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# **National Health Information Systems: The Role of Effective Multi-Sectoral Collaboration**

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**A Technical Guidance Note**

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Country Ownership Strategies:  
Asia Pacific Leadership Forum on Health Information Systems

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## Acronyms

|      |   |
|------|---|
| CCM  | Country Coordinating Mechanism                |
| GAVI | Global Alliance for Vaccines and Immunization |
| HIS  | Health Information Systems                    |
| ICT  | Information, Communication Technology         |
| MOH  | Ministry of Health                            |
| NGO  | Non-Governmental Organization                 |
| SLG  | Stakeholder Leadership Group                  |



## Introduction

Developing countries face a wide variety of health-related challenges, and the national health systems that address those challenges often struggle with limited resources and capability. Health leaders and managers must focus on maximizing the value of scarce human, financial and material resources, and on finding ways to make health systems operate as efficiently and effectively as possible.

Accurate, good quality, and reliable health data on health outcomes, service delivery indicators and the overall performance of the health system is essential for assessing, planning, implementing, monitoring and evaluating health interventions and health trends in the country. The goal of a functional Health Information System (HIS) is to provide that information at all levels of the system and serve as a tool to help pursue better health outcomes.

Owned and managed by the country, a functional HIS has its basis in the establishment of common standards and a unified architecture that can help stakeholders focus on building awareness about the importance of data driven decision making; strengthening demand for information; enhancing governance, leadership and various capabilities within the national health and information system to meet that demand; improve quality of data and foster a culture of information use. A functional HIS implies that there is a sustainable system in place that produces and disseminates various reports and information products aimed at different audiences for use in surveillance, program planning, service and resource management, decision making and national and international reporting.

A functional HIS also requires effective multi-sectoral collaboration since the HIS typically involves the collection of a wide range of data from multiple sources. In most countries, health information comes not only from Ministries of Health, but also from Ministries of Planning and Economic Development, Finance, the Census Bureau, Population Council, Department of Vital Statistics, research bodies and non-governmental organizations.

The purpose of this Technical Note is to underscore the important role that multi-sectoral collaboration can play in contributing to a functional country-led and country owned health information system, and expand our knowledge base and practice in this area. First, the technical note provides examples of the various institutions that normally serve as conduits or sources of health information, and the kinds of data that they collect and report on. Next, it examines the important challenges and opportunities associated with creating and sustaining effective multi-sectoral collaboration for a functional HIS. Finally, it provides an example from the health sector that demonstrates the value and success of multi-sectoral collaboration, and suggests some principles of good practice and lessons for multi-sectoral HIS collaborative ventures.

For our purposes, and in the context of HIS, a multi-sectoral collaboration or partnership refers to: a cross-sector group working together under some form of recognized structure, towards a common strategic direction and goals, which would be difficult to achieve if tackled by any single organization.

## Understanding Multi-Sectoral Collaboration

The concept and practice of multi-sectoral collaboration is not new to the health sector. In fact, the health sector in many parts of the developing world is replete with both large and small scale initiatives and programs that involve multi-sector collaboration or partnerships. For example, health sector strategic plans; the strategic plans of most national AIDS Commissions; projects supported by major global health initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM); the US Government President's Emergency Plan for AIDS Relief (PEPFAR); GAVI and others all call for multi-sectoral partnerships as a core strategy for planning, implementing and scaling up national programs in HIV/AIDS, TB, Malaria, Child Health and other areas. Some of the key tools and resources developed by the Health Metrics Network that provide general guidance on HIS planning and implementation all stress the role and importance of multi-agency stakeholder working groups as an integral part of the collaboration process. There are many benefits from these multi-sectoral efforts, although efforts to implement these collaborative partnerships sometimes pose challenges for governments, donors, private institutions, the rapidly expanding private sector and other sources of health care related services around the world.

In some cases, government officials in the health sector understand multi-sectoral to mean “from other ministries” or “health ministry and non-governmental organizations working in health”. NGOs may understand multi-sectoral as “government and NGOs” (Severo and Helfenbein, 2004).



