemisinin combination therapy has been introduced; the countries' treatment guidelines have been adjusted based on 2005 recommendations; acceptance of the recommendations of groups of experts at the moment of defining AMI approaches in themes have been complied with, such as diagnostic quality management and work priorities for the implementation of rapid tests when discussing vector control approaches; information systems have been aligned with the Global Program and position statements are in compliance; technical consultations and WHO resolutions with regard to themes like the promotion of the use of combination therapies and the implementation of long-lasting impregnated mosquito nets.

A second important factor that kept network efforts harmonized was centering the leadership in the countries at the level Control Programs in Ministries of Health. In this regard, although RAVREDA sought support from many players in the countries and from regional partners, it prioritized the most relevant areas of action for meeting meet public health goals and commitments, in tune with the countries' efforts in the Roll Back Malaria Initiative (2000) and the commitments of the Millennium Goals or with year 2015 goals. The emphasis on having actions to improve basic aspects of access and use of antimalarial drugs, and on insisting for many years on this issue and on the quality of microscope-based diagnosis before introducing other issues that could be more attractive to investigators, is an example of the network' orientation.

Figure 2 shows the relationship between the players. RAVREDA is a technical cooperation network on malaria, with **formal network features**, integrated by malaria program coordinators at the central level in countries and by many players in each country. The CDC, MSH, USP (University of Sao Paulo) and USAID are part of the network that PAHO/WHO coordinates through an effort that facilitates communication, follows up on work plans, and has a joint agenda. A second element is the **AMI project**, funded by the USAID, which involves the same partners and conducts its actions at the level of RAVREDA, in which this external support is combined with the effort of control programs to validate approaches and tools. In Brazil, for example, RAVREDA is known as a forum of the Control Program that guides operational investigation, monitoring, and specific surveillance events (resistance), establishes monitoring and decision-making processes, improves and validates strategies and instruments. The Global Malaria **program** (PAHO/WHO) is the third element on this strategy; it is a reference for the technical network agenda that focuses on supporting countries efforts to develop intelligent management with actions along three lines: case management, vector control, and information management. Figure 2 shows a fourth element that does not exist yet, the **communities of practice** on specific technical issues. They are a crucial component that would provide RAVREDA with a more active and spontaneous life. This relationship between technical peers, however, was nothing more than isolated experiences of information exchange immediately after technical workshops. The technical areas covered by the network clearly provide a very interesting space for the development of communities of practice, whose subjects could range from the standardization of laboratory protocols and procedures (in vitro, molecular) to the discussion of solutions for operational themes of the programs. The communities of practice would produce specific inputs for its validation and promotion within a more ample network context.

Figure 2. Relations of RAVREDA Network with the AMI project and WHO Global Malaria Program⁶.



It is possible to have an impact on control programs for many of the diseases of interest to public health if available tools for care and strategies are properly used. Implementing the right measures has an essential track that is to improve the access and quality of services and adopt intelligence management. This was a central axis in the approach with which RAVREDA developed and, around this, it was possible to harmonize the role of many players and, in terms of the AMI project, to develop a technical cooperation agenda attractive for the priorities of the programs in the countries. One effect of keeping this coherence with a technical agenda and a global strategy was that the network's products were incorporated into the routine of programs. There are already examples in many countries and with projects funded by the Global Fund in the region, where

⁶ Original figure sent by the author was kept

RAVREDA and the AMI project products are being included for large-scale implementation. As was the case with the PAMAFRO project, which is coordinated by the Andean Health Organization (AHO), some approaches and tools developed by the AMI/RAVREDA for implementing in their target zones in border cities in Colombia, Ecuador, Peru, and Venezuela have been incorporated. However, it still is a critical challenge for services to incorporate the improvements it proposes. In aspects that fully depend on centralized decisions, such as changes in antimalarial drug policies, the effects occurred very fast. However, on other issues in which changes involve multiple players, the RAVREDA experiences were no more than demonstrations. Although there is a clear dialogue with the central level, its large-scale institutionalization at the state or department, provincial, and city levels has been difficult to carry out. This was especially difficult in some countries where program management structures became weaker, thus hindering the introduction of improvements in the strategies and instruments at the local levels.

The initiative that began in 2001 as a Surveillance Network for Antimalarial Drug Resistance has become a technical cooperation network among the malaria programs of the Amazon countries. The experience of the first years showed a successful scenario of cooperation between countries that had to address urgent management issues and to seek operational solutions in other priority themes of malaria programs. However, expansion of work subjects also has a cost and is an aspect that has been dealt with in the latest annual meetings with countries. Monitoring therapy efficacy and conducting resistance surveillance are complex themes that call for discipline, methodological rigor, and trained teams. A minimal frequency of two to three years was established for studies to be repeated, but measures should be taken so the network does not become inactive in the meantime. In Asia-Pacific artemisinin combinations are already experiencing a reduction in therapy efficacy, which is a warning for other endemic regions. It is necessary to structure systems that favor the early detection of this phenomenon so as to anticipate policy changes, putting in operation models that integrate *in vivo* surveillance protocols with *in vitro* monitoring actions of strains, and with faster regimens to monitor changes in response patterns integrated to the routines of facilities.

The institutionalization of these actions in a sustainable manner, within the public health surveillance priority agenda in countries, remains a major challenge for the RAVREDA and AMI project. RAVREDA must guarantee results in that regard, although the concern with the control of resistance determinants leads us again to the issue of universal and free access to quality antimalarial drugs and the institutionalization of policies for their widespread offer and use which, ten years ago motivated the expansion of the network's field of action.

Horizontal Cooperation In the Networks: The INFAL Experience

Jorge Eduardo Torroba

Horizontal cooperation

Horizontal cooperation, south-south cooperation, or technical cooperation among developing countries arises as an initiative to complement the traditional cooperation offered by developed countries (north-south or vertical cooperation). Basically, it is a process whereby or more countries work together to achieve the development of individual or collective capabilities through cooperative exchanges of knowledge, skills, resources and technology.

Ideally, activities should be initiated, organized, guided, and financed by the same countries, under the guidance of the governments involved and with the participation of public and private institutions. When necessary, the countries can resort to assistance and financial support of external parties, such as United Nations system organizations, among others.

This form of cooperation formally began during the United Nations meeting held in Buenos Aires, Argentina, on 12 September 1978. At that meeting, 138 countries agreed on a “plan of action to promote and carry out technical cooperation among developing countries” (TCDC). Latin America’s political conditions in the 1980s were not favorable for starting, in any large-scale, a process of exchanging experiences and capabilities among countries as envisaged by the signatories of the agreement, another liability of the so-called “lost decade.” In the most favorable international framework of the 1990s, horizontal cooperation had an important growth, as it took advantage of favorable conditions in Latin America provided by economic stability, economic liberalization, and greater development in so-called emerging countries.

In 1993, PAHO/WHO stated that in the Region of the Americas, the term TCDC would be understood as technical cooperation among countries (TCC), regardless of a country’s level of development, in adherence to the Organization’s historical pursuit of Pan-Americanism.⁷ In the same way as with TCC, which involves PAHO/WHO, the principles of solidarity, sovereignty, dignity, equity, capability-building, and sustainability must be sustained. Since that moment,

⁷ Inter-regional meeting for Consultation on the CTPD Program on Health , WHO-Jakarta 1993.

horizontal cooperation showed its potential as a development tool for Latin American countries, and it has evolved to adapt to international changes that have occurred over time.⁸

The Pan-American Health Organization has worked for more than a century in promoting technical cooperation among countries aimed at building in them capabilities for self-sufficiency and development in health issues, thus transcending north-south cooperation. Thus, the concept of horizontal cooperation is expressed, in various ways, as PAHO/WHO's *raison d'être* and purpose. Some illustrative examples are given below:

- In the 1924 Pan-American Sanitation Code: “to encourage or adopt cooperative measures oriented towards avoiding the introduction and propagation of diseases in the territories of the Signatory Countries.”
- In its mission: “to lead strategic collaborative efforts among member states and other allies so as to promote equity in health, fight illness, improve quality and lengthen the life span of the peoples of the Americas.”
- In regional programs: for example, the Expanded Program on Immunization in addition to providing a program for the exchange of technical excellence among institutions, also has a Revolving Fund for Vaccine Procurement and a lending program for vaccines during emergencies.
- In the Collaborative Centers, where the excellence of national institutions is mobilized for international cooperation purposes.
- In the explicit financing activities to encourage horizontal cooperation through TCC.⁹
- In human resources: given the fact that most technical officers come from countries in the Region and, in general, have taken up jobs in the national public service.

And, of course, in the networks! The international thematic networks that the Organization has promoted, established, and widely used perhaps represent the clearest example and the most natural and spontaneous space for horizontal technical cooperation among the countries of the Americas. In the following text I will describe the experience of the Interamerican Network of Food Analysis Laboratories (INFAL), which was set up and coordinated with PAHO/WHO's participation.

⁸ As has occurred with the cooperation among developed countries, generating tripartite formats – involving developing countries – like triangular cooperation or “partnership”.

⁹ *Technical Cooperation Among Countries*, created in 1988.

The Interamerican Network of Food Analysis Laboratories (INFAL)

INFAL was created on December 12, 1997, at the Pan-American Health Organization in Washington, D.C., as a result of a consultative meeting for establishing the network. Promoted and organized by PAHO/WHO, the meeting gathered representatives from 24 of the Region's countries and six international agencies, who unanimously approved the establishment of the Interamerican Network of Food Analysis Laboratories.

INFAL's mission is "to promote the guarantee of food safety and quality in the Region of the Americas, so as to prevent foodborne diseases, protect the consumer's health, and facilitate commerce, thus promoting and strengthening the development and interaction of analytical laboratories within the framework of integrated national food protection programs.

The network's general objectives are:

- a. To achieve the methodological equivalence parity of food analysis laboratories,
- b. To promote the implementation of equivalent systems of quality management in the laboratories of INFAL,
- c. To strengthen scientific and technical cooperation among the member countries.

Its specific objectives are:

1. To develop an information system among INFAL laboratories,
2. To facilitate the availability of reference materials and the participation in inter-laboratory tests,
3. To organize and promote ongoing training and education programs, thus fostering the exchange of experiences and resources available in the Region,
4. To promote and strengthen intersectorial participation in the formation and operation of national food laboratory networks,
5. To promote and strengthen the integration of INFAL laboratories with food protection and epidemiological surveillance programs.

In its mission and objectives, one can clearly observe the presence of horizontal cooperation concepts. The network's organization, as well as the rules for participation set forth in its statutes, express equity and privilege consensus mechanisms, as can be observed in the following summary:

The INFAL framework is set up by the Assembly, the Executive Committee, the technical groups

(microbiology, chemical analysis, and quality management), the *ex-officio* Secretariat, the Advisory Group, and the national networks.

The Assembly is INFAL highest authority and is integrated by all member laboratories. It meets every two years. Its tasks are: to define strategies and priorities, to choose the members of the Executive Committees; to choose four facilitators per technical group; to establish the number and fields of competence of the technical groups; to assess the activities conducted by the Executive Committee; technical groups, *ad hoc* groups, and the *ex-officio* Secretariat; and to approve the bi-annual action plan.

The Executive Committee is integrated by seven laboratories from different members states. Some of its tasks are: to act on behalf of the Assembly as its executive agency between meetings, to carry out the resolutions resulting from the Assembly, to promote the interaction of INFAL with other organizations, to present propositions to the Assembly for the upcoming biannual action plan, to provide continuity to the activities of the technical groups and *ad hoc* groups, to investigate and manage possible sources of financing for the network operation, and to formalize agreements.

The technical groups are integrated by all INFAL member laboratories; it is up to them to elaborate specific technical criteria and to provide direct assistance through experts.

The *ex-officio* Secretariat is comprised by PAHO/WHO and the Food and Agriculture Organization (FAO); it provides oversight and technical support to the network tasks, as well as basic support for its operation.

The Advisory Group is the entity through which non-member institutions can collaborate with the network through projects.

The National Networks are country-level developments intended to propagate the Regional work. As of now, eleven national laboratory networks associated with INFAL have been established.

- RELOAA (1997) in Bolivia;
- RENLAA (1999) and RNMLAA (2000) in Uruguay ;
- REVLAA (1999) in Venezuela;
- REBLAS (2003) in Brazil;
- REDALOA (2005) and RENALOA (2006) in Argentina;
- REDLAA (2006) in the Dominican Republic;

- RNLAAC (2007) in Cuba;
- RELABAM(2007) in Chile;
- RNLAAP (2007) in Peru.

The statutes seek a balance between flexibility and freedom; they promote and favor participation, commitment, and the sustainability of efforts necessary to cope with the network's mission and objectives. In other words, they establish a network that is a group of institutions that strive to improve themselves through mutual cooperation, instead of merely an informal club of laboratory technicians.

In the beginning, the INFAL could function based on vertical cooperation,¹⁰ with some instances of horizontal cooperation through PAHO/WHO TCC when the network was able to obtain a specific share¹¹ of these budgetary resources, in competition with other areas that were of greater priority to the Organization. And yet, horizontal cooperation expanded,^{12 13} evolving until it clearly overtook vertical cooperation.¹⁴

Such growth in horizontal cooperation was due to the extraordinary development of the media and information technology (IT), to the increased access to them by the countries' institutions, and to PAHO/WHO's efforts to develop and implement some IT tools in the network's daily operations.

Currently, INFAL has several IT-supported tools that facilitate horizontal cooperation among the 60 laboratories of 29 member countries and the more than 150 laboratories connected through national networks. They are offered through INFAL's webpage (bilingual Spanish/English). We highlight the most important ones below:

10 From GTZ, US/FDA, US/FSIS, IDB and Danish Fund.

11 Venezuela-Nicaragua (PAHO/WHO 2002) and Venezuela-Aruba (PAHO/WHO 2003).

12 TCP (FAO 2006) two sub-regions: "*Development of an integral system to ensure quality for food analysis laboratories*", for South America, Central America, Mexico and Spanish-speaking Caribbean.

13 TCC (OPS) Bolivia-Mexico (2007).

14 NFASweden (2006-2008).

1. **Communication groups via electronic mail:** RILAA¹⁵ News (for updates); RILAA SOS and INFAL SOS (for help); RILAA CE, RILAA Micro, RILAA QA and RILAA Chem (for sharing work-related information and documents within the groups).
2. **Chat rooms:** for the technical groups' virtual weekly meetings.
3. **Literature on line:** provides literature information and different links with additional information of interest to laboratories.
4. **The information system:** includes detailed information on the laboratories which integrate INFAL; uses analytical methodologies, standards, reference sources, courses, training, equipment, as well as the capabilities offered to the network and its main needs.
5. **Inter-laboratory tests:** they are offered each year by the different network institutions (members, national networks, and donors) free-of-charge or through the payment of shipping costs to the affiliated laboratories.
6. **Letter of understanding:** this facilitates cost-free training and makes it possible for agreements to be made between laboratories to conduct bilateral cooperation activities, in such a way that laboratories can take advantage of their strengths to provide assistance to those in need.
7. **INFAL advisors:** this is a mechanism that allowed for the mobilization of professionals belonging to an affiliated laboratory to provide assistance or training (free-of-charge) to other affiliated laboratories (which finance the airline and hotel costs). An accessible web database records the subject areas and languages covered by such assistance (Figure 1).

15 NOTE: RILAA is the acronym for Red Interamericana de Laboratorios de Análisis de Alimentos, INFAL's name in Portuguese and Spanish.

Figure 1. INFAL Advisors: a tool with greater solidarity¹⁶.

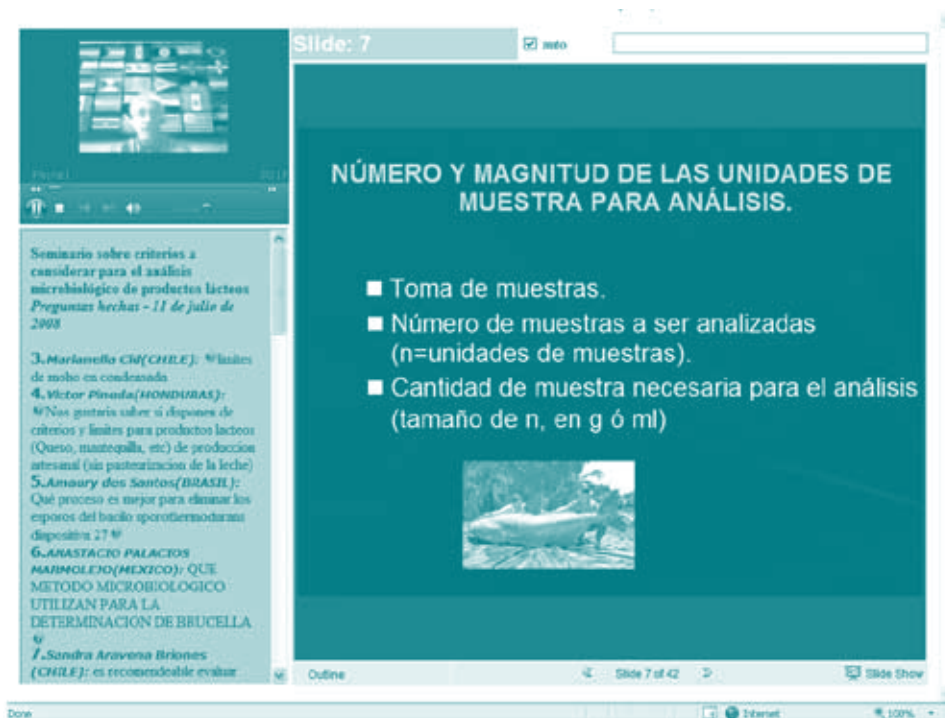
The screenshot shows the website 'ASESORES DE LA RILAA' with a navigation menu and a 'Resumen' section. The 'Resumen' section is titled 'Asesores registrados' and contains a table with the following data:

Especialidad	Asesores registrados	Español	Idiomas			
			Inglés	Portugués	Francés	
Auditorías	2	2	1	1	0	
Bioseguridad	5	4	1	2	1	
Calibraciones	1	0	0	0	0	
Diseño de Laboratorios	1	1	0	0	0	
Estadística	2	2	2	2	0	
Gestión de la Calidad	28	26	12	8	2	
Gestión de Laboratorios	11	9	3	5	2	
Gestión de las Mediciones	1	1	1	1	0	
Gestión de Redes	7	6	2	3	1	
Incertidumbre	2	2	2	2	0	
Mantenimiento	5	4	1	3	1	
Metrología	2	2	2	2	0	
Microbiología	7	7	3	1	0	
Microscopía	1	1	0	1	0	
Parasitología	1	1	1	0	0	
Química	13	10	4	3	1	
Validación de Métodos Instrumentales	1	1	1	1	0	

8. **Virtual classroom:** offers network laboratory workers real-time training courses on the internet in response to needs detected by the technical groups. So far, over 16 courses have been delivered on different aspects of the ISO 17025 standard (its interpretation and implementation, the calculation of uncertainty, the validation of methods, document control, and auditing), the state-of-the-art of reference materials and inter-laboratory tests, general metrology, chromatography optimization, criteria in microbiological food analysis, basic laboratory design, infrastructure and management. It must be emphasized that courses are taught live by INFAL Advisors and then they remain on the *on demand* modality. Thousands of participants have been recorded (Figure 2).

¹⁶ Original illustration sent by the author.

Figure 2. Virtual classroom: the tool with the greatest IT17 proportion



IT has come to INFAL to stay; there is no turning back. Consequently, it is critical to acquire financial and human resources to ensure that it remains viable. It should be noted that solidarity—a key factor and one that always has had a strong presence in the network—also has been enhanced by the advent of IT, since the latter allows its practice to be multiplied. To conclude, we can say that INFAL, based as it is on horizontal cooperation and supported by the pillars of solidarity and information technology, comprises a mechanism of interaction established among food analysis laboratories of the countries of the Americas in order to strengthen the analytical skills necessary to ensure food safety, and thus contribute to the protection of consumer health and facilitate international trade in food.

