Combating Health Care Fragmentation through Integrated Health Service Delivery Networks in the Americas: Lessons Learned

Hernán Montenegro, Reynaldo Holder, Caroline Ramagem, Soledad Urrutia, Ricardo Fabrega, Renato Tasca, Osvaldo Salgado, Gerardo Alfaro, Maria Angélica Gomes

Abstract — Purpose: This paper analyzes the challenge of health services fragmentation, presents the attributes of Integrated Health Service Delivery Networks (IHSDNs), reviews lessons learned on integration, examines recent developments in selected countries, and discusses policy implications of implementing IHSDNs. Design/methodology/approach: A literature review, expert meetings and country consultations (national, subregional and regional) in the Americas resulted in a set of consensus-based essential attributes for implementing IHSDNs. The analysis of eleven country case studies on integration allowed for the identification of lessons learned. Findings: Studies suggest that IHSDN could improve health systems performance. Principal findings include: i) integration processes are difficult, complex and long term; (ii) integration requires extensive systemic changes and a commitment by health workers, health service managers and policymakers; and, iv) multiple modalities and degrees of integration can coexist within a system. The public policy objective is to propose a design that meets each system’s specific organizational needs. Research limitations/implications: The analysis presented in this paper is qualitative. Practical implications: Some policy implications for implementing IHSDNs are presented in this paper. Originality/value: The research and evidence on integration remains limited. The paper expands the knowledge-base on the topic, presenting lessons learned on integration and recent developments in selected countries, which can support integration efforts in the region.

Keywords — Fragmentation, health services, integration, networks, Region of the Americas

High levels of fragmentation characterize health systems in the Americas (Inter-American Development Bank, 1997; Mesa-Lago, 2008; Vilaça, 2009). Fragmentation by itself or in conjunction with other factors can lead to difficulties in access to services, delivery of services of poor technical quality, irrational and inefficient use of resources, unnecessary increases in production costs, and low user satisfaction (World Health Organization 2000, 2007, 2008a). Fragmentation manifests itself as lack of coordination between the different levels and settings of care, duplication of services and infrastructure, unutilized productive capacity, and health care provided at the least appropriate location, especially hospitals. Furthermore, in fragmented systems, users experience lack of access to services, loss of continuity of care, and the failure of health services to meet their needs. Although fragmentation is a common challenge in the majority of the Region’s countries, its magnitude and primary causes may differ in each context. Nonetheless, it is possible to identify some leading and recurring causes of fragmentation in the Americas (Box 1).

Box 1: Leading Causes of Fragmentation in the Region of the Americas

- Institutional segmentation of the health system, i.e., the coexistence of subsystems with different modalities of financing, affiliation and health care delivery, each of them ‘specializing’ in different strata of the population according to type of employment, income level, ability to pay, and social status;
- Health facilities of various levels of care under different decentralized administrative entities (provinces, states, municipalities, health districts, ministry of health, etc.);
- Predominance, within health services, of programs targeting specific diseases, risks and populations (vertical programs) with no coordination or integration into the health system;
- Extreme separation of public health services from the provision of personal care;
- Model of care centered on acute episodic care of disease, and hospital-based treatment;
- Weak steering role capacity of the health authority;
A perception survey conducted in 2002 by the Pan American Health Organization/World Health Organization (PAHO/WHO) on health care coordination in 16 countries of Latin America and the Caribbean (LAC), both first level and specialized care managers considered health services fragmentation to be a serious problem (PAHO/WHO, 2004a; 2004b). Only 22% of first level of care respondents and 35% of specialized care managers/providers considered that referral and counter-referral systems between levels of care were working properly. Respondents also noted that nearly 52% of hospitalized patients could have been treated outside of the hospital environment. Furthermore, only 45% of first level interviewees reported that the same medical/health team examined patients over time; that is, few have a regular source of care.

Fragmentation poses an even greater challenge in light of decreasing fertility rates, higher life expectancy rates, and population aging. These important demographic changes affect the epidemiological profile of the population, and thus the demand for health services. Population aging leads to an increase in chronic diseases and comorbidities, which require greater integration between levels and settings of care. At the same time, users are demanding higher quality, and more comprehensive and integrated health services better adapted to their needs and preferences.

