



UNIVERSAL HEALTH SERIES

HOSPITALS IN INTEGRATED HEALTH SERVICE DELIVERY NETWORKS

Strategic recommendations

PAHO



Pan American
Health
Organization



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REGIONAL OFFICE FOR THE
Americas

HOSPITALS IN INTEGRATED HEALTH SERVICE DELIVERY NETWORKS

Strategic recommendations

Washington, D.C., 2021

Hospitals in Integrated Health Service Delivery Networks: Strategic Recommendations

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ISBN: 978-92-75-12004-0 (pdf)

ISBN: 978-92-75-12209-9 (print)

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Suggested citation. Hospitals in Integrated Health Service Delivery Networks: Strategic Recommendations. Washington, D.C.: Pan American Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO. <https://doi.org/10.37774/9789275120040>.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://iris.paho.org>.

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HSS/HS/2021

Design and layout: Carlos Acosta

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PREFACE

In order to tackle the challenges faced by health systems, the Member States of the Pan American Health Organization (PAHO) committed to work toward universal access to health and universal health coverage by adopting a series of strategic lines that are becoming key to efforts to improve health systems in the Region of the Americas. This decision is the product of a conceptual development process that has been paving the way for strengthening the Region's health systems. Three key milestones marked this conceptual development path:

1. Recognition that health systems that embrace the principles of primary health care obtain better health outcomes. This recognition occurred during the renewal of primary health care in the mid-2000s.
2. The PAHO Directing Council's reaffirmation in late 2009 of the need to strengthen health systems based on primary health care as the basic strategy for meeting national and international health targets. The Directing Council also recognized that integrated health service delivery networks are one of the principal operational expressions of the primary health care approach in health service delivery.
3. Approval of the Strategy for Universal Access to Health and Universal Health Coverage in 2014 to consolidate progress toward more equitable and efficient health systems.

As support for this conceptual development path, this report contributes to the discussion of hospital transformation within the framework of the Integrated Health Service Delivery Network (IHSDN) Initiative in the Region of the Americas. Its main objective is to present the ideas that emerged from the regional discussion on the future of hospitals and the new role of hospitals in IHSDNs. It also examines and summarizes the arguments of the publication *Redes integradas de servicios de salud: el desafío de los hospitales* [Integrated Health Services Delivery Networks: The Challenge for Hospitals], the discussions of the managers' workshops held in 28 countries of the Americas, the results of expert meetings, and PAHO studies to obtain the opinions of managers in certain countries in the Region. It likewise benefits from the international experiences and good practices identified in a systematic literature review conducted by the Andalusian School of Public Health and commissioned by PAHO on the evolution of hospitals and future trends.

As this report indicates, hospitals must play an active role in the transformation of health systems toward universal health. It will not be possible to move toward a people-centered model or have a strong and reliable first level of care if we do not have hospitals that operate as part of a network. This publication presents conceptual considerations and key recommendations on these and other matters equally important to the work under way at all levels of our health systems to advance toward universal health and meet the sustainable development targets.

FOREWORD

Progress toward universal health is the primary task of health systems in this decade. As such, one of the goals actively supported by the Pan American Health Organization (PAHO) is to ensure that all institutions in health systems of the Americas are structured in a way that guarantees the right to health, equity, and solidarity. In order to achieve significant progress in the coming years, PAHO is working together with Member States to promote technical cooperation, the sharing of experiences, and recommendations on each of the strategic lines adopted by the Organization's Governing Bodies.

One of the main challenges is the transformation of health services, including the development of integrated health service delivery networks. Utilization of the recommendations and technical cooperation tools developed for this purpose has been growing as the advances in some activities demonstrate their usefulness and importance.

One of the most important transformations needed in health service delivery is in hospitals, which are the focus of this publication due to their current position and power in health systems and the importance that communities, decisionmakers, and the media ascribe to them.

Hospital managers and others with different roles in the health system have expressed the need for transformation in all areas in different ways.

This publication is the product of the discussions and joint reflections of dozens of administrators at different levels of the health systems of the Americas who are interested in advancing toward universal health and integrated health service delivery networks and in redefining the role of hospitals in this context. With this publication, we are seeking to disseminate recommendations that cover basic aspects of contemporary hospital administration and to offer a positive view of the contribution and future of hospitals as an important component of health systems.

Through a review of conceptual aspects, the description of experiences, and the presentation of practical recommendations, this publication identifies what health system managers must do as a group to transform hospitals into "hospitals that are part of a network." There is a strong conviction today that the viability of hospitals and their future sustainability depends on operating in a network. At the same time, it will not be possible to have effective integrated health service delivery networks with a robust first level of care without transformed hospitals operating in a network.

We hope that the recommendations in this document, adapted to the local circumstances, will accelerate the transformation processes already under way in many countries.

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ACKNOWLEDGMENTS

This publication is the result of the discussions, recommendations, and contributions of countless health services managers from the Region of the Americas who participated in a series of meetings on the role of hospitals in integrated health service delivery networks.

It was prepared by Ricardo Fábrega, based on the recommendations of a working group consisting of Osvaldo Artaza, José Enrique Cabrera, José Luis Castro, María Cristina Cometo, Rossana Fuentes, Reynaldo Holder, Fernando Menezes, Juan José Mercader, Laura Ramírez, Carlos Rosales, Fernando Sacoto, Itzel Smith, Roberto Tapia, Renato Tasca, and Soledad Urrutia.

Amalia Del Riego supervised the preparation of the publication, with technical input from Ramón Granados and Reynaldo Holder, while Rossana Quiñones was responsible for its editing and content review.

Thanks are also due to the more than 20 experts and professionals from the 24 countries that participated in the peer review, and special gratitude to the more than 1,000 hospital and health service administrators, public health experts, and health workers in general who contributed their ideas and enthusiasm to this initiative.

EXECUTIVE SUMMARY

Many aspects of the analysis of health service delivery networks and their integration from the hospital standpoint are relatively unexplored territory, making this an especially interesting and relevant topic as the health sector undergoes transformations toward universal health.

Health systems in all the countries face serious challenges that the PAHO Member States have been attempting to tackle by developing conceptual frameworks and strategies to guide health system development. In recent years, the Organization has issued a series of publications with guidelines for strengthening health systems. Step by step, from the dissemination of the position paper *Renewing Primary Health Care* in the Americas in 2005 to the approval of the Strategy for Universal Access to Health and Universal Health Coverage in 2014, the Organization has been developing concepts, strategies, and frameworks of action to advance health system transformation and development.

In 2007, PAHO launched the Integrated Health Service Delivery Network (IHSDN) initiative to address the problems derived from the fragmentation of the health services and the structural problems stemming from the widespread segmentation of health systems in the countries of the Region.

Following publication of *Integrated Health Service Delivery Networks: Concepts, Policy Options and a Road Map for Implementation in the Americas*, the IHSDN initiative was considered by some to require a more in-depth and detailed analysis of the hospital situation, including the role of hospitals in IHSDNs themselves. This critique gave rise to the initiative to produce this publication.

When analyzing the elements that determine the configuration and role of hospitals, it is necessary to consider the traditional concept of these facilities, which considers them to be the central axis of health care. Recent publications of the World Health Organization (WHO) have expressly referred to this phenomenon as a situation that jeopardizes the good performance of health systems. This criticism has put many hospital staff on the defensive, leading them to react negatively to proposals grounded in primary health care. Any new definition should, therefore, make it clear that a change in the status quo will give hospitals a positive and indispensable role, making them an essential part of IHSDNs, so that these networks are not considered a threat.

In the IHSDN initiative, hospitals are an aggregate of specialized institutions that support a highly effective first level of care. Hospitals themselves are defragmented, which is theoretically correct, innovative, and even visionary. However, the IHSDN initiative does not seek to diminish the influence of hospitals in the health system or the importance of their role, but to integrate these institutions so that all their efforts are aligned with the needs of the people and communities they serve through the development of IHSDNs. It is obvious that without hospitals there can be no IHSDNs; however, it should also be recognized that without effective networks, hospitals cannot do their job.

To summarize, part of the IHSDN initiative involves changes in the traditional role of hospitals, which are no longer conceived as the apex of a pyramid, with a hierarchy based on specialization aimed at successful treatment of diseases. Instead, hospitals become a key participant in a service organized as a health services network, performing specific tasks in a series of processes that constantly cut across the network and include the participation of individuals and communities.

The product of intense debate and joint effort, this work contains a series of proposals in the six priority areas for developing the new role of hospitals in IHSDNs: governance, resource allocation and incentives, the model of care, technology and infrastructure, human resources, and organization and management.

Governance

The term governance, applied to IHSDNs, means reaching strategic decisions collectively to coordinate different participants and establish regulating principles that define the work of each party involved. In the case of hospitals, governance is fully applied insofar as it is assumed that there are relatively autonomous participants in the organization and its coordination mechanisms require the preparation of agreements and establishment of cooperation and the recognition that it is not enough to apply hierarchical standards. Added to this is the need for networks to incorporate the vision of the communities and populations they serve – groups that under traditional institutional arrangements neither participate in the discussions nor influence decisions about the role of hospitals.

In the sphere of governance, it is essential for networks to perform certain tasks, beginning with the definition of their health objectives and strategic lines of action. Next, in keeping with these objectives, they must determine the portfolio of services for each

network facility or node to prevent duplication and ensure that the right services are provided in the right place with the right human competencies, the right technology, and the right cost effectiveness criteria. The principal health care processes should also be constructed in a participatory manner to guarantee comprehensive, continuous care and a coordinated flow of people through the different facilities or nodes of the network. Furthermore, investments, human resources, and financing must be aligned for the greatest health impact. Finally, it is important to monitor their achievement of results and report them to the community.

Resource allocation

Resource allocation to hospitals and hospital activities are methods for meeting health objectives. Consequently, they cannot be determined by the interests, influence, or particular judgment of hospital professionals. Rather, it is the network administration, based on the principal needs of the people and communities it serves, that is responsible for formally linking the mechanisms for allocating resources to the hospital while meeting the targets set in conjunction with the facility. The goal is to ensure optimal network performance and maximum efficiency and effectiveness in health expenditure. Resource allocation and, specifically, the configuration of the various payment mechanisms, should guarantee the sustainability of these facilities and at the same time, promote optimal performance in terms of expected outcomes based on the needs of the people and communities in the network, along with continuous improvements in the efficiency and quality of the services.

There should be a permanent guarantee of quality through the formal licensing and accreditation of infrastructure, technologies, human resource competencies, and fundamentally, the treatment of users and safety of health care processes.

Hospital efficiency and performance measurement should be considered an opportunity for improvement and the sharing of best practices. Efficiency and quality, together with production aligned with the network, are critical elements that resource allocation should reflect.

Model of care

A third key issue for hospitals is determining their contribution to the model of care that the IHSDN initiative is intended to implement. From the patient's standpoint, the ideal model of care is one that enables every individual, family, and community to have an interdisciplinary health team nearby that helps them live a healthy life and comprehensively solve most of their health problems with their participation. In the new model of care, hospitals can be conceived as institutions that coordinate specialized components to support a first level of care with growing response capacity. That way, health system operations revolve around the delivery of health promotion, prevention, treatment, rehabilitation, and long-term care services primarily located near the community.

Thus, hospitals are not considered autonomous facilities but part of the network and support for the first level of care. Hospitals in networks should therefore address needs with the mediation of primary health care teams. In this new model, the objective should be to progressively deliver health care on an ambulatory basis, bringing services closer to people and communities, and achieve continuity in the user's experience through effective health care coordination mechanisms and processes.

Technology and infrastructure

In the sphere of technology and infrastructure, the key is procuring what is needed at each level of care rather than what the market offers to the system (i.e., what it sells). Therefore, based on its health objectives, the network administration sets the criteria for the procurement of new technologies for the entire integrated network.

The same holds true for infrastructure, which should be subject to clear rules to ensure that investments are tailored to IHSDN needs and regulations and avoid overinvestment. With respect to hospital infrastructure, national systems for prioritization are needed that consider the relevance of each facility based on its place in the IHSDN.

Human resources

Human resources development is still the main issue affecting the performance of hospitals, in particular, and all health services in general, making it an issue that clearly requires greater attention when setting up IHSDNs.

Addressing the issue of human resources in hospitals as part of a comprehensive IHSDN requires addressing the management of hospital work and health education. These are key facets in IHSDN management and the molding of professionals for the future health systems of every country.

Hospital work in a network is a field of interprofessional practices and collaborative work whose end result should not only be the treatment of disease but the maintenance of the population's health. Thus, the organization of the work and human resources and their distribution are structural factors in processes for the production of health. It should be borne in mind that the work of human resources in a network hospital is determined by different types of contracts, wages, and incentives (salaries for public employment, fees-for-services, or productivity) related to the models of care, management, and financing of each country.

Having sufficient numbers of competent and committed resources in IHSDNs who are proud of their work requires sound, results-based regulatory and quality management frameworks for professional education and practice, as well as integrated models of care organized for working in a network. Consideration should also be given to the special qualities of health workers, their training needs, wages and incentives, and complementarity and teamwork, as well as the roles and positions that should be redefined for integrated networks.

It is also essential to consider hospitals a venue for training and molding the attitudes and practices of professionals, technicians, and health workers. The major challenge today is to eliminate the disconnect between hospitals and networks and the persistence of professional practice that favors highly complex care over primary health care.

Change management

Finally, recommendations for managing change are needed that should consider the different stages of hospital and IHSDN development and pool experiences, knowledge, and data that support the suggested transformations.

Transforming hospitals requires management teams to have special leadership competencies, given the special qualities of hospital professionals. When promoting organizational change, the organizational culture must be considered, since ignoring it will lead to opposition and impede progress.