17 Original illustration sent by the author.

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PAHO/WHO's strategy to enhance formal network management: a case study

Priscila Almeida Andrade

The interest in promoting structural policy changes and a more influential role in a given social, economic, and political setting increasingly has led players from different sectors to create formal networks. Within this context, this chapter presents the strategy that the Pan American Health Organization/World Health Organization (PAHO/WHO) adopted to enhance the process of shaping and managing a formal network. The first part of the chapter will present some theoretical debates on a type of formal network called “network of policies.” The second part will tackle the process for structuring the Pan-Amazonian Network of Science, Technology, and Innovation in Health (CT&IH). The last session will present a strategy for capacity building the PAHO/WHO Brazil conducted to support the future management of Pan Amazonian Network of CT&IH.

Formal policy networks: theoretical reflections

Networks are strategic mechanisms for promoting the exchange of information, experiences, and knowledge, as well as for contributing to the technical cooperation at the national and international levels in different subject areas (ALBORNOZ; ALFARAZ, 2006). In view of these potentialities, the players have tried¹⁸ to articulate and promote interfaces in their programs, to promote synergies in a specific subject and in a specific geographic area, and to avoid duplication of efforts.

In compliance with GTZ (2007), formal networks are groups related to various institutions or organizations from several sectors, which join together to develop cooperative actions aimed at reaching a given purpose or need.

These networks seek to identify common needs, to harmonize expectations and objectives, and to mobilize political, technical, and financial support. They aim to promote structural changes within a given context, for example, as a result of the action of national, regional and global

¹⁸ Players are construed as natural persons, communities, organizations, groups of interest and countries (HALL; TAYLOR, 2003).

political agendas. In order for these networks' actions to be effective, however, the workplan must extend beyond the isolated expectations and priorities of each participant. It is necessary to develop deep and systematic processes for consensus building, conflict management, and player mobilization, mainly the mobilization of those who are already part of public policy communities.¹⁹

Thus, formal networks are usually created through joint initiatives issued by formal forums, which present different natures and dynamics, such as government agencies, the private sector, nongovernmental organizations, the academy, and international organizations.

In view of such complexity, why do players mobilize and choose to create formal networks? What are the pluses and minuses? What are the threats?

If, on the one hand, formal networks have the advantage of enjoying the possibility to promote sociopolitical transformations, on the other hand, they demand more time to establish the horizontal cooperation and trust relationships among their members. Thus, their creation and management are intrinsically complex, which may threaten their sustainability.

Börzel (1997) and Faria (2003) analyze the dynamics of formal networks. For them, “policy networks” are formal networks that demand and present a high level of formality. According to this theoretical approach, policy networks have a set of relatively stable relations that are interdependent and not hierarchical; they link organizations that share common interests about a public policy and that exchange resources (knowledge, financial resources, human resources, infrastructure, and other resources) and that defend shared interests because they know that cooperation is the best way to reach common objectives.

Thus, “policy networks” require that a set of standards and rules be established, and that principles and values be brought into harmony through an intense and critical process of consensus formation. When this level of compatibilization is reached, the network may become an institution *per se*.²⁰

19 Public policy communities are groups composed of researchers, managers and consultants, that have some common interests regarding certain problems or specific themes. Hence, they create and defend political alternatives and solutions for the questions, according to their institutions, ideas, interests and strategies, which may be equal or not (CARVALHO, 2005).

20 Institutions are defined as a relatively stable set of practices, rules, procedures or formal standards, which define the appropriate behavior certain groups of players (individuals, communities, organizations, groups of interest, countries and other players) in specific situations. Although institution and organization are interchangeable terms in colloquial language, the concept of institution is wider in scope (HALL; TAYLOR, 2003).

According to Carvalho and colleagues (2005) “policy networks” come about through the mobilization of public policy communities. Group members know each other and try to establish ways to collaborate with one another to obtain gains in the interests they defend. Consequently, the relationships established in this group are characterized by a dialectical approach to conflicts and negotiation in search of cooperation.

However, it is not easy to build consensus among institutions with different dynamics and natures. Consider, for example, the difficulties when academic and administrative institutions try to network. The process of negotiating and managing conflicts in policy networks may be facilitated if parties identify and analyze the institutions, ideas, and interests at play. The three “I’s” of public policy analyses are, therefore, fundamental variables to strategically guide processes for building consensus for the formulation of a shared work agenda (ALMEIDA-ANDRADE, 2007).

Institutions determine the action of organizations and, consequently, of the group of individuals that compose them. In addition, the personal experiences of each individual also affect the formulation of ideas.²¹ Thus, the institutional agendas and the individual ideologies promote the formation of what Menicucci and Brasil (2006) have called “filters of interpretation” of network mediators/facilitators. This “interpretation filter,” in turn, has a bearing on which interests are to be defended, influencing the behavior of the mediators in the negotiating process, in terms of the commitment to or rejection of a given line of action.

“Policy network” management suffers from, therefore, the interference of institutional agendas and those of mediators. Mediators strategically examine the set of alternative policies at stake and then choose those that may offer a maximum benefit (for example, policy visibility, mobilization of resources for a specific agenda, etc.). In defense of their priorities, mediators generate conflicts and possible negotiations, which may result in processes of cooperative work, such as the formation and formalization of “policy networks”. Thus, the conflict is part of building a process of cooperation (CARVALHO, 2005).

The theoretical references presented will support the understanding of the degree of complexity in the process for creating a “policy network,” which is illustrated in the next section, as well as understanding the strategy adopted by PAHO/WHO.

21 Ideas are defined as a set of concepts, paradigms, ideologies, values and visions of the world conditioning the interpretation and the behavior of an individual. (Menicucci; Brasil, 2006).

Process of formation of a policy network: the experience of the Pro-PanAmazonian Network of Science, Technology, and Innovation in Health Initiative

The importance of continental Amazon's political, social, economic, and biodiversity aspects and the inequities that exist in this region call for the development of collaborative multisectoral initiatives to attain stronger positions. The political will of Amazon²² countries to promote regional integration through multilateral cooperation organizations such as the Amazon Cooperation Treaty Organization (ACTO) and PAHO/WHO, expands on the possibilities of south-south cooperation for specific purposes. In this regard, the initiative to organize a Pan-Amazonian Network of ST&IH emerges in response to demands from in the scientific (academia) and political (ministries of health) arenas.

In 2003, Brazilian teaching and research institutions joined forces to formally create the Amazonian Multilateral Agreement on Technical and Scientific Cooperation on Health, which was intended to discuss structural issues related to the scientific and technological development of Brazil's Amazon region. This national initiative, which was helped by different players such as the Ministry of Health and the Oswaldo Cruz Foundation (Fiocruz), proposed to create a Pan-Amazonian Network formed by ST&IH institutions as an international cooperation strategy.

Within the political sphere, a meeting of ministers of health and social protection was held in Florianopolis, Brazil, in 2006. At that time, ministers from different Amazonian countries highlighted ST&IH as a political priority for the continental Amazon, recommending the creation of ST&IH cooperative networks involving involved the countries from the Amazon region. ACTO, Fiocruz, and PAHO/WHO were appointed to promote such an initiative in partnership with the Amazonian governments.

Existing alliances among these players, mutual acknowledgement of the aggregate value contributed by collaborative work, and the degree of complementarity among players have promoted the joint mobilization of these partners in the pursuit of political efforts for creating an ST&IH Pan-Amazonian Network.

The outcome of such initiatives was the First Meeting Pro ST&IH Pan-Amazonian Network, held in Manaus, Brazil, in November 2006. This first effort focused more on engaging S&T institutions in the Brazilian Amazon region. It was still necessary to significantly expand the participation to other countries, enlisting the participation of decision-making authority levels

²² Amazon countries that are ACTO members: Bolivia, Brazil, Colombia, Ecuador, Guiana, Peru, Venezuela and Suriname.

(i.e. management) and hands-on institutions (academia and research institutes) within the S&T scope. The formal support of participants in the initiative was expressed through the creation of Rede Pan [Pan Network] (Brazil 2007).

During the Second Meeting Pro ST&IH Pan-Amazonian Network, held in Belém, Brazil, in July 2007, progress was made to widen the participation of representatives from the ministries of health of other Amazon countries. Participants conducted an exercise to identify ST&IH needs in the continental Amazon, and established four large areas of operation for the future Network: environment, development, human resources, and citizenship actions. In addition, a management mechanism for managing the network was proposed, promoting the interface between its management committee²³ and a political forum.²⁴

Despite advances in formally establishing the phases for structuring the network, early on this initiative confronted a significant difficulty in promoting the creation of consensus to build a shared agenda that would focus on specific issues within the ST&IH area.

This may, in part, be attributed to the conceptual discrepancies between the networking process and the complexity of policy networks. Besides, due to the fact that ST&IH represents a cross section of several subject agendas in health, this field demands intense efforts of consensus building in order to define a specific focus for action. This may be illustrated by exemplifying different existing networks that pursue specific actions involving research and/or technology and/or innovation in health, such as:

- The preparation, validation, and analysis of ST&IH indicators;
- S&T management and the fostering of research on health;
- Sistematization of researchers' resúmes;
- Assessment of health technologies;
- Sistematization of scientific evidence for health management;
- Certification of strategic inputs to health;
- Technical and scientific dissemination;
- Information technologies to support health care and permanent education processes.

23 Currently, the Management Committee Pro-Amazonian CT&IH Network is integrated by the ACTO, PAHO/WHO, Fiocruz and the Interim Chairman of the Amazonian Intergovernment Committee for CT&IH. These players wish the C&T institutions from the Amazon countries join the committee.

24 This is the Amazon Intergovernment Committee for CT&IH, which presents the ACTO as the executive secretariat. Each year, a different Amazon country presides over the committee.

In view of this range of opportunities, how can we make sure that we focus on a “policy network” that will operate in ST&IH? How can we ensure that management remains flexible and the inter-relations among the participants remains horizontal? What can we do so that the complexity of the Pan-Amazonian Network management does not render implementation of concrete activities unfeasible? How to promote participatory construction and implementation of a common work agenda?

To contribute to solve these issues, the PAHO/WHO Brazil Country Office organized a training course on network management, adopting the “Pro Pan-Amazonian Network” initiative as a case study, as described in the section below.

Strategies to enhance the process of structuring and monitoring the CT&IH Pan-Amazonian Network: the PAHO/WHO as facilitator

In November 2007, the PAHO/WHO Brazil Country Office conducted a training course on managing networks dealing with health, and used the initiative ST&IH Pan-Amazonian Network as a concrete experience for a case study. The target audience was mediators that participated in the Management Committee for the Pan-Amazonian ST&IH Network and the delegates of the Amazon Intergovernment Committee of ST&IH. This training had the following objectives:

- To promote the conceptual alignment about the meaning and the importance of working in networks;
- To describe the phases for creating and managing networks dealing with health;
- To empower partners to plan and conduct the management of networks dealing with health;
- To promote the exchange of experiences about operations in networks on health;
- To contribute to the creation of a framework among the organizations involved in the initiative “Pan-Amazonian ST&IH Network”;
- To obtain inputs to prepare the workplan for the PAHO/WHO Brazil Country Office in the CT&IH area.

The course was structured for 16 hours of work, using lectures (theoretical presentations and experiences of networks supported by the PAHO/WHO Brazil Country Office) and work groups. The PAHO/WHO consulting team planned the course content, and also participated as

lecturers, moderators, and rapporteurs. These three facilitating agents, as well as team work, were fundamental to promote this technical cooperation activity.

It was up to the speakers to present concepts and/or successful experiences of health networks where PAHO/WHO plays different roles. Moderators promoted debate, seeking to apply concepts and ideas presented during the hands-on sessions where the initiative Pan-Amazonian ST&IH Network was analyzed. The reports sought to systematize discussions, recording the most important questions where consensus was reached or discrepancies remained among the group, as well as the hands-on exercise of the theoretical framework under analysis. Thus, the training program covered the following subjects::

1) Basic concepts:

- Network definition.
- Classification of types of networks (social, formal, and communities of practice);
- Relationship among networks, organizations, and institutions;
- Benefits of formal networks, based on lessons learned;
- Formal network challenges;
- Conditions and factors that influence the success and sustainability of networks; fundamentals and paradigms of the network operation.

2) Operational phases to set up a network:

- Work structure to establish and manage networks;
- Organization process of a network: structures, roles, and functions of its components;
- The role of the facilitator of a network.

3) Characteristics of a network strategic plan:

- Vision, mission, objectives, expected results, and activities.

4) Information and communication in networks:

- Definition and classification of the types of communication in networks (real life and virtual);

- Analysis of advantages and disadvantages of different types of communication in networks;
- Tools available for virtual communication;
- Basic rules for communication in networks;
- Management of technical and scientific information in the Network.

5) Presentation of network experiences:

- Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA).
- ObservaRH Network;
- Network on Investigation of Health Care Systems and Services in the Southern Cone;
- Inter-Agency Health Information Network in Brazil (RIPSA);
- Brazilian Toxicology Network

6) Case Study: analysis of the process to build the ST&IH Pan-Amazonian Network (Work Group):

- Analysis of problems and needs of the continental Amazon in ST&IH;
- Clarification of the work structure of *ST&IH Intergovernment Amazon Committee* and the of the Managing Committee of the *ST&IH Pan-Amazonian Network*;
- Enhancement of the management architecture for the future ST&IH Pan-Amazonian Network;
- Identification of the priority areas where PAHO/WHO must support the process of creation and consolidation of the ST&IH Pan-Amazonian Network.

Final Considerations

The capacity building strategy adopted qualified the debate substantiating it with available evidence on works about health networks. The course also allowed for conceptual and collaborative work experiences to be minimized among participants. Another important outcome was the creation of a biannual work plan for the ST&IH area in the PAHO/WHO

Brazil Country Office that was crafted through a broad participatory process involving strategic partners.

In regard to the case study, the capacity building sessions contributed to create consensus about the work structure that must be established between the future Pan-Amazon ST&IH and the forums of Amazon government interest policies. The future network, therefore, will have a life of its own, Its efforts will be concentrated in the formation of communities of practice to discuss and promote issues specific to the ST&IH area, such as: training researchers, fostering research, and sistematizing and disseminating information and knowledge on the Amazon region. Thus, promoters of this initiative will encourage the conduct of relevant and concrete networking

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SECTION 3:

PAHO/WHO BRAZIL COUNTRY OFFICE ACTION IN TECHNICAL COOPERATION OF NETWORKS



Strategic relations networks for PAHO/WHO Country Office/Brazil technical cooperation

Diego Victoria & Luciana Chagas

Contemporary organizations have sought associations with partners that have objectives in common, in order to achieve them with efficiency and quality. This form of relating with others brings significant innovation to the field of work, making it more collaborative and horizontal, thus allowing the broadening of the scope of operations.

This interactive and shared work posture encourages the creation of collaborative networks capable of expressing innovative ideas and encouraging the appearance of new values, thoughts and attitudes. It also provides broad dissemination of information and the formation of a culture of participation, which are possible thanks to the development of communication and information technologies.

Aligned with this context, PAHO/WHO has been working so as to facilitate the exchange of information, political articulation and the implementation of joint actions together with health stakeholders, with the aim of guaranteeing the health of the population of the Americas and of contributing to their welfare. As such, it seeks to undertake technical cooperation at local and regional levels, aiming to achieve health results with global impact.

For the PAHO/WHO Country Office/Brazil, networking is an opportunity for democratic operations that provide an opening for the participation of a variety of partners and the frequent exchange of information. It also brings an increased guarantee of achieving common and/or complementary objectives by interlinking the stakeholders in the network. The various actions articulated in a planned manner can be much stronger than those developed through a single form of working.

The PAHO/WHO Country Office/Brazil has undertaken a modality of integral technical cooperation in order to reach its strategic positioning in the process of the development of Brazil's National Health System. To this effect, it keeps close relations with its partners through the definition of relations networks involving the participation of more than 290 public, private and non-governmental institutions, in order to achieve a better understanding of each stakeholder's interests. This enables the enhancement of relations, means of communication and the manner of working together.

The context of the work of the PAHO/WHO Country Office/Brazil

PAHO/WHO's technical cooperation has been prepared based on the reference framework defined by the XI WHO General Programme of Work 2006/2015, by the PAHO/WHO Strategic Plan 2008/2015, by the Health Agenda for the Americas, by the Technical Cooperation Strategy for PAHO/WHO and the Federative Republic of Brazil 2008/2012, by the PAHO/WHO Country Office/Brazil Technical Cooperation Work Plan 2008/2009 and by the PAHO/WHO Brazil Institutional Development Plan 2008/2009.

This reference framework focalizes, orients and defines the aim of the technical cooperation to be developed by the Brazil Country Office in the biennium 2008-2009. To this end, it is necessary to define how the work will be done in order to fulfil the objectives in an efficient and effective manner.

Within this context, the PAHO/WHO Country Office/Brazil has developed its Management Model for the period 2008/2012, which enables the Biennial Work Plan 08-09 to be programmed, monitored and evaluated so as to be able to achieve its 53 Office Specific Strategic Expected Results (OSER), its 124 indicators, its 173 activities and its 427 tasks. It also contributes to the monitoring and evaluation of the priorities, modalities and focus areas of the Technical Cooperation Strategy for PAHO/WHO and the Federative Republic of Brazil 2008-2012 and the alignment of the Country Office's human, financial and technical resources defined in the PAHO/WHO Brazil Institutional Development Plan 2008-2009.

In this way, the PAHO/WHO Country Office/Brazil management model seeks to reflect the interaction between work processes, work teams and innovative technical support activities provided by its Technical Units (TU) to the Units of the Representative's Office and the Administration Units, on the politico-strategic and administrative levels, respectively. The model developed is based on a concept of organization in which people must know what the strategic objectives are, dominate the working techniques, know where and how to foster improvements, identify their contribution to the final results and understand the impacts produced by their work.

PAHO/WHO management in Brazil is aimed towards potentiating the initiatives and tendencies of modernization, having as its premises strategic planning and administration; the programming of activities; the monitoring of work processes; the mechanisms of coordination and participation; and the encouragement of innovative action in the management of human, financial, technological and information resources, as well as performance and results evaluation. By

favouring closer relations between the technical staff and the politico-strategic and administrative management of the Country Office, the management of the Organization will enable greater flexibility in allocating and moving people, increasing agility in the provision of technical cooperation services/products and will create favourable conditions for the primacy of efficiency and quality.

Thus, the networks of political, strategic and technical relations of which PAHO/OMS in Brazil is a part enable each member to maintain its independence in relation to the network and the other members, whilst sharing objectives and decisions and contributing towards each stakeholder being able to exercise cooperation and participation.