The achievement of national and international health goals, including the Millennium Development Goals, will require greater, more effective investment in health systems. Although more resources for health are necessary, governments are also seeking new ways to do more with existing resources (WHO, 2007). In a world where poor health system performance is increasingly scrutinized, the need to address the problem of health services fragmentation becomes an imperative (Hofmarcher et al, 2007; Unger et al, 2006).

The need to integrate health services

There is growing consensus worldwide on the areas in which health systems must be transformed. The 2008 World Health Report on Primary Health Care (PHC) advocated for four sets of reforms to meet health systems performance challenges, namely: universal coverage reforms, service delivery reforms, public policy reforms, and leadership reforms. Service delivery reforms aim to reorganize health services around people’s needs and expectations to make them more socially relevant and responsive to the changing world, while producing better outcomes. They are meant to transform conventional health-care delivery, optimizing the contribution of health services – local health systems, health-care networks, health districts – to health and equity.

In an effort to tackle the problem of fragmentation, and in response to this renewed global and regional interest to provide more equitable, comprehensive, integrated, and continuous health services for all inhabitants of the Americas, in 2007 PAHO started preparatory work for the Integrated Health Service Delivery Networks (IHSDNs) initiative. PAHO defines IHSDNs 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 (Modified from Shortell et al, 1993). In people’s experience with the system, IHSDNs can contribute to better continuity of care, which is understood as the degree to which a series of discrete health care events is experienced by people as coherent and interconnected over time, and consistent with their health needs and preferences (Modified from Haggerty et al, 2003).

The region is home to several good practices in the creation of IHSDNs, especially in countries...
like Brazil, Canada, Chile, Costa Rica and Cuba, which have traditionally supported the development of networks. Other countries in LAC are adopting similar policies to organize their health services. Despite these efforts, addressing fragmentation and providing more equitable, comprehensive, integrated, and continuous health services remain significant challenges for the majority of countries in the Americas.

Based on an extensive literature review, and a draft position paper on the topic, PAHO held a series of country consultations on fragmentation and strategies to address it. From May to November 2008, ten national consultations (Argentina, Belize, Brazil, Chile, Cuba, Ecuador, Mexico, Paraguay, Trinidad and Tobago, and Uruguay), two sub-regional consultations (Central America, and Eastern Caribbean and Barbados), and one regional consultation (Brazil) were held. A number of experts participated in the consultations, including representatives from ministries of health, social security institutes and/or other public and/or private insurers, health service managers and providers, universities, civil society organizations, professional bodies, and other relevant actors. A similar methodology was used in the meetings, with a previously established questionnaire to guide discussions. At the same time, PAHO commissioned eleven case studies to identify good practices and experiences in the integration of health service delivery networks and vertical programs into the health system. This process culminated in the adoption of Resolution CD49.R22 on IHSDN Based on Primary Health Care during the 49th PAHO Directing Council, on October 2, 2009, where Members States made a commitment to implement IHSDNs in the Americas, and PAHO officially launched the initiative.

The evidence on health services integration remains limited, particularly in low- and middle-income countries (WHO, 2008b, 2008c). However, studies suggest that IHSDNs can improve access, reduce fragmentation, improve system efficiency, prevent duplication of infrastructure and services, reduce production costs, and respond more effectively to people’s needs and expectations (Dowling, 1999; Wan et al., 2002; Lee et al. 2003; Aletras et al., 1997; Soler, 2003). From the clinical standpoint, continuity of care is associated with improvements in clinical effectiveness, responsiveness of health services, acceptability of services, and health system efficiency (Christakis et al., 2001; Hjordahl & Laerum, 1992; Parchman et al., 1992; Ham, 2007; WHO, 2001; Lloyd & Wait, 2006). From a user perspective, IHSDNs can facilitate timely access to first level care, improve access to other levels of care, prevent duplication/unnecessary repetition of history-taking, diagnostic procedures, and bureaucracy, improve shared decision-making between patient and provider, and promote self-care strategies and chronic disease monitoring (Hartz & Contandriopoulos, 2004).