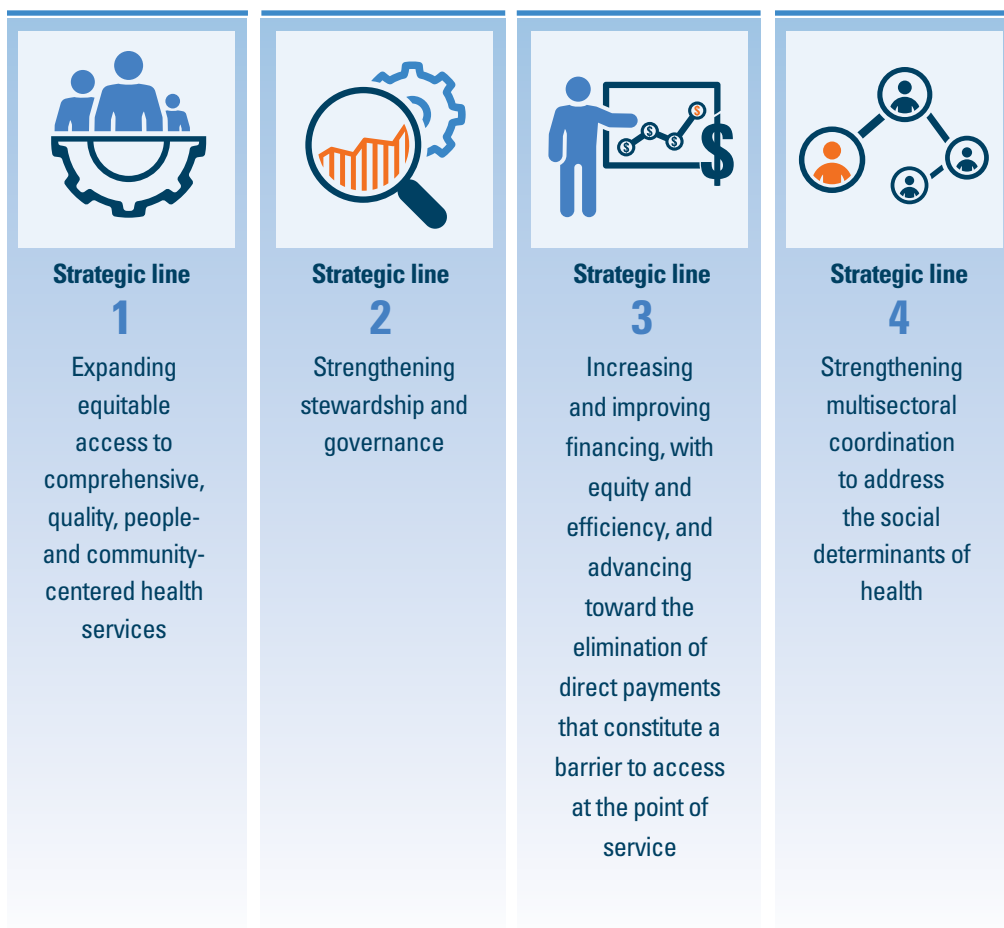
INTRODUCTION

Progress toward universal access to health and universal health coverage is the most pressing challenge of health systems in the Region of the Americas.

There is consensus that “universal access to health and universal health coverage” (“universal health”) means that all people and communities have lifelong access, without any discrimination whatsoever, to the comprehensive health services they need and that these services are of good quality and do not cause them financial hardship. Thus, “universal health” is a progressive and demanding objective that calls for health systems to be strengthened by transforming them into systems based on the values and principles of primary health care. The universal health strategy has four evidence-based lines of reform to achieve strengthened health systems (1) (Figure 1). The first of these addresses the need to expand equitable access to comprehensive, quality, people- and community-centered health services. Part of this first line corresponds to integrated health service delivery networks (IHSDN), which are the main initiative of the countries of the Americas for reorganizing health care to offer a wider variety of services to a greater number of people. To accomplish this, it will be necessary to redefine and improve the organization and administration of health services in general and hospitals in particular.

This publication summarizes the current discussion on transforming hospitals from their current configuration toward institutions that are part of a network. Its main objective is to present the ideas expressed in the regional discussion on the future of these health facilities and forge paths that will enable the countries of the Region to advance toward a joint vision of how hospitals should be integrated into IHSDNs.

Figure 1. Strategic lines for universal access to health and universal health coverage. PAHO, 2014



In September 2005, recognizing that “health systems that adhere to the principles of PHC achieve better health outcomes,” the Member States of the Pan American Health Organization (PAHO) committed to promoting integration of the values and principles of primary health care into health system development and to creating the structural conditions for the renewal of primary health care (2).

Later, in 2009, “aware of the need for strengthening health systems based on primary health care (PHC) as an essential strategy for meeting national and international health targets” and “recognizing that integrated health services delivery networks are one of the principal operational expressions of the PHC approach in health service delivery,” the Directing Council adopted Resolution CD49.R22 on IHSDNs (3).

Based on the foregoing, this publication considers the arguments in *Redes integradas de servicios de salud: el desafío de los hospitales* [Integrated Health Services Networks: The Challenge of Hospitals] (4), the discussions that took place in the managers' workshops held in 28 countries in the Americas, the results of the expert meetings held in Panama in mid-2012 and Barbados in October of that year, and the PAHO studies on the views of managers in certain countries in the Region. It also summarizes the results of a systematic literature review conducted by the Andalusian School of Public Health and commissioned by PAHO on the evolution of hospitals and future trends (5).

It should be borne in mind that most proposals and initiatives are constantly modified. In addition, new options are emerging as knowledge, technology, interdisciplinary synergy, and the demands of the population put pressure on the system and mold its transformation. The health sector is constantly changing and hospitals even more so.

Finally, it should be pointed out that many aspects of the analysis of health service delivery networks and their integration from the hospital standpoint are fairly unexplored territory and, thus, it is an especially interesting and important task in the midst of the transformation currently under way in the health sector. Today, valuable documentation and experiences on the situation in countries can be obtained from hospital managers and experts, as these are the people who make these services work. Arriving at common positions and reaching agreements on the transformation of the system are urgent tasks.

CHAPTER 1



HEALTH SYSTEMS AND THEIR CHALLENGES

Health systems are confronted with the need to address the multiple demands stemming from the endless changes in their context in recent decades, notably: demographic and epidemiological changes, the rapid appearance of new technologies, changes in the population's needs and preferences, the higher cost of service production, the need to foster equity and social cohesiveness, questions about the quality and safety of services, problems related to the availability of qualified human resources, and the countries' concern about guaranteeing universal access to health and universal health coverage – all of which have created the need to rethink the operations of health systems.

We know improvements in the quality of life cannot be explained by the presence of health systems alone and that most hospitalizations are the result of a previous failure of the social and health system. This calls for profound changes in the work of health facilities, which have a long way to go before abandoning the exclusive focus on cure and rehabilitation and becoming services capable of offering preventive services and keeping the population healthy. In other words, they must stop concentrating on saving lives when disease is already in the advanced stages and the harm is already great (though not relinquishing that essential function) and adopt preventive approaches to protecting life, while striving to ensure that the social system as a whole works toward the same end. A change of this nature cannot be brought about by any one type of health service; rather, it requires a change in the organizational paradigm and the way in which the resources needed to meet the health system's objectives are allocated.

There is also a connection between the availability of resources and society's demand, particularly in the Region of the Americas, for greater social solidarity and the elimination



of the inequities that affect our communities. Health plays a role that cannot be ignored, creating the need for more efficient, effective, equitable, and relevant systems. The health sector should play a leading role in improving the quality of life of the population, embracing the values of equity and solidarity, acknowledged as the core of the primary health care strategy.

Achieving equity requires policies that improve insurance mechanisms in health systems, while avoiding their segmentation: universal access to health and universal health coverage must be the goal. These ideas have sparked a great deal of debate lately, and some initiatives in this regard are well-advanced.

The antithesis of all this is health services that are fragmented and commercialized, and that revolve around hospitals – all of which is contrary to the objectives of a good health system (6). The fragmentation of health care delivery is considered to be one of the main problems that must be addressed by countries seeking to improve health service performance. Fragmentation squanders resources and undermines technical quality, reducing access to benefits and user satisfaction.

Multiple meetings and declarations on this issue demonstrate a real consensus on the need for integrated health systems with universal access and coverage, grounded in the basic values of primary health care. Based on that consensus, PAHO is promoting the IHSDN initiative, which has been validated in technical consultations and expert meetings in more than 30 countries in the Americas and adopted by resolution of the Organization's Directing Council in 2009 (3).

CHAPTER 2



THE INTEGRATED HEALTH SERVICE DELIVERY NETWORK INITIATIVE

In order to tackle the problems caused by the fragmentation of health services and solve those of a structural nature stemming from extensive health system segmentation in the countries of the Region, PAHO launched the IHSDN initiative. The process began by documenting experiences from different national and subnational situations.

PAHO defines an IHSDN as “a network of organizations that provides, or makes arrangements to provide, equitable, comprehensive, integrated, and continuous health services to a defined population and is willing to be held accountable for its clinical and economic outcomes and the health status of the population served” (3). This definition provides the conceptual framework for the regional agenda on hospitals in IHSDNs.

IHSDNs are the operational expression of the primary health care approach in the health services, because they help make some of its essential elements a reality: serving as the population’s first contact with the health services and providing comprehensive, integrated, continuous, and appropriate family- and community-centered care. IHSDNs are also an ideal mechanism for expanding the supply of comprehensive quality services to achieve universal health.

2.1 Basic attributes of IHSDNs

Given the diverse health system contexts in the Americas, a single model is not applicable to all situations. Even so, some attributes should always be present in IHSDNs and can be grouped under four major areas: the model of care, governance and strategy, organization and management, and resource allocation and incentives (Figure 2).

Figure 2. Basic attributes of IHSDNs, by area



2.2 Preliminary considerations on the IHSDN initiative and hospitals

By defining the attributes that can be achieved through different institutional and regulatory arrangements, the IHSDN initiative paves the way to solving the problems of health system fragmentation in a manner tailored to the national situation. This flexibility is an important strength but requires precise indicators that confirm the advances in each attribute. Otherwise, the diversity of options can create a labyrinth of measures that hinder movement in the right direction.

One of the main drawbacks observed in managerial culture is a resistance to networks. Indeed, public policies define networks as more or less stable patterns of interaction between autonomous and interdependent participants to solve specific problems and implement common programs (7). Networks are not hierarchies, and none of their components should have management control over another.

Networks are based on interdependence, collaboration, and cooperation to achieve common objectives. Network management should not seek short-term discipline but confidence in the ability to achieve results in the long term. One of the main challenges is therefore weaving the network's common long-term objectives into incentives, since they tend to be overlooked in the day-to-day management of facilities.

Due to these considerations and others that will be discussed throughout the publication, the IHSDN initiative requires a more in-depth and detailed analysis of the realities of hospitals, including their role. Hospitals in the IHSDN initiative are an aggregate of specialized institutions that support a highly effective first level of care. Hospitals themselves are defragmented, which is theoretically correct, innovative, and even visionary. However, the IHSDN initiative does not seek to weaken the influence of hospitals in the health system or diminish their role but to include them in a way that ensures that the whole of their entire contribution is aligned with the general interests of IHSDN operations. Indeed, without hospitals, there can be no IHSDNs, but without effective networks, hospitals cannot do their job.

CHAPTER 3



THE ROLE OF HOSPITALS IN IHSDNS

Several decades ago, experts in this field began to focus on the role of hospitals as part of broader health service delivery systems. In 1957, the World Health Organization (WHO) defined hospitals as “an integral part of a social and medical organization, the function of which is to provide the population complete health care, both curative and preventive, and whose out-patient services reach out to the family and its home environment; the hospital is also a centre for the training of health workers and for bio-social research” (8).

Ten years later, WHO expanded this definition, stating that this concept from the middle of the last century goes beyond the conventional idea of hospitals as places for treating the sick, especially on an in-patient basis:

“It visualizes the hospital as one part of a comprehensive system of preventive and curative medicine and as an institution devoted not only to in-patient treatment, but also to ambulatory and domiciliary care. Its historical importance, the capital investment it represents, the high quality of the medical care it gives, and the first-class qualification of its personnel have led the hospital to be considered, up to now, as a very special institution, of a higher standard and prestige than other components of the health service. If a hospital is to fulfil its destiny in the modern world, it can no longer be regarded as an “ivory tower” but must establish and maintain close and cordial relations with general practitioners, medical officers of health and their staffs of health visitors and medico-social workers, industrial medical officers and occupational health nurses, and any and all other health workers in the community it serves. Indeed, it should do all in its power to make itself known to, and affectionately regarded by, the individual members of that community.” (9).

Despite the warning about avoiding the concept of an “ivory tower,” it is clear that fragmentation has become a factor that jeopardizes good health system performance.

3.1 Definition of hospital

In the analysis of the role of hospitals in IHSDNs, having accepted that there are situations that have been replicated for decades whose resolution is increasingly urgent, it is necessary to clarify the concept and meaning of the word hospital. Numerous health facilities in the Americas are called hospitals and differ widely from country to country. Therefore, it is necessary to start with the idea that there is no single concept or category of hospital. However, this publication, for discussion purposes, uses the classical concept of the modern general hospital: a health facility with several dozen or hundreds of beds and consisting of a series of medical, surgical, and specialty departments, with an emergency service, outpatient consultations with specialists, and in-patient services, part of whose responsibility is to meet the needs of a population ranging from 50,000 to several hundred thousand people.

Although the content of this publication can be adapted to different hospital situations, a decision was made to opt for a broad and generic concept of hospitals without considering specialized hospitals (for example, for psychiatric or tuberculosis care), long-term care facilities, and those that do not admit patients (day hospitals, bedless hospitals).

Nevertheless, when examining hospitals as part of a network, the trends in the evolution of these facilities and the services they provide cannot be ignored. Thus, the debate continues about what constitutes the core of the definition of hospital in terms of IHSDNs. That core should include the characteristic components of a hospital and gradually include services that once were hospital-based but today are autonomous or provided outside of hospitals – for example, dialysis centers, laboratories, distance diagnostic imaging centers, and blood banks.

3.2 Prevailing trends in hospitals

The role of hospitals can be analyzed from two perspectives. The first views hospitals as a node in a people-centered network that seeks first to maintain people’s health; then, when their health is compromised, it attempts to cure them through cost-effective resource utilization, while ensuring a high degree of user satisfaction. This has been the main issue in the discussion surrounding IHSDNs. The second perspective starts with the node itself, closely examining it and observing what happens within it, including its operations and the degree to which the hospital responds to external demands, whether from the IHSDN itself or from the academic and scientific world and the technology and pharmaceutical industry.

Within this framework, it is useful to view the hospital as a professional bureaucracy (10) characterized, among other variables, by its main coordination mechanism: standardization of the skills of the people who deliver the services (for example: in an operating room, professionals must have the utmost confidence in each other’s

performance) – something that is achieved with years of preparation and experience. This type of organization is not built on direct supervision or the hierarchical standardization of procedures (as in traditional bureaucracies), or mutual adaptation (as in less formal organizations), but rather, on the standardization of procedures based on professional criteria.