As the PAHO/WHO Country Office in Brazil undertakes its technical cooperation through its Technical Units, it develops partnerships with a diversity of stakeholders and themes. As a general rule, each TU includes in its relations network public and private entities, collaborating centres, thematic networks, NGOs, other United Nations agencies, private stakeholders, among others. This enables the various PAHO/WHO Brazil relations networks – comprised of the networks of the Representative's Office, and those of the TUs and the Administration area – to relate with the principal categories of strategic institutional stakeholders::

- Ministry of Health:
 - Ministry of Health and its secretariats/departments.
 - National Supplementary Health Agency – ANS.
 - National Health Surveillance Agency – ANVISA.
 - Oswaldo Cruz Foundation – FIOCRUZ.
 - National Health Foundation – FUNASA.
 - National Cancer Institute – INCA.
 - Ministry of Health's Department of International Health Matters – AISA
 - Assessoria Internacional em Saúde do Ministério da Saúde – AISA.
- Other Ministries:
 - Ministry for Foreign Affairs/ABC.
 - Ministries of Education, Cities, Environment, among others
- Regional and Sub-regional Contacts.
 - MERCOSUL.
 - Amazon Cooperation Treaty Organization – ACTO.
 - African Portuguese-speaking Countries – PALOP

Section 3:

PAHO/WHO Brazil Country Office action in technical cooperation of networks

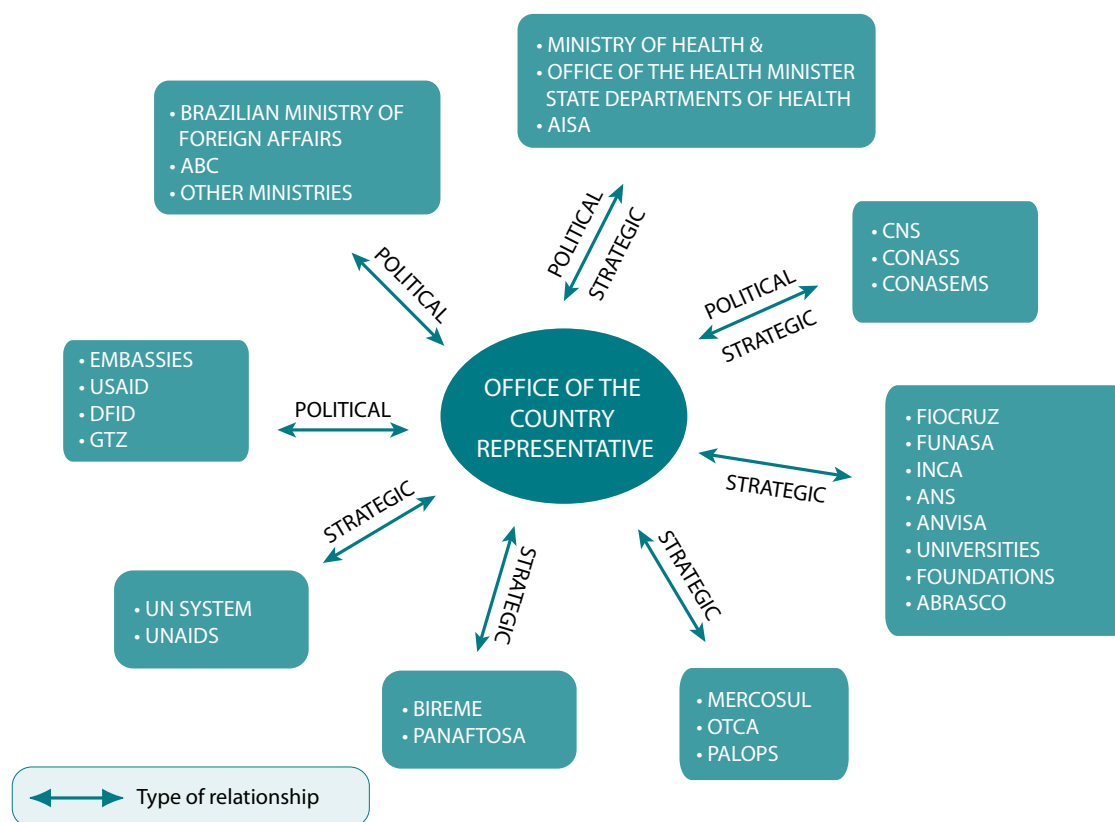
- Embassies and Bilateral Cooperation Agencies: USAID, DFID, GTZ, among others.
- WHO Collaborating Centres.
- PAHO/WHO Reference Centres in Brazil:
 - BIREME.
 - PANAFTOSA.
- Non-Governmental Organizations.
- National Health Councils:
 - National Health Council – CNS.
 - National Council of State Health Secretaries – CONASS.
 - National Council of Municipal Health Secretaries – CONASEMS.
- Health Departments:
 - State Health Departments.
 - Municipal Health Departments.
- United Nations Agencies.
- Federal Universities and Associations:
 - UFMG, UFBA, UFRJ, USP, UnB, UFV etc.
 - Brazilian Postgraduate Collective Health Association – ABRASCO and other associations

These stakeholders contribute towards the achievement of health results by interchanging experiences and actions in diverse areas. In this way, they contribute towards PAHO/WHO technical cooperation taking place in an integral, planned and participative way, as well as attaining its strategic position in the process of the development of Brazil's National Health System.

PAHO/WHO's networks of relationships in Brazil

The PAHO/WHO Brazil Country Office develops politico-strategic relationships with the key players in the health sector. Based on these relationships the technical units establish partnerships and develop a network of techno-strategic relations at the operational level, contributing to the accomplishment of the results desired by the Organization as a whole.

I. The PAHO/WHO Brazil Country Office's network of politico-strategic relationships



a) Relationship with Ministry of Health, State Departments of Health and AISA

This relationship is political and strategic. It is grounded in the management of the priorities set by the PAHO/WHO Strategy for Technical Cooperation with Brazil and the “More Health” Program, requiring permanent interpretation for action on the priorities, focuses and modalities of the Technical Cooperation Strategy and the guidelines, metrics and priority targets of “More Health”, so as to ensure that TC between the Ministry of Health and PAHO/WHO is executed within the context of this framework and that we are able to make a genuine contribution to achievement of the country-wide, region-wide and global health objectives..

b) Relationship with CNS, CONASS and CONASEMS

This relationship is strategic, aiming basically to guarantee the technical positioning of our TC in processes leading to agreements and pacts (Pact for Life, Management Pact and Pact in Defense of the SUS), as the mechanism for articulating relations with the federal, state and municipal agencies that make up the SUS in respect of health policies, plans and programs.

c) Relationship with Ministry of Foreign Affairs

This is a political and strategic relationship, which aims to ensure that our TC responds to the PAHO/WHO Strategy for Technical Cooperation with Brazil and to the Brazilian government's policies for cooperation in health, since both are managed by different instances of the Foreign Ministry, especially the Department of Human Rights & Social Themes, the Brazilian Cooperation Agency (ABC), and the Ministry of Health's Office of International Affairs (AISA). The relationship is characterized by maintenance of a permanent dialogue with these instances, as we supply and receive information relating to international processes in health and diplomacy, health and trade, and health and regional integration agreements for development and global health protection.

d) Relationship with the United Nations System in Brazil

This relationship is strategic and is part of our political and technical intervention in the United Nations Country Team (UNCT) and the various participation mechanisms that exist, starting from administration of our Organization's vision and mission as the specialized agency established by the United Nations to improve health, and from the priorities, modalities and focuses of the PAHO/WHO Strategy for Technical Cooperation with Brazil.

e) Relationship with regional integration processes in South America and other regions

This relationship is strategic and technical. Cooperation with Mercosur is conducted in accordance with Cooperation Agreement 48, which is being executed as a TC process. We will strengthen our relationship with ACTO by means of a Common Cooperation Strategy (CCS) and permanent dialogue with the ACTO Secretariat to formalize and build jointly executed TC processes.

With regard to the PALOP, we will continue with the processes of political and strategic negotiations in the context of the CPLP and triangulation with WHO via AFRO and AMRO to support cooperation by Brazil with these countries in the health sector, followed by a stage involving the elaboration of projects within the framework of TCC.

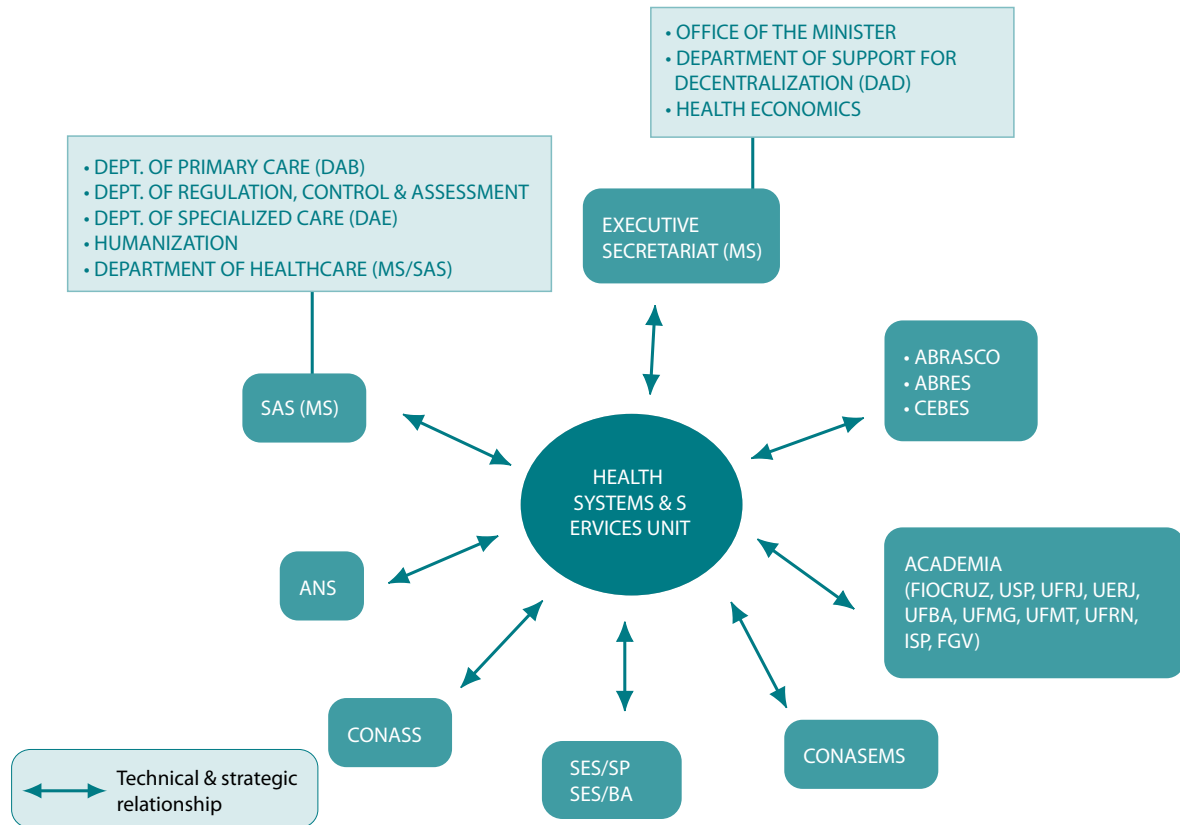
f) Relationship with other institutions in the SUS

This relationship is strategic and technical, considering our relations via Technical Cooperation Agreements with Fiocruz, Funasa, INCA, ANS and ANVISA, and permanent collaboration with universities via letters of agreement and with NGOs such as ABRASCO and AIDIS.

g) Relationship with embassies and bilateral cooperation agencies

Our relationship with embassies is strategic, especially with regard to regional integration processes and leadership and participation in the World Health Assembly and the Directive Council of PAHO. Our relationship with bilateral cooperation agencies is technical, given that we execute voluntary contributions from the governments of the United States, United Kingdom and Japan, and that we chair the UN Thematic Working Group on HIV/AIDS.

II. The Health Systems & Services Technical Unit's network of techno-strategic relationships



a) Ministry of Health, Department of Healthcare (MS/SAS)

Together with the Executive Secretariat, SAS is the Unit's main interlocutor in the Ministry of Health. The technical relationship is based on the implementation of two TCA:

- TCA 43, managed directly with the Office of the SAS Department Head and including initiatives taken under the National Humanization Policy
- TCA 49, with DAB

Besides the specific objects contemplated by the TCA, SAS is a highly relevant interlocutor on various themes of strategic importance to the Unit, such as mechanisms for financing health services, regulation, control and assessment, and intermediate- and high-complexity care.

b) Ministry of Health, Executive Secretariat

The Executive Secretariat is this Unit's other main interlocutor alongside SAS. TC activities are articulated by three TCA:

- TCA 50, covering themes of national strategic relevance such as operationalizing and implementing the “More Health” Program and organizing healthcare in border areas
- TCA 39, with DAD, covering implementation of the Pact
- TCA 45, covering themes related to health economics

With regard to strategic themes the relationship with the Executive Secretariat is particularly important because it deals with top priorities for the Ministry of Health such as the proposed new networks (TEIAS) and discussion of the Ministry's institutional and organizational development strategies.

c) National Supplementary Health Agency (ANS)

TC activities with ANS are embodied by implementation of TCA 42, which covers an articulated work Plan geared to institutional capacity building and increased integration between ANS and other SUS players.

From the strategic standpoint the relationship with ANS is important to this Technical Unit because as the supplementary health regulator it plays a key role in the Brazilian healthcare system, especially in metropolitan areas where large segments of the population are affiliated to private health plans.

d) São Paulo (SP) & Bahia (BA) State Departments of Health

The SP and BA State Departments of Health have expressed interest in the theme Essential Functions in Public Health (FESP) and formally requested authorization from the Ministry of Health's Executive Secretariat to sign a TCA with PAHO/WHO covering a work plan. Both states

stand out in the field of Brazilian public health, not only for their size and large populations but also because they are developing processes to enhance decentralization mechanisms.

From the strategic standpoint TC activities with these states are particularly relevant as they have the potential to become “laboratories” for experimenting with practices and instruments of innovation in the management of health systems and services.

e) CONASS & CONASEMS

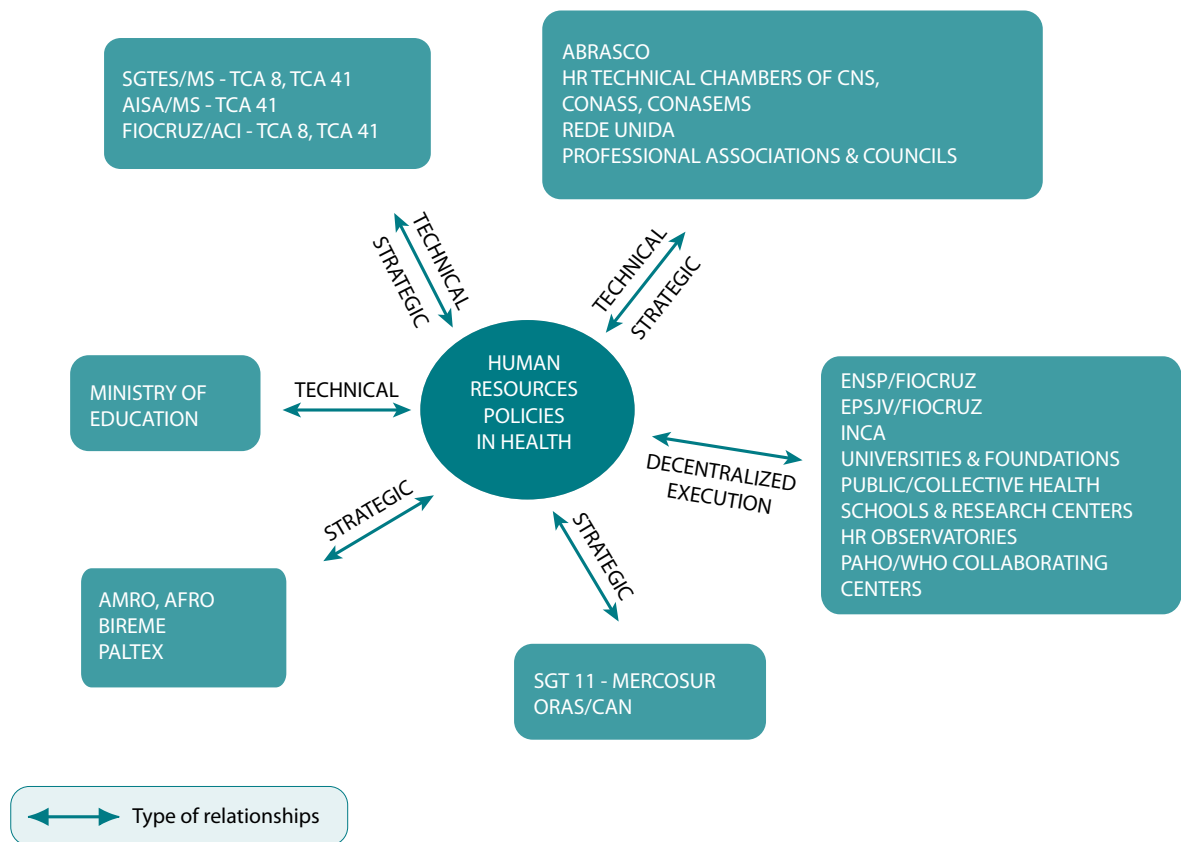
These National Councils are authoritative and competent interlocutors to represent the principal issues relating to SUS management at the state and municipal levels respectively.

The Technical Unit maintains TC relations with these institutions to offer support and institutional backing, embodied in joint organization or participation in events, elaboration of documents, discussion of relevant themes etc. A key focus is cooperation with CONASS on capacity building in Essential Functions in Public Health (FESP).

f) Scientific associations & academic centers

The Technical Unit’s relationship with these institutions is fundamental for several reasons. The first is that the relationship guarantees the coherence of our TC activities and their alignment with Brazilian scientific production in the field of public health. Secondly, the availability and technical excellence of these institutions constitute a solid foundation on which to build partnerships for the development of technical instruments and tools or other innovative and up-to-date intellectual products for effective management of the SUS..

III. The Human Resources Policies in Health Technical Unit's network of techno-strategic relationships



The network contemplates a large number of institutions involved in national coordination and execution of decentralized projects, with funding being provided under TCA 08 and TCA 41.

a) Management of cooperation in the context of TCA 8

The Ministry of Health's Department of Health Labor & Education Management (SGTES/MS) is the Unit's interlocutor for the execution of TCA 8, which covers the provision of support for the national policy of health labor and education management.

The relationship has several aspects relating to the various sectors covered by the TCA 8 work plan, as follows:

- Support for implementation of PRO-SAÚDE, a national program of incentives for curriculum reorientation to emphasize primary care, based on letters of agreement with schools of medicine, nursing and dentistry. The number of schools will increase from 89 to 140 in 2008-09 and other health professions will be included.
- Support for implementation of TELESSAÚDE, a national program of health telematics with 10 reference centers covered by letters of agreement in the current stage (pilot).
- Strengthening and expansion of Redes Colaborativas (collaborative networks), a national program of incentives for the development of information technology, education and labor management in health, comprising projects (32 letters of agreement) with health education and research centers hosting network workstations.
- Support for the formulation and oversight of national policies and incentives for state and municipal policies in health regulation and labor management, provided through support for the activities of the national commissions of the SUS/PROGESUS Labor Management & Education Qualification & Structuring Program, the SUS Permanent National Negotiation Panel, the SUS Decasualization Program and the MERCOSUR Permanent Labor Forum.

Technical and managerial capacity building in health, involving letters of agreement with educational institutions to conduct decentralized training, specialization and master's degree courses in the context of agreements between the Ministry and other SUS agencies. The number of training projects currently in progress is 70.

In addition to the specific projects comprised in each of the above-mentioned national programs, TCA 8 also supports their national and decentralized coordination under letters of agreement drawn up specifically for this purpose.

The coordination of TCA 8 also requires TC activities conducted directly in respect of shared management with SGTES/MS with other units of the Ministry of Health (SAS, SVS, ANVISA, INCA, ENSP/FIOCRUZ etc); other instances of the SUS (such as the Technical Chambers of CNS, CONASS and CONASEMS); the Ministry of Education, universities and their supporting foundations; public or collective health schools and centers; HR observatories; and professional associations (ABRASCO, Rede Unida, ABEM, ABEn, CEBES etc).

In the internal sphere, cooperation requirements under TCA 8 include practically all the Technical Units in Brazil as well as BIREME and several technical units at Headquarters. The interface between TCA 8 and TCA 41 also requires articulation with other Country Offices in the region and, as programmed in the Biennial Work Plan 08-09, with the PALOP via AFRO.

b) Management of cooperation in the context of TCA 41

This TCA covers the International Health Cooperation Program, which is designed to strengthen cooperation between Brazil and other WHO member-states, especially South America and the PALOP, within the framework of south-south cooperation and triangulation by PAHO/WHO.