However, in the case of HIS, given the nature of health information (e.g., types of data, data sources, data flows and the thousands of facilities where data are collected and transmitted), an effective multi-sectoral landscape is a bit more complicated and often less apparent. It should include the Ministry of Health, other Ministries in the public sector, NGOs, private for profit entities, the faith-based sector, the community and their families.

The hypothetical example below illustrates how information originating from a single event in a remote village in northern Kenya flows through not only the health sector but other sectors as well.

## Box 1: Mapping Data Flow

Bubisa (meaning a place of gusty winds), is a remote, wind-swept, small settlement in Northern Kenya. It is home to the local Gabbra people – a small tribal group of camel nomads. The nearest health center managed by a registered nurse and run by the Catholic Church is 20 miles away. The nearest government health facility, a district hospital managed by a medical doctor and a small team of health workers, is 65 miles away. Imagine that a trained community health worker (CHW) in Bubisa attends a birth in the village. The following day, the CHW reports the birth to the nurse at the health center, and the information on the delivery is added to the mother's health record. A new health chart is also opened for the child and immunizations will be administered and documented for the district health office. In a different register, the live birth is documented for vital registration. The nurse sends that information to the office of the local Chief, (representative of the Provincial Administration, Office of the President) who submits it to the office of the district registrar of births and deaths in the Ministry of Home Affairs. The parents will be issued with a birth certificate. Without a birth certificate the child will not obtain a Kenyan national identity card when he turns 18.

This example illustrates how the birth of a child in a remote village triggers the flow of information between and across four different government agencies, a faith-based organization and the community, making a strong case for multi-sectoral collaboration. Given the multiplicity of players and interest groups that need to be working together, coordinating and sharing information is clear. Unfortunately, the reality in such places is that information often fails to flow as described in this hypothetical case and even births fail to be reported and all the other subsequent activities don't happen.



Box 2 provides a real snapshot, with country examples, of some of the typical types and sources of information and Ministries involved. As shown below, much of this information is collected outside the Ministry of Health, again illustrating the need for multi-sectoral collaboration in building and sustaining a functional HIS.

### **Box 2: Illustrative examples of HIS collaboration: Sources and types of data shared**

- Collaboration with the Ministry of Home Affairs/Interior in Afghanistan on the design and conduct of population census, particularly with regard to the inclusion of questions pertaining to health; and sharing of census results down to the lowest possible levels.
- Collaboration with the Ministry of Home Affairs/Interior on the strengthening of the civil (birth and death) registration system.
- Collaboration with the Ministry of ICT or Communications (in Rwanda) on the development of m-Health applications in the country (i.e. use of mobile phones for communications between levels of the health system).
- Collaboration with several ministries and agencies (in Afghanistan and Pakistan) who are involved with response to emergencies and disasters, natural and man-made including investigation and control of epidemics.
- Collaboration with the police and Public Safety commissions with regard to use of emergency communications for the notification and transportation of trauma patients.
- Collaboration with various ministries on the design, coordination, conduct and sharing of health and social surveys results.
- Collaboration with the Ministry of Education and various training and research institutions with regard to staff training in HIS, monitoring and evaluation, and data use.
- Communication by the MoH on trends of various infectious diseases such as HIV/AIDS with other Ministries and Institutions who are involved in the education, prevention and control of these diseases.
- Engagement of district and community offices and organizations for collaborating on notification of suspected cases of infectious disease, and in educating the community and patients about prevention and treatment adherence.

*Source: Personal correspondence with Steve Sapirie, Lead HIS Specialist, Management Sciences for Health, March, 2011*

## The Benefits of Multi-Sectoral HIS Planning and Implementation

Multi-sectoral partnerships are often associated with attempts to address difficult issues that span the public, private and voluntary sectors. It is clear that the Ministry of Health alone cannot address all the challenges that come with the planning and implementation of a functional national HIS system. Without downplaying the potential challenges that any HIS multi-sector collaborative venture is likely to encounter, there are multiple benefits that can be accrued from coming together and working across sectors to conduct HIS planning and implementation. Box 3 outlines some specific examples of such benefits.

