



# Health Policy Notes

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## Harmonize and strengthen health information systems

Decisions are only as good as the information from which it is based. The quality of health information is crucial in achieving favorable outcomes. This is true whether in the clinical context dealing with individual patients or in public health where policies and programs affect populations.

Reliable and timely information guides public health action in a number of ways. Indicators on the health status of the population enable identification of health problems and institution of appropriate interventions to address them. Information that monitors the responsiveness of the delivery system and the impact of health programs allows adjustment of initiatives and redirection of program efforts. Finally, information on availability and allocation of resources is important in the efficient management of the system. Thus, a health information system that efficiently generates these types of information accurately and in a timely manner is crucial for the attainment of health sector goals.

However, the country's health information system (HIS) is beset with problems. The National Objectives for Health recognizes the weaknesses in the country's HIS and identifies it as one of the major areas for health systems reform (DOH, 2005). In addition, a recent study done by the Philippine Health Information Network (PHIN, 2008), using the Health Metrics Network Framework, places the country's HIS sub-par with international standards.

The recent Program Implementation Review (PIR) conducted by the different offices and units of the Policy and Standards Development Team (PSDT) for Service Delivery and Sectoral Management and Coordination Team (SMCT) validated these findings and cited problems in the information system as one of the key issues facing most of the public health programs.

### A single framework for the health information system is lacking.

Relevant health information comes from different sources (Table 1). Different agencies that are mandated to collect, process, analyze, and report vital data, operate different parallel systems to

harness this information. The development of these different systems proceeded independently, fuelled by the need to guide policy makers on vital socioeconomic processes, of which health is just a component.

Table 1. Various sources of health information

Source	Description/Use	Agency in charge of collection
<b>Population-based sources</b> - Generate data on all individuals within defined populations and data on representative populations		
Census	Primary source of information for determining the size of a population and its geographic distribution plus other social, demographic and economic characteristics	National Statistics Office (NSO)
Civil registration	"the continuous, permanent, compulsory, and universal recording of the occurrence of vital events (live births, deaths, fetal deaths, marriages) and other civil status events pertaining to the population as provided by decree or regulation..." (United Nations Statistics Division, 2001)	NSO, local government units (LGU)
Population survey	Generates various immediate and intermediate indicators for health as well as other demographic indicators indirectly related to health (mortality rates, nutrition, service use, practices related to health, household expenditures related to health)	Various agencies (NSO, DOH, FNRI, NSCB)
<b>Institution-based</b> - Generate data as a result of administrative and operational activities which may not necessarily be related to the health sector such as police records, occupational reports, etc.		
Individual Records	Information needed to manage health services provided to individual clients in the institutions or in the community include hospital records, case reports, and disease registry	Private & public hospitals, RHU's, BHS, other health facilities
Service Records	Cover records of events with important health consequences generated outside the health sector;	DILG, PNP, DPWH, DA, DENR, DOLE, DECS, MMDA, DSWD
Resource Records	Focus on the data quality, availability, and logistics of health service inputs and includes data on density on health facilities, human resources, budgets and expenditures, drugs and other core commodities	NSCB, DOH, PhilHealth

Source: Health Metrics Network, 2008

Abbreviations: NSO — National Statistics Office, FNRI — Food and Nutrition Institute, DILG — Department of Interior and Local Government, PNP — Philippine National Police, DA — Department of Agriculture, DENR — Department of Environment and Natural Resources, DOLE — Department of Labor and Employment, and DepEd — Department of Education, DSWD — Department of Social Welfare and Development, MMDA — Metro Manila Development Authority.

The main problem is the absence of a unifying policy framework that would link these parallel systems together and this leads to a fragmented health information system. There is no single body that manages and links the resources, coordinates processes, and efforts of these agencies. As a result, data collection is not standardized, parallel reports are generated, and access to the information is not centralized.