The interlocutor in the Ministry of Health is Fundação Oswaldo Cruz, via its Office of International Cooperation (ACI/FIOCRUZ) and the Ministry of Health's Office of International Health Affairs (AISA/MS). The first SA, designed to support projects in the HR component, includes SGTES/MS in the Programming Committee, which is the coordinating instance for TCA 41.

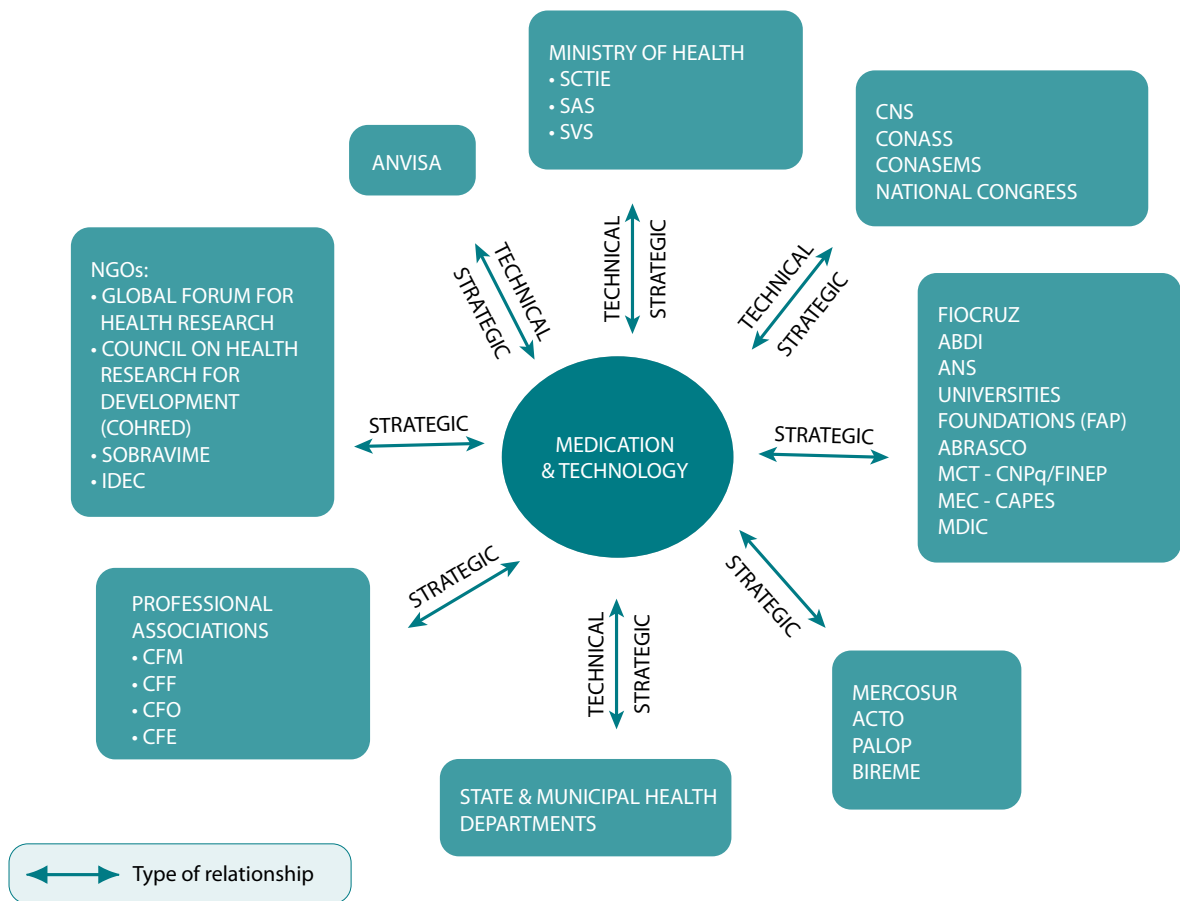
The first SA to TCA 41 has a budget of R\$14 million, already transferred to PAHO/WHO by MS, for projects indicated in the work plan and grouped into the following components:

- Support for the Program of Advanced Qualification in Intersectoral Health Management
- Support for the mobilization of national collaborative networks for international cooperation
- Support for the constitution of international consortia of international technical cooperation networks for the development of human resources in health

Twenty projects distributed in these components have been approved and are currently being executed. Their technical coordination is shared between the Technical Units of PAHO/WHO Brazil and the national counterparts responsible for these international cooperation initiatives (ENSP, EPSJV, ACI, ICICT) and Escola de Governo em Saúde/Núcleo Federal (EGS/NF), all techno-scientific units of FIOCRUZ, and NESCON/UFMG. Execution of these projects includes articulation and participation by institutions in several countries of the region mobilized by the respective PAHO/WHO Country Offices, and the support and orientation of PAHO/WHO's regional programs.

Cooperation with the PALOP is already part of some projects covered by 1 SA/TCA 41 and will be extended and intensified during 2008-09 with a new SA and formalization of cooperation protocols between WHO's regional offices (AMRO and AFRO) and intergovernmental entities PALOP and CPLP.

IV. The Medication & Technology Technical Unit's network of techno-strategic relationships



a) Ministry of Health (MS: SCTIE, SAS, SVS, SGER, SGTES) – TCA 24, TCA 47, TCA 45/4SA

- Technical and strategic relationship via support for policies covering science, technology and innovation, medication and pharmaceutical assistance, and management of the industrial complex and innovation in health; formulation and implementation of policies for primary and specialized care, observing the principles of the SUS; strengthening and expansion of epidemiological surveillance, including national disease prevention and control programs; formulation and implementation of the SUS's policy for democratic

participatory management and strengthening of social participation; training and qualification of health workers and professional regulation in the SUS.

b) ANVISA – TCA 37

- Strategic relationship involving cooperation and technical assistance to facilitate the implementation of actions to reorganize the National Health Surveillance System under the aegis of TCA 37, through projects relating to the protection and defense of collective health developed by various areas of ANVISA.

c) Empresa Brasileira de Hemoderivados e Biotecnologia (Hemobrás) – TCA 51

Technical and strategic cooperation in support of upgrades to the Brazilian National Blood Products Policy, which promotes joint activities in basic research, applied research, and human resources (management and training). The focus for this partnership is on activities intrinsic to the production of blood products and to production of biological products obtained by biotechnology, including reagents in the area of hemotherapy.

d) National Health Council (CNS), National Council of State Health Secretaries (CONASS) & National Council of Municipal Health Secretaries (CONASEMS) – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support: formulation and control of execution of the national health policy in the federal sphere, and criteria for the definition of standards and parameters of care in the field of medication and technology; normative processes in the SUS, analyzing and deliberating on medication and technology issues via resolutions to be adopted by the Ministry of Health; and promotion of universal and equitable access to medication and technology in health services, so as to assure the integrality of actions geared to health system enhancement, from prevention to rehabilitation, focusing on information exchange and technical cooperation.

e) State Health Departments & Municipal Health Departments – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support the process of decentralizing actions for health promotion, prevention and rehabilitation, and production and use of scientific and technological knowledge, assuring universal and equitable access to services, especially medication and technology.

f) National Health Agency (ANS) – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support the promotion and defense of the public interest in supplementary healthcare and regulation of operators, including issues in relations with providers and consumers of medication and technology, contributing to the development of health actions in Brazil.

g) National Congress – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support activities geared to supplying the needs of the population via discussion and approval of proposals for the economic and social areas, especially in the field of policies for medication, pharmaceutical assistance and technology, as well as proper use of tax revenue by central government.

h) Ministry of Education (MEC), Ministry of Science & Technology (MCT), Ministry of Development, Industry & Trade (MDIC), National Council for Scientific & Technological Development (CNPq), research foundations at federal, state, municipal and private universities, ABRASCO, Ministry of Education Faculty Development Program (CAPES), National Technology & Innovation Investment Agency (FINEP), FIOCRUZ, Brazilian Industrial Development Agency (ABDI) – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support: decentralized implementation of the National Agenda for Health Research so as to produce knowledge in accordance with the priorities of the SUS; decentralized implementation of the National Policy for Science, Technology & Innovation in Health (ST&I/H), strengthening state health research systems in all 27 states of Brazil; training of researchers; south-south cooperation between Brazil and other developing countries (Amazon countries and PALOP) by supporting the training of researchers in

priority areas for the countries involved; the creation of national health research networks, development of multicentric research, and funding for S&T research; public-private partnerships for the development of products prioritized by the SUS; implementation of the Pan Amazon ST&I/H Network and triangulation of technical cooperation with African countries in ST&I/H (HR, education and training, strengthening of research institutions and graduate programs in Amazon countries and PALOP); and national and regional development of technology, facilitating access to essential medication by other countries in the region. Strategic relationship with key players for implementation of Brazil's Industrial, Technological & Trade Policy (PITCE). This relationship is crucial to support for implementation of the National Policy for Science, Technology & Innovation in Health and the National Biotechnology Policy, particularly with regard to strengthening the national health-related production complex in biotechnology, pharmaceuticals and medical and hospital equipment.

i) Global Forum for Health Research, Council on Health Research for Development, Brazilian Society for Drug Surveillance (SOBRAVIME), Brazilian Consumer Association (IDEC), MERCOSUR, ACTO, BIREME – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to align global, regional, subregional and national priorities in health research and strategies in the field of ST&I/H; contribute via analysis and interventions to the construction of medication policy in accordance with the guidelines of WHO, PAHO and networks for the promotion of rational medical drug use on all continents; support the promotion of consumer rights, consumer education and awareness raising, defense of consumer rights and ethics in consumer relations, with total political and economic independence; support the process of regional economic integration aiming at the creation of a common market and its basic goals as stated in Art. 1 of the Treaty of Asunción; adopt a common external tariff (CET); support macroeconomic policy coordination; support free trade in services and free circulation of labor and capital; implement the Pan Amazon ST&I/H Network; and support implementation of the thematic Virtual Health Library (BVS) of the Pan Amazon ST&I/H Network as well as the national ST&I/H BVSs coordinated by the Ministry of Health's Department of Science & Technology (DECIT).

j) Federal Council of Medicine (CFM), Federal Council of Pharmacy (CFF), Federal Council of Dentistry (CFO), Federal Council of Nursing (CFE), Federal Council of Nutrition, Federal Council of Physical Therapy – TCA 24, TCA 37, TCA 45/4SA, TCA 47, TCA 51

- Strategic relationship to support promotion of the rational use of medication as an integral part of public policy in Brazil, observing its multiprofessional and intersectoral characteristics in accordance with the resolutions of the National Committee for Promotion of the Rational Use of Medication.

V. The Surveillance, Prevention & Control of Communicable Diseases Technical Unit's network of techno-strategic relationships



a) Relationship with state health departments

This Technical Unit promotes technical/strategic cooperation with the Ministry of Health's Department of Health Surveillance (SVS/MS), in actions of disease surveillance, prevention and control including national coordination of relevant programs such as prevention and control of communicable diseases and AIDS, dengue fever, malaria, viral hepatitis, leprosy and tuberculosis, among others, as well as investigation of and response to outbreaks of nationally relevant diseases. The Unit also provides technical support to the National Immunization Program (PNI), the national network of public health laboratories and environmental health surveillance activities, in addition to strengthening national animal health and food-transmitted disease prevention programs.

Another important area in which TC by this Unit takes place is the establishment of systems for information and analysis enabling the nation's public health system to be monitored and for use in formulating, implementing and evaluating actions to prevent control of diseases and risks to health, setting priorities, and organizing health services and actions geared to optimization of the SUS.

TCA are an important financial support for the development of technical/strategic cooperation with SVS. In our case they comprise TCA 11 (reduction of *Aedes aegypti* breeding and incidence of dengue fever), TCA 32 (control of tuberculosis), TCA 35 (technical assistance for planning, development and evaluation of actions and projects in the Epidemiological & Environmental Health Surveillance Program).

b) SES, SMS

This relationship is technical and strategic. It focuses on border states and municipalities, mainly for cross-border animal disease control (e.g. foot-and-mouth) and veterinary public health.

c) Relationship with UN agencies and other international organizations (FAO, IICA) and PAHO/WHO Collaborating Centers (Panaftosa, Panalimentos, Panzoonoses)

Support and technical cooperation with regard to regional and subregional priorities in zoonoses, animal health and food safety and innocuousness.

d) Relationship with the Ministry of Agriculture & Supply

Technical and strategic relationship, mainly with the Department of Agricultural Defense (zoonoses in production animals and food safety via the national animal product inspection service) and the Department for International Relations in Agribusiness, specifically with regard to the Codex Alimentarius.

e) Relationship with ANVISA

Technical relationship based on support and cooperation with activities executed, such as courses and other technical and scientific events, research on disease outbreaks, and creation of national networks on food innocuousness. Financial execution is covered by TCA 37 (Antimicrobial Resistance, Control of Hospital-Acquired Infections & Patient Safety).

f) Relationship with CCM (Country Coordination Mechanism – Global Fund to Fight AIDS, Tuberculosis & Malaria)

Support for the presentation of national proposals to fund contributions to the fight against AIDS, tuberculosis and malaria, identifying the specific priorities of each program and agreeing a strategy based on the strengths of the various stakeholders, as well as identifying available sources of funding to operationalize the strategy based on existing support.

g) Relationship with ACTO

Technical assistance for ACTO in developing regional initiatives to monitor, control and provide care for communicable diseases.

h) Relationship with USAID

Technical support for:

- Project involving technical and financial cooperation to strengthen tuberculosis control activities under the DOTS Strategy, with priority for expansion of DOTS in Rio de Janeiro

and São Paulo, Surveillance of Antituberculosis Drug Resistance in six states of Brazil, and Supervised Treatment of patients with TB/HIV in Rio de Janeiro and São Paulo

- Project to control malaria for RAVREDA. USAID is the funding agency for RAVREDA (Amazon Network for the Surveillance of Antimalarial Drug Resistance). Other partners are also part of RAVREDA, in which PAHO/WHO coordinates and is responsible for technical assistance to countries together with CDC, USP (United States Pharmacopoeia), MSH (Management Sciences for Health) and Links Media.

i) Relationship with FIOCRUZ

Several of FIOCRUZ's departments are PAHO and WHO Collaborating Centers thanks to its strong capabilities in research on communicable diseases. The Unit works with them in several specific areas via WHO/TDR projects and TCA 35.

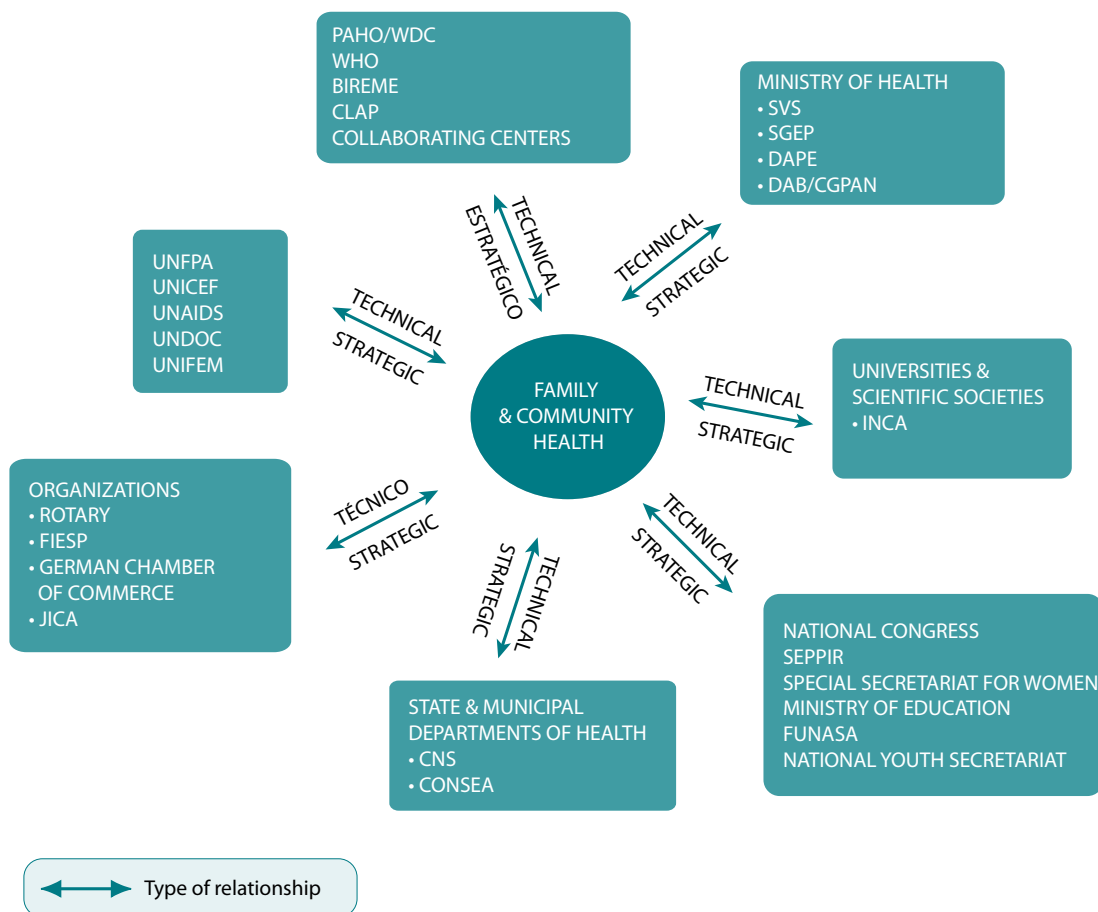
j) Relationship with Brazilian Tropical Medicine Society (SBMT)

The main focus for the relationship with SBMT is technical support for national and international events organized by the Society, especially its annual conference.

k) Relationship with Ministry of Health's Department of Science, Technology & Strategic Inputs (SCTIE/MS)

The Unit participates in aspects of technical assistance with the formulation, implementation and evaluation of the National Policy for ST&I/H in respect of communicable disease control, including technical cooperation in vaccines, immunobiological products and other related inputs, as an integral part of the National Health Policy.

VI. The Family & Community Health Technical Unit's network of techno-strategic relationships



a) Relationship with Ministry of Health

This relationship is the hub for cooperation via PAHO/WHO's technical component, local partnerships in Brazil and support at the regional and global levels. The Unit works with the following sectors and departments of the Ministry:

- The Department of Strategic & Programmatic Actions (DAPE), responsible for most lifecycle programs (children, adolescents, the elderly, men and women), and programs relating to care for the disabled, mental health and prison health. For all these programs we operate under a Supplementary Agreement to TCA 43, drafted directly with us and

defining all the actions for each program as well as the type of support required from PAHO/WHO in the sphere of technical cooperation.