**Essential Attributes of IHSDNs**

Health systems in the region of the Americas operate in a wide range of contexts, which makes it difficult to prescribe a single organizational model for IHSDNs; in fact, there are multiple possible models. The public policy objective is to achieve a design that meets each system’s specific organizational needs (Lega, 2007). The national health authority plays a key role in leading this process through policymaking, regulation, performance assessment, and financing mechanisms (PAHO/WHO, 2007a).

Despite this diversity of contexts, the experience of recent years indicates that IHSDNs require a number of essential attributes for proper performance. The attributes of IHSDNs presented below, grouped according to four principal domains, are the result of the literature review, case studies and consultations mentioned previously.

**Graph 1: Domains and Essential Attributes of IHSDNs**
The integration of health services should be seen as an evolving and continuous process. Each health service reality presents its own integration challenges in light of the attributes described above. As noted earlier, the causes of health services fragmentation are many and vary from one reality to another. Therefore, solutions should be context-specific and take into account that different attributes at different stages of development can coexist within a single network.

The PAHO IHSDN initiative also identified a series of public policy instruments and institutional mechanisms to assist policymakers, services managers and providers in developing IHSDN. Public policy instruments represent the strategies and resources used by governments to achieve their goals, and include legal instruments, capacity building, taxes and fees, expenditures and subsidies, and advocacy and information. Institutional mechanisms are those that can be implemented in health service
management/provider institutions, and which can be clinical (e.g., multi-disciplinary teams, staff rotation across levels of care, a single electronic medical record, referral and counter-referral guidelines, case management), and non-clinical (e.g., shared organizational mission and vision, health worker and user participation in governance, matrix-based organizational designs).

The relevance of these instruments and mechanisms will depend on each country’s political, technical, economic, and social reality. Regardless of the instruments or mechanisms adopted, they should always be backed by a State policy that promotes IHSDNs as an essential strategy for achieving more accessible, comprehensive, integrated, and continuous health services. In turn, this policy framework should be underpinned by a coherent legal framework consistent with the development of IHSDNs, operations research, and the best available scientific knowledge.

Lessons Learned

Past implementation of IHSDNs has yielded valuable lessons that are helpful in formulating a successful implementation strategy (Gillies et al, 1993; Shortell et al, 1994; WHO, 2008b), the most important of which are:

- Integration processes are difficult, complex, and long term;
- Integration processes require extensive systemic changes and partial interventions are insufficient;
- Integration processes require a commitment by health care workers, health service managers, and policymakers;
- Integration does not mean that all network components must be integrated into a single modality as multiple modalities and degrees of integration can coexist within a single system.

The development of IHSDNs is not a straightforward process given that most countries cannot dismantle their systems and replace them with structures compatible with IHSDNs. Restructuring efforts should therefore start from existing structures.

Additional lessons learned were identified as part of the analysis of eleven case studies commissioned by PAHO. The case studies were comprised of five experiences related to the integration of health service delivery networks and six experiences related to the integration of vertical programs into the health system (Box 2). The case studies reflect the diversity of integration efforts in the region. Out of the eleven case studies reviewed, five clearly exemplified the negative effects of fragmentation and the significant challenges to integration, particularly regarding the sustainability of efforts. Six cases showed varying degrees of success and some improvements in access to, quality and efficiency of services as well as increased social participation.

Box 2: Case Studies on Integration of Health Service Delivery Networks and Vertical Programs in Latin America and the Caribbean

<table>
<thead>
<tr>
<th>Case Studies on the Integration of Health Service Delivery Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brazil - Network of Emergency Care in the Northern Macro Region of Minas Gerais</td>
</tr>
<tr>
<td>2. Chile - Integrated Public Health Services Networks: Health Reform and the Case of the Ñuble Health Services</td>
</tr>
<tr>
<td>3. Chile - Integrated Public Health Services Networks: Health Reform and the Case of the Western Metropolitan Health Services</td>
</tr>
<tr>
<td>4. Guatemala - Coordinated Health Care Model in the Departments of Escuintla and Suchitepéquez</td>
</tr>
<tr>
<td>5. Brazil – Program &quot;Mãe Curitibana&quot;: A Network of Care for Women and Children in Curitiba, Paraná</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Studies on the Integration of Vertical Programs into the Health System</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Brazil - The Brazilian Strategy to Combat the HIV/AIDS Epidemic and its Integration with the Unified Health System</td>
</tr>
<tr>
<td>8. Colombia - Synergies for Tuberculosis Control</td>
</tr>
</tbody>
</table>