Hospitals are still bureaucracies, but with a highly autonomous operational staff that drives the effort to standardize skills to meet the demands of treatment processes. Codes of conduct and ways of proceeding dictated by outside agencies, such as universities, professional associations, or scientific societies, often make more sense to the hospital team's professional staff than the regulations imposed by direct supervisors. In reality, standards of practice are guided by the needs of the people and communities stipulated in the network's health objectives. This is made possible by the participatory development of protocols and clinical guidelines for the network's principal health care processes, involving and coordinating all network actors connected with them. Local adaptations in the network should be based on national guidelines, tailoring them to the needs of integrated processes coordinated between the home, the first level of care, and the hospital in each specific context.

The power of these facilities derives from the expertise of their professional staff and the conviction that their work is too complex to be supervised by bureaucrats or regulated by experts from other disciplines. Medical professionals also know that their services are in high demand, which affords them professional mobility and enables them to demand autonomy. In many cases, professionals tend to identify more with their profession than with the institution they work for.

When the operational part is viewed more as the apex rather than the base of the organization, the professional administrator or chief of service has little room to maneuver, and while that individual is not necessarily chosen by the clinicians, he or she must have their cooperation and share their codes and, almost always, their profession. Notwithstanding, professional administrators are required to supervise professional staff who often do not act like subordinates; hence the need to develop special competencies for exercising flexible, adaptive, and participatory leadership.

Something similar is observed regarding decisions about the use of technology or priorities in research, education, and continuing education. The desire for new technologies, which are heavily promoted by the industry and always appear to represent major advances, is not necessarily aligned with the priorities of the population served by the network or the best available evidence. The same holds true for the selection of research or education topics in hospitals. Such is the case with the constant focus on rare syndromes and the relatively little time devoted to diseases that are highly prevalent in the general population.

The analysis of the elements that influence hospitals should include a discussion of the tendency to consider these facilities the center of health care delivery. Recent WHO publications (6) have expressly called this phenomenon a macrotrend that hinders the

establishment of good health systems. This criticism, furthermore, has led many hospital staff to become defensive and react negatively to initiatives based on primary health care. Thus, any new definition must recognize the hospital's contribution to health care as both positive and indispensable and make it an essential part of a good IHSDN, so that networks are not viewed as a threat.

In summary, part of the IHSDN initiative is a change in the role once assigned to hospitals, which are no longer the apex of a pyramid in which the hierarchy is based on specialization to successfully treat disease. Instead, they will become an important participant, with certain functions in a series of processes that repeatedly cut across a health service delivery network in which people and the community participate.

3.3 Hospital management

Numerous publications discuss the key aspects of hospital management. Old arguments about human resources are now addressed in a way that considers competency-based management and the need to promote a good working environment and that further explores the management of physicians and nurses (11). It is now common to find documentation on experiences with the reorganization of hospital work, as well as initiatives (12) and experiences in the modification of hospital structure and architecture to meet the care and treatment needs of patients, rather than the needs of the medical specialty that treats the problem that resulted in the patient's hospitalization (13). There are also documented experiences in the integration of clinical and administrative work, and reorganization with respect to management contracts and agreements, care processes, and clinical management proposals, which were uncommon prior to the 2000s (14). Furthermore, strategic planning, results-based management, and reporting are promoted, and there is growing literature on multihospital procurement, delegated management of support services, the creation of extramural services, and the construction of centers highly capable of treating people with health problems without hospitalizing them (15).

With regard to information systems, there is also a great deal of experience and a major industry to support them through technologies of varying scope and usefulness. There is also abundant literature on the quality of hospital services and growing concern about the judicialization of disputes with individuals over health service delivery. Special mention should also be made of the increasing attention being paid to geriatrics and the management of care for people with chronic diseases, as well as the interest in cardiology and oncology services, due to demographic and epidemiological changes. The development of pharmaceutical services based on primary care also suggests the need for a change in management approach that responds to the new definitions. This new approach with primary health care functions and approaches clearly differs from traditional pharmaceutical practice and requires urgent changes in how the services are managed.

3.4 IHSDN requirements from the hospital standpoint

When redefining the role of hospitals in IHSDNs and seeing how they respond to the needs and demands of the population they serve in terms of quality and efficiency, it will also be necessary to ask how the network will affect hospitals, given the interdependence among network facilities. The discussion starts with the premise that there will be no good IHSDNs without hospitals and no hospitals that maximize their contribution to society unless they are part of an IHSDN. For this to occur, hospital needs must be taken into account in the development of the network.

The most important aspects of networks, from the standpoint of the hospitals wishing to join them, can be summarized as follows:

- ◆ The population should be adequately covered by health promotion and risk prevention services in order to anticipate health problems and prevent delays in seeking hospital care.
- ◆ Professional performance at the first level of care should be competent and capable of solving health problems to avoid unnecessary referrals.
- ◆ This first level, moreover, should:
 - be open 24 hours a day and have sufficient human resources and health technologies to provide continuous and effective care;
 - follow up on people who have been discharged to prevent relapses and readmissions;
 - have reliable clinical and administrative information systems;
 - have resources outside the sector to provide support for socially complex cases that the hospital cannot handle; and
 - be able to respond in situations involving a threat to public health.

Box 1 presents the example of hospitals and primary health care in Saint Kitts and Nevis.

Box 1. Role of hospitals in primary health care: key considerations for the health system of Saint Kitts and Nevis

Hospitals in Saint Kitts and Nevis are the property of the State and, therefore, part of the national health system. However, despite the best of intentions, the results produced by the network of services have been inadequate, leading to user complaints, unregulated fees, health worker dissatisfaction with working conditions, and inappropriate and asymmetrical use of the services. The health authority has pledged to seek solutions that meet and exceed the expectations of the population, providers, and financing agencies. The Ministry of Health is developing and upgrading its structures and procedures to make them more integrated, people-centered, high-quality, and aimed at achieving results validated by appropriate performance indicators. The organizational philosophy focuses on participatory leadership and a firm commitment to the values, principles, and components of primary health care.

In the final analysis, what will matter most to the health system is that people receive, perceive, and report satisfaction with the services. The goal is to pay consistent attention to people's needs and continued quality improvement, regardless of where the services are provided. This should not be viewed as merely a theoretical goal but as a basic policy imperative.

Declaration of responsibility

The Ministry of Health recognizes its leadership role in health, defined as the simultaneous exercise and coordination of policy and technical administration, which includes leadership, policy-making, regulation, and the guarantee of universal coverage to facilitate universal access to the health services while integrating their delivery.

Declaration of accountability

It is the nondelegable and essential role of the Ministry of Health to define, plan, and regulate the national health system as an IHSDN, based on national, regional, and international models. The attributes associated with results are the following:

1. Effective leadership and governance: sound legal, policy, and institutional framework; programs characterized by smart design, performance standards, consensus building, and supervision.
2. Adequate, predictable, and sustainable financing. This implies mobilizing sufficient funds to deliver health care and allocating them in such a way as to guarantee people access to the services they need and protection from financial ruin caused by out-of-pocket health expenditures.
3. Delivery of quality-oriented services – that is, need-based, people-centered services that are effective, efficient, appropriate, and safe. This includes measures to guarantee the performance and continuous evaluation of providers.
4. Adequate human resources: ensuring a competent, motivated, receptive, and productive workforce that is sufficient in number, has the necessary competencies, and is appropriately distributed.
5. Adequate resources: the procurement and distribution of sufficient supplies of essential medicines, vaccines, diagnostic media, and other quality-assured technologies; assurance of their evidence-based use and cost-effectiveness.
6. A good health information system – that is, a system for managing health data that furnishes timely and reliable information about health determinants, health system performance, and the health status of the population, and provides information for evidence-based decision-making.

Priority tasks

1. Constantly defend the values of integration and the development of a culture of learning, interdependence, collaboration, and excellence, with the support of a good legal and policy framework.
2. Formulate and implement specific integration policies and plans for improving the governance of hospitals and community facilities.
3. Identify and take advantage of new flows of financing with appropriate and dedicated investment to enhance the capacity and aesthetics of community facilities and services to make them more attractive and increase their use.
4. Prepare and implement protocols throughout the network to ensure that hospitals and community centers:
 - a) provide quality care, treatment, and support services;
 - b) ensure uninterrupted coordination of patient and medical data flows;
 - c) continuously evaluate the work and performance of health care providers;
 - d) evaluate the use of human resources and materials in terms of the objectives and behaviors established for the network and the system;
 - e) ensure a uniform two-way flow of data and information to improve decision-making and the reorientation of policies, plans, institutions, and programs, guided by feedback.

Dr. Patrick Martin

Director General of Health

Ministry of Health, Saint Kitts and Nevis, 2012

CHAPTER 4



HOSPITALS AND THEIR CHALLENGES

Hospitals must eliminate major barriers in their transformation toward integration in networks. The discussions that gave rise to this publication addressed numerous key issues in the management of the transformation process, and a consensus was reached to group the most important of them under six categories. These categories are relatively common in texts on the transformation of health systems, but here this publication approaches them specifically from the perspective of a hospital that is becoming part of a network and is no longer an isolated business or autonomous facility.

This selection of six categories implies prioritization that (as the product of an agreement among experts from very different countries) will not fit every situation in the Region, and each reader will have to adapt them to the local situation. In any case, these categories reveal inescapable challenges for hospitals in networks. The first issues addressed are governance, resource allocation and incentives, and the model of care – issues clearly related to key elements of the universal health strategy. These are followed by technology and infrastructure, human resources, and organization and management, which are cross-cutting elements of health systems, applied to the hospital reality in this analysis.

4.1 Governance

It is necessary to establish what is meant here by governance and, in particular, how it applies to health. Governance is defined as “a process involving the formulation of the mission, vision, and values of an organization, its strategic objectives and monitoring system, and as the development of strategies to achieve them” (16). In the case of health, one definition describes it as the strategic decision-making processes that directly

or indirectly affect the health system, where “strategic actors use power resources to influence decision-making” (17).

The term *governance*, therefore, is perfectly applicable to IHSDNs, since the object is to achieve collective strategic decision-making for coordinating different participants and creating shared rules of the game that determine the work of each. These decisions affect different options for structural organization. In the case of hospitals, governance is fully applied, to the extent it is assumed that there are relatively autonomous participants in the organization, that its coordination mechanisms require the drafting of agreements and cooperation, and that it is not enough to apply hierarchical standards. Added to this is the need to integrate the vision of the people and communities with which the network interacts, who, under traditional institutional arrangements, do not take part in the discussion or influence decisions about the role of hospitals.

As noted in *La gobernanza en las redes integradas de salud (RISS): contextos, modelos y actores en América Latina* [Governance in integrated health networks (IHSDN): contexts, models, and actors in Latin America] (16), the important thing is “to understand the need for good governance that ensures optimal levels of governability and facilitates the performance of administrative functions.”

4.1.1 Differences in network and hospital governance

In the case of IHSDNs, governance is key to achieving the health objectives and, thus, it is an essential feature. PAHO’s position is that for IHSDNs to be what they are intended to be, they must have a single system of governance.

In the discussions on this topic, it has been argued that good governance is of the highest priority in IHSDNs. According to this argument, if hospitals have their own very strong governance, internal arrangements could be made that hinder the formation of a network; thus, it is preferable to increase hospitals’ participation and adaptation to the governance of the network as a whole. Although this is an open question, Artaza (18) proposes several elements that help to distinguish network governance from the governance of network hospitals (Box 2).

In light of the above, to ensure good governance in hospitals and the network, institutions should be created in which decisions are not based solely on the interests of internal groups, informal leaders, or the hospital director, but integrate the vision of the people and communities involved as well. This integration should strike a balance that facilitates achievement of the objectives that the network expects the hospital to meet in the short, medium, and long term.

Based on the description of governance above, the creation of genuine corporate governing bodies has been proposed for hospitals, whose board of directors or executive board should include representatives of the population and community institutions who together can represent interests of the general public. The role of governing bodies of this type is to make the good governance of the network visible and establish monitoring mechanisms that prevent the interests of internal groups from prevailing. This solution has

been applied in experiences with the establishment of boards of directors, local citizens boards, management boards, and other types of governance, but there is still no research to support specific proposals on the corporate governance of hospitals that is consistent with good governance in IHSDNs.

Another mechanism that has been proposed for integrating hospitals into networks is external accreditation. Although it can be a real help if well-designed, its sporadic nature and disconnect from the day-to-day work of hospitals make it impossible for it to fully replace the corporate governance and participatory management established in hospitals.

One of the aspects meriting special attention is how to include investment decisions in a broader system of governance, as indicated in the box below. Strategic decisions on new investments and their execution require significant technical capacity in the network and the creation of stable agreements.

Finally, given its importance, the need to develop internal leadership for governance and a vision of hospitals that are part of a network should be mentioned. Leadership capacity and the related management skills become real assets when establishing and executing agreements.

Box 2. Characteristics of governance in an integrated health service delivery network and in hospitals that are part of a network

Characteristic	Integrated network	Hospital
Governance	It defines the health objectives for its population, taking national priorities into account; assigns roles to the network's various health institutions; and defines a strategic vision, goals, and targets for the network as a whole.	The hospital's governing body should be able to state that the facility is aligned with the network and translate the general objectives and strategies into the short- and medium-term work of the institution.
Participation	It should have a more general vision of the population served and moderate the creation of expectations and user satisfaction. It should create social monitoring, transparency, and public reporting mechanisms.	It should set the policies for user and citizen participation, create the entities for user participation, and foster transparency in its relations with universities and industry.

Service portfolio	It should define the service portfolio and development proposals for each network facility, which also requires determining which activities should be prioritized and which should be halted. This requires participants to have a high degree of clinical competence.	It should be capable of making internal adjustments to program the service portfolio required by the network and meet its health and financial objectives; it should also be capable of participating in the design of the network's health care processes and tailoring its internal organization and procedures to the agreed design.
Management	It should establish referral and counter-referral flows, as well as the respective information systems. It should also establish the monitoring, evaluation, and feedback systems and coordinate the network's logistical and integrated care processes. It should establish resource allocation mechanisms and link them to results in terms of output, efficiency, and quality. This requires an emphasis on clinical management components.	It determines the mechanisms for developing human talent, utilizing technologies, internally allocating resources, positioning itself, and developing the corporate image.