- The Department of Primary Care's Office of Food & Nutrition Policy (CGPAN), responsible for actions relating to nutrition, such as promotion of a healthy diet, prevention and control of food-related disease, and food and nutrition surveillance. Technical cooperation by PAHO/WHO is provided under the aegis of TCA 49.

b) Relationship with state and municipal departments of health

The Unit's relationship with state and municipal departments of health may be technical for specific issues but it is much more strategic with regard to cooperation on decentralization in the tripartite joint management commission and negotiation of agreements. The Country Office decentralizes TC via TCA with the states. It is above all through this local cooperation, which is in turn aligned with national policies, that our work in TC is able to develop innovative instruments and proposals, and creative projects capable of improving the quality of life for the overall population. Examples include an interagency project on human safety in a city in São Paulo State, and the future International Center for Training & Knowledge Management in Adolescent Health for Latin America and the PALOP.

c) Relationship with universities and scientific societies

Largely technical but also political in situations where these segments have significant potential to influence political decisions. Partnering with academia is highly important to the process of building new knowledge bases and gathering evidence on health and diseases. The Unit therefore partners with universities in various parts of Brazil on themes such as child and adolescent health.

d) Relationship with the UN system

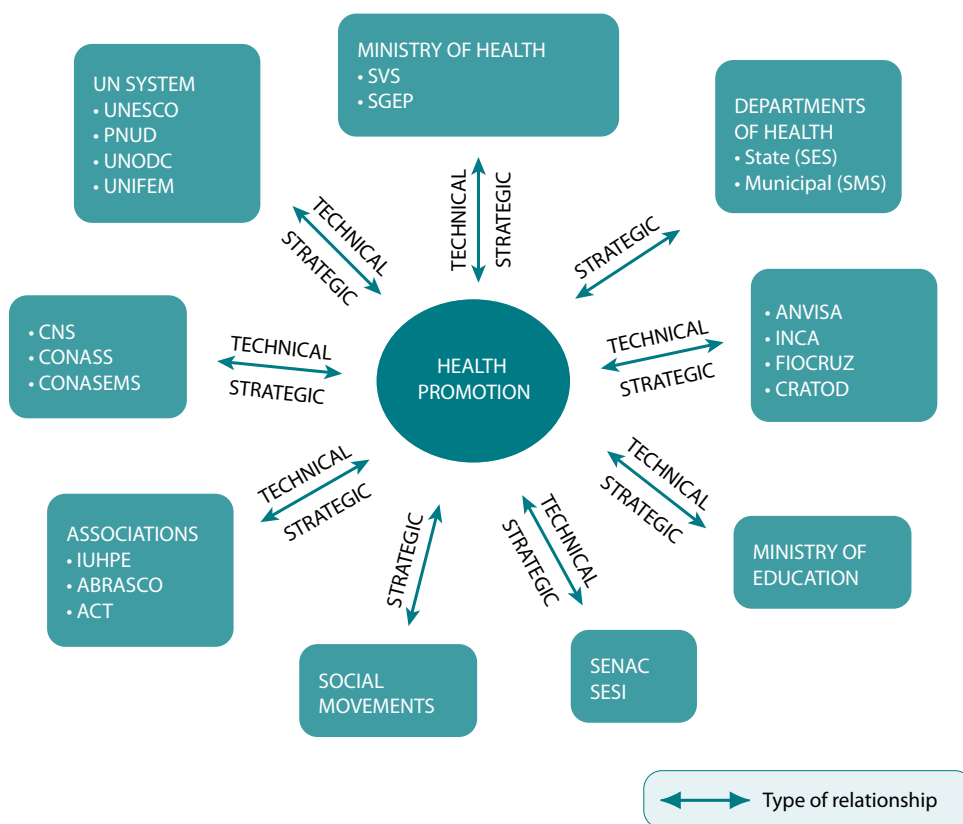
The relationship with the UN system is technical in the technical groups (TG) on gender and race and HIV/AIDS, but includes a significant strategic component insofar as it involves advocacy for PAHO/WHO's positions in the interagency context. This Unit's participation in TG meetings is intense, especially in formulating joint proposals such as the human safety project for a city in São Paulo State, in which four UN agencies are involved (PAHO/WHO, UNFPA, UNICEF and

UNESCO). The links in gender and race are among the strongest, because of the importance of Brazilian groups in this sector.

e) Relationships with other organizations

Organizations such as Rotary, FIESP, the German Chamber of Commerce in Brazil, bilateral cooperation with JICA and NGOs are a strategic focus involving partnerships at different levels. This is evidenced by the interest of these partners in supporting the adolescent care training center in São Paulo as well as other initiatives. For example, JICA is funding the human safety project, and other organizations are strongly interested in supporting specific actions.

VII. The Health Promotion Technical Unit's network of techno-strategic relationships



a) Strategic relationship with Ministry of Health, SVS, SGEP

This relationship is technical as well as strategic. It is grounded in application of policy and programmatic lines with counterparties who are strategically important both for the role they play in the SUS and in terms of the execution of projects, programs and TCA. TCA 44 and TCA 35 are part of this work. The counterparties give the Unit meaning because they are responsible for health promotion in Brazil. SVS has the national program, while SGEP is in charge of everything that relates to community participation, popular education and social control.

b) Relationship with departments of health

This relationship is strategic and aims to prioritize certain states and cities where the main TC programs are carried out, including Faces, Voices & Places (FVP), Healthy Cities, and Tobacco Control, setting an example to other states and cities. Mutually beneficial cooperation agreements have been established with some of the states, intensifying the work and expected to produce clearly specified results.

c) Relationship with decentralized institutions: ANVISA, INCA, CRATOD, FIOCRUZ

This relationship is strategic and technical, mainly because of the institutions' strategic importance to public health in Brazil. Their clearly defined functions and vital importance are exemplified by ANVISA, the Ministry of Health's regulator and normative body, with a key role in tobacco control including regulation of aspects of sales, advertising, labeling and product composition. PAHO/WHO's TC with all these institutions includes activities, projects and letters of agreement in their respective fields. INCA is a Collaborating Center in the area of tobacco. CLAVES (FIOCRUZ) has begun the process of joining the group of Collaborating Centers. CRATOD is the key institution for execution of the Bloomberg demonstration project in the city of São Paulo.

d) Relationship with Ministry of Education

This relationship is basically strategic, focusing on a project to promote health in schools. Some activities are executed jointly with MS to strengthen this component.

e) Relationship with private-sector institutions: SESI, SENAC

This relationship is strategic and technical, since the institutions in question are strategic to the private sector in the areas of industry (SESI) and commerce (SENAC). We have worked with SESI for a long time, focusing on research and several important publications. It has just been named a Collaborating Center in the health field precisely because of its experience in working with industry.

f) Relationship with social movements

Because social participation is a strategic component of health promotion, we work with social movements and other civil society groups to promote projects designed to help them organize, increase their empowerment, and above all raise awareness of health and citizenship issues. Several initiatives support the achievement of this objective, focusing mainly on improving the health of indigenous communities, blacks, gypsies, GLBT, slum dwellers, and vulnerable communities, among others. These activities are conducted under the aegis of TCA 44.

g) Relationship with academic institutions, associations & NGOs, such as IUHPE, ABRASCO, ACT, CEPEDOC

We have technical and strategic relationships with these institutions, which bring together professionals from various sectors of public health. ABRASCO is the largest network of professionals in collective health. IUHPE's members are committed to promoting health and health education. ACT plays a key role in promotion and advocacy relating to tobacco control and to the Ministry of Health's important program in this sector. CEPEDOC, which has just been named a PAHO/WHO Collaborating Center for the promotion of healthy cities and health promotion, has done important work in support of PAHO/WHO's initiatives and this Unit in particular.

h) Relationship with main councils: CNS, CONASS, CONASEMS

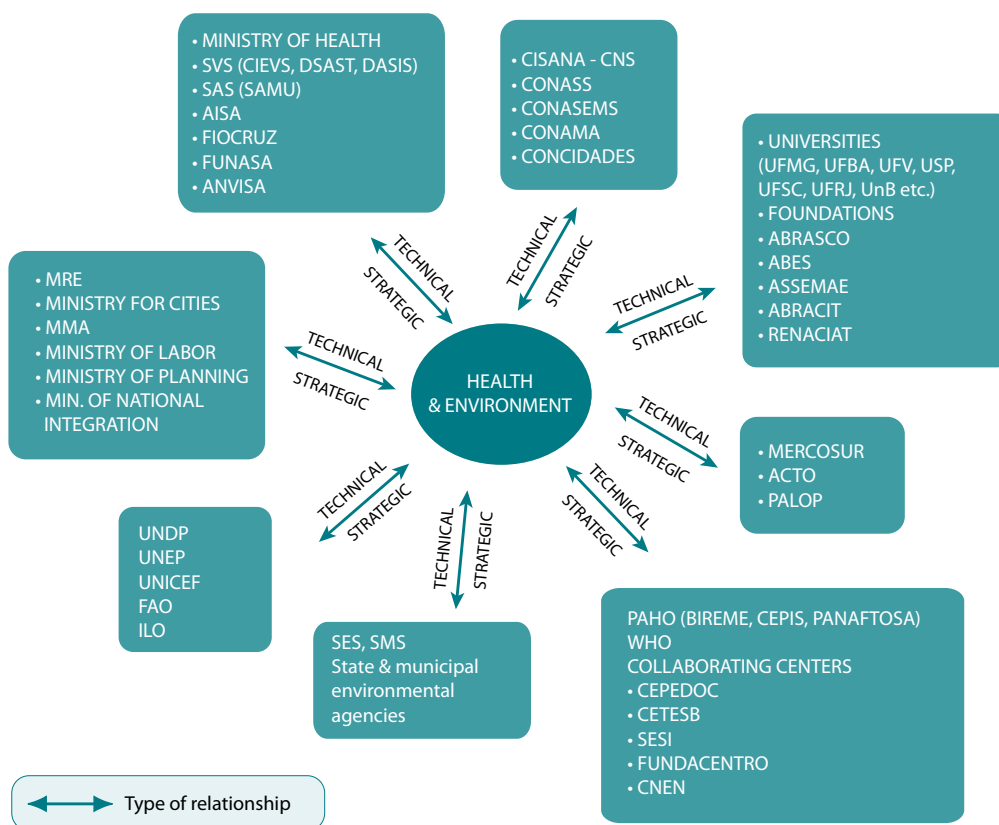
Each of these councils corresponds to a tier of government and the relationship with all three is strategic. However, our work with them also involves some technical projects, mainly relating to motivation and advocacy. Examples include priority projects in tobacco and violence control, Healthy Cities, Health Promoting Schools, and FVP. CNS enables civil society organizations to

put social control into practice, converting the community into a manager of the system. Our cooperation with CNS takes place under TCA 23.

i) Relationship with different agencies in the UN system

An important task of the Unit has been to foster the relationship with other UN agencies, especially to promote synergies and complementarities in lines of action or concrete projects. We have just finalized a project with UNDP to prevent gun violence. This project led to the creation of a thematic working group on violence. Our relationship with UNESCO includes mutual support in school health and violence. The same applies to UNODC and UNIFEM.

VIII. The Health & Environment Technical Unit's network of techno-strategic relationships



a) In the field of environmental and occupational health

The Ministry of Health's key environmental health activities are conducted by the Department of Health Surveillance (SVS), under the responsibility of technical staff who specialize in environmental and occupational health. They comprise the production, integration, processing and interpretation of information to produce knowledge of existing health problems linked to environmental factors, and to support decision making and execution of activities related to promotion, prevention, control and evaluation.

In 2005 the MS introduced operating rules for the National Environmental Health Surveillance Subsystem. Its functions include coordinating, evaluating, planning, monitoring, inspecting and overseeing surveillance activities related to disease and risks to health from water for human consumption, air and soil contamination, natural disasters, environmental contaminants and chemical substances, accidents with hazardous products, effects of physical factors, and workplace conditions.

This work involves technical cooperation with several universities that have experience in the theme, such as the University of São Paulo (USP), the Federal Universities of Bahia (UFBA), Minas Gerais (UFMG), Rio de Janeiro (UFRJ) and Viçosa (UFV), the University of Brasília, and the University of Campinas (Unicamp), among others.

Environmental health surveillance activities are conducted in articulation with several sectors of the MS, such as the Departments of Toxicology (GGTOX/ANVISA) and Technology in Health Services (GGTES/ANVISA), with CESTH and ENSP at FIOCRUZ, and with networks and associations such as RENACIAT, ABRACIT and the Brazilian Toxicology Society (SBTOX).

In occupational health, PAHO/WHO's cooperation with the Ministry of Health is allied with the efforts of local associations and unions, as well as other international cooperation agencies such as the ILO, and other ministries such as Labor and Social Security.

The strategic alliance with the MS is strengthened by TCA 35, signed with SVS, TCA 37 with ANVISA and TCA 38 with FUNASA, for the implementation of environmental and occupational health programs.

b) In the field of basic and environmental sanitation

The mission of the Ministry for Cities, created in January 2003, is to formulate and implement the government's urban development policy and sectoral policies for housing, environmental sanitation, mass transit and urban traffic, especially in metropolitan areas. Decree 14,445, signed in January 2007, establishes guidelines for the national basic sanitation policy.

The main activities of the Ministry for Cities in the sphere of information are the National Sanitation System (SNIS) and the National Basic Sanitation Survey (PNSB). Work began in 2004 on designing and organizing the PNSB, which is to be conducted in 2008 by the Ministry for Cities, IBGE, and the MS (SVS and ANVISA).

The Department of Public Health Engineering and FUNASA assess the impact of sanitation actions on health with the participation of PAHO/WHO and universities. Other TC activities include programs of rural sanitation, sanitation in small localities, and sanitation in indigenous areas.

c) In the field of the environment

The Ministry of the Environment (MMA) is responsible for formulating and implementing national policies for the environment and water resources; preservation, conservation and sustainable use of ecosystems, biodiversity and forests; and integration of the environment and production. It set up a Department of Environmental Quality & Climate Change in 2007. Besides national policies, it is also responsible for environmental policies and programs for Legal Amazonia; ecological and economic zoning; and proposing strategies, mechanisms and economic and social instruments for enhancing environmental quality and sustainable use of natural resources. It is also responsible for managing waste that is hazardous to human health and the environment; environmental impact assessment and licensing; monitoring the quality of the environment; and land use and integrated management of the coastal and marine environments.

d) In the field of risk assessment

This activity focuses on risk assessment in contaminated locations, involving cooperation with CGVAM/SVS/MS and universities with renowned expertise in the field, such as UFRJ.

Another area of work is risk assessment relating to chemicals registered in Brazil, especially agrochemicals. PAHO/WHO provides support to ANVISA's toxicology sector.

e) In the field of natural disasters and accidents with hazardous products

In this field the MMA is responsible for coordinating the National Plan for Prevention, Preparation & Rapid Response to Environmental Emergencies (P2R2). The plan has been under development since early 2003 to coordinate efforts by states, municipalities and other institutions to set up a rapid response and prevention system to reduce the impact of accidents.

Through its emergency operations sector CETESB has been the only WHO Collaborating Center for preparation for disasters caused by accidents with hazardous chemicals since 1992. In this capacity it is responsible for transferring the technology acquired over time to other countries, especially in Latin America.

PAHO/WHO works with the National Civil Defense Secretariat to support the training of technicians in SUMA/LSS, and with the MRE as a member of the Interministerial Group on International Humanitarian Assistance. It works with SAMU at the national and state levels to train personnel to respond to chemical emergencies and put in place multidisciplinary and multi-institutional action plans.

f) In intersectoral articulation

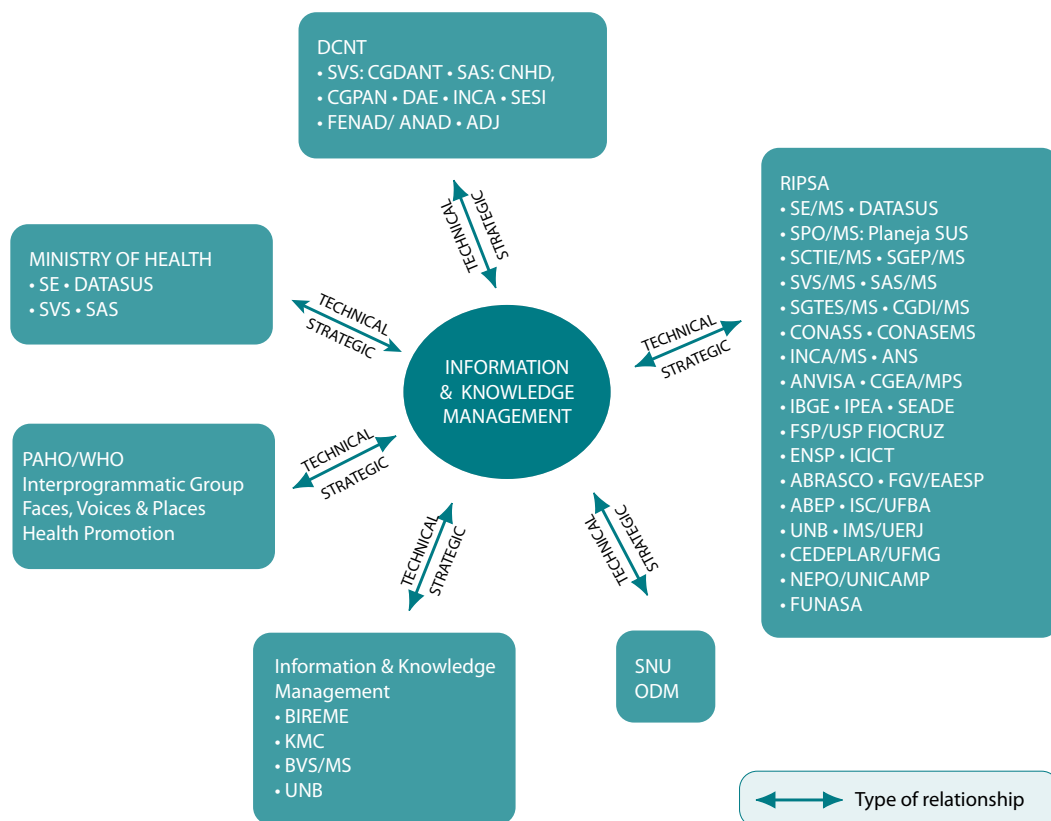
PAHO/WHO participates in various public policy evaluation forums, especially CONCIDADES, CISAMA, the Intersectoral Occupational Health Commission (CIST), CNS, CONAMA, the National Chemical Safety Commission (CONASQ), in support of CONASS and CONASEMS, and non-governmental organizations such as ABRASCO, ASSEMAE and ABES. PAHO/WHO also collaborated on preparation of the Brazilian Report on the MDG (Goals 9, 10 and 11) together with IPEA, the Ministry for Cities, the MMA and MS, IBGE, FUNASA, UNICEF, UNDP and UNEP.

PAHO/WHO also supports region-wide activities by MERCOSUR (e.g. the child environmental health surveillance system) and ACTO (environmental health and climate change surveillance

in the Amazon region). It also supports the training of technicians from PALOP in health, development and disaster recovery policies.

PAHO/WHO partners with a number of Collaborating Centers to strengthen support for environmental and occupational health in Brazil, including CEPEDOC, SESI, CETESB, FUNDACENTRO and CNEN, and with BIREME as a PAHO/WHO Specialized Center.

IX. The Information & Knowledge Management Technical Unit's network of techno-strategic relationships



The Unit's relationship with the MS is technical, especially with the Executive Secretariat and SVS. Its work themes relate to health information systems, analysis of the health situation, and chronic non-communicable disease prevention and care. These activities are performed under TCA 35/SA5.

TCA 15 is under review to orient some activities that favor training in strategic analysis of health information. A new SA is being prepared to favor reorientation of the health situation room; this activity involves collaboration with the Executive Secretariat and DATASUS. In first-half 2008 Fundação Getúlio Vargas (FGV) is to deliver reports to SE/MS and PAHO/WHO on optimizing the information resources available from DATASUS and their integration with platforms that support health analysis.

RIPSA (TCA 14) plays a key role as a formally constituted network of 30 national institutions linked to the production, analysis and diffusion of health information. Management of RIPSA entails a strategic relationship between PAHO/WHO and the Ministry of Health's Executive Secretariat/MS via DATASUS. The network's member institutions work together to produce the outcomes agreed in its annual plan, which is approved and reviewed semiannually by its central office (OTI). The Department of Health Surveillance (SVS) is a key partner because of its capabilities in health information analysis. IBGE, the national bureau of statistics, is another linchpin of the network. RIPSA's Indicator Management Committees (CGI) and Interdisciplinary Thematic Committees (CTI) are important technical bodies whose members include representatives of various institutions and academia.

