

Assessment of the health information system related resources in the primary health centers in Iraq

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Abstract:

Background: Sound health statistics are essential for health decision-making at all levels of the health system. Unfortunately, Health information systems in most countries are inadequate in providing the needed management support and the current health information systems are therefore widely seen as management obstacles rather than as tools, the current study is an attempt to assess the available resources of health information system at the primary health care center level.

Methods: A total of twenty six health centers were selected from seven districts that were selected from six Iraqi governorates. The Office/facility check list was used to measure the available resources concerning the health information system within the health centers, it is one of the PRISM package tools that are used to assess the HIS performance.

Results: One hundred percent of the facilities surveyed have computer, printer and calculators respectively while only 57.7% have an internet access, 100% of facilities reported continuity of electrical supply with the presence of the generators. Air conditioning and the availability of tap water were high and they were 96.2% for both. All the facilities didn't report any running out of any register in the past twelve months.

Conclusion: The available resources within the health facilities are quite good for the running of health information system related activities with no problem with such aspect that could affect the health information system performance.

Keywords: Health information system, Health information system resources.

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 inadequate in providing the needed management support ^(4, 5).

Current health information systems are therefore widely seen as management obstacles rather than as tools. The reasons can be due to irrelevance of the information gathered ⁽⁶⁾, Poor quality of data ^(7, 8), Duplication and waste among parallel health information systems ⁽⁹⁾, Lack of timely reporting and feedback ⁽¹⁰⁾, Poor use of information ^(11, 12), Lack of HIS policy framework and its application to plans, projects and actions ⁽¹³⁾, Relative HIS weak structure and limited resources ⁽¹⁴⁾.

Quality and timely data from health information systems are the foundation 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 sector, choices made in the collection and use of information will determine the system effectiveness in detecting health problems, defining priorities, identifying innovative solutions and allocating resources to improve health outcome ⁽¹⁷⁾. Also better information supply and use within countries have been shown to deliver cost savings, system efficiencies and even improved health outcomes ⁽¹⁷⁾.

The World Health Organization (WHO) has long identified health information systems as critical for achieving 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. By this decisions for investing in national HIS are justified on a basis of the needs for information to support decision-making and action in the health sector, the feasibility and the cost benefit of the implementation and further maintenance ⁽²⁰⁾.

It is essential and practical step here is to know the available resources concerning the HIS within the health centers, this has been done by using the Office/facility check list which is one of the PRISM package tools produced by Measure Evaluation that are used to assess the HIS performance ⁽²¹⁾.

The current study is an attempt to assess the available resources of health information system at the primary health care center level in Iraq.

Subjects and Method:

A cross-sectional study was conducted for the assessment process, a total of twenty six health centers were selected from seven districts that 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, Saladin, Karabala, Sulaimania, and Theqar]. 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. The office/facility checklist was used to measure the HIS resources, 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. It is used at the facility level to assess

stock of available resources of HIS such as equipment, utilities, storage of information, communication capability, and HMIS forms and registers. Data collection process was carried out during the period from the mid of February 2013 to the end of May 2014 and the assessment has been done by interviewing with managers and representatives of care providers at facility level.

Results

1. Availability of equipments

Table 1 shows that 100% of the facilities reported of having two or more computers, all the facilities reported having CDs (Data backup unit), 88.5% of the facilities reported having two or more printers. 100% of the facilities got a UPS of two or more, 61.6% of facilities had two or more generators while 3.8% of the facilities reported of having no generator. All the facilities had mobile telephone coverage, 57.7% of the facilities reported to have internet access and 88.5% of the facilities had two or more calculators.

Tab 1: Availability of equipments at the facility level

Category	Number	No. of facilities	Percent
a. Computer	0	0	0.0
	1	0	0.0
	≥ 2	26	100%
b. Data backup (CD)	Yes	26	100%
	No	0	0.0
c. Printer	0	0	0.0
	1	3	11.5%
	≥ 2	23	88.5%
d. UPS	0	0	0.0
	1	0	0.0
	≥ 2	26	100%
e. Generator	0	1	3.8%
	1	9	34.6%
	≥ 2	16	61.6%
g. Mobile telephone	Yes	26	100%
	No	0	0.0
i. Internet	Yes	14	57.7%
	No	12	46.15%
j. Calculator	0	0	0.0
	1	3	11.5%
	≥ 2	23	88.5%

2. Utilities

Concerning the utilities, the results showed that 100% of facilities reported continuity of electrical supply with the presence of the generators.

Regarding interruptions, 80.8% of facilities reported of daily interruptions. 96.2% of the facilities reported the presence of air-conditioning for the room where the computer hardware is kept. Also, 96.2% of the facilities

reported the availability of tap water except for one facility, as depicted in the Tab2.

3. Availability of registers, forms

All the facilities didn't report any running out of any register in the twelve months period preceding the time of assessment for the services present in each facility, as presented in table 3.

Tab 2: Availability of utilities

		No. of facilities	Percent
a. continuity of electricity supply?		26	100%
b. Interruption	Never/occasionally	1	3.8%
	Once a month	0	0.0
	Twice	0	0.0
	Weekly	4	15.4%
	Daily	21	80.8%
c. air- conditioning of the room where the computer hardware is kept		25	96.2%
d. availability of tap water		25	96.2%

Table 3: Availability of registers, forms

Type of record, report or register	Have you run out of this form in the past 12 months? If so, why?				
	Yes	No		No service	
		No.	%	No.	%
a. General consultation	0	26	100%	0	
b. Antenatal consultation	0	24	92.3%	2	7.7%
c. Family planning	0	11	42.3%	15	57.7%
d. Vaccination register	0	24	92.3%	2	7.7%

Discussion:

The availability of resources to perform HIS tasks is crucial. 100% of the facilities surveyed have computer and calculators respectively while only 57.7% have an internet access. These greatly contribute to HIS performance.

Access to the electricity and water supply is very high and 96.2% of the facilities report back-up generators to continue electricity coverage, therefore availability of utilities is not problematic. 100% percent of the facilities showed that the selected registers, forms and monthly reports are available with no facilities showed a stock-out in forms in the last 12 months, indicating that supplies for HIS are quite good.

The available resources within the health facilities are quite good for the running of HIS related activities with no problem with such aspect that could affect the HIS performance.

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