

# 11

## HIS Policy – Role of National, Regional and Global Levels in Building and Promoting HIS in Countries

Health Policy as defined by World Health Organisation (WHO)

*“Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health care goals within a society. An explicit health policy can achieve several things: it defines a vision for the future which in turn helps to establish targets and points of reference for the short and medium term. It outlines priorities and the expected roles of different groups; and it builds consensus and informs people.” [http://www.who.int/topics/health\\_policy/en/](http://www.who.int/topics/health_policy/en/)*

While there are many categories of health policies, in this chapter we focus on the role of the national, regional and global levels in promoting HIS in countries. As argued for in this book, the HIS should as a general rule, be built on a decentralised foundation; local use of information being a pre-requisite for quality data, even for the central level. There is of course a paradox here, as the aim of the state is often primarily to strengthen its “central gaze” over the health systems, leading to them promoting systems geared towards upward reporting, and responding to surveillance concerns. Since, the central ministry is necessarily always the controlling authority of the HIS in a country, including the power of assigning budgets, defining software and software vendors, and assigning different responsibilities to the staff, their policies stand apparently in a stark contrast to normative goals of promoting and supporting “decentralised information for decentralised action.”

While global and regional organisations such as the WHO and the West African Health Organisation (WAHO) represent a supranational level, ministries of health represent the national and state levels. The role of policy differs between the levels, and in this chapter we give examples of both, global and country/state level policies. As depicted in the figure, we regard policy making and implementation as an interrelated cyclic task, which in principle will never end, and remains ongoing and evolutionary in nature. The typical approach to policy implementation and its monitoring is to regard it as a linear process which passes through five phases – Input, Process, Output, Outcome, and Impact.

Contrary to this view, and as depicted in the figure below, we argue for feedback loops as being crucial both in the making and implementation of the policy. For example, proven and well documented impact of HIS will for sure lead to more funds, i.e., input, which may again increase the impact quickly.

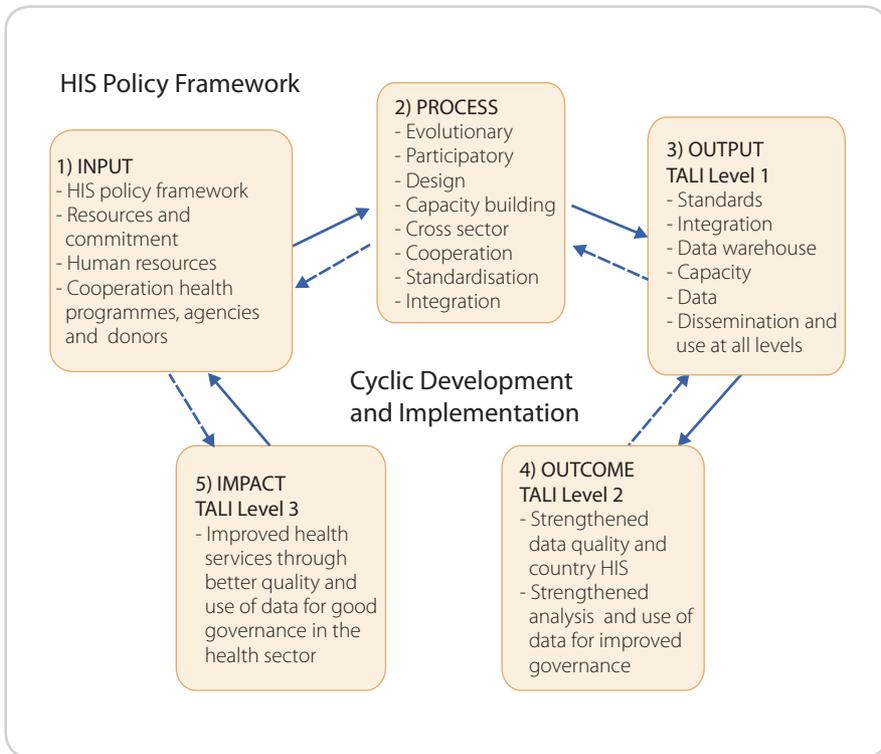


Figure 11.1 Cyclical and Iterative Process of HIS Policy Development and Implementation

This cyclical relation between policy development and implementation is sketched out in the phases from input, process, output, outcome and impact. While the HIS policy framework is an important input to HIS strengthening, the very process of policy development (such as processes of participation and capacity building) helps to shape the outputs (such as the creation of standards and integration), which influences outputs (such as strengthened and improved HIS). This can ultimately help to improve decision making which can shape health services and health outcomes. The TALI tool described earlier in this book (see Annexure 1) represents a methodology to measure three levels of data coverage and completeness (outputs), improved use (outcomes) and improved impacts. The framework depicted above is based on two key principles:

- There is a cyclical and mutual relation between HIS policy and its implementation. Effective policy shapes improved outcomes, which in turn can help shape more effective policy.
- Policy making and their implementation is based on principles of ongoing participation, capacity building, and strengthening the institutional framework, within which development and implementation is carried out.

This framework provides us with useful guidelines in understanding the role of policies in addressing inequities, strengthening the design and implementation of

standards, managing resource allocations, and coordinating technical support. These are discussed in the sections that follow. Policy making takes place at multiple levels, and we draw upon examples from the global level of the HMN to the national levels to illustrate the role of policy.

## 11.1 Role of Overall Policy: Addressing Inequities

Health equity can be described as the absence of health differences between relatively unequal socially disadvantaged groups. In the context of health equity, as asserted by the WHO Constitution in 1946, which argued that “the highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition.” Significant health inequities are linked to social disadvantages instead of biological or genetic conditions.