### Box 3: What can collaboration in HIS planning and implementation deliver?

- Broadened awareness and sense of common purpose
- Defining clear HIS needs and goals
- Streamlining data collection
- Enhancement of data quality, use and accountability
- More efficient use of resources
- Increased access to resources
- Sharing of knowledge and technology
- Investing in a common fit-for-purpose technology
- Development of innovations
- Broad sharing of responsibility for different activities
- Setting clear priorities for HIS reform
- Stronger ownership by stakeholders
- Use of strengths and expertise of different partners
- Sustainable development of HIS activities
- Better health outcomes for citizens

## What Makes Multi-Sectoral Collaboration Work?

Successful multi-sectoral collaboration is often marked by the following:

- The desire for change comes from the institutions themselves. In other words, the motivation to succeed is internal and the “prize” is clear. In the case of HIS, ideally the ultimate prize should be the full implementation of the country’s national HIS Strategic Plan where it already exists;
- A small stakeholder leadership group that acts as “guardians of purpose” exists and they have a clear plan that they seek to accomplish.
- The goal and expected end-results of the collaboration are defined by the sector partner institutions together;
- The roles, responsibilities, and mutual obligations of each partner are clearly defined in a document available to staff and concerned stakeholders;

- There is a genuine and continuous effort for transparency and feedback among all partners, including collaboration in monitoring progress towards objectives and documenting results.

## **The Levels and Levers of Effective Multi-Sectoral Collaboration: Evidence from the Literature**

There is a paucity of information and data on multi-sectoral collaboration in the published literature, despite a preponderance of multi-sectoral initiatives in the field of health and development. Very few good studies on this topic exist, although the factors which contribute to effective inter-organizational collaboration are known, and most of these have been summarized above.

Health issues and health information flows cut across sectors and institutions at different levels and communities. When it works well, multi-sectoral collaboration can bring people and organizations together to tackle challenges on many different fronts. When different groups of people come together with a common goal, clear vision and a desired end result, their skills, knowledge and experience always add up to more than the sum of their parts – another reason why multi-sectoral collaboration is an important part of any HIS strengthening initiative.

The limited evidence from the literature on multi-sectoral collaboration; primarily drawn from the fields of health, economic development, road safety and disaster management; cite the following eight factors as having the broadest impact on the effectiveness of any multi-sectoral collaborative initiative:

1. Leadership at all levels – both formal and informal
2. Information and evidence
3. Context and motivation
4. Resources
5. Structure
6. Common understanding
7. Collaborative capacity
8. Trust and legitimacy

*Source: Multi-sectoral collaboration and economic development, Morris, M, Dec. 2010*

The challenge for national HIS leaders is how to translate these success factors and make them work for HIS multi-sectoral collaboration. How can HIS national stakeholders organize themselves and apply the same predictors of success to their own efforts? This section provides a brief description of each of the factors and highlights some examples of how to apply them to build and sustain effective national HIS multi-sectoral collaboration.

## Leadership

The role of leadership in any collaborative endeavor is to create common ground for people to talk and work together, to support others to identify and address challenges and produce results. In any collaborative space, both formal and informal leaders at all levels emerge and give direction to the effort. They do so by listening; translating meaning across sectors; and building common understanding with respect to the information, evidence, and decisions under consideration. They also keep people focused on strategic purposes and outcomes which helps to overcome vested or narrow interests. A leadership style that is open, inclusive, and respectful often helps build trust and inspire collaboration. Leadership in collaborative environments is achieved through inspiring and motivating commitment to a common goal and action; building broad based involvement and participation; and sustaining hope, engagement, and commitment (Chrislip and Larson, 1994).

In Uganda, the HIS Stakeholder Leadership Group (SLG) was established in 2006 to create an environment where stakeholders with a variety of perspectives could collaborate and share ideas about the implementation of a USAID-funded human resource information system (HRIS). The SLG's first step was to bring together all leaders and decision-makers that would have an interest in the HRIS. The purpose of the Uganda SLG was to agree on a shared common goal and to determine the specific priorities the system needed to address. The SLG included representatives from the MOH, the four national health professional councils, training institutions, NGOs, the Ministry of Education, Public Service Commission and donor agencies. SLG members met and communicated regularly to address implementation challenges, identify necessary customizations and reports, and make decisions as needs arose. Leadership was shared amongst the various partners and even meeting venues were rotated to give each partner a chance to host and chair various sessions. Over the years, the SLG assumed advisory responsibility for all HIS related activities in Uganda's health sector – not just for the human resource information system. One of the key results of this group was the development of an integrated HRIS for the health sector in Uganda. The group continues to thrive and make useful contributions to Uganda's country-owned HIS work.