4.1.2 Recommendations on governance

When integrating hospitals into IHSDNs, consideration of the following elements is especially recommended:

- ◆ Guarantee network governance. It is particularly important for the hospital to join the networked governance entities and that this be a priority. It is likewise critical for planning and strategic agreements to be clear and shared.
- ◆ Create work agreements that have a strong clinical component. It will be necessary to draw up concrete agreements on the specific responsibilities and conditions of the work relationship with each professional in the continuum of care, primarily with respect to referrals, patient flows, priority illnesses and situations and the capacity to handle them, prioritizing greater response capacity at the first level.
- ◆ Have other mechanisms for strengthening collaborative work that are productive and strengthen the process – for example: the exchange of services, joint procurement to take advantage of economies of scale, and the adjustment of supply to meet the needs of the population served by the network.
- ◆ Devote time and resources to developing competencies and skills for leadership, change management, and the construction of governance.
- ◆ Develop specific regulations governing the network structure and establish the basic elements of its mission (the reason for the network) and those related to how they are connected, as well as the functions of each component.

4.2 Resource allocation

WHO has called for transition toward more equitable financing systems and innovation in the acquisition of resources and how they are allocated. One of the main concerns is preventing waste, specifically when it comes to medicines and services requiring technology support (19). This section explores resource allocation and the mechanisms for payment to health facilities. It does not deal with issues involving the financing of the system, which are related basically to the way resources for the health sector and its health care facilities are obtained (generally through a combination of taxes, social security contributions, and direct payment). It also assumes knowledge of the arguments on the greater efficiency obtained when hospitals work in IHSNs that were put forward during the discussion and approval of this regional policy (3).

When examining resource allocation from this standpoint, there are two problems. On the one hand, hospitals are major consumers of resources. Even though the objective of the stated policies is to strengthen disease prevention and health promotion, it is observed in practice that considerably more than half of allocated resources go to hospital care. The natural tendency seems to be for hospital budgets to drive this increase.

On the other hand, the question remains of how these resources actually help to meet the needs of the health service delivery network and the health priorities of the population it serves once they are made available to the hospital. This question will be the main focus of this section.

Hospital income can be divided into two major categories, based on its source:

- a) External financing, provided by some entities (social security, private insurance, ministry budget) for the care of a particular population. This means that the population is insured in some way and that this insurance offers substantial coverage that includes hospital costs. This is the main source of hospital income.
- b) Direct fees for service.

Most experts consider this second source of income (direct payment) a hindrance to progress toward universal health and call for its reduction or elimination. The hope is that health systems will shift toward insurance and prepayment modalities that eliminate economic barriers to people's access at the point of care. Achieving this would require a shift to hospital care without copayments at the point of service and the creation of insurance mechanisms that offer sufficient coverage. It should be recalled, however, that while direct payment for public services is falling, it is often a major component of the resources that hospitals use for their day-to-day operations. Thus, when shifting to the elimination of direct payment, it is important to ensure that this income is sustainably replaced.

The following should be borne in mind when transforming hospitals into facilities that are part of a network:

- ◆ Free services at the point of care is a core value of the universal health strategy.
- ◆ The universal health strategy must be gradually implemented in the Americas.

Financing entities have a variety of payment mechanisms, ranging from total retrospective payment to total prospective payment. The most common form of retrospective payment in facilities substantially integrated with their financing entity is the one in which the hospital has a reference budget without clear linkage to the degree of activity (historical budget). Thus, the financing entity transfers all the necessary funds to the hospital to cover the expenses incurred in a given period and absorbs the deficit. This has been the customary way of allocating resources to public or social security facilities, but the available information indicates that this modality is inefficient, increases expenditures through inertia, and tends not to be geared to the needs of the population. Moreover, resource allocation under this modality is not aligned with performance or outcomes and does not foster cooperation in networks; furthermore, it reduces cost control and generates inequity in resource allocation.

In prospective payment mechanisms, in contrast, the financing entity agrees with the facility on a predefined sum. This modality, which consists of setting the price of the services without limiting their number, tends to result in an increase in services for which sufficient resources may not be available. Thus, prospective budgets tend to put a cap on the amount of activity with predefined fees; these are known as prospectively set global budgets. Calculating a global amount in relation to a total volume of benefits with predetermined fees for a specific population and transferring the entire amount regardless of the services actually rendered is, in practice, a per capita prospective global payment (also known as a block contract).

Under this theory, prospective payment and risk transfer are an effective way of aligning providers with the priority activities and at the same time controlling the costs of the system. It implies, in fact, the need to duly consider the magnitude of risk transfer, since hospitals cannot control all risks. There is general agreement that it is preferable for the unit of payment to be added; in addition, there is abundant literature questioning the fee-for-service modality. Consequently, there has been progress toward payment packages for diagnostic services (Box 3) or case-based payment, based, for example, on diagnosis-related groups (DRG). These modalities also have their drawbacks or risks, and it should be assumed that there is no perfect mechanism for resource allocation.

In light of this, many high-income countries are increasingly using prospective global payment mechanisms with adjusted capitation when health service delivery networks and primary care financing are involved (20). Case-based payment is also being adopted in hospital services. In any case, there is no homogeneity among countries in the application of innovative financing solutions. Countries are seeking a balance that will enable them to boost efficiency, improve health outcomes, contain costs, and maintain a stable flow of resources for hospitals. Thus, instead of responding to theoretical mandates, resource

allocation mechanisms are being developed in the course of practice through agreements between influential agents, taking the rigidity of the institutional regulations applicable to facilities into account.

The allocation of resources to hospitals and their activities is a way of meeting health objectives, and these activities, therefore, cannot be defined by the interests, influence, or personal views of professional hospital staff. Rather, it is the network administration, based on the needs of the people and communities it serves, that is responsible for formally linking the hospital payment mechanisms with the achievement of the goals agreed on with the facility. This alignment, whose purpose is to ensure optimal network operation and the maximum equity and effectiveness of health expenditure, is achieved through negotiations in which the network defines the needs and the hospital indicates its requirements for responding to them; it materializes in contracts or commitments that must be transparently monitored and evaluated to ensure hospital accountability. Ideally, the contracts or commitments should explicitly indicate the incentives for improving performance to encourage the hospital's coordination with its network: for example, wage increases for professionals, since they are the ones who determine how the resources are used.

Box 3. Prospective payment mechanisms: diagnosis-related payment in Chile

In the 1990s, Chile launched a reform of payment mechanisms for its public hospitals with a view to improving equity and efficiency in health service delivery. This process was spearheaded by the National Health Fund (FONASA), which is responsible for financial transfers to all public providers. The goal was to break with historical budgets and the direct financing of intermediate procedures that guarantee neither quality care nor efficient resource management.

To this end, it developed a payment model based on diagnosis-related groups (DRG-PM) in which payment is determined by the estimated average cost of solving a particular health problem. The estimate is based on the value of a basket of benefits associated with that diagnosis and includes estimates of the frequency of each action taken and procedure employed; it considers bed days, tests, procedures, and surgical interventions. The DRG-PM is applied to groups of patients with the same pathology or condition but not to individual cases, where the clinical criterion should always prevail. Since it is a prospective payment mechanism, variations in the cost of service delivery are absorbed by the facility, because the standard value is paid in all cases. The main objective is to pay for the problem solved and not measures used to solve it, thereby promoting efficiency.

In selecting the diagnoses included in the DRG-PM, issues such as their proportion of total expenditure, their frequency, and the health problems whose treatment could be standardized were considered (FONASA, 1999). At the beginning, when

the mechanism was tested, 18 baskets of services were constructed, accounting in the first year for less than 10% of the total transfers in the pilot phase, with the potential for reaching nearly 40%. As time went by, the DRG-PM in the public sector evolved toward a mechanism of payment for priced benefits, and the term DRG-PM came to be restricted to the purchase of benefits from the private sector by agreement with FONASA.

Around 2012, the priced benefits included all baskets of services linked to the benefits of the explicit health guarantees (AUGE) and accounted for nearly 57% of the funds transferred to hospitals.

Thus, there are two levels of resource allocation: the first level, corresponding to the financing entity (public insurance, ministry of health, social security), provides resources to the IHSDN, whose ideal allocation mechanism appears to be an adjusted global per capita that considers the needs of the population. The second level consists of the allocations to network facilities. This suggests one mechanism for allocating resources to the first level of care, in which capitation predominates (mixed), and another for allocating them to hospitals through work contracts that consider the expected degree of activity to meet the network's requirements.

This results in the need to consider a third level of resource allocation related to the transfer of incentives to health professionals. Given the nature of hospital operations, if hospital administrators lack appropriate mechanisms, they will find themselves in a very difficult position in which the network demands certain results but the internal culture and organizational inertia prevent the changes necessary for achieving them. Hence, there is a need to consider mechanisms for rewarding physicians, nurses, and other health professionals in alignment with network objectives (see Box 7 in the human resources section further on).

Finally, the network should offer incentives to encourage each health institution (or node) to do what it is supposed to. Thus, each node should have the necessary resources for efficiently intervening in each network process or flow: "Financial planning should address short-, medium-, and long-term considerations and aspects related not only to service production but to infrastructure, equipment, human resources, and the health needs of the population" (4).

4.2.1 Recommendations on resource allocation

- ◆ As part of the process to establish hospitals as part of a network, it will be necessary to reduce the importance of historical budgets and gradually shift to payment mechanisms associated with the capacity to solve health problems (diagnosis-related groups or other similar systems).
- ◆ Resource allocation should be determined by periodic negotiations that yield work contracts or commitments, in which the network sets the targets that the hospital should meet, both quantitative (production and quality) and qualitative (e.g.,

user satisfaction, collaboration in network operations) and both parties agree on verification, monitoring, and incentives mechanisms that lead to achievement of the objectives.

- ◆ In order to align hospital financing with country and network health priorities, consideration can be given to rewarding services for priority diseases to produce a greater health impact.
- ◆ Financing mechanisms should take equity into account and prioritize it in resource allocation; in order to do so, they must consider the differential costs of serving populations in situations of vulnerability who have little family support or a lower sociocultural level.
- ◆ Resource allocation mechanisms should avoid concentrating services in populations with relatively greater access; the important thing, therefore, is not only the number of services provided but how they are distributed among the population.

4.3 Model of care

A third key issue for hospitals is determining their contribution to the model of care in the IHSDN initiative. Thus, it is essential to define what is understood here by “model of care” in health.

Models are a descriptive representation of the optimal way of organizing activities to meet health needs and demands and improve the system as a whole. Optimal service delivery does not occur by itself. It requires work to manage and reorganize the system, something that can only be accomplished with persistence, time, and high-quality strategic management.

The basic purpose of a model of care is to guide decision-making in the health system: the purpose of strategic decisions is to further the establishment of the model; once the model is known, adopted, and shared, it guides the day-to-day decisions that allow it to perform better. A model of care is powerful as long as it mobilizes the system’s energy and fosters coherence in the work of decisionmakers at all levels.

4.3.1 *The model of care and IHSDNs*

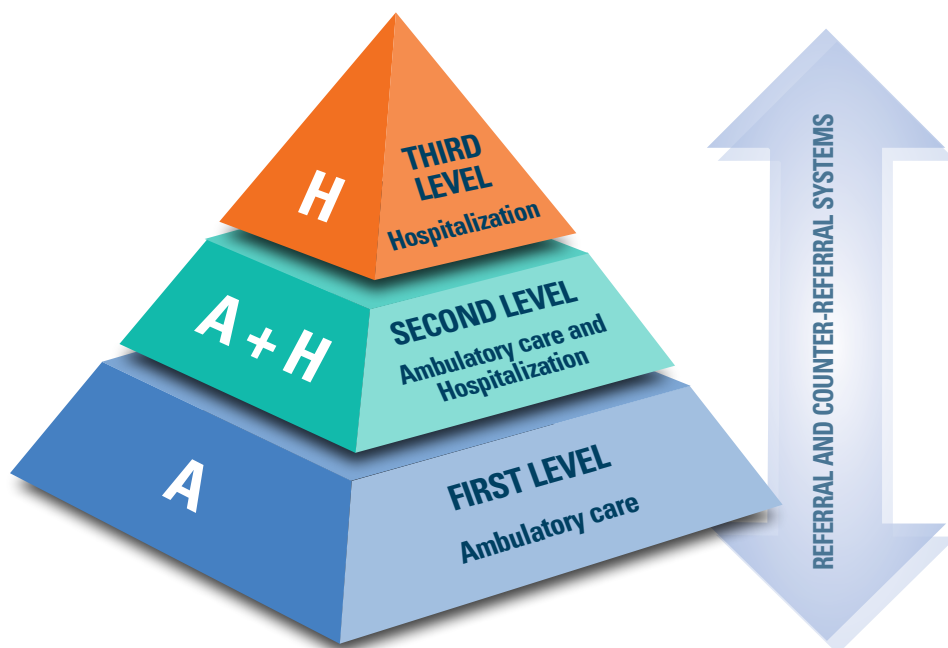
The IHSDN initiative describes an explicit a model of care with a graphic representation that radically transforms the customary and well-known structure of the widespread model of care in countries based on levels of complexity and depicted as a pyramid.

The pyramidal depiction (Figure 3) is no longer useful, because its concept of the system is flawed. In particular:

- ◆ It ignores the importance of the population and cultural context and fails to include them as components in the graphic representation of the system.
- ◆ It implies greater complexity at the third level of care, which is not the case. Although hospitals are more complex from the biomedical standpoint, they do not have to deal with the full biopsychosocial complexity addressed daily by the team at the first level of care, which requires other competencies.

- ◆ It provides for greater coverage at the first level of care, when in fact, all levels must provide full coverage for the functions in which they specialize.
- ◆ It gives the impression that fewer things are done in hospitals, although they actually provide a large volume of services to relatively few people with a very large number of tasks.
- ◆ It puts hospitals at the top, although it is the population that should be at the top or center of every conceptualization of the system.

Figure 3. Traditional health care pyramid



In the IHSDN concept, hospitals occupy a different position, serving as a subsystem that interacts with the population to contribute to its quality of life. In this concept, a first level care is established in close proximity to the population, along with a series of specialized support components, one of which is the hospital (Figure 4).