Different agencies release and report numbers from different data sources which may not necessarily be consistent. For example, maternal mortality rate, the Millennium Development Goal (MDG 5: "Reduce maternal mortality by three quarters" that is unlikely to be achieved with current efforts (NEDA, 2007). There are three different reports on the status of this number. The USAID sponsored Family Planning Survey (2006) reports it to be at 162 per 100,000 live births. This is generally the number being used by the DOH and the national government and is considered to be most accurate. The Field Health Service Information System (2006) generated by the National Epidemiology Center of the DOH through reports submitted by the local governments gives a significantly lower number at 63 per 100,000 live births. Another NEC report, the Philippine Health Statistics which derives information from NSO-generated civil registry data routinely gives an MMR estimate but its 2004 to 2006 versions have yet to be released. While surveys are usually the most widely cited, these only come out every three years and in the interim, reporting based systems are used to determine trends. However, without proper understanding, stakeholders may actually be misled rather than be guided by multiple information sets coming out from these independent systems.

There are also several other sources of critical health information that are not integrated and are inaccessible to health managers. Information generated by hospitals, professional associations, pharmaceutical companies, other government agencies, and the academe has also been left untapped. No regulatory framework exists to integrate their efforts into the country's HIS.

Currently there is an Inter Agency Committee for Health and Nutrition Statistics under the NSCB which is mandated to coordinate HIS initiatives among the different agencies. In addition, the Philippine Health Information Network, which was recently established through the Health Metrics Network, serves as another body that would carry out the efforts to integrate the health information system. However, it is still in its infancy stage and at present lacks a legal mandate and political structure.

### **The health information system in the DOH is fragmented.**

While there is a need for hastened inter-agency action to improve the HIS in the country, the DOH faces its own internal issues of fragmentation. Despite the fact that the DOH is the most important source and user of health information, there is a significant degree of disharmony in the various information systems it maintains. For example, Table 2 shows the disparity between morbidity number reported by the Field Health Service

Information System (FHSIS) versus the NCDPC for tuberculosis and malaria. The National Tuberculosis Program (NTP) and the Malaria Control Program (MCP) maintain their own disease registry and information systems. Although the NCDPC data are used for internal planning, FHSIS is considered the official data and is used as the usual reference by the different stakeholders.

**Table 2.** Disparity between NTP/MCP morbidity vs. FHSIS Statistics

Year	TB		Malaria	
	NTP	FHSIS	PhilMIS	FHSIS
2003	132,669	92,079	48,441	28,549
2004	134,484	125,254	50,850	19,894
2005	135,487	133,958	46,485	36,090
2006	146,772	131,741	35,405	22,284

Sources of data: FHSIS 2003-2006, NTP and MCP.

Overseas development agencies and other donors have further contributed to the fragmentation. Multi-million dollar projects impose new data requirements on the health system to track health impact. Contrary to the sector-wide approach (SWAp), this promotes establishment of vertical information systems that are not necessarily based on the priorities of the health sector.

While there is a whole lot of data being generated at all levels, not a lot of these are accessible to the DOH. Worse, even the more important ones are not being processed as information and are not being used to guide decision making. In the examples mentioned above the difference can be partially explained by the absence of hospital data. Hospitals are a rich source of vital health information as yet untapped. Currently, there is no mechanism mandating all public and private hospitals to process vital health data and link these with the DOH. While some more advanced tertiary centers have developed their own health information system, not all of them are being accessed and utilized by health managers. Also, although some DOH-run hospitals have established their own hospital management information system, which is a possible source of health resource data, this is not linked with the central office (NOH, 2005). In addition, PHIC maintains a separate information system that contains crucial data on disease profiles and utilization patterns that is not readily accessible to the DOH.

Similarly, information on important resources such as facilities, human resources, local health systems, and financing generated by various bureaus are not centralized, hence are not readily available to the other DOH offices and other stakeholders who may need them. As a result, decision-making at the

central levels is not necessarily knowledge based (PIR Batch 4, 2008).