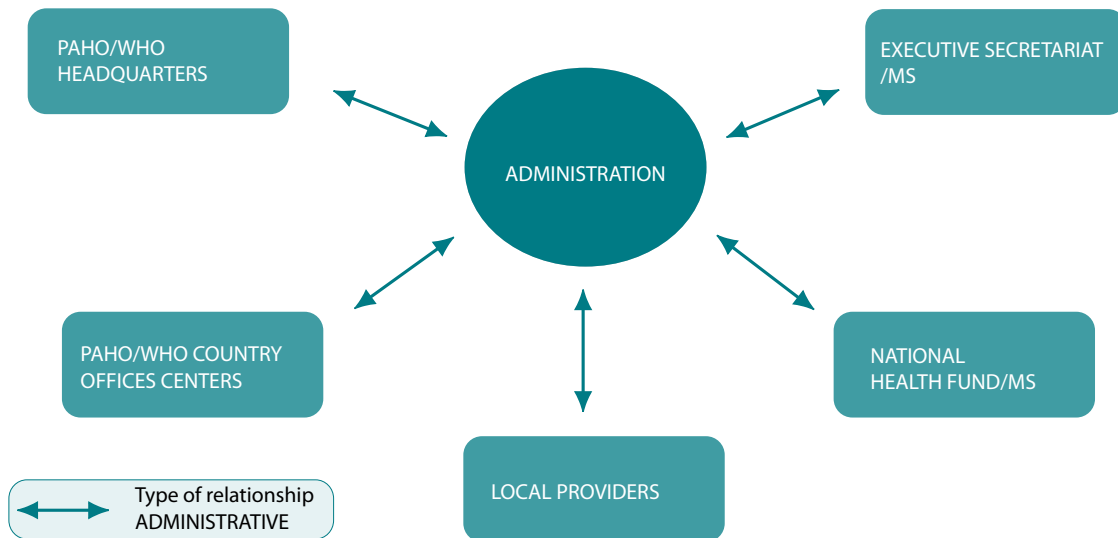
RIPSA's production is designed to contribute to the national health policy and management of the SUS, via a range of indicators and core data (IDB), and health situation analyses available as a database on the internet as well as in documents and specific publications. RIPSA promotes similar initiatives in the states (Ripsa no Estado) in collaboration with CONASS and CONASEMS. BVS-RIPSA is under development with support from DATASUS, FIOCRUZ and BIREME, as an instrument of national and international cooperation. RIPSA supports monitoring of the National Health Plan and the SUS planning system (PlanejaSUS) conducted by the Planning Subsecretariat of the Ministry of Health's Executive Secretariat (SPO/SE/MS), in accordance with a specific TCA (TCA 15).

The technical relationship with BIREME (which is part of PAHO/WHO and covered by TCA 12) and universities is geared to the development and use of technology to make available the health information that is constantly produced and updated by institutions with which PAHO/WHO partners.

A new TCA is currently under development with INCA to strengthen the diffusion of national policies for integral cancer care and the management of programs, research and regional integration activities focusing on cancer prevention.

The relationship with the UN system is strategic, within the context of the group of agencies whose function is to cooperate with the effort to achieve the MDG at the national, state and municipal levels.

X. The Administrative Unit's network of strategic relationships



Networking potentialities at the PAHO/WHO Brazil Country Office

The leading potentialities provided by networking between the PAHO/WHO Brazil Country Office and its partners include::

1. Support to integration of internal areas in the Ministry of Health;
2. Technical collaboration to regional and subregional priorities;
3. Greater facility to develop joint and integrated activities;
4. Possibility of converting priorities between PAHO/WHO and partners;
5. Higher possibility of reaching agreed upon results;
6. Reorientation and joint planning with the areas;
7. Potentiality of relations between PAHO/WHO technical units: inter-programmatic work;
8. Higher legitimacy in south-south cooperation initiatives;
9. Stable and qualified institutional partnerships;
10. Legitimate cooperation environment with well-defined transparent processes;
11. Documented products and processes that are available, qualified, and recognized;
12. Higher stability, neutrality, and legitimacy in mediation with new managers enabled by PAHO/WHO's cooperation;
13. Capacity to adjust to new institutional scenarios.

The Role of the PAHO/WHO Brazil: description of networks in which it is articulated

Diego González Machín & Priscila Almeida Andrade

Working in an organization such as PAHO/WHO, which fosters alliances, the exchange of information, and knowledge management, opens up opportunities for mutual learning and strengthening of team work. These are the principles of the network operation which PAHO/WHO has been dealing with and which have enabled the Organization to acquire broad experience in performing different roles:

- **Articulator**, approaching strategic players and convergent initiatives;
- **International cooperation agent**, promoting the triangulation of key players for the development of collaborative works (south-south and north-south cooperation);
- **Mobilizer** of human and financial resources, infrastructure, and technical and political focus;
- **Technical and operational collaborator** for network operation;
- **Provider of information and evidence in** subjects of interest to the network;
- **Advocate** of specific themes and initiatives;
- **Moderator**, contributing to processes for achieving consensus and managing conflicts;
- **Facilitator (technical or process)**, working as the managing unit or member of the network managing forum (e.g., managing committee of coordinating council);
- **Disseminator**, contributing to spread the word on the activities performed, as well as the exchange of information, knowledge and experiences.

The main networks the PAHO/WHO in Brazil, both through the Country Office or through its centers, BIREME and PANAFTOSA, are:

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1. Inter-agency Health Information Network (RIPSA)
2. Virtual Health Library Network (VHL)
3. Amazon Network for the Surveillance of Antimalarial Drug Resistance (RAVREDA)
4. National Network for Monitoring and Control of Microbial Resistance in Health Services
5. The Inter-American Network of Food Analysis Laboratories (INFAL)
6. Latin America and the Caribbean Toxicology Network (RETOXLAC)
7. Brazilian Network of Information and Toxicological Care Centers (RENACIAT)
8. Network on Investigation of Healthcare Systems and Services in the South Cone (ISSS Network)
9. Network of Cooperation and Support to SUS Management (CooperaSUS Network)
10. Network of Potentially Healthy Cities (RMPS)
11. Nutrition Network at the SUS (NUTRISUS)
12. Network of Technical Schools of the SUS (RETSUS)
13. Network of Observatory of Human Resources for Health in Brazil (OBSERVARH)
14. Network SUS Management (GERUS)
15. Network for Teaching for Strategic Management of the SUS (REGESUS)
16. Network of National Program for Health Professional Training Reorientation (Pro-saúde)
17. Collaborating Network for Training Human Resource Specialists for the SUS (CADRHU Network)
18. Network of Innovation and Learning in Hospital Management (INOVARH)

In the following pages each network will be presented according to its title, date of establishment, person who facilitates or coordinates it, members, objectives and main activities, how members can join it, and the PAHO/WHO's role in its development.

Name of Network:	<i>Rede Interagencial de Informação para a Saúde no Brasil (RIPSA)</i> (Inter-Agency Health Information Network)
Date of establishment (month/year)	In December 1996, the network was established through the Minister of Health's Administrative Ruling, and its operation was defined based on the Technical Cooperation Agreement with the PAHO/WHO Brazil Country Office (TC-14).
Network facilitator	The network's Technical Secretariat, composed of representatives of the Ministry of Health, PAHO/WHO Brazil Country Office, and the Brazilian Institute of Geography and Statistics (IBGE), designated by Administrative Ruling of the Ministry of Health Executive Secretary.
Network members	<p>Approximately 30 organizations and institutions responsible for producing, analyzing, and disseminating information dealing with the formulation, management, and evaluation of public health policies in Brazil, in an intersectoral perspective:</p> <ul style="list-style-type: none"> • SUS management agencies: (i) Ministry of Health, through its secretariats, foundations and agencies; (ii) <i>Conselho Nacional de Secretários Estaduais de Saúde</i> (Conass); and (iii) <i>Conselho Nacional de Secretarias Municipais de Saúde</i> (Conasems); • Agencies from other government sectors responsible for information of interest to health care: IBGE, <i>Instituto de Pesquisa Econômica Aplicada</i> (IPEA), <i>Fundação Sistema Estatístico de Análise de Dados do Estado de São Paulo</i> (SEADE); • Academic institutions recognized for data analysis in health information systems: Oswaldo Cruz Foundation, <i>Faculdade de Saúde Pública/Universidade de São Paulo</i> (USP), <i>Instituto de Saúde Coletiva/Universidade Federal da Bahia</i> (ISC/UFBA), <i>Instituto de Medicina Social/Universidade Estadual do Rio de Janeiro</i> (UERJ), <i>Núcleo de Estudos Populacionais/Universidade Estadual de Campinas</i> (UNICAMP), <i>Departamento de Estatística/Universidade de Brasília</i> (UnB), <i>Centro de Desenvolvimento e Planejamento Regional/Universidade Federal de Minas Gerais</i> (CEDEPLAR/UFMG); • PAHO/WHO, through its Country Office in Brazil and the Latin American and Caribbean Center on Health Sciences Information (BIREME).

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Name of Network:	<i>Rede Interagencial de Informação para a Saúde no Brasil (RIPSA)</i> (Inter-Agency Health Information Network)
Network objectives	<p>To systematize information and generate knowledge to subsidize public health policies in Brazil, in a collective and consensual construction process, which includes:</p> <ul style="list-style-type: none"> • Continuous production and improvement of a database of selected indicators, available in the Internet, under the responsibility of the Information Technology Department of the SUS (DATASUS); • Analysis of relevant issues for the development of health information in Brazil in specific subject fields related to: (i) health conditions; (ii) information and database systems; (iii) applied information processes and technologies; • Preparing bulletins on the condition and trends of issues of interest to the health sector, which require decisions made at intersectoral level.
<p>Main activities</p> <p>Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<p>RIPSA acts through the following decision-making and technical support organizations, either by in-person meetings or through electronic communication:</p> <ul style="list-style-type: none"> • Inter-agency Workshop (OTI), responsible for the strategic management and participatory planning, with meetings twice a year; • Technical Secretariat, composed of representatives from the Ministry of Health, PAHO/WHO Brazil Country Office, and IBGE, to support and make the OTI recommendations feasible; • Indicator Management Committee (CGI), of permanent nature, to analyze the following indicators: demographic, socio-economic, mortality, morbidity, and risk factors, resources and coverage; Interdisciplinary Thematic Committees (CTI), of a temporary nature, to deepen the analysis of the specific issues pointed out by the OTI. • The RIPSA Virtual Community is to be developed with the support of BIREME.
Network web page/virtual library	Developed in cooperation with the BIREME, the VHL-RIPSA is available at http://www.ripsa.org.br/
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Participating institutions were selected based on their well-known action in this field, and formalized their interest in becoming members of the network. Proposals to include new members are submitted to OTI approval.

Name of Network:	<i>Rede Interagencial de Informação para a Saúde no Brasil (RIPSA)</i> (Inter-Agency Health Information Network)
Financial resources	Each member contributes from their institutional resources and according to their specific norms. The network operation is maintained with resources from the Ministry of Health, managed by PAHO/WHO's Brazil Country Office, through Technical Cooperation Agreement 14.
Role of PAHO/WHO in the network	<ul style="list-style-type: none"> • RIPSA was established through a joint initiative of the Ministry of Health and PAHO/WHO, motivated by the Regional Core Health Data Initiative (1995); • The PAHO/WHO Brazil Country Office has played an active role in the management of RIPSA, taking part in all the network deliberative and technical support forums; • The intermediation by the PAHO/WHO Brazil Country Office has ensured that the process can continue through: (i) legitimacy of its term to act in the field of health information; (ii) the status of neutrality, which favors building inter-institutional consensus; (iii) stability in managing resources linked to the Network operation; (iv) documentation of products and processes, rendering them available to all stakeholders.
Other information of interest	RIPSA's current lines, with special interest in international cooperation: (i) to promote similar initiatives at the state level, with five pilot projects under development; (ii) to publish in 2008 the second edition of the book on basic indicators, currently being translated into Spanish; (iii) to develop a video and a book on the experience and methodology adopted at RIPSA, aiming to foster cooperation among the countries interested in it; (iv) to improve the VHL/ RIPSA, which serves the same purpose.

Network's Name:	Virtual Health Library (VHL)
Date of establishment (month/ year)	March 1967. It progressed through several models, and in March 1998, it adopted the VHL.
Network facilitator	Network of thematic facilitators, of national scope, under the general coordination of BIREME/PAHO/WHO.
Network members	Institutions that are producers, intermediaries, and users of scientific and technical information from research, education, and healthcare systems. In 2008 the network included more than 2,300 institutions.
Network objectives	<p>To contribute to develop capabilities in and infrastructures for information and scientific and technical communication aimed towards the equitable access and the publication of quality information on health, including:</p> <ul style="list-style-type: none"> • Regional, national, and institutional policies and programs on information and scientific communication; • National and regional management and technical capabilities and infrastructure in managing sources and flows of scientific and technical information; • Increase the visibility, accessibility, quality, credibility, use, and impact of scientific and technical production in Latin America and the Caribbean; • Open access to the main sources of information, knowledge, and scientific evidence produced in within and outside the Region; • Methodologies and technologies suitable to the conditions of the Region, including the use of Portuguese and Spanish.

Network's Name:	Virtual Health Library (VHL)
Main activities	<p>Cooperative development of products, services, and events related to scientific and technical information.</p> <p>Main cooperation products:</p> <ul style="list-style-type: none"> • LILACS – Latin American and Caribbean Literature on Health Sciences, with twenty thousand new bibliographic registries of scientific production from Latin America and the Caribbean, and 13,000 new full-text entries per year; • 215 online open access scientific journals published in the SciELO collection network; • Selected Web resource directory; • Event directory; • Dynamic links to the main international sources of scientific information, including PubMed, Web of Sciences, Google Scholar, and others; • Health Science Descriptors, updated translation of the MeSH into Portuguese and Spanish, including approximately 30,000 main terms and 80,000 synonyms; • Methodologies and technologies designed to manage information and scientific communication according to the international state-of-the-art in Portuguese, Spanish and English. <p>Main services:</p> <ul style="list-style-type: none"> • Access to the main regional and international sources of scientific and technical information, including: <ul style="list-style-type: none"> ff LILACS – Latin American and Caribbean Literature on Health Sciences; ff SciELO – Online collection of scientific journals; ff MEDLINE/PubMed – Global scientific literature produced by the NLM/USA; ff Cochrane Library – International collection of scientific evidence ff WHOLIS – Scientific and technical literature from the WHO, including the PAHO/WHO. • Cooperative service of access to document copies (SCAD), which processes approximately 220,000 requests per year; • Capacity building on information and scientific communication.

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Network's Name:	Virtual Health Library (VHL)
Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<p>Means of communication among members:</p> <ul style="list-style-type: none"> • Face-to-face meetings: <ul style="list-style-type: none"> ff Regional Coordination Meeting of the Virtual Health Library, held every two to three years; ff Regional Congress on Health Sciences Information (CRICS), held every two to three years; ff Meetings of the thematic and national networks; ff Meetings of the committees and technical work groups; ff Online meetings of the committees and work groups. • Online communication: <ul style="list-style-type: none"> ff News Network – Newsletter VHL; ff E-mail; ff Lists of interest; ff Virtual Communities and online cooperative spaces: <ul style="list-style-type: none"> – Forums; – Blogs; – Wikis; – News.
Network web page/virtual library	www.bvsalud.org
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Membership is institutional, open to institutions that are promoters, producers, intermediaries, or users of scientific and technical information.
Financial resources	Each member participates with its own resources and allocates additional resources through projects and grants.
Role of PAHO/WHO in the network	The Virtual Health Library is the strategy used by PAHO/WHO for technical cooperation on scientific and technical information in the Region, which is promoted and coordinated through BIREME, its specialized center on scientific and technical information.

Network's Name:	Virtual Health Library (VHL)
Other information of interest	<p>The VHL was collectively created by health institutions from Latin America and the Caribbean within PAHO/WHO's technical cooperation. The VHL is based on three pillars:</p> <ul style="list-style-type: none"> • The VHL is a technical cooperation strategy to develop capabilities and infrastructure for the equitable access and publication of scientific and technical information. The VHL is part and product of the creation of the information society (or informational society, or knowledge society, or network society) and contributes to insert health systems and populations into the information society; • The VHL is a cooperative model for managing information and scientific knowledge, supported by networks and relying on international state-of-the-art. It uses methodologies and technologies that are international standards and favor interoperability. The sources of information are operated as Web services in order to facilitate its use on the Web by other services. The VHL fosters open access. <p>The VHL is an operational milestone of cooperative work, with three dimensions:</p> <ul style="list-style-type: none"> • Social networks, including institutions and individuals who are producers, intermediaries, and users of scientific and technical information; • Network of contents, which include networks of information products, services, and events; • Network of informed and learning environments, which consists of institutions, networks, forums, and communities based on exchange of information, knowledge and experiences. <p>The VHL also serves as a forum and platform for international south-south cooperation with other developing regions, through information networks coordinated by WHO, such as e-PORTUGUESe, integrating Portuguese-speaking countries; the Global Health Library, which promotes the adoption of the VHL model for other developing regions; the EVIPNET, which promotes the use of scientific evidence to inform public policies on health care; and the TropIKA.net, coordinated by the Tropical Disease Research and Training program (TDR/WHO), focusing on managing knowledge on infectious and parasitary diseases. The VHL is considered a regional and global public asset.</p>

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<p>Name of Network</p>	<p><i>Rede Amazônica de Vigilância da Resistência aos Antimaláricos (RAVREDA) [Amazon Network for the Surveillance of Antimalarial Drug Resistance]</i></p>
<p>Date of establishment (month/ year)</p>	<p>2001.</p>
<p>Network facilitator</p>	<p>PAHO/WHO Roberto Montoya (international consultant for malaria).</p>
<p>Network members</p>	<p>Malaria control programs from eight countries in the Amazon region (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela), PAHO/WHO, USAID, CDC, United States Pharmacopeia (USP) the MSH Organization, surveillance and control institutions, and research centers from the countries.</p>
<p>Network objectives</p>	<p>To improve the management of malaria control programs in the following areas:</p> <ul style="list-style-type: none"> • Drug policies; • Drug access and use; • Access and quality of diagnosis; • Vector control and entomology; • Information analysis.
<p>Main activities</p> <p>Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<ul style="list-style-type: none"> • Yearly assessment meetings; • Technical group meetings • Workshops; • Pilot-experiences; • Operational investigation; • Design and standardization of instruments and protocols; • Newsletter (twice a year). • Virtual forums are planned to carry out communities of practice on specific subjects/themes.
<p>Network web page/virtual library</p>	<p>http://www.ops-oms.org/Spanish/AD/DPC/CD/ravreda-ami.htm</p>
<p>Membership (spontaneous, selection, appointment, payment of admission fee, etc.)</p>	<ul style="list-style-type: none"> • Selection.

Name of Network	<i>Rede Amazônica de Vigilância da Resistência aos Antimaláricos (RAVREDA)</i> [Amazon Network for the Surveillance of Antimalarial Drug Resistance]
Financial resources	USAID is the sponsor, through the AMI (Amazon Malaria Initiative) project. Contributions made by countries.
PAHO/WHO's role in the network	<ul style="list-style-type: none"> • Coordination of activities with each country's ministry of health; • Coordination of technical assistance partners (USP, MSH, CDC); • Coordination of south-south actions; • Cooperation in designing tools, instruments, and protocols, as well as monitoring and evaluation of activities; • Managing the USAID grant through which the network's actions are financed; • Coordination of annual technical meetings and the meeting of the AMI project Steering Committee, which finances the network; • Preparing work plans with the countries; • Updating the PAHO/WHO web page; • Preparing the newsletter; • Updating and preparing dynamic database reports on the working topics of the Network.
Other information of interest	RAVREDA is a formal technical cooperation network on malaria surveillance and control. It has a coordination and hierarchical structure, in which the main players are the managers of malaria programs from the ministries of health and institutions in those countries. The network was established and works thanks to USAID's AMI project. The creation of communities of practice is under consideration for specific subjects on which work groups have already been established, but they do not have spontaneous dynamics operation in the Network.