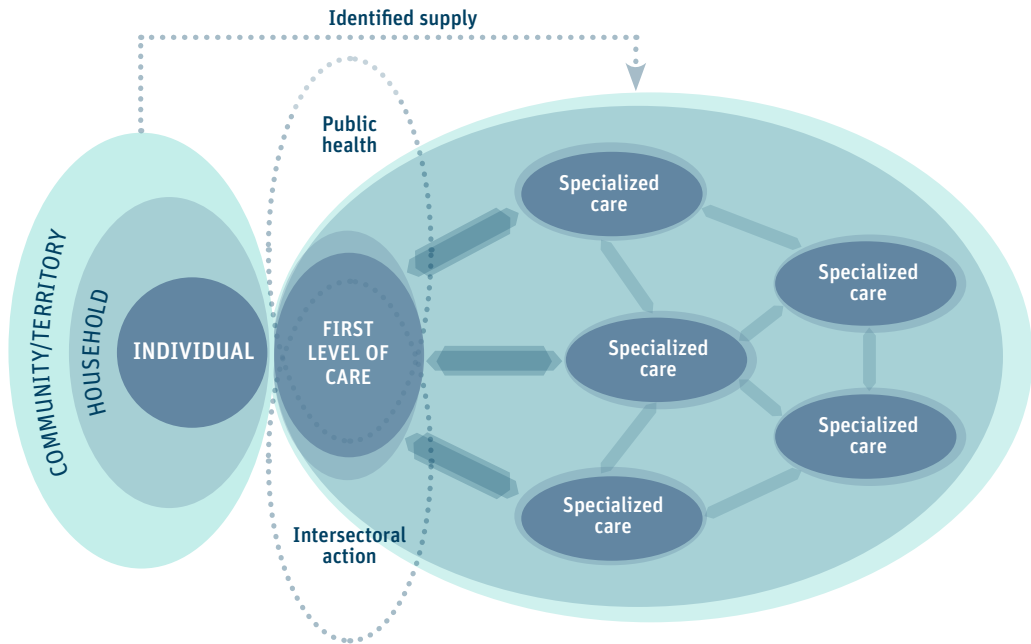
The IHSDN initiative includes a comprehensive health care model, defined as “a series of actions that promote and facilitate efficient, effective, and timely care, oriented not to patients or their disease in isolation, but to people considered to have the right to their physical and mental integrity and as beings in a sociohistorical context who belong to different types of families and communities and are in a continuous process of integration and adaptation to their physical, social, and cultural environment” (21).

The model from the standpoint of people

The ideal model of care is one in which every individual, family, and community has an interdisciplinary health team nearby that helps them to live a healthy life. That team

should be able to monitor and respond to most needs and have the support of other components of the health system (specialized centers, laboratories, hospitals) or social welfare system (self-help groups, social workers) for situations in which for one reason or another, it is neither advisable, relevant, nor possible to address on its own.

Figure 4. Model of care in IHSDNs



Source: Adapted from Pan American Health Organization. *Integrated Health Service Delivery Networks: Concepts, Policy Options and Road Map for Implementation in the Americas*. Washington, D.C.: PAHO; 2010.

This concept, which embodies a new vision for the work of the system, has implications for the way hospitals participate in the delivery of services. The role of hospitals in this model of care is “to contribute to the solution of problems referred by the health care network, based on the type of activity, level of complexity, and specialties that the network establishes for it, in open and closed care, including emergency care” (4).

The flexible hospital

In this model, hospitals “should become flexible structures that can be dynamically redefined over time by their health care networks, which should determine their portfolio of services – that is, their types of activities, level of complexity, and specialties. These facilities, in turn, should have the competencies and authority to modify the structure of their organizational operations to meet the demands of their respective networks so as to provide effective responses to people’s health needs. This declaration should contribute to a dynamic definition of the role of the different types of hospitals in the work of a network to meet the health needs of a particular population. In other words, it will be necessary to move beyond the traditional notion that certain services necessarily are

and will be provided in a conventional hospital, since they can be provided more cost-effectively in other components of the network” (4).

In the new model of care, hospitals can be conceived as institutions that coordinate specialized support components for the first level of care. Thus, they are considered not independent entities but parts of the network and support for the first line of care, and the work of the system revolves around health promotion and preventive services provided mainly in facilities located near the community. Furthermore, since the hospital structure no longer consists of vertical compartments focused on organs and specialties but is organized as a matrix around macroprocesses centered on people’s needs, more and more functions are no longer the exclusive responsibility of hospitals; instead, they are shared with community and ambulatory services, which requires integrated management.

Hospitals in a network must respond to needs with the mediation of the primary care health teams, since these groups come directly from the population or the health teams themselves. This does not mean that hospital management should no longer be the basic responsibility of its management teams; on the contrary, it is advisable that the hospital have the greatest possible management capacity in order to combine resources in a way that boosts the efficiency of their services to the network. The complexity of hospitals is undeniable and does not derive simply from the type of illnesses it treats (some of which, in fact, can be treated rather easily) but from the volume of interactions it is involved in and the tremendous interdependence of the different professionals and staff of the institution, who must coordinate their work to achieve the desired outcome. Hospitals must rely on this ongoing cooperation to function and must understand and appreciate that this complexity requires them to embrace interdisciplinary models that understand and promote a collaborative and pluralistic vision in which therapeutic space is shared.

Mechanisms for coordinating care

In the new concept, everything related to the coordination of care continues to be relevant. Foremost are classical aspects, such as referral and counter-referral. Processes at the different levels of care are being redefined so that referral and counter-referral become problem-solving instruments when care is required from different components of the network (when a single problem affects the same person). To the degree that the whole network is involved in the process of care, referral and counter-referral are an aspect that is most obvious and yet imperceptible to the patient. Nevertheless, for these processes to fully make sense to clinicians, progress should be made in the joint preparation of multilevel clinical guidelines and protocols tailored to each health network.

From that perspective, the clinical process becomes the linchpin of network management, and networks develop around it that cut across different levels and connect the functions of several facilities to create a steady flow that helps solve the population’s problems with the greatest cost-effectiveness. These networks are constructed around programs, pathologies, age groups, or priority groups. In order to serve them, flexible

collaborative interventions are planned and implemented to meet the needs of the people involved who, in turn, are viewed in their family, community, and cultural context. While the delivery of this coordinated care follows the guidelines of the IHSDN initiative, the natural tendency is to concentrate the greatest response capacity in the first level of care and view care processes comprehensively. As stated in the publication *Redes integradas de servicios de salud: el desafío de los hospitales* [Integrated Health Service Delivery Networks: The Challenge of Hospitals], “a powerful indication of operations in a network can be found in any medical guide: if it begins by looking at ‘the patient’, from his admission to the hospital and onward, there is no network; it is but an illusion, a good intention” (4). In any case, referral and counter-referral are just the initial aspect of the coordination of care; much more needs to be done to create a real network culture. It will be necessary to develop knowledge-sharing initiatives among professionals from the different facilities operating in the network, who will attend clinical meetings together and visit each other, consult with each other by phone, and share rotations, communities of learning, and, in general, a series of initiatives that foster their mutual recognition and knowledge to achieve continuity of care in the user’s experience.

Network management

In managing the network, efforts should be made to integrate its priority programs and health priorities in the work of the health teams in its area. Experience shows that this can be done as long as the network management maintains control over a number of key processes, such as the distribution of the coordinators and their responsibility at each level of the network, flexibility in local resource allocation and the identification of gaps, flexibility in the development of the provider network, local hiring responsibilities, application of the general pay scale to new hires, the creation of flexible intersectoral support networks, and gradualness in implementation (22). All of these components enable the work to achieve progress in key programs to operationally integrate the construction of health service delivery networks, which must include hospitals.

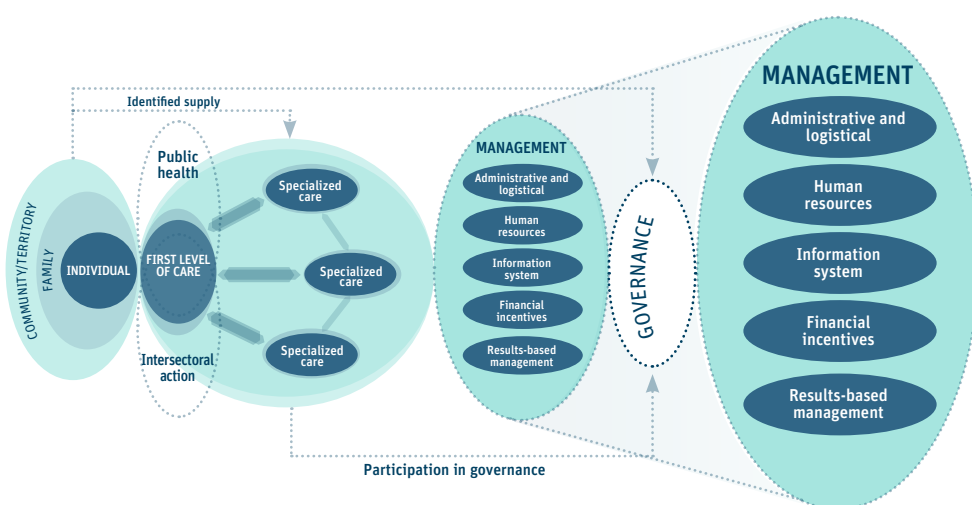
Hospitals can cooperate in addressing health priorities to boost response capacity at the first level of care, identify procedures that can be deployed in facilities closer to the population, and contribute to the use of information technology or the good use of mobile teams or portable equipment to identify health problems on an ambulatory basis. This is achieved by continuous education and training.

When attempting to tailor the overarching vision of the model of care to the network itself, it is advisable to create health situation analysis forums in which all members of the network jointly participate. The goal is for these forums to embrace the national health objectives, draft agreements on common complementary health objectives, reach agreement on priorities, and deploy joint strategies. To accomplish this, the different components of the network must have relationship competencies, the capacity to arrive at common diagnoses, and mechanisms for reaching agreement on treatment approaches. In a well-managed IHSDN, it will be necessary to take steps to increase ambulatory care and agree on approaches and criteria to reduce variability in clinical practice; this will

require greater standardization of care for the most common and priority illnesses. The result will be a dynamic process that will transform hospital functions and other components.

All functions that support the introduction of a new model of care have strengthened the position of the network manager, an administrator who formally assumes these tasks with the support of a professional team and oversees the network's governance entities. Figure 5 shows five functions of a management entity that is not part of the facilities but oversees network operations. These five functions, together with implementation of the model summarized here, are the competencies required of a network manager.

Figure 5. Basic features of IHSDNs associated with network management.



Source: Adapted from Pan American Health Organization. *Integrated Health Service Delivery Networks: Concepts, Policy Options and Road Map for Implementation in the Americas*. Washington, D.C.: PAHO; 2010.

Modalities of care for people with chronic diseases

As a result of the demographic and epidemiological transition, an increasingly important issue is the adoption of new modalities of care for chronic diseases, the continuity and quality of which improve in a network. Health systems should increasingly be geared to caring for people with long-term illnesses that are not transitory or episodic, but may result in periodic crises. Chronic patients live with their disease, and a system designed to handle acute infectious events or accidents does not meet their needs. The specific strategies that have been developed, including some that have been extensively deployed in recent years, such as disease or case management, do meet their needs. In disease management, the network is organized to care for people with the same disease, with specialized personnel providing treatment based on standard evidence-

based guidelines to guarantee timely services and care to anticipate problems. In case management, particularly vulnerable people with highly complex diseases are assigned a well-qualified specialist as their case manager, who coordinates all services for them. In this type of approach, the case manager is the network integrator for all episodes of morbidity or decompensation experienced by the patient and must especially consider using the available family, community, and social resources to tailor interventions to each particular case.

Disease management and case management help integrate hospital services with the other components of the health service delivery network and promote the adoption of self care and the use of personal, family, and intersectoral resources, resulting in more cost-effective management. In short, the idea is to set up a type of population-based radar in the health care system and not be confined to addressing episodic demand.

Emergency care

The role of emergency medical services warrants special mention. In fact, one of the most compelling pieces of evidence of the importance of hospitals having a robust first level of care as part of the health service delivery network is the excessive permanent demand in hospital emergency services. This problem cannot be solved simply by increasing the capacity for care at this point in the network. Instead, it calls for strengthening the first level and taking advantage of the opportunity for emergency care to detect gaps in coverage and determine the effectiveness of the network. Every effort to construct a model of care tailored to the reality must consider mechanisms to discourage people from seeking emergency care and take advantage of opportunities to identify weaknesses and improve other points in the network.

4.3.2 Recommendations on the model of care

- ◆ The referral and counter-referral system is a coordination mechanism par excellence, but it is not the only one. The delivery of continuous, integrated, people-centered, quality care requires multiple coordination mechanisms, including clinical practice guidelines, protocols, case management, and mutual adaptation.
- ◆ In a people-centered model of care, the configuration of the health services should start with and be determined by the health needs of the population served by the network.
- ◆ One of the first elements that should be considered is the preparation of integrated clinical guidelines for the network, in which all the teams involved in a health care process participate. This should culminate in an agreement on the behaviors expected of each team in that particular network. The guidelines should be evidence-based and their application should be subject to periodic review and monitoring.
- ◆ Another key element is the establishment of network programming to organize the demand for hospital and specialized care referred by ambulatory facilities. This also requires planning of the hospital's work, based on the demand, and the establishment of agreements for meeting targets and delivering services, along with

plans for developing the supply. This configuration will require a strengthened first level of care; agreement on integrated care processes; redefinition of the functions of all network entities, not just hospitals; and innovation in service delivery, with emphasis on ambulatory care and strong hospital support.

4.4 Technology and infrastructure

Recent years have witnessed dizzying technological advances in the fields of clinical equipment and information and communication. This has created the urgent need to examine at least three aspects connected with hospitals and IHSDNs: which technologies are useful, how to promote or create the possibility of developing health service delivery networks, and how to ensure their most cost-effective use, based on the best evidence.

Concerning usefulness, hospitals are very vulnerable to the pressure to remain at the forefront in terms of technology. Most clinicians want equipment or drugs that will enable them to maximize health outcomes and be seen as professionals who embrace technologies early on. For clinicians, it makes sense to rapidly determine to what extent a new health technology will improve the processes outlined in the clinical guidelines. However, these processes must respond to a network plan, since it is the network that is responsible for addressing the health priorities of the population and there can be a lag between network priorities and the demand for new technology, whose procurement is not always weighed against the evidence of its potential benefits.