The noted economist Amartya Sen has argued that health equity is a central dimension of overall social justice, and shapes the capabilities of individuals to participate in and benefit from social and economic development.

In the context of developing countries, as also in many other developed countries, inequities come in many forms and can be based on social, geographical, income, religious and also other considerations. In South Africa, the average household expenditure for Whites was five times the rates for Blacks in 1995. Female children are less likely to be brought into clinics than their male counterparts. In India, for example, the Constitution has categorised different social groups in terms of castes and tribes (Schedule Caste and Schedule Tribes), and have earmarked for them particular benefits, such as reservations and quotas for employment and for admissions to higher education institutions. This is an example of an intervention to try and address social inequities.

To be able to address problems of health inequities, authorities need to be able to firstly identify health inequities, and secondly, be able to differentiate random variations in these inequities from those that are systemic and which can be decreased through medical, public health or social policy interventions in a given context. Both these issues of identification and action are intricately related to conditions of health information.

The state can thus play two key roles in helping to address inequities:

- One is by defining standards for which data elements are to be captured, a measure which can help to correctly *identify* populations or areas that are marginalised and which contribute to health inequities. Addressing these conditions are then expected to make the situation more equitable. For example, in India till 2008, the national HMIS was designed to include data elements which were disaggregated into three sub groups of “Schedule Castes,” “Schedule Tribes,” and “Others.” While the aim of such a disaggregated design was arguably to identify and support disadvantaged groups, to support the mandate of the Indian Constitution, practically it was not possible to get quality data at this level of detail. For example, when a patient came to a health facility for a consultation with the doctor or the nurse, it was not possible to ask them to which social group they belonged. Further, since the proportions of these social groups remained relatively unchanged in the overall population in a given area, arguably better

quality and more relevant data could be achieved through annual surveys rather than as a monthly routine data which added tremendous workload to the data providers. In 2008, the Ministry of Health redesigned the national HMIS excluding the desegregations from the routine data.

- Another example of inequities, again drawing from India, is the efforts of the government in trying and addressing the rising “Naxalite Problem” in the country through the agenda of development. Naxalite is a generic term used to refer to militant communist groups operating in different parts of India under different organisational envelopes. In the eastern states of the mainland India (Bihar, West Bengal and Orissa), they are usually known as, or refer to themselves as Maoists and have other names in other states. They have been declared as a terrorist organisation under the Unlawful Activities (Prevention) Act of India (1967). The Naxalites are considered to be extreme-left radical communists, supportive of Maoist political sentiment and ideology. As of 2009, Naxalites were reported to be active across approximately 180 districts in ten states of India accounting for about 40 per cent of India’s geographical area, especially concentrated in an area known as the “Red corridor.” The strategy of the government to counter this rising problem of extremism has been to strengthen the development platform including health in the affected districts. In this regard, in 2010 the ministry of health identified thirty-seven “Left affected districts” and sought to identify key health indicators here so that additional budgets could be earmarked in order to strengthen health related interventions which aimed at mitigating inequities.

While in Western countries, personal identification numbers (such as Social Security Number or National ID) have been in use for many years, the same has historically not been the case in developing countries. However, in recent years many countries in the South are also attempting to design personal number systems for ensuring better identification and also to strengthen national security systems. For example, a large initiative ongoing in India concerns the issuing of UIDs (Universal Identification Number – also called Aadhar) based on biometrics to all residents of the country. This initiative potentially has implications for the health sector, especially for the implementation of schemes that target individual beneficiaries. An example of this is the ministry of health scheme (called JSY – Janani Suraksha Yojna meaning Woman Protection Scheme) which provides cash incentives to “Below Poverty Line” (BPL) mothers who have their deliveries conducted within government institutions. This is a policy intervention by the ministry to try and enhance institutional deliveries and through this contribute to reduce the percentage of maternal deaths. Potentially, the Aadhar numbers could be used by the JSY scheme to ensure better targeting of mothers receiving benefits.

The supporting HIS can serve two key purposes at the level of the individual and also of the health facility:

- At the individual level, the HIS can help to authenticate whether the correct beneficiary is being paid the required benefits.
- At the facility level, the HIS can be designed to generate indicators such as the percentage of BPL deliveries to whom cash incentives have been paid, so as to help alert administrators whether the programme is meeting its first level objective – to pay the right people. A higher level objective would be to assess whether the JSY scheme has contributed to enhance institutional deliveries and reduce maternal mortality.

Addressing inequities is also inscribed in the “rights” based approach to HIS. The HMN has recently established the Equity Working Group which made recommendations outlining the content of equity-sensitive information systems, identified opportunities for reducing collection burdens, and suggested strategies to foster an equity-oriented decision making culture. The box 12.1 outlines some principles to guide the integration of equity concepts into HIS. The state can play a major role in adopting such principles which can help make explicit and acknowledge the normative values on which HIS need to be designed.

## Box 12.1

## Integrating Equity Into Health Information

1. Each person has dignity and each one matters
  - Count everyone in the society from birth to death
2. Everyone should have opportunities for health and the means to improve health; vulnerable populations need special attention
  - Collect and analyse information related to health inequities in health status and determinants of health among better-off and worse-off sub-population
3. Governments are accountable to the public, communities have a right to the information they need, to make health decisions, and individual autonomy should be supported
  - Release information to the public in a meaningful form
4. Governments, communities and individuals are all responsible for promoting health and health opportunities
  - Support capacity for and cultures of human rights oriented decision making, based on health information

(Source: Laxi Bambasi, Integrating equity into health information systems: A human rights based approach to health and information – URL: [www.plosmedicine.org/article/info](http://www.plosmedicine.org/article/info))

Each of the above principles has direct implications on the design and implementation of HIS, for example:

- “Every individual matters” requires that each and every birth must be registered with significant implications for a vital registration system that is complete and provides for full coverage.
- The principle of “opportunities and the means of health to all” require minimally acceptable level of data in HIS – a core set of quality indicators – as well as the conditions surrounding the release and use of data.
- Populations as units of analysis as contrasted to individual based information are especially useful for scrutinising the achievement against human rights considerations which indicate patterns of inequities across various strata in society.
- The implication of “accountability and autonomy” has implications not only related to particular content of the health information, but also mechanisms related to promote the effective use of information, including the public release of data in a useful form. Confidentiality and privacy issues are paramount, especially in relation to information disaggregated by equity stratifiers.