### **Knowledge-based decision-making at the sub-national level is weak.**

Considered as a major HIS in the country, the FHSIS collects a summary of the accomplishment indicators on various public health programs, status of the delivery of health services, and morbidity reports from the different barangay health stations (BHS) and RHUs across the country, which are made available to the public. The FHSIS was envisioned to be used for planning, budgeting, logistics management and decision-making both at the local as well as the national level (Gepte, 2007). In fact, it is the only HIS that serves the needs of local governments in guiding health related actions and, from the standpoint of national planners, the only HIS that can assess performance of local health systems.

Although the NEC is considered the steward of the FHSIS, it has no administrative control over the processes involved. RHUs, which are tasked with data collection and reporting, are under the local government units. Ultimately, it is the LGUs who are responsible for the proper implementation of the FHSIS. Recent evaluations of the FHSIS have revealed the following weaknesses: delayed and incomplete submissions, inaccurate data, inadequate of technological infrastructure, lack of trained personnel and midwives for data recording (PHIN, 2008).

All of these problems redound to data utilization. It seems that data collection is not linked to data use. Delays in reporting could probably be minimized if the data is regularly processed and used, with the act of submission being just part of the routine. Reports are being crafted for the consumption of local planners but for mere compliance with requirements. Furthermore, that majority of local governments do not prioritize investments in health information management illustrates the overall regard for the knowledge-based decision-making at the local level.

There is a massive inadequacy in proper health information and disease surveillance infrastructure at the local level that would improve the quality of information. Most RHUs do not have the necessary equipment such as computers, internet access, information technology software as well as properly equipped laboratories for more accurate diagnosis. Human resource capability is another major limitation. Constant capability building and training activities as well as monitoring and evaluation efforts have proven inadequate given the undermanned NEC.

It does not help that the central office sometimes imposes on the LGUs what information to collect. Previously, the LGUs were compelled to collect the numerous indicators of the FHSIS. In addition, vertical programs impose different indicators as well as parallel information systems on the LGU's. Given the huge gap in human resources, these are additional burdens on the part of the LGUs. In 2001, in an effort to unburden RHU personnel of the requirements of the FHSIS, the number of indicators to be

monitored was reduced through the decentralized FHSIS. Still, the problems with timeliness and completeness persisted (Gepte, 2007).

### **DOH must take a lead role in inter-agency efforts to integrate HIS.**

Given the urgent need for reforms in the health information to improve public health outcomes and to step up efforts to attain the MDGs, the DOH must take a lead role among the different agencies in the moves to have an integrated health information system in the country. Among the initiatives to this end are:

**Develop a policy framework for health information system.** The policy will guide the health information initiatives, spelling out a common strategic legislative, regulatory, developmental and operational agenda. It will also include the standardization of health information through a health data dictionary and protocols on information flow and exchange. Furthermore, it must into take account ethical and confidentiality issues.

**Strengthen the inter-agency network for HIS.** By providing it a governance structure and proper legal mandate to carry out the task, an interagency network can provide a greater opportunity to institute an integrated, coherent, national approach to the development and expansion of the country's HIS. Also, expanding membership by including private sector and other stakeholders would be beneficial to achieve the endeavor.

**Harness the technological advances in information systems.** Given the rapid development in information technology, means and ways must be adopted to utilize these advances in harmonizing and strengthening the health information system. Investment on a platform/portal that would enable the linking of the data and information of these various agencies must be made.

In the meantime, the DOH must resolve its own internal issues facing it. Given the presence of multiple information systems as well as untapped sources of information in the DOH, a single unit must be given the power to call the shots and spearhead the efforts to harmonize systems at that level. They must be able to link to the processes of the various information systems across the DOH such as development of standards, unification of reporting schemes, and making the information available for use of the various stakeholders.

Making information widely available for the various DOH agencies promotes a culture of knowledge-based decision-making.

