Consultant Report on: Proposed Assessment of Health Information System in Nepal

Indu Prakash Shahi

Prof: Theo Lippeveld

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Acronyms

FMS   Financial Management System

 HIS   Health Information System

HIS   Health Information System

HMIS   Health Management Information System

MDG   Millennium Development Goal

MIS   Management Information System

MOHP   Ministry of Health and Population

NHA   National Health Account

 NHIS   National Health Information System

RHIS   Routine Information System Management

WHO   World Health Organization

Part I   Introduction, Purposes and Methodology

Background

In general, health system is "Health Care System" but in broader view it includes all the interventions required to improve it by influencing health determinants. Health system is to provide quality services where and whenever it requires (WHO). For the quality service good Health Information System (HIS) is necessary in different levels.

The HIS is one of the six components that the WHO has focused, is backbone for a good health system. Limited financial strength, human resources crisis and bureaucratic sclerosis, corruption, and fragmentation of data pushing health system backward in Nepal. For this it is necessary to build consensus on implementing National Health Information System (NHIS) and Routine Information System Management (RHIS) framework recommended by WHO in 2008. Therefore, purpose of the study is to recommend Nepal Government to conduct a health assessment in order to establish well defined NHIS and RHIS.

Part II   Nepal and Standard Health Information System

Existing Health Information System in Nepal: 18 governmental and 301 private hospitals, mostly based in urban area, lack integrated data management system among the MOHP, different regions and private institutions. Most hospitals keep their records on paper or ledger. The data management system is irrelevance, program oriented, fragmented, and of poor quality, leading a problem of referral to decision making level. Therefore, there is acute need of NHIS and RHIS for which assessment is necessary. The following are two standard NHIS and RHIS.

a) Framework for National Health Information System

Components of National Health Information System

In order to increase accessibility, availability of accurate health information in timely manner HIS should be based on the following six Components.

1) HIS resources must be supportive at the policy level among legislative, regulatory and planning body about the framework on statistics, financial, infrastructure and logistic. 2) **Indicator** includes health determinants, input, output, outcome and health status. These can be achieved by development of set of core health indictors with national priorities that harmonizes the national and global initiative such as MDGs. It should be within the national capability to generate the accurate, timely and complete statistics. 3) **Data Source** can be personal, service, resources record. **4)Data management includes** collection, storage, process, compilation, analysis, integrated data repository and timely producing accurate data. 5) **Information Products** must be transferred in a compliable, interpretable and presentable form for knowledge base and decision making to measure the impact on health status. 6) **Determination of use can be improved by setting up** culture of information that strengthen and institutionalize information use, practice and demand of data for policy and decision maker. For this it requires supportive organizational environment, providing incentive for best service delivery, making senior officer more responsible for result oriented indicator and setting up linking between data and resource allocation.

Strengthening National Health Information System

Guideline Principle for HIS Development: There must be ownership, leadership in the country level to respond need and demand of the HIS. Based on the existing system, broad based consensus among stakeholder, gradual and incremental process with a long-term vision is required. The **HIS can be processed by** i) Leadership, coordination and assessment. ii)priority setting and planning iii) implementation of health information system strengthening activities. The **HIS tools** contain -

framework, assessment and planning. The specific component for the HIS are: monitoring vital events, health system matrix, data warehousing, HIS policies – legislation,

b) Framework for Routine Health Information System

The following are key components for the routine health information system.

1. Data Sources. The framework recommends data sources in the system, service and record level. For system record NHA, FMS; for the service level - HMIS, Disease Surveillance System and for individual: records must be for the purposes of disease record either in paper or electronic based. Data must be facility and community based; available for daily basis for sufficient coverage and quality; feeds information into national and global setting. The system will be ideal tool for integrated MIS.

2. Data Generation process: i) Minimum set of core **indicators** must be based on the service delivery, capability to generate accurate and complete statistics. The data selection process must link indictor to data collection strategy and involve key stakeholders. ii) **Data Collection** must be simple, standardizes, include user manual, system- based record such as report forms, better if collected by trained health care staff. iii) **Data Aggregation** can be done by using individual data from, clinical record and register or tally sheet in order to report higher level. iv) D**ata Transmission is** required within individual health care system such as care service, first and referral level. v) **Data Processing** and analysis can be done by computer technology, development of customized data management for application of data process and analysis.

3. Use of data information for decision making and integrated service delivery: There must be use of information in patients-client, facility and system management level. Family folder, quarterly report, and management application at system level are examples for each of them.

4. RHIS Management: Availability of appropriate resources includes infrastructure, resources and procedure. For example, electricity, phones, internet, human, physical and financial. For the policies HIS policies and operational guidelines are required.

Intervention required to improve RHIS

The RHIS interventions have been effective in improving the data quality, information use, and health systems functioning at the local level. The technical intervention address technical barriers to data quality and information use such as indicators, data generation architecture, decision support systems. The Behavioral intervention assess how people react and use information for their regular performance in order to success RHIS. It also emphasis on technical, behavioral and organizational factors to success RHIS. Organizational determinants mainly focus on guidelines and importance of electronic based data information for better array of routine work such as identifying incidence of disease, medical record, quality of care delivered to individuals. Since the RHIS intervention helps to improve data quality and information use, in return it helps health system performance. Locally managed RHIS become potentially more valuable as countries decentralize health sector responsibilities.

Part III Future Roadmap, Recommendation and Conclusion

Based on the above frameworks guidelines, this report proposes assessment of HIS in Nepal. This assessment aims to establish baseline, promote comprehensive understanding of the HIS among stakeholders, identify priority areas. The assessment can be done in three phases by taking greater consultation of the all stakeholders, health workers or experts, technical experts of information technology, administrative staff, policy makers, Central Bureau of Statistics, university staff, WHO representatives, and representative from donor agencies. Outcomes of the HIS assessment

is a step forward the strategic plan with a comprehensive vision. Also the assessment aims at stakeholder understand the need of HIS, build consensus on priority setting and support the implementation of the strategic plan.

Roadmap for Applying HIS Framework

Health assessment can be done in three phases: in the first phase includes leadership, coordination and assessment. Priority setting and Diagnosis can be done in second and then Implementation of country HIS strengthen activities. Administration of the assessment process includes national workshop of key stakeholders, series of meeting, large workshop held before and after initiating process. Besides these working with local facilitators, group leader familiar with health system is essential.

Recommendation and conclusion

The consultant recommends the MOHP for greater assessment for the HIS guided and developed by NHIS and RHIS framework. In the existing scenario it is extremely necessary to establish the NHIS in order to improve healthy life for all at any age throughout the nation as per SDG4. The NHIS will help transfer information among various levels while RHIS will cope data required in the services level. In the policy level, information on routine and national level service are equally important and hence both the NHIS and RHIS are equally important. Hence assessment of Health Information System is essential to further provide better health care service and improve heath system in Nepal. Moreover, comprehensive frameworks and practical tools to guide HIS implementers will be imperative.

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