- The principle of “mutual responsibility” has various implications including those related to the strengthening of research to understand health inequities, building capacity for the analysis and use of information, setting up mechanisms to enhance demand for equity sensitive information in civil society, and promoting broader participation in equity related processes.

HIS policy can play a key role in strengthening equity in the HIS as a strategy to try and address health inequities. While such policy is designed at the “top”, at the level of the national ministry or global HMN, for it to be effective in practices, this design necessarily must seek to strengthen the decentralisation of health information, and its use for decentralised action. In line with the cyclical approach to policy development and implementation sketched in Figure 11.1, inequities can be better identified through more effective (upwards) flow of information towards policy makers. This can contribute to better policy, and their implementation on the ground requires the enablement and capacity towards decentralised action. Effective implementation can on one hand help to address the inequities which the policy sought to address, and on the other, it can contribute to “better policy” for the future.

## 11.2 Policy Setting at the Global and Local Level: Health Metrics Network

Adequate HIS policies are lacking in most of the developing countries, in terms of both legal frameworks which govern the information and its principles of organisation and funding, and more specific guidelines related to the day-to-day running of the HIS. Often, what exist are limited to specific information systems for health programmes, which fail to take into account pivotal issues such as data sharing, standards, interoperability, and the development of a centralised HIS organisation. To address this situation, the HMN was established to both help countries develop their own policies, as well as drive this work also at the global level by promoting the HMN integrated framework for HIS, which could potentially be used as a model for HIS policies by donor organisations, national development agencies, and others.

The HMN was established in 2005 as a partnership organisation with the WHO, operating as a network of international organisations, countries, and other organisations involved in HIS strengthening. The HMN had an explicit strategy to assist countries through developing tools and standards for assessment and planning, and to provide financial support to implement these tools in countries. At the core is the HMN Framework and Standards for Country HIS Strengthening (“the Framework” – See Figure 11.2), a document that spells out the various components of a HIS, as well as a normative “golden standard” on how they should be organised, with a central data warehouse as the glue. To work towards this model, HMN calls for a three-step process:

- Assessment of the current HIS.
- Making a strategic plan to improve towards the framework model, and,
- Securing funding and implementing the plan.

For this, HMN also developed an assessment tool, and a guidelines document for strategic planning. For the implementation of the plan, that is the third step, HMN has only helped countries in writing proposals for external funding, save for a handful

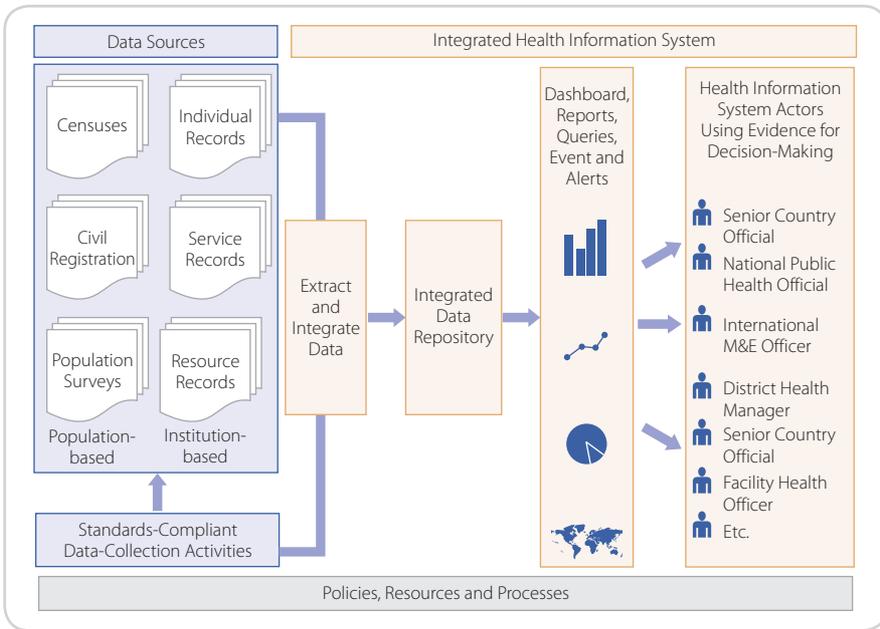


Figure 11.2 The HMN Framework, Outlining the Golden Standard of HIS Organisation. (Various configurations are possible, the central aspects are integration of data in a data repository, and a wide range of different users accessing this repository.)

of the so-called “wave-one” countries (such as Sierra Leone), which were selected to implement their plans to provide learning for other countries.

The strategic plan that a country makes, based on their HIS assessment, often represents the first policy document on HIS in the country. The role of HMN in policy making is thus one of assisting each country in developing their own national policies (strategic plan), based on an assessment of their current system *in relation to* the HMN framework. The framework is thus a global policy document, which guides the development of national policies, and over eighty countries have done the assessment.

While a substantial amount of countries have applied the HMN tools, they are almost exclusively from the lowest income classifications (using the World Bank classification). A few countries can be termed upper middle income, but all in all the majority of countries adopting the HMN framework as a base for their HIS policies are relatively poor. HMN has thus had limited impact on the so-called developed world. This has been quite intended, given the little emphasis HMN has placed on this. However, the framework model is a general one, and represents a vision that richer countries are also striving towards.

