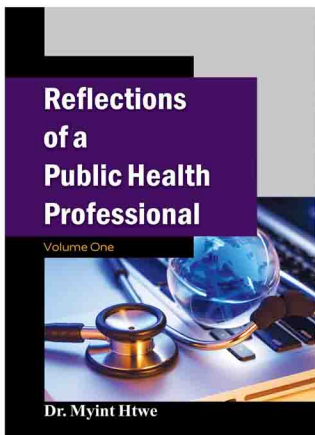


# Quick Assessment of Health Information System



**Dr Myint Htwe**

## 12. Quick assessment of health information system

*(This article is based on two presentations made at the inter-country consultation on “Strengthening of Health Information System in Countries of South-East Asia Region”, WHO-SEARO, New Delhi, October 2001 and inter-country workshop on “Data Management for Evidence-based Decision Making”, Bangkok, Thailand, December 2001, and concluding remarks at the inter-country workshop on “Strengthening Use of Health Information at the District level”, Bangkok, August 2009).*

Health information system (HIS) of the country can be equated to the nervous system of the human body. The human body cannot function properly unless the nervous system is transmitting appropriate electrical impulses through the medium of different chemicals and enzymes in the human body. Likewise, the proper and systematic functioning of HIS requires good linkages and coordination of its components, starting from data collection forms, data transmission dynamics, capacity and capability of data gatherers at the peripheral level of the health system to strategic decision makers of the Ministry of Health (MoH).

If HIS is not generating timely, valid and reliable data/information (either underestimated or overestimated data), we will not know the real health situation or actual performance of the health care delivery system. We may be formulating strategies and developing health projects/programmes based on weak or speculated data/information. This could result in unnecessary wastage of resources in the implementation of projects/programmes.

Having efficient HIS *per se* is not sufficient unless data sets are appropriately transformed into information by the competent staff and due consideration is given and actions taken by concerned project managers. In other words, generated information must be utilized or utilizable for decision making in technical, administrative, logistics and management aspects of health

projects/programmes at different levels of the health care delivery system. This data culture must be inculcated to the extent possible among all public health professionals (from epidemiologists to basic health service staff) working at all levels of the health care delivery system.

Dynamic, robust, responsive and efficient HIS is a basic prerequisite for the effective functioning of the health care delivery system. It must be supported by establishing strong functional linkages with the computerized human resource for health information system. One point to be noted is that HIS is different from Management Information System (MIS), which is wider in scope. MIS has many sub-systems like Service Management Information System (SMIS), Logistics Management Information System (LMIS), Personnel Management Information System (PMIS), Financial Management Information System (FIMS), etc.

This article is confined only to a quick assessment of general HIS and to some extent to the hospital information system but not to its allied systems such as vital registration system, disease surveillance system, sentinel disease surveillance system, noncommunicable disease surveillance system, etc. These will be discussed separately.

In order to know the functional efficiency of general HIS, the following checklist may be applied under the rubric of;

- (i) *Policy and general issues*
- (ii) *Data collection and transmission*
- (iii) *Data presentation and utilization*

The specific time frame for reviewing the scenario must be made in advance. It is better to review the scenario for the last three years. The wording of the checklist questions may be appropriately modified when translated into the Burmese version.

**Policy and general issues**

- (i) Are there ministerial policies, strategies, guidelines or standard operating procedures for staff handling HIS?*
- (ii) What is the overall organizational structure of national HIS? Is it concrete and compact?*
- (iii) What is the status of functional linkages (practicability, utility, feedback, and specific responsibility) with allied information systems such as Hospital Information System, Management Information System, Sentinel Disease Surveillance System, etc.?*
- (iv) What is the trend and quantum of financial and human resources available for HIS over the years?*
- (v) What regular capacity building activities were conducted for HIS staff at all levels of the health care delivery system during the last three years and are these well recorded? Was any review or assessment conducted on these records for future planning?*
- (vi) What are the career ladder and future prospects of HIS staff?*

**Data collection and transmission**

- (i) Was any review or revision made recently on data collection and reporting forms? If so, details should be studied for any action taken.*
- (ii) How are medical records in hospitals kept and used?*
- (iii) Was any quick review made on data management of hospital information system? If so, review it in detail.*
- (iv) How are data from private sector, INGOs and NGOs incorporated into national HIS?*
- (v) How are data collection and reporting forms filled and by whom and whether staff have been regularly trained and oriented?*
- (vi) How are data in collection forms stored? Is software used for storing and transmitting data user-friendly or not?*

- (vii) *What is the framework of overall data transmission system?*
- (viii) *Are data sieving points available in the overall data transmission system?*
- (ix) *Is there a built-in mechanism for checking validity and reliability of data generated by HIS and how is it being done?*
- (x) *Is there a regular feedback mechanism from respective data sieving points to the level below?*

### **Data presentation and utilization**

- (i) *How are data presented or depicted (health profiles, fact sheet) at the lowest level of the health care delivery system? This is extremely important as data gatherers will appreciate the utility of data and they will be more serious in getting valid data.*
- (ii) *As this is an action-oriented level, are there standard operating procedures in place for data presentation?*
- (iii) *How are data being analyzed and how is the generated information documented and used?*
- (iv) *Is there a mini, six-monthly or annual meeting to analyze and review the health situation (including hospital administration and disease pattern data) state/region-wise, as was done regularly in the vector-borne disease control programme decades ago?*
- (v) *Are data analysis workshops being conducted as part of capacity building activity for HIS staff working at all levels of the health care delivery system?*
- (vi) *How is documented information utilized by decision makers and project managers of different health programmes?*
- (vii) *How are survey data/information and programme evaluation findings considered in light of the data generated from routine HIS, i.e., synchronization, cross-referencing and triangulation of data and information?*

## **Conclusion**

The above questions may depict a snapshot scenario of HIS in a short period of time. Based on the findings, doable and quick-win strategies could be formulated. It is also noted that Myanmar HIS was thoroughly reviewed and assessed in March 2007 involving MoH, Ministry of National Planning and Economic Development and Ministry of Immigration and Population. We need to review to what extent actions had been taken based on the findings of the trilateral assessment. HIS in a developing country may not yield affirmative responses to many points in the checklist. However, one could, at least, pinpoint weak areas for taking priority remedial measures for improvement in a phase-wise and step-wise manner. In essence, the true health situation of the country can be documented with confidence only if HIS is robust, responsive and efficient.

## **References**

- (1) Presentation made by Dr. Myint Htwe at the inter-country consultation on *"Strengthening of Health Information System in Countries of South-East Asia Region"*, WHO-SEARO, New Delhi, 16-19 October 2001. (SEA-HS-219)
- (2) Presentation made by Dr. Myint Htwe at the inter-country workshop on *"Data Management for Evidence-based Decision Making"*, Bangkok, Thailand, 3-7 December 2001. (SEA-HS-221)
- (3) Concluding remarks made by Dr. Myint Htwe at the inter-country workshop on *"Strengthening Use of Health Information at the District level"*, Bangkok, Thailand, 10-12 August 2009. (SEA-HS-326)

(NB. This is the updated version of the article, which appeared in the Bulletin of Preventive and Social Medicine Society, Volume 1, Number 1, September 2014.)