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<p>Name of Network:</p>	<p><i>Rede Nacional de Monitoramento e Controle da Resistência Microbiana em Serviços de Saúde (Rede RM)</i> [National Network for the Monitoring and Control of Microbial Resistance in Health Care Services]</p>
<p>Date of establishment (month/year)</p>	<p>September 2005.</p>
<p>Network facilitator</p>	<p>The PAHO/WHO Brazil Country Office, the <i>Agência Nacional de Vigilância Sanitária</i> (ANVISA) (National Health Surveillance Agency of Brazil) and the General Coordination of Public Health Laboratories of the Health Surveillance Secretariat—Ministry of Health (CGLAB – SVS – MS)—are the network facilitators, and they have the same weight in decision-making and division of work.</p>
<p>Network members</p>	<p>The PAHO/WHO Brazil Country Office, in partnership with the <i>Agência Nacional de Vigilância Sanitária</i> (ANVISA) (National Health Surveillance Agency of Brazil) and the General Coordination of Public Health Laboratories of the Health Surveillance Secretariat—Ministry of Health (CGLAB – SVS – MS).</p>
<p>Network objectives</p>	<p>The RM Network aims to control and reduce the emergence and spread of microbial resistance in health care services in the country, using knowledge about the sensitivity profile and distribution of the pathogens, and directing prevention and control measures. The network is a reference for the permanent monitoring of sensitivity profile and hospital microbial resistance control programs in Brazil.</p>
<p>Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<ul style="list-style-type: none"> • E-mail : resistencia.microbiana@anvisa.gov.br • Electronic bulletins: • http://www.anvisa.gov.br/servicosaude/controlere/rede_rm/index.htm • Seminars • Publications
<p>Web page / Network Virtual Library</p>	<ul style="list-style-type: none"> • http://www.anvisa.gov.br/servicosaude/controlere/rede_rm/index.htm
<p>Membership (spontaneous, selection, appointment, payment of admission fee, etc.)</p>	<p>Through appointment of sentinel hospitals, public health central laboratories (LACEN), and health surveillance services. The work is integrated and systematized, with a standardized methodology, quality control, data analysis and dissemination of results.</p>
<p>Financial resources</p>	<p>Resources from Technical Cooperation Agreement 37 between ANVISA and the PAHO/WHO Brazil Country Office.</p>

Name of Network:	<i>Rede Nacional de Monitoramento e Controle da Resistência Microbiana em Serviços de Saúde (Rede RM)</i> [National Network for the Monitoring and Control of Microbial Resistance in Health Care Services]
PAHO/WHO's role in the network	To coordinate all joint activities, mediate and foster the production and publication of information for the international scientific community on microbial resistance in the region.
Other information of interest	RM NETWORK attributions: <ul style="list-style-type: none"> • To standardize the method used by microbiology laboratories to ensure accuracy and reproducibility of microbiological analysis at the national level and mechanisms to improve quality of these data; • To train personnel of public health laboratories and sentinel hospitals participating in the RM project to participate in the network by identifying and confirming microbial resistance; • To train infection control committees in states, cities, and hospitals participating in the RM project to participate in the network by providing epidemiological data on the infections; • To implement the National Network for Monitoring and Control of Microbial Resistance in Health Care Services; • To monitor priority pathogen profiles in order to carry out epidemiological studies; • To identify and encourage the adoption of specific prevention and control strategies for the pathogens studied; • To set guidelines and definitions for surveillance strategies in order to prevent and control the spread of microbial resistance in hospitals and communities; • To create systems of information notification and feedback for the detection, prevention, and control of microbial resistance spread; • To analyze the impact of the RM Network implementation and the adoption of the recommended activities; • To serve as the foundation for a permanent monitoring program of sensitivity profile and control of hospital microbial resistance in Brazil.

Name of Network:	The Inter-American Network of Food Analysis Laboratories (INFAL)
Date of establishment (month/ year)	December 1997.
Network facilitator	PANAFTOSA (PAHO/WHO) (Dr. Jorge Torroba).
Network members	Government-owned food analysis laboratories in the Americas (up to three per country). More food analysis laboratories in each country are added through the national networks (11 to date).
Network objectives	<p>According to its bylaws: The mission of the Inter-American Network of Food Analysis Laboratories (INFAL) is: promoting the assurance of the safety and quality of food in the Region of the Americas to prevent foodborne diseases; protecting consumers' health; and making trade easier by fostering and strengthening the development and interaction of the analysis laboratories within the national integrated food safety programs.</p> <p>General objectives are:</p> <ul style="list-style-type: none"> • To obtain methodological equivalence in food analysis laboratories; • To promote the implementation of equivalent quality management systems in INFAL laboratories; • To strengthen scientific and technical cooperation among member countries. <p>Specific objectives include:</p> <ul style="list-style-type: none"> • To develop an information system among INFAL laboratories; • To facilitate the availability of reference material and participation in inter-laboratory tests; • To organize and promote certification and continuous education programs, fostering exchange of experiences and resources available in the Region; • To promote and strengthen intersectoral participation for in creating and operating national food laboratory networks; • To promote and strengthen the integration of INFAL laboratories in food safety and epidemiologic surveillance programs.

Name of Network:	The Inter-American Network of Food Analysis Laboratories (INFAL)
Main activities	<p>Activities:</p> <ul style="list-style-type: none"> • Training courses, face-to-face and virtual; • Inter-laboratory tests; • Exercise to validate methods; • Allocation of advisers (from INFAL) with resources from member institutions; • Cooperation agreements among member institutions; • Furnishing and exchanging information among members.
Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<p>Means of communication:</p> <ul style="list-style-type: none"> • Virtual meetings through chats (weekly for each technical group); • E-mail groups for the technical groups (INFAL_Chem, INFAL_Micro and INFAL_QA) and to disseminate, exchange, or provide information (INFAL_News, INFAL_SOS); • E-conference and on-line qualification activities through the Internet.
Network web page/virtual library	<p>http://www.panalimentos.org/rilaa/ (the page is bilingual—Spanish and English).</p> <p>It has two main information sections:</p> <ul style="list-style-type: none"> • “Online bibliography”: collection of links of interest in full text; • The INFAL Information System: database containing information on each member (mainly contact information, analysis methods, capabilities and needs). Access to the system is restricted to members only.
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	<p>Membership and permanence in the network is established by the bylaws. It is voluntary and free of charge. Currently, there are 60 member laboratories from 29 countries and 11 national networks (totaling 200 food analysis laboratories).</p>
Financial resources	<p>It operates with its resources from the members and support by the PAHO/WHO and the FAO. The cooperation of third-party organizations is accepted for specific projects (as has been done by the IDB, GTZ, Danish Cooperation Fund, etc.).</p>
PAHO/WHO’s role in the network	<p>Facilitator. PAHO/WHO (Technical Group on Food Safety) and the Food and Agriculture Organization act as Secretariats.</p>

Name of Network:	The Inter-American Network of Food Analysis Laboratories (INFAL)
Other information of interest	<p>The network infrastructure includes: (1) the Assembly (maximum authority); (2) the Executive Committee; (3) the technical groups (chemical analysis, microbiology, and quality management); (4) the Ex-officio Secretary; (5) the Advisory Committee and (6) the national networks.</p> <p>Some activities carried out to this date include: 3 assemblies, free of charge inter-laboratory tests (13 in chemistry and 15 in microbiology); 12 long-distance courses (live) with more than 3,500 participants from countries in the Region of the Americas.</p>

Name of Network:	<i>Rede de Toxicologia da América Latina e do Caribe -RETOXLAC</i> [Latin American and Caribbean Toxicology Network]
Date of establishment (month/ year)	August 1999.
Network facilitator	PAHO/WHO (Dr. Diego González Machín, Regional advisor on toxicology); <i>Universidade Nacional Federico Villarreal</i> , Lima/Peru (Dr. Marco Ramírez Chávez).
Network members	Professionals dealing with chemicals at the ministries of health, universities, toxicological information centers, and private sector with diverse backgrounds (biology, biochemistry, chemistry, medicine, pharmaceutical sciences, engineering, toxicology, etc.).
Network objectives	<ul style="list-style-type: none"> • To provide a forum for professionals in the Region to exchange information, generate knowledge, and solve problems related to chemicals; • To promote the implementation of national networks; • To create directories of professionals and institutions related to toxicology; • Prepare educational materials on subjects related to toxicology; • To support the allocation of human resources during massive poisonings.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<p>Activities:</p> <ul style="list-style-type: none"> • Provide constant information exchange; • Disseminate information through web pages, new publications, events, grants, etc.; • Provide answers to toxicological consultations; • Issue alerts on risk situations related to chemicals; • Promote monthly clinical case discussions; • Provide inputs for the Regional Virtual Library on Toxicology. • Promote the implementation of National Networks (REDARTOX - Argentina, RENACIAT - Brazil, Rita - Chile, RETOMEX - Mexico, REPATOX - Panama). • Promote the harmonization of intoxication case reports and the standardization of case record charts. <p>Means of communication:</p> <ul style="list-style-type: none"> • <i>Listserv</i>.

Name of Network:	<i>Rede de Toxicologia da América Latina e do Caribe -RETOXLAC</i> [Latin American and Caribbean Toxicology Network]
Network web page/virtual library	RETOXLAC: http://www.bvsde.paho.org/bvstox/e/retoxlac/retoxlac.html
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Spontaneous membership through: <ul style="list-style-type: none"> • E-mail by sending a message to the list managers; • Sending a command to the list's automated administrator; • The list website, filling out the membership form.
Financial resources	It has no financial resources.
PAHO/WHO's role in the network	The network technical facilitator.

Name of Network:	<i>Rede Nacional de Centros de Informação e Assistência Toxicológica (RENACIAT) (National Network of Information and Toxicological Care Centers)</i>
Date of establishment (month/ year)	<p>The Brazilian Centers of Information and Toxicological Care were created individually beginning in the 1970s.</p> <p>The National Network of Information and Toxicological Care Centers (RENACIAT) was established through Resolution No. 19, issued by the Collegiate Board of the <i>Agência Nacional de Vigilância Sanitária</i> (National Health Surveillance Agency)/Ministry of Health on February 3, 2005.</p> <p>The network is coordinated by the General Toxicology Management of the <i>Agência Nacional de Vigilância Sanitária</i> (ANVISA).</p> <p>The bylaws were written by the members, who created, within the network's structure, the following management groups: 1) Management Committee for GGTOX; 2) Ethics Commission; 3) Information System Committee; 4) Standardization, Control, and Evaluation Committee; 5) Financing Committee; 6) Training Committee; and 7) Technical and Scientific Committee. These committees participate in developing and updating the network. There is also a group on antidotes established previously and which remains active.</p>
Network facilitator	ANVISA (Luiz Cláudio Meirelles and Heloísa Rey Farza – General Toxicology Management).
Network members	38 Centers of Information and Toxicological Care distributed in 20 states and in the Federal District.
Network objectives	<p>To develop knowledge on toxicology.</p> <p>To treat poisoning victims and improve clinical practice on toxicology.</p>
<p>Main activities</p> <p>Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<p>Activities:</p> <ul style="list-style-type: none"> • To provide certified information on toxic products to the population and to health care professionals; • To prepare and disseminate recommendations to health care professionals on specific treatments for poisoning cases. <p>Means of communication:</p> <ul style="list-style-type: none"> • Telephone and the Internet; • Teleconferences; • Meetings; • Seminars and congresses.

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<p>Name of Network:</p>	<p><i>Rede Nacional de Centros de Informação e Assistência Toxicológica (RENACIAT) (National Network of Information and Toxicological Care Centers)</i></p>
<p>Network web page/virtual library</p>	<p>Virtual Health Library– Toxicology (VHL-Tox) http://tox.anvisa.gov.br</p>
<p>Membership (spontaneous, selection, appointment, payment of admission fee, etc.)</p>	<p>Selection by ANVISA and other Network members Minimum requirements: government-owned institutions, operating 24 hours x 7 days.</p>
<p>Financial resources</p>	<p>Variable: health secretariats at municipal and/or state levels, and/or municipal, state, or federal universities.</p>
<p>PAHO/WHO’s role in the network</p>	<ul style="list-style-type: none"> • Facilitator: • Cooperation in managing financial resources to purchase education and dissemination materials; • Technical cooperation for some specific projects: creating the VHL-Tox and the long-distance toxicology course; • Support in identifying successful experiences in other countries which can be used by the network. • Support in identifying strategic issues. • Support in disseminating network activities throughout Latin America and the Caribbean.
<p>Other information of interest</p>	<p>The network comprises 38 centers distributed in 20 states and in the Federal District. It has a toll-free telephone line, active throughout the country, called <i>DISQUE-INTOXICAÇÃO</i> 0800-722-6001. The closest center (member of the network) answers the call, and if the line is busy, the call is transferred to the next closest, until the person requesting receives response. The response is based on specialized documents. The network also takes part in developing the VHL-Toxicology Brazil and in the decentralized education of health care professionals in treating poisoning cases. Courses are face-to-face or virtual, and have already benefited more than 1,100 students since 2003.</p>

Name of Network:	<i>Rede de Investigação em Sistemas e Serviços de Saúde no Cone Sul (RED ISSS)</i> ([Network of Research on Health Care Systems and Services in the Southern Cone
Date of establishment (month/ year)	August 1994.
Network facilitator	<i>Escola Nacional de Saúde Pública (ENSP/Fiocruz).</i>
Network members	<p><u>Steering Committee:</u> <u>Board:</u></p> <ul style="list-style-type: none"> • Lígia Giovanella – President; • Rosana Kuschir – Vice-president; • Ivani Bursztyn – Administrative Director. <p><u>Network’s National Representatives:</u></p> <ul style="list-style-type: none"> • Argentina – Alicia Stolkiner; • Brazil – Luiza Heimann; • Paraguay – Maria Elsa Paredes de Bataglia; • Uruguay – Delia Sanchez. <p><u>Affiliate Members:</u> Today, the network consists of the following number of institutional members from these countries: Brazil (40), Argentina (19), Uruguay (9) and Paraguay (5). It also includes individual members. The network establishes working relations with other countries to cooperate on research on health care systems and services (ISSS). Network members are research institutions (65%) and health care services (35%).</p>
Network objectives	<ul style="list-style-type: none"> • To support the development of research on health care systems and services in the Region; • To encourage and promote exchange of experiences among researchers and managers (policy-makers) inside and outside the Region, connecting academic institutions and healthcare service providers; • To evaluate restructuring processes for the health sector in Latin American countries, in terms of equity, and to discuss new alternatives and models to organize healthcare systems and services; • To furnish information for sectoral-policy decision makers, based on evidence, that contributes to guarantee the universal right to health in the Region’s countries.

Name of Network:	<i>Rede de Investigação em Sistemas e Serviços de Saúde no Cone Sul (RED ISSS)</i> ([Network of Research on Health Care Systems and Services in the Southern Cone
Network web page/virtual library	http://www.ensp.fiocruz.br/parcerias/redsald
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	To become a member, participants should contact the Executive Secretariat or the national representatives by E-mail or through the Homepage: www.ensp.fiocruz.br/parcerias/redsald redsald@ensp.fiocruz.br redsald@fiocruz.br
Financial resources	During its 13 years of operation, the network obtained financing for specific activities from different partnerships, especially: International Development Research Centre, Canada (IDRC); PAHO/WHO; Council on Health Research for Development (COHRED); and Alliance for Health Policy and Systems Research (Alliance). Since it was established, the network has received important operational support from the Fiocruz, through the Escola Nacional de Saúde Pública Sergio Arouca (ENSP/FIOCRUZ).
PAHO/WHO's role in the network	Support in the identification and exchange of experiences; Support in the identification of strategic issues; Support in the dissemination of the network activities.
Other information of interest	Since it was created, the network has developed activities in both research and capacity building on research methodologies in health care systems and services designed to: 1) complement the different scientific and technical capabilities in the Region; 2) promote the sharing of experiences among countries and some research activity coordination in common areas; 3) disseminate information and technologies that can significantly benefit countries or sectors with unequal development levels and with fewer possibilities of individually leveraging social improvements.

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Name of Network:	<i>Rede de Cooperação e Apoio à Gestão do SUS (Rede CooperaSUS)</i> (Network of Cooperation and Support to SUS Management)
Date of establishment (month/ year)	November 2004.
Network facilitator	Ministry of Health (Leonardo Pimentel Berzoini leonardo.berzoini@saude.gov.br).
Network members	Ministry of Health, PAHO/WHO Brazil Country Office, CONASS, CONASEMS, ABRASCO, health care managers, professionals, advisors, academics, users. The network includes approximately 2,300 registered users.
Network objectives	Support the strengthening of the decentralized management of the Unified Health System (SUS), through actions aiming at the: <ul style="list-style-type: none"> • Identification of intervention methods, management tools, re-adjustment of structures and work processes, so that managers from the three government levels can face the new attributions related to the SUS decentralization process; • Fostering of a culture of interaction, participation, and exchange among different managers and education and research institutions; • Cooperation to develop joint initiatives that strengthen SUS's decentralized management; • Encouraging a culture of cooperation and technical support for cities within State Secretariats of Health; • Disseminating and promoting problems and challenges existing in health care management.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	The CooperaSUS network publishes a weekly virtual bulletin airing the main issues pertaining to SUS management processes, as well as providing communication tools to users, such as the network forums, chat, blog. The network mainly communicates virtually, but it also holds face-to-face meetings.
Network web page/virtual library	www.saude.gov.br/cooperasus - In the menu it is listed as Virtual Library
Membership (spontaneous, selection, appointment, payment of admission fees, etc.)	Spontaneous; according to the user's interest in the network's topics.
Financial resources	Provided by the Ministry of Health.
The role of the PAHO/WHO in the Network	The PAHO/WHO Brazil is a member of the coordinating committee. It plays the role of political coordination along with the Ministry, ABRASCO, CONASS, and CONASEMS.

