

Assessment of the Management Functions of Health Information System in Iraq

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Abstract

Background: Sound health statistics are essential for health decision-making through all levels of the health system. Unlikely, health information systems in most of the countries are insufficient in supplying the needed management support, by this the recent health information systems are therefore widely seen as management obstacles rather than as tools, the current study is an attempt to assess the management functions of health information systems at the districts and facility levels.

Objective: To assess the management functions of health information systems at the districts and facility levels.

Subject and Methods: A cross-sectional study was conducted in Iraq with a data collection period extended from the mid of February 2013 to the end of May 2014, a total of seven districts selected from six Iraqi governorates were included in the study, and a total of twenty six health centers were selected from the seven districts. The management assessment tool was used to assess HIS management functions, it is one of the PRISM package tools that are used to assess the HIS performance.

Results: At the facility level, the percentile scores showed that the governance, quality standards, planning, training, supervision and financial functions were totally absent, while at the district level, the percentile scores showed that the management functions were totally absent except for the supervision functions which were 28.57%.

Conclusion: This study concluded that the health information system has a poor management functions.

Key words: Health information system, health information system management functions, management assessment tool.

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Introduction

Health information system (HIS) is defined as integrated efforts to 'collect, process, report and use health information and knowledge to influence policy making, program action and research'[1].

Although it is understood that improvement of the situation requires

“accurate information”, many developing countries do not have reliable health management information systems [2]. Many describe it as highly unreliable and disorganized [3]. In addition to that health information systems in most countries are limited in supplying the needed management support functions [4][5].



Recent health information systems are widely seen as management obstacles rather than as enhancing tools. The problems can be due to irrelevance of the information gathered [6]. Poor data quality [7][8]. Duplication and waste among parallel health information systems [9][6], poor timely reporting and feedback [10]. Individual health care is not linked to a reference population [9]. Centralization of information management [9]. Poor use of information [11][12]. Absence of HIS policy framework and its use to plans, projects and actions [13]. Limited HIS structure and inadequate resources [10][14], HIS isolated from policy- and decision making process and does not respond to the needed information of decision-makers [10].

Good quality and timely data from health information systems are the principles of the health system and it is considered as a core building block of the health system as a whole [15][16]. As within the health system, choices made in the collection and use of information will determine the system effectiveness in identifying health problems, defining priorities, detecting innovative solutions and allocating resources to enhance health outcome [17]. Also good information provision and use within countries have been shown to maintain cost savings, system efficiencies (including increases in quality and coverage) and even improved health outcomes [17]. The World Health Organization (WHO) has long identified health information systems as an important for providing health for all by the year 2000 [18], as the 1978 Declaration of Alma Ata [19] provided an opportunity to develop HIS to reflect broader development needs with an emphasis on intersectoral harmonization of the information systems.

The primary goal of the HIS is to provide an evidence based decision and action in the health system [13].

It is essential and practical step here is to know the management function of HIS in the country, this has been done by using a practical tool which is the Management Assessment Tool (MAT) which is one of the PRISM package tools produced by Measure Evaluation that are used to assess the HIS performance[20].

The present study aims to assess the management functions of HIS at the districts and facility levels.

Materials and Methods

A cross-sectional study was conducted for the assessment process, a total of seven districts were selected by simple random sampling from six Iraqi governorates which were selected by simple random sampling and these governorates were [Baghdad (Karkh and Rusafa), Diyala, Salahaddin, Karabala, Sulaimania, and The Qar] during the period from the mid of February 2013 to the end of May 2014. The primary health centers were selected with a minimum of 35 percent of health centers per district reaching to 50 percent per district according to a convenient sampling technique taking in consideration security situations, a total of twenty six primary health centers were included in the study.

The Management Assessment Tool (MAT) was used to measure the HIS management functions, it is one of the PRISM package tools produced by Measure Evaluation together with John Snow, Inc. that are used to assess the HIS performance [20]. It has been used to assess the level of management functions of HIS in the district and facility levels. HIS management functions constituted of HIS governance, training, planning, supervision, finances, and use of quality performance improvement tools.