This article is © Emerald Group Publishing and permission has been granted for this version to appear [here](http://new.paho.org/hq/index.php?option=com_content&task=view&id=6183&Itemid=3553). Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.
The lessons learned from the case studies on IHSDNs are summarized below using Walt and Gilson’s framework for policy analysis, which takes into consideration not only the content of reforms, but also the role of context, processes and actors and how they influence these reforms and, in some cases, determine their success (Walt & Gilson, 1994).

**Context**
- Integration strategies are more likely to succeed when combined with broader changes in the model of health care, and comprehensive sectoral and/or social protection reforms.
- The existence of appropriate political, legal, and administrative frameworks is key to the sustainability of IHSDNs. However, in some cases, integration efforts can start informally and evolve into more formal arrangements.
- In general, the success of integration initiatives is associated with greater availability of resources.
- Different contexts determine different strategies, which should be politically feasible and adapted to the reality of each country/local setting.
- Integration efforts seem to be more successful when implemented in the context of stronger health systems with less structural problems (e.g., systems with a strong steering role of the national health authority, less segmentation, and adequate levels of financing).

**Process**
- Policy stability over time increases the likelihood of success of integration strategies. Frequent policy reversals can threaten the progress and commitment of network members.
- Following a gradual path and a logical sequence of implementation helps to generate trust in integration strategies; if efforts are seen as arbitrary, resistance is likely to ensue.
- It is important to demonstrate early gains with measurable results and pilot experiences to encourage and sustain efforts to move forward with the integration process.
- A high level of participation of interested parties is crucial to ensure transparency, accountability, and sustainability of integration efforts.
- Integration can begin as an informal agreement and subsequently become a formal arrangement with the necessary political and legal backing.

**Content**
- Within the framework of universal coverage and access, it is important to prioritize vulnerable population groups and health risks to ensure equity.
- Common and shared goals help to define and consolidate the network. Having clarity of purpose and knowledge of the network’s objectives constitute the basis for cooperation and joint work among the network’s members.

**Actors**
- The success of integration efforts is strongly associated with the quality of interpersonal and inter-institutional relations, including a commitment and willingness to change; a sense of belonging and appreciation; trust and communication; and credibility.
- Encouraging citizen and community participation through health education, self-care, social control, and satisfaction surveys is an important aspect of integration strategies.
It is important to close the gap between policy makers, managers, providers and users through the generation of interactive spaces for dialogue and for the exchange of ideas and solutions. In addition to the lessons learned highlighted previously, it is also possible to identify barriers and facilitators to the integration of health services (Table 1).

**Table 1. Barriers and facilitators to the development of IHSDNs**

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Institutional segmentation of the health system, including weak steering role of the health authority</td>
<td>1. High-level political commitment to the development of IHSDNs</td>
</tr>
<tr>
<td>2. Sectoral reforms of the 80s and 90s (privatization of health insurance; different health service portfolios across insurers; competition among providers for resources; proliferation of contracting mechanisms; job insecurity for health workers; and regressive cost recovery schemes)</td>
<td>2. Availability of financial resources</td>
</tr>
<tr>
<td>3. High-power groups with competing interests (specialists and super-specialists; insurers; drug industry, medical supply industry, etc.)</td>
<td>3. Leadership of the health authority and service managers at all levels of the system</td>
</tr>
<tr>
<td>4. External financing modalities that promote vertical programs</td>
<td>4. Decentralization and flexible local management</td>
</tr>
<tr>
<td>5. Deficiencies in information, monitoring and evaluation systems</td>
<td>5. Financial and non-financial incentives aligned with the development of IHSDNs</td>
</tr>
<tr>
<td>6. Weak management</td>
<td>6. Culture of collaboration and teamwork, with adequate staff incentives</td>
</tr>
<tr>
<td></td>
<td>7. Active participation of all stakeholders</td>
</tr>
<tr>
<td></td>
<td>8. Results-based management</td>
</tr>
</tbody>
</table>