## Information and evidence

Any multi-sector initiative must rely on commonly shared information and evidence that helps to create a common starting point for discussions and decisions, and keeps people focused on issues rather than interests. For example, in the case of HIS, the process of planning a national health

information system should include all key stakeholders, and establish and elicit their information needs and interests as well as their technical input and support at all stages of plan development and implementation. A collaborative process around a shared purpose can help broker and ease the process of collaboration, and make choices clear.

## **Context and motivation**

Context and motivation brings clarity to the purpose of the collaboration. It helps to lay out the mission, scope, goals, accountability mechanisms, roles and responsibilities, and provides a basis for decisions around making the collaboration accomplish its mission. Here again, the national HIS Strategic Plan, where it exists, should be the magnet that attracts and pulls together all the partners who become the driving force motivating the implementation of the plan. The strategic goals contained in the plan should also help provide the rationale and explanation for any decisions. No decisions or parallel activities need to be undertaken outside the rubric of the agreed upon plan.

## **Structure**

Multi-sectoral collaboration does not function without some kind of mutually agreed upon structure. Structure refers to both formal and informal settings and arrangements that facilitate the work of a multi-sectoral group. In most cases, the design of the structure is dictated by context and circumstances. For example, in the case of HIS, the initial multi-sectoral consultation that brings together various stakeholders requires a consultation design structure that guides even basic decisions like agenda development, and where and how meetings are held. Efforts to develop or implement an action requires other types of structures that inform distribution of responsibilities, ways in which decisions are made, managing differing expectations and allowing institutional space for different partners to participate in their own flexible way. What is important to remember is that the structures that are adopted should enable the organizations and individuals involved to view issues systematically, and in a way that allows them to identify the web of factors and underlying causes that impact their collaborative venture. Only then will the unique and valuable role of each sector become clear, resulting in more equitable and balanced relationships amongst the partners.

## **Resources**

Obviously, financial, technical, human, logistical and operational resources play an important role in the work of any multi-sector collaboration, especially to support activities and to overcome resistance to involvement and collaboration.

Evidence in the literature shows that once a collaborative group begins adopting and implementing plans, access to financial resources, technical assistance and similar implementation support is required. No national HIS plan will succeed without the availability of

these resources, which in some cases may need to be shared or re-allocated between departments or units in a spirit of mutual agreement. For example, in Vietnam, resources from another department were applied to another, in support of a shared initiative.

### **Common understanding, collaborative capacity, trust and legitimacy**

These three factors are inter-related, and must be discussed together. Time and space to talk and work together give rise to these foundational factors that underlie any successful initiative. These factors are the biggest predictors of success with any collaborative venture, and need to be intentionally and carefully planned for and nurtured. The conditions for the emergence of these factors should not be limited to “good news and wins” only; the conditions are also created through transparency and fairness in difficult situations. The research also suggests that a previous positive experience with a collaborative undertaking is the best predictor of whether an organization or team will engage in subsequent collaborative initiatives.

In summary, the literature on multi-sectoral collaboration point to the importance of this three-in-one process that all multi-sectoral groups should consider in order to produce results:

- ***Talking together*** to develop common understanding, creating shared purpose and appreciation;
- ***Working together*** to develop collaborative capacity: developing skills and experience in joint decision-making, monitoring process and results, sharing resources, leadership and compromise;
- ***Building trust*** together through respecting and honoring all collaborators and partners.



Box 4 describes an example of an effective multi-sectoral collaboration in the health sector, and highlights some of the factors that contributed to the positive outcomes.