The governance functional level of HIS management was measured by the finding of a mission statement, management structure,

organizational chart, and distribution list of information report. The planning functional level was measured by the presence of a current HIS situation analysis report, HIS long term plan and targets and presence of HIS targets. The quality standards functional level was assessed by use of quality performance improvement tools, availability of HIS standards at facilities and higher levels. The training functional level was assessed by the presence of training manuals, on-job training and schedule of planned trainings. The supervision function was assessed by the finding of supervisory checklist, schedule and supervisory reports. The financial functional level was measured by the finding of an HIS expense register, mechanism for generating funds, financial report and long term financial plan.

The assessment has been done by interviewing with managers and representatives of care providers at facility and district levels. Data was translated into a

computerized data base structure, followed by descriptive statistics.

Statistical analysis

Was done using SPSS version (18) computer software (Statistical Package for Social Sciences). The following measurements and tests were used: Frequency distribution and percentage for the studied variables and according to their characteristics and mean values.

Result

At the facility level, the percentile scores showed that the governance, quality standards, planning, training, supervision and financial functions were totally absent.

At the district level, the percentile scores showed that the governance, quality standards, planning, training and financial functions were totally absent, while supervision functions were 28.57% (Presence of HIS supervisory checklist) Figure (1).

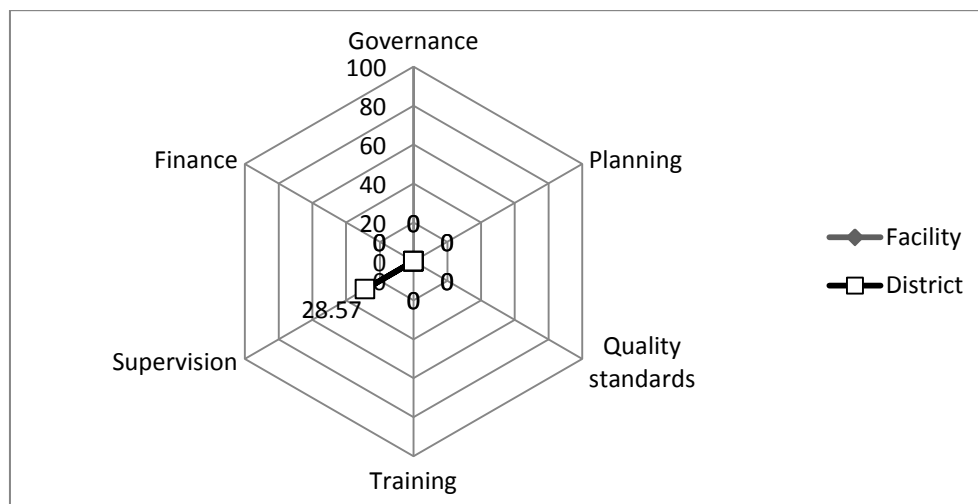


Figure (1): Health information system management functions at the facility and district levels

Discussion

Managing a system is a process of managing functions and resources to produce better outputs. The management of HIS is not different in that regard. Thus, the definition of HIS management would be “presence of mechanisms for managing HIS functions and

resources effectively for better HIS performance.

Health information systems management [21][22]. Is a basic for the performance of HIS. It is assessed through the presence of the HIS vision statement and the foundation and maintenance of HIS support services such a straining planning, human resources,



logistics, supervision, and finance. By identifying levels of support services, it is feasible to develop priorities for actions.

The results from management assessment tool at facility and district levels identified that most management functions were absent indicating that most of the assessment features were not met, indicating that HIS management functions are not its optimum. When these findings are compared with low data accuracy and information use, it is obvious that there is a consistency in findings that low performance is associated with low support management functions, especially use of quality standards, training and supervision.

It is the management assessment tool provides a good estimate of the management support services and when compare with performance identifies how these two affecting each other [23].

Training is limited to data collection and data entry. There are no provided mechanisms for a well provided planned training and training usually happens on an ad hoc needs basis, curtailing opportunities for continuous improvement. Similarly, supervision is not specifically provided towards HIS tasks, but it is considered as a part of the general supervision.

There is no specified supervisory checklist for assessing the level of information use as there is no such self-assessment procedure which leads to more informed decision making or act as promoting for more informed decision making.

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