The HMN tools included the following six components of HIS:

- HIS resources.
- Indicators.
- Data sources.

- Data management.
- Information products, and,
- Dissemination and use.

The process of strengthening these starts with the assessment, a process meant to be done through wide participation of various stakeholders, including health programmes, central statistics office, and owners of various health information sub-systems. Graded answers to around 200 questions help provide an overview of the situation, as well as an evaluation of where the system is the weakest. The strategic plan is then expected to be negotiated among the same actors, aiming at both implementing the model HIS as laid out in the framework, and to address the challenges and weaknesses revealed by the assessment.

The primary reason for the assessment process is to convene multiple stakeholders and enroll them in a joint process towards improved HIS, rather than producing exact statistics of the strengths and weaknesses of the HIS. The assessments were thus done by the countries themselves, and often the guidelines for this process were not followed strictly. Given that the assessments were subjective, performed by using varying methodologies and with different stakeholders from country to country, the results do not lend themselves to strict comparative science. However, some general trends can be seen across countries, continents, and income levels. The Figure 11.3 below shows the overall scores for the six domains (each consisting of many questions), for all countries which, by 2010, had completed the assessment using the latest version of the HMN tool. An analysis based on income levels (mostly low and lower middle income), and regions (Sub-Saharan Africa, Eastern Mediterranean, South-East Asia, the Asia-Pacific region, and the Americas), reveals the same findings that countries consistently score the least in the domains of HIS Resources and Data Management (below 50 per cent of maximum score). Within these domains, the

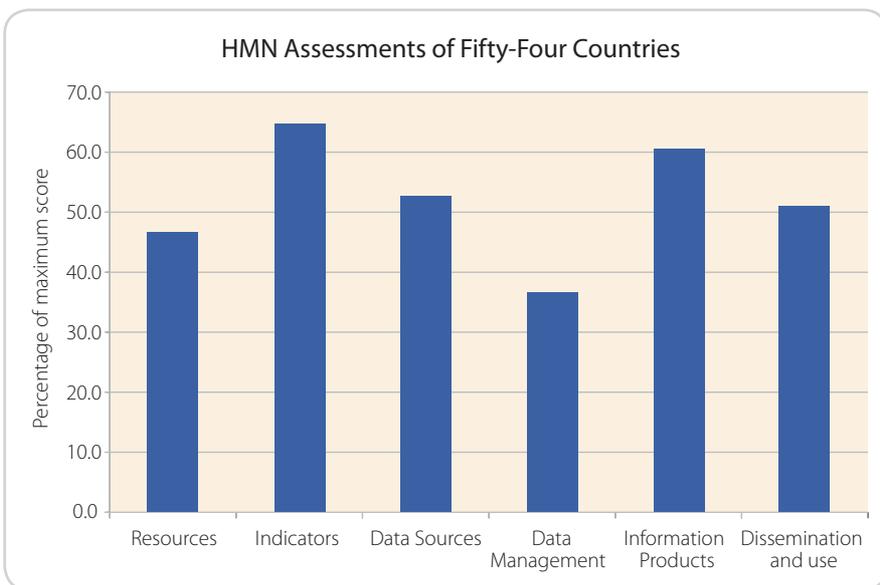


Figure 11.3 Overall HMN Assessment Scope Across Six Dimensions

sub-domains of HIS Policies, and existence of integrated data warehouses, stick out as the weakest. The assessment evaluation of Moldova provides an example:<sup>1</sup>

*A less promising situation shows the policy and planning component, where there are great discrepancies: there is no written HIS strategic plan, no active coordination mechanisms between MoH, NHIC and NBS, as well as no written policy to promote a culture of information use throughout the health system.*

Most of the country strategic plans have been made available through HMN's website, <http://www.who.int/healthmetrics>, which often represents the only policy on HIS available for many of the countries. While they may not carry the formality and details, expected of finished policies, they nonetheless include normative guidelines for the development of these. For example, in the strategic plan for Georgia:<sup>2</sup>

*The first step in the design process is to agree on minimum set of national health indicators. There is need in a strategic framework to guide indicator selection. The framework should be consistent with the National Health and Health System Performance Frameworks 2, relate to national health objectives and priorities, clearly define the purpose of the information system and the indicators derived, and maximise stakeholder participation. Indicator development and use should be embedded in management planning and resource allocation. Selection of indicators should build on best practices and local experience, be appropriate for each level, be simple and clear, and be linked to action.*

Another example is the strategic plan for Uganda, which among other action points, include the following:<sup>3</sup>

- Set up HIS committees (national and district).
- Draft institutional arrangements for setting up HIS unit (one-stop centre for data management).
- Set up partnerships for HIS implementation and funding at national and district levels.
- Set up and update HIS web-page for all sub-systems to feed into and be able to obtain data.
- Set up web-based linkages for production and accessing health information between the HIS sub-systems (including the private sector and research institutions).

These action points, which have been approved by the ministry of health, clearly have implications at the policy level, for instance the inclusion of private sector health data into the overall HIS, and the goal of having web-enabled access to this.