**Empower LGUs for knowledge-based decision making through FHSIS.** Given that the FHSIS is the only health information system in place at the sub national level, moves to strengthen knowledge based decision making must begin with the FHSIS. The DOH must continue to pursue efforts to improve the FHSIS. Some of the activities that can be undertaken are:

*Advocate the use of knowledge based decision making in health among the local chief executives.* This should involve the use of regulatory and financing instruments to influence local government to promote the use of available health information to guide decision-making and to sustain the culture of knowledge based decision making by giving due importance to improving the health information system. Financial instruments can be implemented by way of including health information and disease surveillance component in the grant mechanism being developed for some public health programs. Social incentives/disincentives can also be used. Disaggregating indicators numbers up to the province level and publication of the top 10 best and worst performers may spur LGUs into prioritizing these public health problems and at the same time become conscious of the importance of the quality information to guide decisions. Best practices in health

**Box 1. The Canadian Society for International Health (CSIH) Health Equity Reform Project in Capiz**

information systems must be rewarded and at the same time documented for the benefit of other LGUs.

*Capacitate LGU's not only on data collection but information processing and use:* Endless trainings and capability building seminars on the FHSIS may only achieve so much. A comprehensive framework involving multiple stakeholders in the development of capacities at the local level must be developed. CHD's must play an active role in building capacity at the level in the management of information systems. Roles of private sector and academe not only in the conduct of training but also in monitoring and evaluation must be explored.

*Streamline the FHSIS indicators and other disease Surveillance Processes.* While maintaining essential indicators and information required nationally, the LGU must be given some leeway in what indicators to collect and what information to harness for their own consumption. Processes must also be streamlined to assure efficiency and accuracy. Demands of the vertical information systems at the local level must be integrated into the processes of the FHSIS. At the central level, a process of harmonization with other sources of information must be undertaken so that only a single set of information comes from the DOH.

*Development of independent systems at the local system.* Ultimately, the vision is for the LGU to practice knowledge based decision-making and to have enough capacity to develop their information system. This will enable them to balance data collection with their needs and the demands of national programs and at the same time be able to harness information from multiple sources including hospitals and other facilities. This envisioned system will be guided by the overall framework for health information system

and is readily accessible through an IT portal to the central offices policy makers and program managers as well as the various stakeholders in health.

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The project aimed to address the weaknesses in the incorporation of resources allocation, and prioritization issues in the planning process. Specifically, its objectives were to integrate the concepts of health equity and non-traditional health determinants in the health planning process. Training activities were then designed to increase knowledge and awareness of health equity, resource allocation, and health planning among health sector decision-makers. Health surveys were conducted to compile accurate and recent local health information. Tools that would aid processing these information were also developed. This included developing computer databases and the distribution of large chalkboards (called Community Monitoring/Data Boards) to Barangay Health Stations and Rural Health Stations to display statistics on local health indicators. A crucial part of the project is to crucial local ownership and awareness through a series of advocacy training sessions for health care personnel. Workshops for resource allocation were held in the project sites allowing community leaders the opportunity to commit resources for specific interventions and lobby local chief executives for budget allocations responsive to these health-related concerns.

mainstreaming of the mechanisms of the projects at a bigger scale.

Source: Canadian Society for International Health

The Health Equity Reform Project of the CSIH shows how knowledge-based decision-making can be effectively institutionalized in a local government unit (LGU).

By involving

The stakeholders at all levels of health care delivery were involved in identifying health priorities. for health planning and commitment building also provided a

By promoting sense of ownership to, and responsibility for, the proposed community-based actions.

The involvement of

During its implementation the CSIH utilized a “Training-of-Trainers” (TOT) approach, by which CSIH experts provided skills-building to a local training NGO, which in turn developed the capacity to carry on and replicate the project with increasingly less Canadian technical assistance.

At the end of the project a considerable improvement in the capacity of local stakeholder were noted. Local partners were now able to design and conduct their training. Also, improved knowledge based decision making were observed in the barangay, municipal, and interlocal levels. Data analysis and processing by local planner were also observed to improve. In addition, the quality and timeliness of data collection improved. Finally, the alliances forged by GRF with private and public health service providers opened avenues for networking, resource sharing, and advocacy for the use of health equity principles in resource allocation and decision- making, and possible of

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