**Recent developments**

Since the IHSDN initiative was launched in 2009, there have been several developments both at the regional and country level. At the regional level, PAHO will launch a Community of Practice (CoP) on Primary Health Care in 2011, in which one of the objectives will be the sharing of experiences and lessons learned on IHSDNs. The CoP will also make available a repository of tools and instruments that can help countries implement IHSDNs. Furthermore, PAHO is developing guidelines that support the implementation of networks in six areas, which had been identified as priorities during the country consultations: general orientations for implementation, governance, information systems, human resources development, clinical coordination mechanisms, and first level of care strengthening. At the country level, some of the most recent integration experiences since the launching of the Initiative are mentioned below.

In 2010, the Ministry of Health of El Salvador developed an instrument for the assessment of the essential attributes of IHSDNs as defined by the PAHO Initiative. The instrument, which was validated in national workshops, was adjusted to the country’s characteristics, and level of network development. The purpose of the baseline assessment is to support the ongoing reform of the National Health System of El Salvador, which has as one of its pillars the development of integrated health service networks supported by the creation of Community-based Family Health Teams. The country has also implemented an integrated health information system including indicators based on the IHSDN attributes that help to identify coordination mechanisms across levels of care. In addition, efforts to integrate health services from different health sector institutions (Social Security Institute, Institute for Teachers' Welfare, Solidarity Health Fund) into a common network are underway. Finally, El Salvador has strengthened social participation and intersectoral work through the establishment of an Intersectoral Health Commission, which brings together 37 institutions (including five ministries), and is responsible for joint strategic analysis and decision-making on public health
issues. The technical body of the Commission is chaired by the Minister of Health.

Also in 2010, Paraguay embarked on a process to promote the gradual development of IHSDNs at the national level as an integrated response to the fragmentation, segmentation, and social exclusion that has characterized the health system in that country. Two of its departments, Central and Asuncion, were selected for an accelerated implementation of IHSDNs. First, the Ministry of Public Health and Social Welfare developed and disseminated its strategic orientations for the development of networks in the country. Subsequently, a series of workshops were held to present the framework, harness support from different actors, and analyze health services capacity in the two departments. During the workshops, participants defined health areas based on standardized criteria, identified facilities that could function as basic health units and specialized centers, determined the available physical and human resources, assessed the coverage of existing services, and defined the gaps and needs to reorganize services into networks. This process is supported by a national effort to strengthen first level of care through the establishment of family health units - comprised of physicians, nurses, nursing assistants and community health workers - and which constitute the basis for the organization of networks.

In Brazil, the Ministry of Health issued Ordinance 4.279 on 30 December 2010 establishing guidelines, based on the concepts and attributes of IHSDNs, for the organization of the health care network within the framework of the Unified Health System (SUS). This strategy seeks to address the fragmentation of health services and management, and to improve the political-institutional operation of the SUS. The country is also organizing Innovation Laboratories that aim to produce and disseminate knowledge to support the three spheres of government (national, state and municipal) in the management of health care networks within the SUS. The Labs focus on proposing solutions, presenting innovative management tools, practices and instruments, and are targeted at health managers and other stakeholders interested in promoting the development of networks. The country has recently concluded Innovation Labs on the role of primary care in health networks, vi and on logistical systems, and is currently involved in the organization of four Labs on the management of chronic conditions, regulation of access, participation tools, and regionalization, all in the context of integrated networks.vi

On 19 January 2011, Colombia issued Law 1438 reforming the social security in health system. Chapter II of the Law establishes that health services shall be provided through IHSDNs formed by territorial entities, municipalities, districts, and departments, including public, private and mixed providers. The law aims to reduce the fragmentation that results from the extreme separation of health systems functions, the existence of over 12 different sources of financing, and 70 private insurers each with their own service provision structure; and the excessive competition among health services providers, with no public-private complementarity. Other challenges faced by the Colombian system include unutilized productive capacity, access barriers, a multiplicity of payer institutions, and legal and administrative hurdles that prevent the provision of comprehensive and continuous care. It is expected that the law will help to strengthen the first level of care, bring services closer to the population served, and provide care that is more integrated.vi

As can be seen from the experiences above, countries have been advancing in the development of policy and legal frameworks that support the creation of networks. However, important challenges remain particularly in regards to the implementation of IHSDNs, which can follow different paths, with different speeds. A quick examination of these recent country developments confirms several of the lessons learned previously highlighted such as that integration processes are difficult, requiring the commitment of health service managers and policy makers, and that there are facilitators and barriers that should be considered when designing integration efforts.