Name of Network:	<i>Rede de Municípios Potencialmente Saudáveis (RMPS) (Network of Potentially Healthy Cities)</i>
Date of establishment (month/ year)	August 2003.
Network facilitator	Universidade Estadual de Campinas (Prof. Dr. Ana Maria Girotti Sperandio).
Network members	Cities in five Brazilian states (50).
Network objectives	<ul style="list-style-type: none"> • To enable, expand and monitor PAHO/WHO “Healthy Cities” projects and strategies by creating healthy public policies, promoting social participation at all levels, and developing sustainable initiatives; • To support municipal administrations so they can develop a unified and integrated government project; • To support managers, technicians, academics, organizations, and society at large to establish public policies that take into account the health promotion and a better quality of life.
<p>Main activities</p> <p>Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<p>The development strategy adopted by RMPS was to create a web of knowledge and practices, spun by players involved in this process through:</p> <ul style="list-style-type: none"> • Fostering intersectoral and transectoral actions; • Strengthening different players in regards to transforming participation and the search for autonomy; • Creating practices that consolidate players’ values and wishes about their territory so they can cooperate to develop a healthy and sustainable place, respecting the principles of social equity; • Disseminating successful experiences in cities within and outside the Network. <p>The RMPS prioritizes five work lines:</p> <ul style="list-style-type: none"> • Health (projects on physical activities, tobacco-free environments, healthy diet); • Safety (violence prevention); • Generation of Work and Income, Quality of Water and Solid Waste, Social Participation, promoting an interface with the cities’ master plans.
Network web page/virtual library	http://www.redemunicipiosps.org.br

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<p>Name of Network:</p>	<p><i>Rede de Municípios Potencialmente Saudáveis (RMPS) (Network of Potentially Healthy Cities)</i></p>
<p>Membership (spontaneous, selection, appointment, payment of admission fee, etc.)</p>	<p>The focus is on managers who identify with the network’s objectives. Each member must:</p> <ul style="list-style-type: none"> • Commit to meet the objectives established by the network; • Appoint representatives to enter into dialogue with the network coordinators; • Appoint an implementation and monitoring committee for the projects linked to the network; • Strengthen popular participation in creating public policies; • Mobilize different segments of society to develop local networks; • Develop a unified and integrated government project, through an intrasectoral, intersectoral, and transectoral approach; • Develop intermunicipal cooperation activities.
<p>Financial resources</p>	<p>There are no defined financial resources. The network receives support from the Ministry of Health, the PAHO/WHO Brazil Country Office, and, indirectly, from the cities for some specific projects.</p>
<p>PAHO/WHO’s role in the network</p>	<p>Technical cooperation and financial support for specific projects.</p>
<p>Other information of interest</p>	<p>The network receives technical cooperation from the PAHO/WHO Brazil Country Office and the Universidade Estadual de Campinas (UNICAMP/ School of Medical Sciences/Department of Preventive and Social Medicine).</p> <p>With its extensive experience in developing integrated actions, RMPS has already held several meetings and seminars; fostered exchange with international missions (Ecuador and Japan). It also has supported the publication of books that record many collaborating specialists’ knowledge and the activities of member cities in creating healthy public policies.</p>

Name of Network:	<i>Rede de Nutrição no SUS – Redenutri (Nutrition network at the SUS)</i>
Date of establishment (month/ year)	December 2000.
Network facilitator	Ministry of Health.
Network members	<ul style="list-style-type: none"> • Ministry of Health; • State secretariats of health; • Municipal secretariats of health; • Collaborating centers on food and nutrition; • Universities.
Network objectives	To foster the sharing of experiences by carrying out activities related to the Brazil's National Policy on Food and Nutrition.
<p>Main activities</p> <p>Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)</p>	<p>Activities:</p> <ul style="list-style-type: none"> • Planning priority activities in food and nutrition within the Unified Health System (known for its Portuguese acronym, SUS); • Exchanging experiences on the organization of activities in the field of nutrition at the municipal and state levels; • Discussing the challenges to improve food and nutrition surveillance, to promote a healthy diet, and to prevent and control nutritional deficiencies for micronutrients; • Evaluating the implementation of the Brazil's National Policy on Food and Nutrition in several management spheres; • Training human resources; • Conducting studies. <p>Means of communication:</p> <ul style="list-style-type: none"> • Face-to-face annual meetings since 2000; • E-mail – list created in 2005 with approximately 6,000 participants, called Redenutri.
Network web page/virtual library	http://dtr2004.saude.gov.br/nutricao/redenutri.php
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	When the network was first established, members were selected among nutrition professionals in the health secretariats. Today, those interested in joining the network can register spontaneously.

Name of Network:	<i>Rede de Nutrição no SUS – Redenutri (Nutrition network at the SUS)</i>
Financial resources	The General Coordination of the Brazil's National Policy on Food and Nutrition in the Ministry of Health is responsible for providing funding to maintain the network.
PAHO/WHO's role in the network	Disseminating the network's publications and events and of other initiatives of interest to it.
Other information of interest	The Rede NUTRISUS includes six collaborating centers (FIOCRUZ, IMIP, UFPR, UFBA and UFPA) and three reference centers (USP, UFPelotas and UNB); the latter three universities support training and carry out studies and research on subjects of interest to the network.

Name of Network:	<i>Rede de Escolas Técnicas do Sistema Único de Saúde (RETSUS)</i> (Network of Technical Schools of the Unified Health System)
Date of establishment (month/year)	November 2000.
Network facilitator	Ministry of Health/Secretariat of Work Management and Health Education/Department of Management of Health Education/General Coordination of Technical Actions.
Network members	Technical schools and education centers for SUS human resources in the Brazil's states. They are all government-owned institutions that work towards educating mid-level workers in the health care system.
Network objectives	<ul style="list-style-type: none"> • To share practices and knowledge; • To disseminate methodologies and technological resources designed to improve teaching, research, and technical cooperation activities, in order to implement human resource health policies among mid-level employees.
Main activities	<ul style="list-style-type: none"> • Sharing information and knowledge; • Seeking solutions for problems of common interest; • Disseminating methodologies and technological resources designed to improve teaching, research, and technical cooperation activities, in order to implement human resource health policies among mid-level employees; • Providing liaison among health education institutions for mid-level workers in the country, in order to increase their capability to act in tune with the needs or demands of the SUS.
Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<p>Means of communication:</p> <p>Journal published monthly and available at the website;</p> <ul style="list-style-type: none"> • E-mail; • Web site available for discussion list and e-conference.
Network web page/virtual library	www.retsus.epsjv.fiocruz.br
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	To become a member, it is necessary to meet the criteria approved by the Tripartite Inter-managerial Commission (CIT) and analyzed by the General Coordination Committee.

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Name of Network:	<i>Rede de Escolas Técnicas do Sistema Único de Saúde (RETSUS)</i> (Network of Technical Schools of the Unified Health System)
Financial resources	Technical Cooperation Agreement number 8 between the PAHO/WHO Brazil Country Office, Secretariat of Work Management and Health Education/Ministry of Health (SGTES/MS), and other sources.
PAHO/WHO's role in the network	Technical and operational cooperation to promote the exchange of information and experiences among participating technical schools, as well as to share knowledge and allocate resources for the network's operation. Participation in annual technical meetings at national and Regional levels.

Name of Network:	<i>Rede Observatório de Recursos Humanos de Saúde do Brasil (OBSERVARH) (Network of Observatories of Human Resources in Health in Brazil)</i>
Date of establishment (month/ year)	September 1999.
Network facilitator	Ministry of Health/ Secretariat of Work Management and Health Education (Coordination); ARCO ²⁵ (link point).
Network members	Government-owned and private institutions, universities, hospital services, health care government agencies, and national teaching and research centers.
Network objectives	To enable the establishment, follow-up, and assessment of sectoral policies and programs, as well as to cooperate to social regulation of health education and work systems.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	Activities: <ul style="list-style-type: none"> • To provide scientific and technical information about human resources in the country health sector and network activities; • To carry out analyses on human resources in health in the country; • To share information and experiences among institutions through the regular dissemination of common interest topics; • To prepare publications. Means of communication: <ul style="list-style-type: none"> • E-mail; • Network electronic bulletin; • “News” in each website of Network member institutions.
Network web page/virtual library	http://www.observarh.org.br
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	According to the criteria defined by SEGETS/MS Ordinance Number 1, of March 11, 2004.
Financial resources	Secretariat of Work Management and Health Education/Ministry of Health (SGTES/MS).
PAHO/WHO in the Network	<ul style="list-style-type: none"> • Technical and operational cooperation, including liaison with the Network of Observatories of Human Resources in Health in other subregions of the Americas (PAHO/WHO) and other WHO regions; • To support the development of the Network annual work plan; • Participation in the annual meetings of the observatories.

25 ARCO is a project of the Ministry of Health, FIOCRUZ and PAHO/WHO Brazil to be a linking point for the collaborating networks in human resources in health.[SHOULDN'T THIS BE FOOTNOTE 24?]

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Name of Network:	<i>Rede Gestão do SUS (GERUS) [SUS Management Network]</i>
Date of establishment (month/year)	December 2001.
Network facilitator	Escola Nacional de Saúde Pública - Oswaldo Cruz Foundation (ENSP/FIOCRUZ).
Network members	Universities and health centers that develop methodologies for the managerial development of the SUS primary health care units.
Network objectives	To prepare and apply education methodologies for managerial development for the SUS primary health care units.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<p>Activities:</p> <ul style="list-style-type: none"> • To mobilize academic centers to offer courses—Núcleo de Estudos de Saúde Coletiva (NESC) and Escola de Saúde Pública (ESP); • To share experiences, knowledge, and ideas on subjects of interest; • To prepare, apply, and update education methodologies in use for the managerial development of the SUS primary health care units; • To qualify managers to manage the primary healthcare units. <p>Means of communication:</p> <ul style="list-style-type: none"> • Internet (network E-mail and website).
Network web page/virtual library	http://www.ensp.fiocruz.br/portal-ensp/escola-de-governo/cursos/index.php?idcurso=325&indtipo=2&menu=661
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Selection. The institution interested in joining the network must use and develop the GERUS methodology.
Financial resources	Secretariat of Work Management and Health Education/Ministry of Health (SGTES/MS).
PAHO/WHO's role in the network	Technical cooperation.

Name of Network:	<i>Rede de Ensino para a Gestão Estratégica do SUS (REGESUS)</i> (Network for Teaching SUS Strategic Management)
Date of establishment (month/ year)	January 2006.
Network facilitator	Oswaldo Cruz Foundation (Technical Secretary); Ministry of Health/ Secretariat of Work Management and Health Education (Coordination).
Network members	Public health schools and government-owned higher education institutions that develop capacity in educating and qualifying professionals for the strategic management of SUS.
Network objectives	To cooperate in developing work plans, research projects, education, qualification, and technical cooperation projects, among educational institutions at the federal, state, and municipal levels according to SUS needs.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	Activities: <ul style="list-style-type: none"> • Foster the creation of education and qualification projects, according to SUS needs; • To encourage technical cooperation projects among education institutions and the several SUS management levels; • To support the conduct of research projects in education and qualification of personnel for the strategic management of SUS. Means of communication: <ul style="list-style-type: none"> • E-mail
Network web page/virtual library	www.regesus.org.br
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	An institution can express an interest in joining the network, through a letter of intent to the Secretariat of Work Management and Health Education/Ministry of Health (SGTES/MS). The applying institution must specify its scope of action, considering the conditions in article 1 of Ordinance Number 176/GM, of January 27, 2006.
Financial resources	Secretariat of Work Management and Health Education/Ministry of Health (SGTES/MS).
PAHO/WHO's role in the network	<ul style="list-style-type: none"> • To form the coordination committee and participate in projects seminars; • To cooperate to develop work plans with the member institutions; • To technically cooperate to reach network objectives.

Section 3:

PAHO/WHO Brazil Country Office action in technical cooperation of networks

Name of Network:	<i>Rede do Programa Nacional de Reorientação da Formação Profissional em Saúde (Pró-Saúde) (Network of the National Program for the Training Reorientation of Health Professionals)</i>
Date of establishment (month/ year)	November 2005.
Network facilitator	Ministry of Health, through its Secretariat of Work Management and Health Education (SGETS/MS).
Network members	Higher education institutions that participate in the National Program for the Training Reorientation of Health Professionals (Pró-Saúde).
Network objectives	To set permanent liaison mechanisms and sharing experiences among schools participating in Pró-Saúde and to reduce the distance between academia and the health services.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	Activities: <ul style="list-style-type: none"> • To produce and share knowledge to improve service delivery in order to strengthen SUS. • To discuss family health strategies. • To disseminate pilot projects developed with schools of medicine, dentistry, and nursing. Means of communication: <ul style="list-style-type: none"> • Website; • Seminars; • E-mail.
Network web page/virtual library	www.prosaude.org
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Higher education institutions participating in Pró-Saúde join the network through a selection process defined by the Ministry of Health and the PAHO/WHO Brazil Country Office.
Financial resources	Technical Cooperation Agreement Number 08 between the PAHO/WHO Brazil Country Office and SEGETS/MS.
PAHO/WHO's role in the network	<ul style="list-style-type: none"> • Technical cooperation; • Participation in selecting the Network member-institutions; • Follow-up on the Pro-Saúde projects and activities developed by the network.

Network's Name:	<i>Rede Colaborativa para Capacitação de Especialistas em Recursos Humanos para o Sistema Único de Saúde (Rede CADRHU)</i> (Collaborating Network for Training Human Resource Specialists for the Unified Health System]
Date of establishment (month/ year)	November 2001.
Network facilitator	Núcleo de Estudos em Saúde Coletiva/ Universidade Federal do Rio Grande do Norte.
Network members	Higher education and research institutions committed to technical cooperation projects related to policy management and work management in health.
Network objectives	To promote improvement of work regulation and management, as well as to qualify human resources in health.
Main activities Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<ul style="list-style-type: none"> • To maintain and update the bibliographic collection of courses offered by network members; • To disseminate through the Internet products resulting from events held by network members or by its partner institutions, SUS managing forums, and PAHO/WHO; • To discuss, via the internet or in face-to-face meetings, subjects related to work regulation and management and human resource qualification; • To continuously improve the teaching project of the Specialization Course on Human Resources in Health; • To provide long-distance courses on improvement and specialization in human resources; • To foster the use of long-distance education in professional master's degree programs in the field of human resources. <p>Means of communication:</p> <ul style="list-style-type: none"> • Discussion forums; • Workshops; • E-mail.
Network web page/virtual library	www.redecadrhu.org.br
Membership (spontaneous, selection, appointment, payment of admission fee, etc.)	Spontaneous.

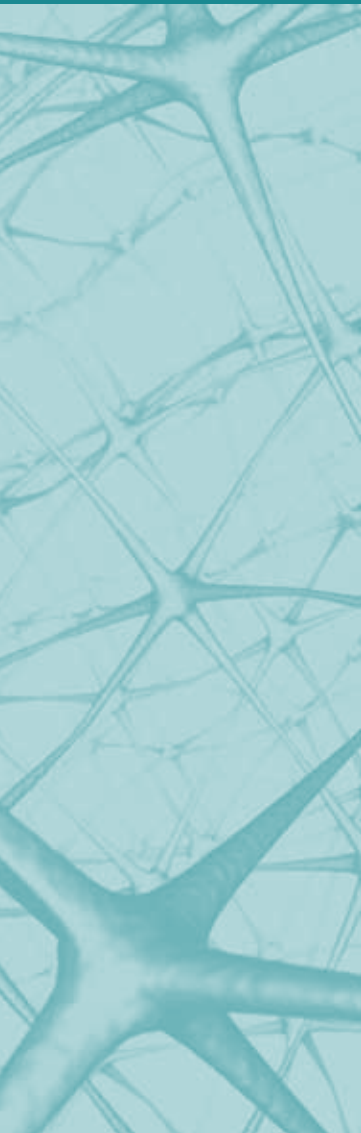
Section 3:

PAHO/WHO Brazil Country Office action in technical cooperation of networks

Network's Name:	<i>Rede Colaborativa para Capacitação de Especialistas em Recursos Humanos para o Sistema Único de Saúde (Rede CADRHU)</i> (Collaborating Network for Training Human Resource Specialists for the Unified Health System]
Financial resources	Technical Cooperation Agreement Number 08 between the PAHO/WHO Brazil and the SEGETS/MS.
PAHO/WHO's role in the network	<ul style="list-style-type: none">• Technical and operational cooperation for running the network;• Support to the network management process;• Cooperation in implementing a similar initiative in the Andean Region and in the Southern Cone.

Name of Network:	<i>Rede de Inovação e Aprendizagem em Gestão Hospitalar (INOVARH)</i> [Network of Innovation and Learning in Hospital Management]
Date of establishment (month/ year)	July 2006, through Ordinance number 1773, of July 28, 2006.
Network facilitator	ARCO.
Network members	Academic institutions, hospitals, and users of products and services provided by the Network.
Network objectives	<ul style="list-style-type: none"> • To foster the development and publication of technologies and innovations in hospital management. • To promote ongoing education in hospital management.
Main activities	Activities:
Means of communication among members (face-to-face, E-mail, discussion lists, e-conferences)	<ul style="list-style-type: none"> • Holding seminars and courses for hospitals that are partners of network member-institutions in each state; • Sharing experiences at the national level; • Holding discussions about technologies; • Disseminating experiences in permanent education in the field of hospital management. Means of communication: <ul style="list-style-type: none"> • Web site under construction.
Network web page/virtual library	www.inovarh.org.br
Membership (spontaneous, selection, appointment, payment of admittance fee, etc.)	Spontaneous
Financial resources	Network does not have specific financial resources.
PAHO/WHO's role in the network	<ul style="list-style-type: none"> • To support the development of work plans in the network. • To serve as an articulator, seeking to promote the network's expansion in the Region of the Americas.

FINAL CONSIDERATIONS



Final considerations

Diego González Machín & Luciana Chagas

In this book's chapters we have detailed PAHO/WHO's experience in Brazil (through its Country Office and its specialized centers, such as BIREME and PANAFTOSA) and that of other professionals that collaborated to this edition in the development of national and regional networks. All experiences presented here are characterized by sharing objectives and procedures directed to the interaction among network players. In this regard, all the different ways of operating within network share the reliance on basic principles of horizontal complementary ties and common responsibilities and objectives to their development.

The way the PAHO/WHO functions in Brazil increases the reach of its activities and exchange of experiences among its components, thus enabling Brazil itself, as well as the other countries in the Region, to manage and disseminate knowledge. We would like to highlight a few aspects of networking that were touched on in the book's chapters:

- Although flexibility and horizontality of work hold sway in networks, statutes, work plans, or objectives are necessary to reach a balance between flexibility, commitment, and sustainability, which ensures that their missions and visions will be fulfilled.
- The introduction of information technologies in networks enables horizontal participation and cooperation.
- The utilization of means of communication in networks is not only a means to convey information, it also is a means of generating the exchange of information, interpreting information, applying knowledge, and attaining collective learning.
- The learning process in a network combines the exchange of ideas with the presentation and application of lessons learned and practical experience.
- Networks facilitate the joint work of decision makers, the academic community, research centers, nongovernmental organizations, public and private institutions, bilateral and multilateral cooperation agencies, and international financial institutions in an environment that praises cooperation and horizontal work in such a way that no institution loses its autonomy.
- Although the main focus of networks today should be the exchange of information and the generation of knowledge, depending on the objectives for which they were created,

they may add to this focus the resolution of problems, the development of best practices, research, implementation and development of policies, etc.

- The Digital Literacy Program established by PAHO/WHO will help strengthen the necessary skills and capabilities of networks so they can functionally develop in the information society.
- The step-by-step implementation and management for networks includes the following phases: conception, proposal, establishment, planning, implementation, and assessment. They are supported by the practical experience of network operation and should be seen as a recommendation.
- Networks operate, by nature, in a decentralized manner, but to ensure that many of their activities can occur, they should rely on the work of a moderator, facilitator, and, in many cases, of a management team. A network's members define its functional structure.
- The variety of roles PAHO/WHO can play when working with networks—as an articulator, an international cooperation agent, a technical and operational collaborator, or as a moderator and/or facilitator—can enrich work and bring network partners closer together.

It is also worth noting that, for effective network work, it is necessary to continue to overcome challenges and to build important conditions for this type of work. Some of these challenges include:

- Reaching a complete integration of the network's players, considering the different institutional cultures of the participants.
- Successfully articulating institutional actions to better exchange information and socialize knowledge, aiming to complement one another and thus avoid overlapping and scattering of actions and resources.
- Introducing follow-up and assessment mechanisms, which are important to monitor the actions performed and their impact in the network's area of operation.

Finally, for PAHO/WHO in Brazil, networking is an opportunity for democratic actions that open opportunities for the participation of several partners and for the frequent exchange of information. It also ensures that shared and/or complementary objectives can be reached by interconnecting the players that make up the network. Different actions articulated under a plan may be much stronger than those developed under a single type of operation.

Network Management at PAHO/WHO Brazil: concepts, practices, and lessons learned

Preparation and technical and editorial coordination
PAHO/WHO Brazil Country Office

Colaboração



“This will be the century of networks, connectivity and interdependence, and all of these will enable us to overcome the barriers of space and time and to open up heretofore unimaginable possibilities for humanity. If we use these networks to multiply exponentially the social capital available, to link people and institutions in a vast web of support that embraces all the inhabitants of our hemisphere, we will have taken a giant step toward ensuring that our knowledge and experience converge into finding new modes of exchanging technical cooperation for sustainable human development.”

Part of Dr. Mirta Roses Periago’s inaugural speech upon assuming her first term-in-office as Director of the Pan American Health Organization.