In addition, HMN has made strong attempts towards promotion and advocacy around this framework at the global level. Both regional and global conferences have been held, like the 2010 Global Health Information Forum held in Bangkok. The conference brought together countries and organisations working on HIS, and signified the conclusion of HMNs work towards many international organisations:

<sup>1</sup> [http://www.who.int/healthmetrics/library/countries/HMN\\_MDA\\_StrPlan\\_Final\\_2007\\_11\\_en.pdf](http://www.who.int/healthmetrics/library/countries/HMN_MDA_StrPlan_Final_2007_11_en.pdf)

<sup>2</sup> [http://www.who.int/healthmetrics/library/countries/HMN\\_GEO\\_StrPlan\\_Final\\_2009\\_06\\_en.pdf](http://www.who.int/healthmetrics/library/countries/HMN_GEO_StrPlan_Final_2009_06_en.pdf)

<sup>3</sup> [http://www.who.int/healthmetrics/library/countries/HMN\\_UGA\\_StrPlan\\_Draft\\_2009\\_05\\_en.pdf](http://www.who.int/healthmetrics/library/countries/HMN_UGA_StrPlan_Draft_2009_05_en.pdf)

*Leaders from WHO, the World Bank, The Global Fund, UNICEF, UNAIDS, UNFPA, GAVI and the Bill & Melinda Gates Foundation called for ‘new ways of working and a more systematic approach by all partners.... to better monitor and evaluate progress and performance,’ emphasising the need to strengthen country capacity to collect, process, analyse and use health data.<sup>4</sup>*

To summarise, the role of HMN has been to work at both the global and national level to strengthen HIS, including policies. The HMN framework is the most successful and distributed policy document for HIS globally, with more than eighty countries adapting tools to assess and plan their HIS according to this framework.

### 11.3 Policy Initiative for Improved Mother and Child Health

THE UN motivation for strengthening HIS, with key focus is on good data quality. The UN “Post Accountability and Information Commission Work plan” (CoIA), which is supported by various countries including Norway, aims at strengthening HIS and M&E systems for better accountability for Maternal, Neonatal, and Child Health (MNCH) resources and results in developing countries. The first three of the CoIA recommendations are of particular importance to this chapter:

- **Recommendation 1:** By 2015, all countries have well-functioning HIS (...) and “at least twenty countries” by 2013, and “at least fifty countries” by 2015, have timely and accurate core coverage indicators data.
- **Recommendation 2:** By 2012, a core set of eleven indicators on reproductive, maternal and child health, disaggregated for gender and other equity considerations, are being used for the purpose of monitoring progress towards the goals of the global strategy (this represents core information content of the HIS).
- **Recommendation 3:** By 2015, all countries have integrated the use of ICTs in their national HIS and health infrastructure.

These recommendations emphasise the need for a “strong and well-functioning HIS” including: timely and accurate data; core data and indicator sets on reproductive health; and integrated use of ICT. As discussed earlier, the TALI tool (see Annexure 1) developed under the HISP framework, provides a framework to make such an assessment:

- **Level 1 – of the TALI tools HIS assessment framework: *the technical level.***
  - ♦ **The information system is working technically according to its specification.** At this level of maturity, it would be seen that data flows are established with high levels of completeness of data reporting and data are of reasonable quality and basic data quality control procedures are in place. There are designated “Information officers” in place with job descriptions, placing responsibilities for information handling, data reporting and data management at all levels. At the central level, a HIS unit is in place. Integration of data flows and reporting from the different health services and health programmes and establishing a data repository as a shared resource at national, sub-national and district levels are key steps in improving information practices at this level. **Data completeness** and **timeliness** are key indicators for assessing this level.

<sup>4</sup> [http://www.who.int/healthmetrics/news/weekly\\_highlights/ghif\\_2010\\_call\\_to\\_action/en/index.html](http://www.who.int/healthmetrics/news/weekly_highlights/ghif_2010_call_to_action/en/index.html)

- ♦ **Motivation for strengthening health sector governance through improved information use.** In the action plan of the CoIA, however, in-country use of information and capacity building, is directly and indirectly referred to in most activity areas, such as on “Monitoring of eleven core indicators (2.1)” and “Annual review and action (2, 6)” and “Dissemination, interpretation and use of data (7)”. Achieving this, necessarily requires the strengthening of the use aspect of HIS, which is more complex than establishing technical systems. Research has established well why this is the case, identifying reasons such as existing legacy systems, socio-cultural-institutional conditions, and a near absence of an information culture that supports “information for action.” The TALI tool has identified two levels of such an information culture, one dealing with the use dimension and the other with the impact level.
- **Level 2 – Data is analysed, disseminated, fed back, and used: *the institutional use level.*** At this level, the HIS would be characterised through the use and display of summary reports employing graphical tools and maps (where appropriate) on key indicators for the facility, district or state/national levels which are produced every month and disseminated to all relevant stakeholders and fed back to the facility level. Information is used and discussed, and indicators are assessed against performance targets on a regular basis at review meetings, staff meetings, and the like. Indicators to assess this level of information usage are the availability of analysed and disseminated information; graphs on the wall, monthly/quarterly bulletins, presentation of information at review meetings, and the creation and dissemination of feedback reports. In short, there are “conversations” taking place around data.
- **Level 3 – Information used for planning and evaluation of achievements of prior plans and carrying out impact assessment: *the level of institutional impact.*** This level is about moving towards active use of information in planning and evaluation, and the institutionalisation of these processes in the practices of the health system. While of course it is hard to assess such impact of information, we would expect such information usage to be documented in the evaluation of achievements as according to annual plans, and the using of information to follow up on planned activities. This level of maturity is also reflected in information use for diverse and higher levels of sophisticated impact assessment such as budgeting, resource allocation, equity management, and performance measurement. Bringing together a comprehensive analysis of the health situation and trends with data on health inputs, such as health expenditure and health system characteristics is particularly important.

In line with the cyclical framework (Figure 11.1) linking HIS policy and its implementation, through the TALI tool we have tried to show how global policy such as the CoIA can be made more “measurable” on the ground, and be monitored to see if its aims are being achieved.