#### **Box 4: Collaborating for a common purpose: Ghana Global Fund Country Coordinating Mechanism**

The Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria (Global Fund), is a multilateral donor with a unique approach to country-ownership and country-led development. The Global Fund does not design or implement programs; they leave this to the countries that are supported. The Fund's approach to country-led development is distinguished by a unique decision-making structure and an unrelenting focus on performance at every stage of program development. Decisions on how Global Fund resources are used are made by developing country governments and civil society.

The Global Fund requires beneficiary countries to establish a Country Coordinating Mechanism (CCM) to administer the funding with at least 40 percent of its members drawn from civil society. The CCM model brings together multiple stakeholders to collectively identify country needs, design programming, and oversee implementation of Global Fund-supported projects. The CCM is a concept that recognizes that many kinds of groups and people – including government agencies, private sector, providers, civil society, researchers and affected communities – must be engaged in planning and optimizing resources to deliver services.

In its early days, the CCM in Ghana was often cited as a successful example of multi-sectoral collaboration. Ghana had one of the best implementation records of GFATM projects. For example, it was the first country in the world to fulfill the conditions for disbursement in 2003.

Several factors played a critical role in the success of Ghana CCM's multi-sectoral engagement, including:

- The government of Ghana's genuine commitment to scale up the national response to the 3 diseases;
- The government's belief in the value of public-private partnerships and willingness to involve civil society;
- Ghana's successful ongoing experience with sector-wide approach (SWAp) in the health sector - a common-basket funding and planning mechanism that requires the collaboration of several partners;
- Early integration of the GF programs into national strategic plans and existing systems;
- A strong secretariat and regular CCM meetings;
- Participatory decision making. The CCM functions in a democratic way, each member has a voice and representatives of all sectors feel ownership and their contributions are valued;
- Seamless and open communications.

*Source: Ghana Country Coordinating Mechanism: A Case Study, The Global Fund 2003*

This example from Ghana illustrates several key themes that made them successful, including: motivations behind the collaboration that are driven by a common vision, clearly defined goals and objectives, fostering respect and trust, encouraging inclusiveness and openness, combining perspectives, harnessing resources and skills of various partners, and helping the partnership reframe issues and be creative in developing new partnership solutions to key issues. These factors are essential to the success of HIS multi-sectoral partnerships as well.

## **Conclusion**

A comprehensive health information system is a relatively new phenomenon in the developing world. However, strengthening functional HIS will remain critical to all health system strengthening efforts in developing countries, including strengthening multi-sectoral collaborations. Without good information and good performance from the different segments of the health system and other sectors, it will be exceedingly difficult to put scarce resources to best use.

It is important to focus on strategies and initiatives to establish, improve and sustain multi-sectoral collaboration – one important element in a country-led and country owned HIS national platform. Such a national platform that is supported and maintained by all key players will serve several purposes: improving the quality and consistency of available data; enhancing data use for policy formulation, program planning, management and monitoring; and improving health care at the point of service delivery. As such, the information that a functional HIS generates should meet the needs of a wide variety of users.

As discussed in this technical note, health information flows do not just occur within a single organization like the central Ministry of Health, but tend to occur between different levels of the Ministry of Health, and between the Ministry of Health and other ministries and non-governmental organizations. Information also flows in different directions – up, down and across different systems and organizations. Effective multi-sector collaboration can greatly contribute to efforts for optimizing the quality of information, the timeliness of information, and how information flows among multiple organizations, and also advocate for building the necessary leadership, governance, technology, and human capacity to use information to improve the performance of the health system. At the end of the day, what matters is that good quality and timely information is available when and where it is needed to inform planning and improve the quality of health services.

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Additional resources and tools on Leadership, Team Building, and Partnerships can be found at the following sites:

[www.aidstar-two.org](http://www.aidstar-two.org)

Managers Who Lead: A Handbook for Improving Health Services:

<http://www.msh.org/resource-center/managers-who-lead.cfm>

<http://www.team-building-leadership.com/>

Leading Together: Complex Challenges Need a New Approach:

[http://media.wiley.com/assets/162/02/jrnls\\_LIA\\_JB\\_drath2301.pdf](http://media.wiley.com/assets/162/02/jrnls_LIA_JB_drath2301.pdf)