Echoing that concern, during the 28th Pan American Sanitary Conference in September 2012, the ministers of health of the Americas adopted a resolution urging the Member States “to strengthen the rational use of health technologies.” The governments recognized the potential benefits to health systems of embracing health technologies, based on health technology assessment, defined as “the systematic evaluation of properties, effects, and impacts of those technologies, including medical, social, ethical, and economic dimensions” (23).

The key is to acquire health technologies that are necessary, safe, and effective and have an adequate cost-effectiveness and quality profile, and not be limited to procuring whatever is offered to clinicians; hence the need to set criteria for the evaluation and procurement of health technologies, their introduction in the services, and their prescription and rational use. At least four key aspects should be considered in this evaluation: cost-effectiveness, the opportunity cost of using the resources, service integration, and continuity of care. It should also be borne in mind that some technologies require additional management procedures.

PAHO is proposing that the evaluation, selection, prescription, dispensing, and rational use of health technologies be managed with the support of practice guidelines and the monitoring of health technologies (including medicines). These processes should be approached from the standpoint of integration to ensure the coordination of all interventions and prevent isolated reactive responses. In health technology assessment and the respective decision-making, managers should rely on the support of agencies,

commissions, or units devoted to the subject (for example, the National Center of Excellence in Health Technology {Centro Nacional de Excelencia Tecnológica en Salud} [CENETEC-Salud], Box 4). Drug selection or pharmacotherapeutics commissions are also an example of evaluation bodies that can be found in the majority of countries in the Region. In a field where developments occur at lightning speed, there is heavy pressure from multinational corporations to embrace new technologies. Moreover, professionals and the general public alike often mistakenly view new health technologies as necessary innovations with greater health benefits. Thus, assessments must be properly structured, performed by individuals or bodies with the right competencies, and integrated with the other processes.

If used improperly, effective health technologies could squander resources. Practice guidelines should therefore be adopted to ensure their appropriate use and guarantee patient safety, cost-effectiveness, and opportunity cost in the use of resources associated with the introduction of these technologies. Here, pharmaceutical services with a primary health care approach have a key role to play to support the management of preventive actions and the safest therapies.

Box 4. The Mexican experience in health technology: National Center of Excellence in Health Technology (CENETEC-*Salud*)

CENETEC-*Salud* is an organ of Mexico's Secretariat of Health. Directly under the Department of Health Sector Integration and Development, it was created in January 2004 to respond to the Mexican health system's need for systematic, objective information on the proper management and use of health technologies to support decision-making and optimal resource use, based on the best available evidence.

CENETEC-*Salud* has four boards that are respectively responsible for biomedical engineering, telehealth, technology assessment, and the development of clinical practice guidelines. On its creation, a wide range of actions was proposed, among them: establishing agreements with health technology centers to promote modernization, innovation, excellence, and the development of appropriate technologies; developing guidelines for medical equipment, including a master plan to address its introduction, use, maintenance, replacement, and technical obsolescence; promoting advances in biomedical engineering; drafting national guidelines for the development of telehealth services; and setting standards for information exchange between biomedical technology and telehealth applications. These are but some of the many activities that reveal the breadth and heterogeneity of the work in health technology.

In 2009, CENETEC-*Salud* was named a WHO Collaborating Center for cooperation in the development of the Latin American Network for Health Technology Assessment

to facilitate methodology sharing and support capacity building in the countries of the Region. It has also supported the development and use of Spanish-language practice guides for medical equipment and the use of evidence-based medicine in the design of clinical practice guidelines based on epidemiological priorities. Another aspect of its collaboration has been the development and dissemination of a plan for the creation of telemedicine services, including telehealth education. The center has a website (<https://www.gob.mx/salud/cenetec>) containing the master catalog of clinical practice guidelines, which currently number more than 500, available in PDF format in Spanish, as well as numerous recommendations and guides on medical equipment and telehealth.

The impact of technology can be observed in the following management areas:

1. **Health technologies:** Technology today makes ambulatory diagnosis of the vast majority of disorders possible through the use of resources such as computerized tomography, magnetic resonance imaging, endoscopy, and sonography. Certain invasive procedures can even be performed on an ambulatory basis with little risk (digital angiography, needle biopsies). This opens the possibility of creating specialized ambulatory diagnostic centers that are no longer connected with hospitals. In such centers, the diagnosis can be made and treatment immediately prescribed without hospitalization, a practice known as high-resolution consultation (5).
2. **Information and communication technologies:**
 - a) **Telemedicine.** Several modalities are observed:
 - **Teleconsultation:** This refers to contact between a physician from an ambulatory center or community hospital who needs assistance and a specialist. Here, the parties discuss the diagnosis and treatment of the case for which support is required. This practice supports the diagnosis and, indirectly, the professionals working at the first level of care. The ultimate responsibility and decision will always rest with the consulting physician.
 - **Telediagnosis:** This is used for care in the different specialties (cardiology, gynecology, dermatology, otorhinolaryngology, ophthalmology, and radiology) and for pathology studies in specialized units through the transmission of images (telepathology). In the latter case, it is considered a specialized consultation or diagnostic procedure and recorded as such as part of the referral center's services. Nowadays, high-quality images can be transmitted, making it possible to increase the number of remote diagnostic centers.
 - **Tele-education:** This is provided through virtual medical meetings or the contributions of specialists, enabling physicians at first-level facilities to upgrade their skills and obtain the latest available medical information to provide proper treatment for the cases they see in the best possible way. It is also used for health education and health promotion activities for the general public.

- *Interpersonal communication*: This is used, among other things, for contact with the mothers of newborns, clinical follow-up in some situations, the reinforcement of self care for people with chronic diseases, and virtual family visits.
- b) Electronic medical records.** Numerous high-quality applications have been developed that have achieved acceptance among clinical personnel. These applications are a basic desire of institutions called to operate in networks. Proper use of electronic medical records offers the following advantages:
 - People-centered management (the information follows the person and not the other way around).
 - Better quality of care (they reduce the variability of care and medical errors).
 - Integrated information.
 - Continuity of care.
- c) Internet and intranet.** Internet use is growing and has become an instrument that supports medical decision-making, giving medical professionals access to documentation, protocols, clinical guidelines, and manuals. Moreover, it is increasingly common for patients and family members to find information about their illness on the Web, although they do not always have enough of a foundation to assess the quality of the information. Hospital staff must learn to recommend Web-based sources of information or links to prevent the use of inaccurate or alarmist information about diseases.
- d) Georeferencing.** These technologies have several useful applications:
 - Management of a facility's physical resources: knowing when, how, and where ambulances or mobile equipment are being used.
 - Use of health service access maps or maps indicating the distribution of health services (geographic information systems), as well as population maps that provide detailed information on household and community risks.

Information and communication technologies enable hospitals and networks to expand their sphere of influence at little cost (Box 5) when each of their modalities is used in a complementary manner. Thus, hospitals and ambulatory services become part of a single entity whose operations are fully coordinated to provide services in a nearby location.

Similarly, the introduction of appropriate technology can change hospital administrative procedures and simplify logistics to the point, for example, where no warehouses of any kind are needed; this would cut costs, since certain infrastructure would no longer be necessary or space could be reallocated.

For the successful application of new technologies, certain conditions must be present:

- ◆ Strategic decision-making. The technology should be aligned with the model of care and the management model in use.
- ◆ Response should be aligned with expected outcomes (defined in advance).
- ◆ Impact on important aspects leads to a review of processes and requires standardization and a clear definition of requirements.

- ◆ Impact on the organization's management and culture should be adequately assessed.
- ◆ Successful use of this type of technology depends on adequate change management, in which the health professionals should be involved.
- ◆ Efforts should be made to ensure that the data are analyzed and become relevant information for management.

It should be borne in mind that introducing technology does not solve the existing problems of management, cooperation, collaboration, and outcomes; moreover, if these problems are not approached as specific areas for improvement, the technology will exacerbate them.

Furthermore, there is a widespread belief that technologies have been poorly introduced and are underutilized in health facilities, limiting their potential for improving health care. In addition, some cases involve duplication and a lack of rationality in the introduction of technologies, together with serious deficiencies in their management.

Box 5. The virtual hospital, a guarantee of universal access. Technology at the service of the health of the Panamanian people

The virtual hospital administers the integrated teleradiology network in Panama, which consists of the use of information and communication technology to provide health care, timely and quality medical care, and distance medical education. The essence of the technology is the high-speed transmission of data and high-quality images, the use of efficient compression techniques, and the direct receipt of digital images. These technologies represent a great step forward in medicine, especially with respect to guaranteeing access to health services for people living in poor, scattered, and excluded rural areas suffering from a lack of specialists, lack of resources, limited medical services, and geographical communication issues. Through technology, Panama has achieved the objective of equity by ensuring equality in health services, regardless of a person's geographical location and financial means. It is a combination of technology and health for the neediest.

The teleradiology network has been up and running since 2009 and advanced to the virtual hospital modality in 2011. In 2014, it had 22 nodes that provided conventional X-ray imaging, fluoroscopy, ultrasound, computerized tomography, magnetic resonance imaging, and nuclear medicine. It also has telemammography modes at four first-level facilities, eight rural or district hospitals, seven regional referral hospitals, and three national referral hospitals. The network is run by a manager who guarantees the participation of a team of 12 radiologists. Over time, telemammography, tele-electrocardiography, and telespirometry have been added.

The radiology information system permits efficient scheduling of ambulatory or in-patient diagnostic imaging studies as soon as a medical order is received. This makes it possible to control the patient's arrival and waiting time, and there is a task-list for assigning patients. Once the diagnostic imaging technician performs

the study, the image, together with the patient's information, is sent electronically to the data center, which has high storage capacity and is administered by the country's largest telephone service provider (which is a partner of the Panamanian State). The radiologists have passwords to access the system, and they interpret the studies in the order they arrive or based on their priority. The reports are transcribed by medical secretaries, who also have passwords to the system, and the radiologist validates and signs them, at which point they are sent back to the data center. The technician where the order originated and who originated the request for the study can access the report with his password and receive, print, and send it to the treating physician or give it to the patient.

Output in the teleradiology network's first year of operations was 199,633 studies. Since 2010, the output has grown, reaching 374,935 studies in 2014, and in the first quarter of 2015 alone, 203,304 studies had been performed.

4.4.1 Infrastructure of hospitals in a network

Another matter that health managers should focus on when moving toward hospitals in a network is the definition of new physical resources for health and the upgrading of old infrastructure. There are four major considerations in this regard:

1. First, it is important to have a national health investment system. The population demands security in life, something often associated with the presence of a hospital nearby. Many politicians, in turn, find themselves richly rewarded if they have a hospital or health facility built in communities that request one. Furthermore, due to a variety of internal pressures, health facilities, whether hospitals or other types, also wish to grow and improve their response capacity and technology. At the same time, most people, especially those already in greater conditions of vulnerability, do not have all the infrastructure needed to meet their health care needs. Thus, it is essential that the health decisionmakers responsible for the distribution of resources duly gauge the existing gaps and use objective criteria in priority setting. It is therefore advisable for countries to adopt and implement national investment systems that will enable them to objectively evaluate the social return on health investments and set adequate criteria for the design and technical execution of health facilities. This implies building technical capacity from the central level – that is, the ministries of health – on down to the local area of regions or departments. Among the objectives, priority should be given to the application of better investment models and practices from the standpoint of hospital architecture and engineering that include the concept of community-friendly hospitals, an intercultural approach, energy sustainability, and safety in disasters (safe hospitals). It will likewise be necessary to introduce hospital and network management models to ensure that the design and operation of the hospitals facilitate their implementation. At the central level, moreover, it will be necessary to establish clear mechanisms for working with

the agencies that determine the financing, whether the ministry of finance and social development or any other with responsibility in this area. Thus, national health investment systems should be part of the government's most important infrastructure investment processes, since they can guarantee the good operation and service delivery of health networks. The cost of these investments to the countries of the Region of the Americas is growing and will increase with the passage of time, as life expectancy increases and the epidemiological transition advances.

2. Every investment should entail an evaluation across the network. When determining investment needs in the health service delivery network, it is important to know how the investment will affect service flows and ascertain whether it makes a positive contribution to a health care network that strengthens the first level of care. There are methods (24, 25) for evaluating the aggregate operation of health facilities and health service delivery networks that can provide a good estimate of the investments that should be made in hospitals, specialized services, and first-level ambulatory care. These methods evaluate the health care demand generated by the network, as well as the supply of services; the two are then forecast over time, and the gaps that must be covered by physical, human, financial, and other resources are determined. This exercise should include private for-profit and nonprofit health facilities and consider the determinants and technical requirements that can affect the network, its facilities, and projected patient flows.
3. The third element that should be considered is hospital architecture (Box 6). New trends will affect both the size and operations of hospitals in IHSDNs. It is reasonable to expect that networks will transfer their main operations from hospital wards to ambulatory care and that the vacated space will largely be used as conference rooms or classrooms for the teams. It is also expected that intensive care areas will increase and that the number of areas for people under observation, in stable condition, or requiring long-term care will decrease or disappear. The areas for receiving ambulances carrying people referred by the emergency units of community ambulatory facilities will increase, as will areas for patient selection or triage, and the classical waiting rooms for emergencies that come in off the street will shrink to the point where there is no access to emergency services not mediated by a proper referral or preselection process. The design of hospital wards should take the needs of patients and their families into account (for example, they should permit family members to accompany the patient or ensure that diagnostic or therapeutic technology in the hospital is brought to the patient, and not the other way around to keep people from having to move from place to place within the hospital) and facilitate the use of progressive models of patient care, depending on the complexity of the case and the need for nursing care.
4. Finally, special attention should be paid to the maintenance of infrastructure, medical and industrial equipment, and information technology. It is common practice in the public sector for hospital infrastructure and, generally, everything purchased with investments, to have no budget for maintenance, upgrading, and removal.

This is observed in the case of buildings, technology, and equipment. The result is the rapid deterioration of these assets and the reduction of their average life, as well as the enormous problem of their disposal. Modern hospital management should have adequate budgets and trained human resources to keep each piece of equipment acquired at the network's disposal. Otherwise, equipment problems can put the necessary confidence in network development and infrastructure investment at risk.