## 11.4 Role of Policy: Making and Implementing Standards

A key focus in this book has been on the key role of standards in establishing effective HIS and IHIA. This importance is greatly heightened, especially in the contemporary context, where we are confronted with a multiplicity of systems, and where governments and international donors are keen to promote the establishment

of IHIA. For example, the HMN has published a book titled “Framework and Standards for Country Health Information Systems”. In this, they describe six components of standards of a HIS:

- HIS resources.
- Indicators.
- Data sources.
- Data management.
- Information products.
- Dissemination and use.

We can try to unpack the nature of standards within each of these components, which is summarised in the table below.

Table 11.1 Components of Standards for HIS

<i>Component of standards</i>	<i>Types of standards – examples</i>
HIS resources	<ul style="list-style-type: none"> <li>• Software platforms – e.g. use of open source platforms within the health sector.</li> <li>• Open standards to ensure all technology/software used are inter-operable allowing any technology platform or software to be able to read documents, maps, images and data sheets.</li> <li>• Hardware platforms – e.g. use of particular configuration of machines at the district or facility levels.</li> <li>• Compliances for vendors with respect to system interoperability when undertaking new software development.</li> <li>• Data entry medium – e.g. use of particular configuration of mobile phones to facilitate data entry and transmission from peripheral facilities.</li> <li>• Recording formats – e.g. structure of primary registers in facilities for recording service data.</li> </ul>
Indicators	<ul style="list-style-type: none"> <li>• Defining particular indicators for monitoring health programmes (such as maternal health, child health, family welfare etc.).</li> <li>• Defining what indicators should be received by different administrative levels, e.g. monitoring indicators for districts and impact indicators for the national level.</li> <li>• Defining indicators for other domains such as hospitals, infrastructure, human resources etc.</li> <li>• Defining the action taking protocols against these different indicators.</li> </ul>
Data sources	<ul style="list-style-type: none"> <li>• Defining sources of data for primary recording in primary registers.</li> <li>• Defining data sources for the generation of different indicators.</li> <li>• Defining standards on how different data sources must “speak” to each other such as vital registration and HMIS.</li> <li>• Defining validation rules for scrutinising data quality.</li> <li>• Defining institutional protocols for dealing with quality issues.</li> </ul>
Data management	<ul style="list-style-type: none"> <li>• What is the level of aggregation of data required for different levels of the hierarchy?</li> <li>• Defining the institutional mechanisms for verification of data.</li> <li>• Defining periodicities of reporting and associated responsibilities.</li> <li>• Defining the institutional procedures for addressing data quality issues.</li> </ul>

Information products	<ul style="list-style-type: none"> <li>• Defining standards for different reports for various administrative levels.</li> <li>• Defining formats and procedures for feedback reports.</li> <li>• Defining media and format in which data should be made available to public at large.</li> </ul>
Dissemination and use	<ul style="list-style-type: none"> <li>• Defining policies for dissemination of data to civil society, including media.</li> <li>• Defining policies around issues of data privacy and confidentiality.</li> <li>• Ensuring principles of equity are maintained by enabling flows of information.</li> <li>• Defining policies for accessing data by different government departments both within and external to the health department</li> </ul>

As indicated in Table 11.1, standards can be of various types, including relating to hardware, software, registers, data elements and indicators. Additionally, and very importantly, standards are also in terms of processes and procedures. For example, a guideline that all data of a month from facilities should be consolidated at the district level by the fifth working day of the following month represents a standard around a process. Establishing procedures around what data in what format should be made available to whom and when, also represents important standards.

While the scope of standards is wide, a key focus area remains on concerning data elements and indicators, including definitions of what data elements should be captured, the uniform nomenclature for naming the data elements, which indicators need to be generated from each element, what is the periodicity of data collection, and the protocols to enable data exchange. Important in this regard, is the need for policy to define particular principles around standards, which can help in the development of operational standards. For example, adhering to the hierarchy principle helps in emphasising that information needs to vary with the different levels of administration. While the national level needs to focus on indicators that can help the state to discern the impact of different programmes and make appropriate policy interventions, the lower levels (e.g., the district and below) need to focus more on indicators useful for monitoring activities. Often, as our examples through this book have tried to highlight, if the central state focuses on detailed monitoring indicators rather than on evaluation and impact related, this then draws their focus away from their core task, that is policy level impact evaluation.

We have discussed in earlier chapters how at the global level, the WHO is playing a lead role in establishing a framework of standards for data exchange called the SDMX. HD. This standard seeks to establish protocols for interoperability between patient level and aggregated facility level data, and similarly between human resources and aggregated facility data. The state, through policy interventions, then has the responsibility to adopt these standards with the necessary customisations to ensure that their systems are compatible with global benchmarks. Standards by no means imply that “one size shoe fits all,” and principles such as of “flexible standards” and the “hierarchy of standards” can help implement standards that are simultaneously interdependent and also customisable to meet different needs.

Problems in keeping the framework of standards are:

- The situation in the health departments (and also other public sector departments) in most developing countries is that different standards (or none at all) are used

for managing documents, maps, images, spreadsheets and databases. A majority of these are on proprietary platforms and do not necessarily interoperate, so documents and data of one department or health programme or state cannot be read or accessed by another. In the absence of a common thread, every time the Centre or the State asks for data or information from particular facilities or other levels, it has to be converted into a common format, which takes time and runs the risk of data loss.