Policy Implications

Four main policy implications can be inferred from the lessons learned highlighted earlier. The first is that tackling fragmentation should be an important priority for policy makers. As stated previously, fragmentation increases inequity, inefficiency, and can lead to worse clinical outcomes. Inequities in health, in turn, can
translate into tensions in society, threatening social cohesion and inclusion. As countries strive to be more competitive in the global economy, and achieve higher levels of human development, addressing health systems inequities and inefficiencies through more integrated models of care becomes an imperative.

The second policy implication refers to the need to strengthen health systems, particularly in low- and middle-income countries and those highly dependent on foreign aid. Health services integration faces significant challenges when implemented in the context of weak health systems, characterized, among others, by weak stewardship of the national health authority, low financing, and poor institutional capacity. Weak health systems are often highly dependent on external financing, which in general promote vertical programs thus increasing fragmentation. In this context, it is crucial to harmonize and align donor funding around national health plans and strategies following the principles of the Paris Declaration on Aid Effectiveness: ownership, harmonization, alignment, results, and accountability.

The third policy implication refers to the need to tackle structural issues in the health system such as segmentation, low health spending, and an overreliance on market-based competition among health insurers and providers. To face these issues, several countries are moving toward a more collaborative approach in health systems, promoting a stronger regulatory role of the state. It is unlikely that policies and regulatory frameworks that promote IHSDNs will be successful if major structural health systems issues are not properly addressed.

Finally, health systems should be configured in a way that places people at its center, framing access to health care as a right. This implies a change from a supply-driven model to a people-centered approach as well as a change in culture and society. A rights-based approach is necessary not only for economic development reasons, but also as a moral imperative. It helps to analyze and address, within the context of health systems, “the inequalities, discriminatory practices and unequal power relations that are often at the heart of development challenges” (WHO 2011).

References


WHO, on behalf of the Regional Office for Europe and European Observatory on Health Systems and Policies (2008c) Policy Brief: When do Vertical (Stand-Alone) Programmes have a Place in Health Systems? Copenhagen: WHO.

1 Authors are from the Pan American Health Organization/World Health Organization (PAHO/WHO).
2 PAHO defines health services fragmentation as health facilities and services at different levels of care that are not coordinated among themselves or that do not provide care over time; health services that do not cover the entire range of promotion, prevention, diagnosis, treatment, rehabilitation and palliative care services; and services that do not meet people’s needs (PAHO/WHO 2011).

This article is © Emerald Group Publishing and permission has been granted for this version to appear here (http://new.paho.org/hq/index.php?option=com_content&task=view&id=6183&Itemid=3553). Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.
iii PAHO defines equity in health as the absence of unfair differences in health status, and access to health services and health-enhancing environments and treatment within the health and social services system (PAHO/WHO, 2007b). Comprehensive, integrated, and continuous health services are understood as the management and delivery of health services such that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease-management, rehabilitation and palliative care services, through the different levels and sites of care within the health system, and according to their needs throughout the life course (Modified from WHO, 2008b).

iv [Last accessed in May 2011]

v [Last accessed in June 2011]

vi [Last accessed in May 2011].


ix WHO defines people-centered care as ‘care that is focused and organized around the health needs and expectations of people and communities rather than on diseases. People-centred care extends the concept of patient centred care to individuals, families, communities and society. Whereas patient-centred care is commonly understood as focusing on the individual seeking care—the patient—people-centred care encompasses these clinical encounters and also includes attention to the health of people in their communities and their crucial role in shaping health policy and health services (WHO 2010).