4.4.2. Recommendations on health technology and infrastructure

The main recommendations for tackling technology and infrastructure challenges in the development of hospitals in a network include the following:

- ◆ Adopt an integrated approach that coordinates the sequence of steps for introducing health technologies, from their assessment to the monitoring of their use.
- ◆ Establish processes for decision-making on the introduction of health technologies, based on health technology assessment.
- ◆ Develop, adapt, or adopt and implement the use of practice guides, standards, and indicators for prescribing, dispensing, and monitoring use to support decision-making on the introduction of new health technologies.
- ◆ Strengthen the rational use of health technologies and the development and application of drug formularies, guidelines, and practice guides that support clinical use (including by level of care), as well as systems for monitoring their use in IHSDNs.
- ◆ Prioritize technologies that facilitate clinical integration and ambulatory care for health problems.
- ◆ Promote transparency in public procurement, sharing nonproprietary information on purchase prices and the results of national and regional health technology assessments to generate information for decision-making.
- ◆ Promote the prioritization of investments based on the needs of the network, hospitals, and ambulatory care facilities. This will require the strengthening of systems for collecting quality data and the adaptation of existing studies on health technology assessment to avoid duplication.
- ◆ Procure infrastructure and equipment, planning the elements and resources necessary for their good operation (for example, preventive and corrective maintenance) and their disposal once their useful life has ended, along with training for personnel.
- ◆ Move toward the establishment of national health investment systems.

Box 6. The concepts of *sustainable hospital* and *friendly hospital* in the Region of the Americas: examples of their application

The concepts of *sustainable hospital* and *friendly hospital*, which are more compatible with networked systems, are the foundation for the design of new hospitals worldwide. Although this definition is still used mainly by technical personnel, it undoubtedly represents the essential new trend in design and construction, which is still in its early stages in the public sector of the Region of the Americas. Nevertheless, some concrete examples of its application are worth noting:

1. In Chile, the new hospitals in the Maipú and Florida communes, each with nearly 400 beds, began operations between 2013 and 2014. The concepts of friendly hospital and sustainable hospital were applied in their design, resulting, for example, in rooms with more space for a maximum of three patients, allowing for more personalized care and for family members to spend more time with patients. The design also included a building energy analysis, which led to the use of more-insulating materials that reduce energy loss. The two hospitals have promoted horizontal over vertical movement and open spaces and green roofs to bring nature into the hospital to create more curative environments. These hospitals are the first of their kind in Chile. They also have seismic isolators, a technology that will substantially reduce the vulnerability of the infrastructure and people to tremors and earthquakes.
2. Metepec Regional General Hospital in Mexico, with 236 beds, opened in 2012. Its design, construction, and maintenance are governed by sustainability criteria, which address areas such as the location of the facility, the materials and processes used, and making the most of energy. The hospital provides comprehensive services to meet the region's medical needs and support for the populations living nearby. The land on which the hospital stands was originally a tree nursery, and the 1,400 or so trees that were planted help improve the environment surrounding the hospital.
3. The Tlalnepantla Regional Hospital in Mexico, with 120 beds, opened in 2012. An environmentally friendly project that will reduce operating costs by 30%, it is the first social infrastructure plan to obtain silver LEED certification (LEED certification is related to energy and environmental sustainability). The design includes water- and energy-saving systems and an underground system for storing and recycling water for subsequent use in irrigation.

4.5 Human resources

Human resources development continues to be the main issue affecting hospital performance and unquestionably requires close attention when establishing health service delivery networks. Hospitals are currently suffering from a serious shortage of specialists. The objective is to have sufficient numbers of competent and committed human resources who are proud of their work as part of IHSDNs. To accomplish this, it will be necessary to consider the special qualities of health workers, their training needs, remuneration and incentives, the complementary nature of their skills, and teamwork and to rethink their role and positions in health service delivery networks.

It is well-accepted that workers in the health sector, especially professional staff, act in a complicated and strategic manner, adapt their goals to the context in which they work, and are important participants in any process of change. In short, they are not passive objects of intervention, but participants with values and capabilities that deserve consideration and support.

Health professionals have a high degree of knowledge and training and are well aware of the importance of their good performance; thus, they act as agents of both the community and their managers and health authorities. In addition, they have broad discretion in their activities, because their contracts by necessity lack specifics and leave most decisions, such as those related to spending, to their good judgment. It is therefore essential to give professional human resources special consideration when promoting institutional changes of differing scope in the health sector, so that the uniqueness of these staff and the importance of their desire for self-realization are recognized.

For the same reasons, undergraduate and continuing education and the role that hospitals play in it is an important concern. In the case of undergraduate education, a document cited earlier (*Redes integradas de servicios de salud: el desafío de los hospitales*) takes up this discussion very appropriately, noting that: “health education centered on curative care with a strong tendency toward overspecialization, far from the majority of the population’s health needs and from the requirements of systems based on primary health care, is still found today in many countries in the Region and is largely related to the priority use of the clinical campuses of high-complexity hospitals, usually concentrated in the capital cities and urban areas, as classrooms and venues for acquiring skills and techniques” (4).

In training and education today, considerable thought is being given to the drawbacks of prioritizing the use of state-of-the-art technology and specialized care over recognition of the health priorities of the population. There is a need for greater diversification of learning opportunities to make education more consistent with the epidemiological situation and the need for teamwork and networks of care. Hospitals should contribute to this transition, whether through in-house training or the creation of opportunities for learning and knowledge acquisition in all health facilities. Rapid progress toward training in ambulatory care and community services networks should be promoted in the coming years (26).

Also noted is the need to facilitate core training for specialists that promotes the movement of professionals from certain areas to others and the development of professional competencies that will enable generalists to perform procedures that were once the sole province of certain specialties. Continuing education, in turn, should be considered essential to the quality of working life and be aimed to facilitating the transformation of hospitals into infrastructure compatible with operating in a network.

The health team, historically formed at the direction of specialists in the case of hospitals, is another important element. One of the day-to-day concerns of good hospital management has been how to concentrate the work of specialists in the roles for which they are clearly irreplaceable and expand the workplace for other professional and support staff. This concept faces a new challenge today, when hospitals should consider themselves part of a broader team that includes professional and support staff who work outside the hospital. In network building, the aim is to create teams that are not only interdisciplinary but comprised of members of different health facilities with a view to expanding ambulatory care facilities.

Another issue that should be explored and developed is the hiring and retention of human resources to stress the value of careers in health and create incentives. One of the areas of greatest concern is the serious disadvantages of the most common mechanisms for remunerating physicians. To illustrate, the fee-for-service mechanism rewards the creation of demand, excessive referral between specialists, and the delivery of unnecessary services, while fixed salaries undermine productivity and foster a bureaucratic mentality unconducive to problem-solving. Finally, capitation rewards risk selection that excludes the chronically ill. Some systems combine these mechanisms through fixed and variable payments in an adequate institutional culture and encourage productivity and the search for results. In bureaucratic public services like the majority of hospitals, it is possible to gradually decrease the proportion of fixed salary and increase that of variable income based on outcomes.

Different pay incentives have been proposed to promote health service delivery in networks. These include increasing the relative percentage of new consultations by individuals referred by the primary care system versus check-ups to monitor old patients or patients referred by the hospital itself. Another proposal is to reward shorter waiting lists, regardless of the number of services provided, so that specialists benefit if general practitioners improve their response capacity and do not refer an excessive number of people. In any case, it will be necessary to explore dynamic payment mechanisms, tailoring them to the objectives agreed upon by network and hospital managers and the clinical team.

With regard to incentive systems, the use of mixed programs (based more on groups than individuals and more in-kind than financial) that evolve to meet network objectives is usually proposed. Nonfinancial incentives include the granting of workplace autonomy, flexible schedules, access to training, and recognition of the work performed. In any case, incentives must have certain characteristics that boost their effectiveness – for example,

objectives that: are clear, measurable, realistic, and applicable; reflect professionals' needs and preferences; are tailored to the context; are fair, equitable, and transparent; and are of a financial and nonfinancial nature.

More recently, there has been strong emphasis on the need for staff to identify with the institution they work for. The economic literature shows that intrinsic motivation depends on how staff see themselves in relation to their employer. Staff, and professional staff in particular, must identify with their job, their team, and their organization, creating identities that increase productivity and the achievement of results. As Akerlof and Kranton have noted, a change in identity is the ideal motivator if a worker's effort is hard to see or reward. Experts are critical of exclusively using monetary incentives in settings where the intrinsic motivation of workers plays a key role. This can even produce effects that are the opposite of those sought (27).

Other elements that markedly influence the work of health teams are the growing respect for people's rights, the humanization of care, and user satisfaction. This could not be otherwise, because health care involves, above all, interactions among people in which, based on their knowledge, medical professionals are expected to be capable of interpreting people's needs and the demands of their community. This not only requires them to have scientific and technical knowledge but interpersonal skills to understand and convey their findings and indications. To properly perform this role, professionals are needed that are committed, available, and trained in how to interact with patients, considering the intense emotions that a disease or health problem arouses in people and their families. Specialists note that this requires sensitivity training, given the impact of such interactions on people's life and health. Sensitivity training should be provided to a wide range of staff, and ensuring its effectiveness will require an ongoing effort to identify practices or work agreements consistent with this approach.

Three more trends identified in the discussions and research on health workers are influencing health systems. The first is the growing proportion of women in the workforce. This is commonly accompanied by demands for part-time work and changes in the customary ways of organizing the sector, creating additional opportunities and challenges for operating in a network. The second is the observed lengthening of the working lives of physicians (postponement of retirements) in certain settings, together with the emergence of multigenerational health teams. This also raises questions when creating opportunities for cooperation among professionals with very different training. Finally, there is growing concern about workers' quality of life and the transformation of hospitals into healthy workplaces. An integral concept of health work would require "taking care of oneself to take care of others" (28). Many of the current work models impose excessive demands on health workers and create problems that are then reflected in high rates of absenteeism, resentment, and frustration, as well as psychosomatic illnesses.

Human resources management in the new approach should consider all of these elements and try to use the right instruments to foster personal development, new network hiring models, and new work profiles for operating in a network. Managers should consider

themselves managers of competencies and clearly understand that these human resources are the ones who will shape the nature of the institutions. The manager's mission is to ensure that staff objectives coincide with those of the organization, so that each synergistically fulfills its goals and aspirations. One methodology that is increasingly common is competency-based management, which defines what each individual is expected to contribute to the institution and together determine how to do it. Competence is understood as the knowledge, skills, and human capacities observable and measurable in practice that are necessary for obtaining excellent performance in a particular setting (29). It is therefore evident that, from the standpoint of a hospital in a network, specific responsibilities can be defined that open opportunities for the development of health professionals and health workers. In any case, one of the general competencies that is fundamental in the current context is a perpetual willingness to learn, unlearn, and relearn in a cooperative and collaborative framework. In order to achieve this, stimulating work environments that motivate workers and provide emotional support, recognition, and camaraderie are essential.

With regard to the new work profiles for operating in a network, management obviously consumes resources, and professionals in this field are therefore necessary. In successful network implementation experiences, it can be seen that each health facility has people devoted part- or full-time to the coordination of care. In some cases this occurs naturally and some professional staff have an outstanding ability to come to agreements and maintain them. Nevertheless, the situation should gradually be formalized by hiring the right people and developing the respective ad hoc job profiles. Special provision should be made in hospitals to enable professional staff and other workers to fully assume the role that enables them to properly engage with health facilities relevant to their work. In addition to creating new jobs related to network management and the coordination of care, it will be necessary to improve negotiating skills and problem-solving capabilities, as well as change-management skills (Box 7).

Managers should also consider the possibility of hiring people as network staff, rather than hospital staff, to facilitate the mixed performance of groups of professionals in an ambulatory or first-contact situation, rather than simply in hospitals. This will help to create a common culture in the health service delivery network. Managers should also understand that the changes proposed involve new requirements for the selection of personnel and a willingness to assign staff differently.

All of this requires national human resources planning that supports the development of the entire system, an effort that will involve the participation of the education and labor sectors.

Box 7. Competencies of managers

Global Consortium for Healthcare Management

Leaders of organizations in the public and private sector, health care managers' organizations, and academic institutions, with contributions from professionals in the different health sectors, have decided to join forces to meet the challenge of increasing recognition of the health services management profession, developing a directory of health care leadership competencies. The shared aim of all participants is enhancing leadership and management practices in health care worldwide.

To further promote these shared aims and enhance leadership and management practices in health care, these leaders created the Global Consortium for Healthcare Management, which is recognized and supported by members of the International Hospital Federation (list of participants at the end of this box).

The need for the professionalization of health care management

Health authorities recognize that delivering quality health care is dependent on the efficient and effective use of resources. The professionalization of management in health care organizations enhances efficiency and helps to ensure the best use of limited resources.

As the health care portion of nations' GDP continues to increase, the pressure for enhanced management capacity will continue to grow. In addition, as health care management is recognized as a profession, people will be attracted to the profession. The profession will have a greater voice in society and will be increasingly relevant to achieve improved patient and population health outcomes.

The evidence is convincing that efficient use of resources and the quality of the health care services provided are improved by enhancing the management capacity of individual leaders and teams.

Yet, health care organizations face two key barriers to realizing the benefits of professional management. The first is the lack of adequate management preparation in the training of many health care leaders. The second is the fact that the role of health care manager is not recognized as a profession in all countries.

To professionalize health care management and produce highly competent managers, the Consortium's collective work to date has identified the need to focus on six critical areas: accountability and transparency, service improvement, educational standards, integrity, a commitment to share leading practices, and equality in access to and delivery of care.

The call to action

The Global Consortium for Healthcare Management is urgently calling on governments and the international health community to recognize that health care performance and improvements are significantly dependent on the existence and quality of professional management of health care organizations.

The basic principles on which the performance of professional health care managers rests include:

- Ethical, fair, and equitable behavior at all times.
- A commitment to active, continuous learning about sound management and leadership practices.
- Demonstration of those management and leadership practices in the execution of their daily responsibilities.
- Serving as a resource for training less-senior health care managers.
- A commitment to improving the health of populations and individuals.
- Acknowledgment of health care management associations as the governing bodies in the field and acceptance of their rules, regulations, and codes of conduct.

The Consortium also calls for the adoption of the Global Healthcare Management Competency Directory as the initial basis for health care management development frameworks and programs, for use by academic institutions and relevant licensing and accrediting bodies.

The Consortium advocates for the formation and strengthening of professional organizations for health care managers, which provide the infrastructure for effective health care management practices to become pervasive, thus improving health outcomes and optimizing resource utilization. Departments or ministries of health at the country level are urged to actively support the development of professional health care management organizations.