- Further, since many of these applications have been developed by external vendors or international donors without adequate documentation or release of source code, often such data interoperability is not even possible. To address such challenges arising out of lack of open standards, in India, in a recent initiative which has been described as historic, revolutionary and a victory for the open source movement, concerns the decision to announce a policy that will make it mandatory to have an open and royalty-free standard for all technologies and software used in the government. This potentially implies the creation of a uniform standard for all government work to enable all documents or databases to be accessible through any technology platform. The policy has been cleared by the Department of Information Technology and the National Informatics Centre and is likely to be made official soon. This effectively means the technology used in all government departments and offices, including the health department, would need to shift to an open standard contributing to more cost-effective data exchange.
- We have in the earlier paragraphs outlined the scope of standards that need to be established in order to make HIS more effective in promoting local action. In the absence of a central authority that is defining, managing, and updating these standards, there is a real danger of the HISs disintegrating, especially in the context of donor dependencies where different agencies tend to establish their vertical and compartmentalised information systems which do not speak to each other. An important challenge is around the processes by which standards are established and implemented. Often, the tendency at the top – both international donors and the central ministries of health – is to create “standards from nowhere” and just mandate lower levels to follow. Such an approach has historically proven to be recipes for disaster. Participation of stakeholders is important in the process of defining standards, and the central ministry needs to play a key role in enabling stakeholder participation and in establishing consensus.

The Nobel Prize winning economist Douglas North in his theory of institutions (1990) has forcefully argued that policies made at the “top” have little chance of successful implementation if they do not adequately overlap with the informal institutions that exist on the “ground” where they need to work. For example, a policy declaration in 2009 in India to carry out electronic tracking of every pregnant mother and newborn child across the country has been significantly stalled in its implementation. It is because its design is incongruent with the situation on the ground, such as the availability of primary registers, high existing work load of the health service providers, weak computer based infrastructure including internet connectivity at the peripheral facilities, and the absence of a uniform identification numbering system for individual beneficiaries. In light of this deep lack of overlap between the mandated policies or formal institutions and the informal constraints which exist in the implementation domain, the policy implementation has been far from being effective. This example

raises the important concern of policies needing to be developed through appropriate participatory mechanisms, and in also ensuring the practical feasibility of its acceptance and implementation. This resonates with the framework presented in Figure 11.1 which emphasises the linkage between policy development and its implementation.

## 11.5 Role of Policy: Focusing Resource Allocation Where Needed Most

An effective HIS requires adequacy in the provision of various resources including related to infrastructure, manpower, training budgets, and various others. Developing countries, by definition, present resource constrained environments, and available resources need to be managed judiciously amongst different competing requirements, stemming from various health facilities, districts, and health programmes. There are also various competing interests of various actors including donors, diseases, politicians with self-interests in particular geographical constituencies, and health programmes which makes resource allocation a complex and politically charged task. Most often, resource allocation decisions are controlled by the National Ministries of Health who have the responsibility to prepare sound and robust guidelines to create enabling environments in which HIS can thrive in supporting decentralised action. These principles and guidelines are as follows:

- A first guiding principle is that of establishing processes to support “need-based resource allocation,” as contrasted with the concept of all concerned to be provided equal allocations, as is often the case. For example, if resources from the central level need to be provided to facilities in different institutions to help promote institutional deliveries, then the state has the option of either supporting each health facility equally or differentially. This decision of the state is based on criteria of whether well performing facilities are better and further supported, so that they can build upon their strengths, or that the poor performing facilities be given additional resources to help transcend their constraints. These questions do not have straightforward answers, and criteria need to be established and applied in a context-sensitive manner within a framework of consistent and transparent policies. State policy becomes an important vehicle to establish such a resource allocation framework, and to ensure allocation takes place in line with its stated policies.
- Another guiding principle for resource allocations is that it is based on a framework of “evidence based decision making”. The HMIS itself becomes a tool to define and promote such a framework, where for different facilities or districts the indicators of performance, efficiencies of prior resource utilisation, and existing capacities are provided weightings to define resource allocations. This helps to make the process objective, transparent and linked to needs. In India, for example, states are entitled to a total monitoring and evaluation budget of 4.5 per cent of their overall annual state budget, and the state budget is comprised of district budgets, which in turn are constituted of sub district budgets. Therefore based on annual health action plans which are defined based on the HMIS generated indicators, at each level budgets need to be made, and then consolidated at different levels to finally come up with the state annual plan.

- Another key component of the task with respect to resource allocation concerns the conduct of concurrent evaluation of how prior resources have been utilised, both with respect to the volume and purpose of use. Building systems of accountability and transparency is key to this, and many governments are orienting their e-governance initiatives towards achieving these goals. In contexts where corruption is rampant and resource allocation is made based on political and other subjective considerations, evaluation is often not easy to conduct in an objective manner. Often, whistle blowers are punished rather than rewarded, giving staff little or negative incentive to buck the trends. The state thus has the responsibility to clearly define systems of accountability around reporting on resource utilisation, and to ensure that people are not penalised for trying to be accountable.
- Standards can be used to help provide guidelines on resource allocation. For example, the state can establish norms of what kinds of equipment, infrastructure or human resources, different health facilities should have. Then resource allocation could be based on a comparison of what are the existing holdings on these facilities, and conducting a gap analysis in relation to the norms. The identified gaps then provide a concrete basis to help define required resources in different facilities. The facility survey carried out by the WHO in various countries is an example of an effort to help identify gaps. Similarly in India, the government has established a very extensive network of norms – Indian Public Health Standards (IPHS) – for different types of health facilities in the country, which are now being used as a basis for carrying out district health planning. These norms are not necessarily “appropriate,” as they represent desired norms and in many cases may be infeasible to attain. However, by constantly engaging in dialogues around them between the state and facilities, with respect to what is feasible and practical to attain, these standards can be fine tuned and made more realistic.
- Many governments, such as in Brazil, South Africa, and Kerala in India, have made policy statements to support the use of open source software in the public sector. Many other governments are interested in following this path, but often do not know how to operationalise such a policy. For example, it can be difficult to set up tender documents for enabling the procurement of open source applications in systems where proprietary systems have historically been the norm. An important role that the state can play, then, is to set up policies and procedures both to support the uptake of open source systems, and also to help make them work in practice. This helps to highlight the particular challenge with respect to resource allocation decisions in the matter of open source software. In general, often capacity in governments to assess costs and resources around software application is limited and more so in the case of open source where the assumption is that the state should get “everything free.” This of course is a misconception and there are various factors around open source software which need to be costed (such as customisation and capacity development costs) and incorporated in resource allocation decisions. Making these cost factors explicit, and building frameworks within which they can be objectively assessed is an important aspect to help enable the evaluation of open source systems.