The Consortium recognizes that the competency framework must remain flexible and needs to be adapted to the specific circumstances of each country. Accordingly, the competencies identified in the directory may be adapted to ensure their relevance in the local context.

Recognizing the need for greater progress in the ongoing effort to build professional health care management competencies, the members of the Consortium agree that the following measures should be implemented according to national circumstances and needs:

- Adoption of the Global Healthcare Management Competency Directory to inform and align health care management development programs at all levels of undergraduate, postgraduate, and ongoing education and professional development.

- Adaptation of each of the competency requirements, incorporating them into credentialing systems, which should be based on independent evaluation and evidence of demonstrated competencies.
- Formal recognition at the national level of the health care management as a profession.
- Implementation of merit-based career advancement along with a career path for health care managers.
- Recognition of health care managers' professional associations as key stakeholders for policy dialogue related to leadership and management and for the advancement of the profession.

Participating organizations (2017): American College of Healthcare Executives, Australasian College of Health Service Management, Canadian College of Health Leaders, European Association of Health Managers, Federação Brasileira de Administradores Hospitalares, Federación Andina y Amazónica de Hospitales, Federación Internacional de Hospitales, Federación Latinoamericana de Hospitales, Health Management Institute of Ireland, Hong Kong College of Healthcare Executives, International Health Services Group, Jamaican Association of Health Services, Management Sciences for Health, Pan American Health Organization, Sociedad Chilena de Administradores en Atención Médica y Hospitalaria, Taiwan College of Healthcare Managers, THET Partnership for Global Health, University of the West Indies.

4.5.1 Recommendations on human resources

There is an abundance of documentation and recommendations for addressing the main concerns with respect to human resources (30). While by no means exhaustive, these recommendations are based on those from the expert meetings held in the Region of the Americas on the transformation of hospitals:

- ◆ For each workplace, it will be necessary to prepare a description of new competencies that will facilitate and promote working in a network, along with the new roles and new jobs.
- ◆ Transformation processes should pay special attention to professional human resources, recognizing their uniqueness and the importance of their desire for self realization.
- ◆ Policies should be redesigned to train specialists, seeking their ongoing interface with network health facilities and an increase in the ability of ambulatory services to solve health problems.
- ◆ Special attention should be paid to the feminization of the workforce and the challenges it implies, as well as the trend toward professionals, especially physicians, postponing their retirement.
- ◆ Managers should prioritize changes in education and training activities to integrate the values and principles of primary health care, as well as interdisciplinary and collaborative work. This should be done with current staff and, above all, in undergraduate education.

4.6 Organization and management of change

Finally, recommendations for change management are needed that should consider the various stages of hospital development and the configuration of IHSDNs and gather experiences and evidence to support the changes suggested.

For most specialists, it is clear that neither changes in the work environment, nor the pressure they exert in their organizations, nor a governance-based management model, not even the desired alignment of incentives for working in a network appear to be having a clear effect in the right direction in hospitals. The organizational culture is very strong, and years doing things in a way that appears to be effective collide with “external” pressures for changes that appear to be relevant and urgent.

This resistance to change, moreover, comes from two errors too often repeated in public policy-making. The first is the emphasis on design rather than implementation, when, according to the Pareto principle, 80% of the success of reforms depends on their implementation. The second is the erroneous, inadequate, or nonexistent assessment of the organizational parameters to be changed. This is why some authors suggest abandoning the distinction between policy formulation (or design) and implementation (or management). Instead, they argue that, in practice, policies are constantly being redesigned as managers discover unanticipated problems during implementation. Consequently, the right thing is to realize that policies are developed and molded by the situation. A good manager should be able to adjust the implementation parameters without losing sight of the objectives.

Action to respond to the demand for change in public institutions in recent years has been stymied by the lack of a good description of organizational mechanisms. Furthermore, the public expects these institutions to behave in the same way as private institutions, without understanding this is often incompatible with the organizational nature of public institutions. The analogies between public and private institutions are often made without considering the fact that in public institutions it matters a great deal how things are done.

Another recommendation is that the compartmentalized “silo” approach to information and knowledge in hospitals must be abandoned. It also suggested that social media be used to mold public opinion about the changes.

4.6.1 Leadership for change

To further the process of change in health, it is important to determine the core competencies that a leader should display – competencies that have gained international acceptance and have been systemically adopted. The results of this process will have major policy implications for national health authorities seeking to strengthen management capacity and transformative leadership in health system development (31).

Three general recommendations should be followed to create leadership in health: select leaders who render committed service at different levels and support them; pay attention to areas or facilities where political allegiances and political patronage have taken

precedence over the general performance of the system; and increase nurses' and other professionals' contribution to change in all facets of the system, because they add value and more easily transfer the benefits to patient care.

Change should be negotiated, monitored, and continuously reevaluated. Thus, leadership must be consistent with the established objectives. It must also be inclusive – that is, horizontal – and leaders must have a real ability to communicate. Experience shows that stability in hospital management teams promotes organizational development and changes, such as those expected to emerge in the development of IHSDNs.

Information and transparency are vital in times of organizational change, when fear, resistance, and interests must be dealt with. Managing change will require embracing a leadership style that can be tailored to the different contexts and organizational maturity of groups and individuals. Therefore, as Artaza et al. point out, “the worst leadership style is the one is that, due to the inability to listen effectively, does not accommodate to the situation” (4).

Under that logic, it is possible to explore the possibilities offered by the literature on human relations, which has given rise to leadership approaches such as that of Hersey and Blanchard on situational leadership, which suggests that leadership should vary with the maturity of the followers, gearing it to the task or to people, depending on the context. The Hersey and Blanchard theory assumes that supervisors can deliberately shift behavior and adapt it to the maturity of their subordinates (32).

New techniques, such as coaching, can also have a substantial impact on the people responsible for managing change, since leaders also need support in this process.

4.6.2 Organizational culture

This publication has shown how organizations that operate as professional bureaucracies have their own culture. That means that certain beliefs, values, and practices form the basis for their behavior. Each component of the organization also has its own culture, resulting in different subcultures within the organization. The staff, technocrats, operational personnel, and middle management at the strategic apex likely have their own codes as well.

Organizational culture is, by definition, the accepted explanation of an individual's place in the world, meaning that every change in the organization's culture alters that place in the world and generates resistance and fear.

The following principles should be considered when intervening in an organizational culture (4):

- ◆ A culture exists. Every organization has its own characteristics, which are expressed in a particular way of being.
- ◆ The culture must be made visible and known. This will require a shared assessment. It has already been shown that organizational cultures are invisible to those who are immersed in them. Although new arrivals easily detect certain features of the culture, these gradually fade from view and become invisible to them. The elements

of the organizational culture can be seen from the outside, but it is advisable for the assessment to be made in collaboration with people who are part of the system, so that they can help to interpret the cultural elements identified.

- ◆ The organization's leaders and heroes (its most respected people) are those who can contribute the most to changing the elements of the culture that need to be changed. These individuals should actively participate in the intervention.
- ◆ As many members of the organizational system as possible should participate in the assessment and intervention. It will be easier to change a culture if those who maintain it have participated in the different stages of the intervention. They must take ownership of the assessment and the intervention and embrace them. The way to instill ownership among the members of an organizational system is to involve them in the process, since for the intervention to be effective, it must be a "self-intervention."
- ◆ The intervention should be action-oriented. An organization's culture is not changed in the abstract but is steered in the right direction toward the achievement of certain specific ends.
- ◆ The existing culture should be acknowledged and valued. It should be used as the fulcrum for achieving its own modification.
- ◆ Cultural change should only be attempted when strictly necessary. Change for the sake of change makes no sense in organizational culture and, by the same token, can be a mistake and have repercussions if attempted when there is no clear need.

In organizational change, it should be borne in mind that ignoring the organization's culture can spark real resistance. However, if the culture can be used to understand and promote the change, it is very helpful.

4.6.3 Recommendations on the organization and management of change

The recommendations on the organization and management of change can be summarized as follows:

- ◆ Knowing the most important characteristics of the organizational culture and taking advantage of its positive aspects are key.
- ◆ Attention should be paid to tailoring interventions to the real context without losing sight of the objectives.
- ◆ It is necessary to enhance leadership capacity in terms of the number of people and their preparation.
- ◆ Changes are more feasible and sustainable when the people affected participate in making them.
- ◆ A climate of trust and respect is essential for promoting change.
- ◆ Change is more likely to happen when it is based on prior successes and the identification of good practices and lessons learned by the same teams than when it is based on the identification of deficiencies, gaps, or problems.
- ◆ Communication, truth, and the recognition of progress are pillars for ensuring change.

CONCLUSIONS

This publication has attempted to describe the current state of the discussion on hospitals in networks in the Region of the Americas. While many of the issues addressed are well-focused and grounded in sound theoretical frameworks, they have only recently emerged and the literature on the Region is very limited. Nevertheless, there is a general conviction that a common program for the transformation of hospitals is urgently needed.

This publication highlights the strategic lines that, according to the experts, must be addressed in the Region. These include concern about governance, resource allocation and incentives, the model of care, the introduction of technology and adaptation of infrastructure, human resources, and the organization and management of change.

For each of these broad lines, this publication proposes recommendations that emerged in the current phase of discussion. These recommendations are illustrative rather than prescriptive in nature, and can be studied in relation to specific contexts and priorities. In essence, the goal is to contribute and align the various elements to achieve a cultural change that will reposition hospitals as key elements of people-centered networks. The hope is to improve the performance of networks as a whole and ensure that in the long term, systems thinking will become part of the daily work of everyone involved. This is the context for understanding the concern about network governance, the importance of clinical agreements between levels of care, payment mechanisms that break with historical budgets, the network programming of activities and new investments, health technology assessment, training processes centered on the principles of primary health care, and the development of new professional profiles for working in a network. These are only a few of many recommendations that are part of a wide range of interventions whose implementation should be tailored to local circumstances.

Furthermore, the object of the strategic lines and recommendations collected in this publication is to ensure that today's shared vision of hospitals becomes a reality: that hospitals will be dynamic and flexible, centered on the population they serve, and operate interdependently with other types of health facilities. For this, they will need a sufficient number of competent human resources and sufficient financial resources aligned with network priorities and objectives to meet the needs of the population. They

must also have the necessary infrastructure and technology to fully exercise their role in the network. Finally, they must be able to report their achievements and results, be transparent in their work, function as safe environments for workers and the community, be open to change, and have a good management team.

This common vision should lead to a joint strategy and follow a road map that will make the transformation of hospitals a key component in the development of integrated health service delivery networks; it is therefore essential to formulate shared and adaptable recommendations applicable to different contexts.

The preparation of a consensus-based road map in each country and the existence of recommendations such as those provided here will be necessary to promote decision-making aligned with the integrated health service delivery networks that have been proposed. Developing the work program will require new meetings of experts and managers in each country to obtain shared recommendations applicable to national circumstances.

It is also evident that learning in this area should constantly be monitored, and mechanisms will be needed to enable decisionmakers in the different spheres of the health systems to make timely improvements.

The Pan American Health Organization offers technical cooperation to assist with the transformation of hospitals through the Productive Management Methodology for Health Services (PMMHS) and several training initiatives originating in the countries. Many new initiatives of this type will undoubtedly emerge in line with the specific cooperation strategies in each Member State.

In this regard, learning communities and virtual forums are instruments with great potential and are positive complements to the current national and international discussion. Technical cooperation and cooperation among countries also play an important role in the adoption of what has been learned from different situations.

GLOSSARY

Most of the terms used in this publication are already defined in the glossary of *Integrated Health Services Networks: Concepts, Policy Options and Road Map for Implementation in the Americas* (3) and are not repeated in this publication. Below are some terms not included in that publication:

1. **External accreditation.** A mechanism for the comprehensive evaluation of a hospital's quality, based on known standards objectively applied by entities independent of the hospital evaluated.
2. **Universal access to health and universal health coverage.** A phrase that implies that all people and communities have access, without any discrimination whatsoever, to timely, adequate, and comprehensive quality health services determined at the



national level on the basis of needs, and safe, effective, and affordable quality drugs, while ensuring that the use of these services does not expose people, especially groups in conditions of vulnerability, to financial hardship.

3. **Network manager.** An administrative professional or team that, while not exercising direct control over all health facilities in the network, performs functions that facilitate the coordinated operation of the whole. The manager's main functions are related to management and resource allocation and incentives. It is one of the possible governance arrangements adopted during the establishment and operation of integrated health service delivery networks.
4. **Judicialization.** For the purposes of this publication, this term refers to litigating a matter in court that could be resolved another way, such as mediation or an agreement between the parties.
5. **Network node.** A concept borrowed from network theory. In the case of health, nodes are autonomous interdependent components that are linked to achieve the network's objectives. From a general standpoint, they can be understood as facilities, meaning that every hospital and ambulatory health care center is a node. From the operational standpoint, health workers can be considered nodes that operate in a network while working in different facilities, when they have links that enable them to coordinate their work to meet common objectives (i.e., to care for a particular person).

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In 2007, PAHO launched the Integrated Health Service Delivery Network (IHSDN) initiative to address the problems derived from the fragmentation of health services and to overcome the structural problems stemming from the widespread segmentation of health systems in the countries of the Region.

In the IHSDN initiative, hospitals are an aggregate of specialized institutions that support a highly effective first level of care. Hospitals themselves are defragmented, which is theoretically correct, innovative, and even visionary. However, the IHSDN initiative does not seek to diminish the influence of hospitals in the health system or the importance of their role, but to integrate these institutions so that all their efforts are aligned with the needs of the people and communities they serve through the development of IHSDNs. It may be obvious that without hospitals there can be no IHSDNs; however, it should also be recognized that without effective networks, hospitals cannot do their job.

The IHSDN initiative presents a change in the role assigned to hospitals, in which they are no longer considered the apex of a pyramid in which the hierarchy is based on specialization to successfully treat disease. Instead, the hospital becomes a very important participant in a service organized as a network, performing specific tasks in a series of processes that cut repeatedly across the health service delivery network and include the participation of individuals and communities.

The product of an intense debate and joint effort, this work contains a series of proposals in the six areas considered a priority for developing the new role of hospitals in IHSDNs: governance, resource allocation and incentives, the model of care, technology and infrastructure, human resources, and organization and management.