## 11.6 Role of Policy: Coordinating Technical Assistance Including Donor Support

In the context of HIS, technical assistance can take on many forms, including establishing and managing infrastructure, design and development of software applications, managing its implementation, employing public health domain skills in the analysis, interpretation, and use of information for helping to make improvements in health services delivery. Based on the wide variety of skills which need to be technically supported, the diversity of competencies available, and the geographical spread of people, the function of technical support needs to be managed effectively.

Here, state policy has a key role to play. Some of these roles include:

- **Establishing quality standards for technical assistance** – For example, support for strengthening software use, identifying what are the different levels of competencies which need to be established, as well as also the training levels required for each extant occupation in the health system to reach the desired competency levels.
- Policies around quality standards then need to **establish what kind of people should reach particular competence levels and how**. In the context of technical assistance for strengthening HMIS; the state can perhaps specify that field nurses should be at level “1” of competence where they are capable of doing data entry, while a data manager at the sub district facility should be at level “2,” where, in addition to data entry, he or she should be capable of generating reports, validating data, generating and uploading reports to required repositories. At level “3” it could be required of the district level team member to display capability levels to carry out basic programme management decisions based on HMIS, and with respect to the application be capable of adding or removing data elements and indicators, creating local reports, and other similar tasks. The state, then, has the responsibility to establish such competency standards and policies concerning on who should be at what level, and what are the training levels required to attain these competencies.
- Another responsibility of the state could be in **establishing standards for agencies** which are providing technical assistance and certifying their methods used. For example, the state could empanel a set of agencies that are considered competent to provide training to the health department of HMIS. The methods of these empanelled agencies would need to be standardised and certified which would include a formal accreditation of the curriculum used for the training, and also the faculty, methodology, and the assessment methods. Associated costs of each of these components would also need to be negotiated with and agreed to by the state. Such systems of certification would not only help to contribute to a uniform level of quality in training across the whole system, but also to ensure the systems by which agencies are selected to be objective and transparent.
- Another important role of policy is to help **establish procedures and systems** for identifying needs for technical assistance, recruiting vendors, developing and monitoring their contracts. In Table 11.2, we summarise key roles which policies should seek to address in coordinating technical assistance.

Table 11.2 The Role of Policy in Coordinating Technical Assistance

<i>Activities around technical assistance</i>	<i>The role of policy</i>
Defining needs for technical assistance	<ul style="list-style-type: none"> <li>• Facilitating stakeholder participation in needs assessment for technical assistance.</li> <li>• Facilitating the reaching of consensus in multi-stakeholder meetings.</li> </ul>
Identifying competent agencies to provide required technical assistance	<ul style="list-style-type: none"> <li>• Maintaining databases of approved agencies which can provide different forms of technical assistance.</li> <li>• Maintaining databases of approved individual consultant that can provide different forms of technical assistance.</li> <li>• Develop methodologies for evaluating agencies based on their performance.</li> </ul>
Managing technical assistance contracts	<ul style="list-style-type: none"> <li>• Defining formats for tenders, RFPs, contracts.</li> <li>• Approving processes of rate contracts.</li> <li>• Arbitrating in times of disagreements.</li> </ul>

Technical assistance is, often provided by donor agencies, coordinating that which is extremely complex, considering the fact that these agencies have their own specific agendas which they want to pursue, and are often incompatible with national frameworks of health systems strengthening. For example, one agency may be focusing only on human resources information systems, while another could have its focus on the malaria component of the HIS. Coordinating the activities of these agencies is vital because they may often tend to duplicate work, and sometimes initiate projects which may run counter to what the state is doing. Since donor assistance is normally governed as political decisions, and come with significant amounts of independent money, the state is hard pressed to coordinate them or even have a say on how it is used and for what. Some governments set up donor coordination committees where through periodic meetings of the respective donors, efforts are made to coordinate and harmonise activities. However, often these meetings tend to be largely bureaucratic exercises with no one really having the authority to steer things in a particular direction. So, it becomes important for the Ministry to have someone senior and with the required authority to chair such a forum and be able to give it direction and meaning.

### Summary

1. Policy plays out at multiple levels, such as the global, regional, national and sub-national levels.
2. Normally policy efforts are ineffective as they are made at the “top” with little sensitivity to the practical constraints on the ground. This therefore requires policy frameworks to be intimately inter-linked in a cyclical relationship with efforts to make them work on the ground – concerning their implementation.

3. The HMN has played a key role in trying to harmonise global policy efforts around HIS with national policy efforts.
4. Policy can play a key role in supporting the strengthening of decentralised HIS for decentralised action. But this requires a shift from traditional roles of central ministry of surveillance and control towards trying to create enabling environments in which decentralised HIS can thrive.
5. Policy can play four key roles:
  - Addressing inequities.
  - Setting and implementing standards.
  - Coordinating resource allocation, and,
  - Managing technical assistance, including donor support.

## Reference

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North, Douglass C. (1990). *Institutions, Institutional Change, and Economic Performance*, New York: Cambridge University Press.