

Updates in Public Health and Preventive Medicine

Editorial

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Ensuring Data Quality for Informed Decision Making

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Introduction

Data quality is a view or an assessment of data's qualification to serve its purpose in a given context. It refers to whether data is properly collected, accurate and fit for its intended purpose. Data quality is not linear and has many dimensions like accuracy, completeness, consistency, timeliness, relevance and data confidentiality. For HMIS (health management information system) data to be useful, the data has to be: relevant, accurate, timely, complete, precise, and reliable and should have integrity. Good quality data is important for planning and to support decision-making. Monitoring and evaluation of growth and transformation plan and sustainable development goals requires good quality data [1].

The need for organized, accessible, timely and accurate data for health decision making become a growing concern both at national and international level. In response to this, Ethiopia has undertaken an extensive reform and re-design of the HMIS. The reform has taken major steps in response to the lack of accurate, timely and complete data that consequently affected the quality of care, planning and management systems as well as the decision making by the managers at all levels in the health care system [2].

The Federal minister of health in collaboration with CDC and Tulane International Ethiopia launched different electronic health management system like Electronic Health Management Information System - Public Health Emergency Management, smart care (Tena care) soft wares [3]. The electronic management information system requires full functionality of electricity, supplies and trained human power. To use the electronics health management system at large, the coverage of electricity should be high.

The CHIS (community health information system) that is used by health extension workers to capture granular level data at the user level that is the community, household and individual was also reviewed [4]. Mobile health is another important step the country currently implementing. IVR (Interactive voice response) is one of the mobile health applications that are used by health extension workers. The IVR is an automated telecommunications system allowing a client to interact with a computer to achieve defined results, without human intervention. The IVR system has been designed to allow providers health extension workers to send/review their activity reports to a centralized database system using all kinds of telephone. The system will respond with a message appropriate to the information found in database [4]. The CHIS and the IVR are very important data source. Since CHIS and IVR data sources are from the grass root level, ensuring the data quality at this level is very crucial. Since the IVR is new technology, stakeholders and federal minister of health should continually evaluate the system functionality.

Data accuracy can be checked by using Lot Quality Assurance Sampling methodology, which can be done at health

facility level. The desired level of data accuracy must be done on monthly bases. Most of the time, this activity did not get attention in many health facilities. Supervisors should assess whether the HMIS data accuracy is checked both at health facilities and at administrative level and should also give constructive feedback. Data quality can be affected by over reporting and under reporting. Over reporting and under reporting is common in many health facilities of Ethiopia [5]. Routine Data Quality Assessment, which used to understand the level of data accuracy within woreda, zone or region, should be done to identify over reporting and under-reporting problems.

Although there has been a revision of the HMIS indicators to support greater usability and to enhance comprehensiveness and standardization, high quality data remains a challenge.

Much of this stems from poor capacity building of users of the data system at all levels of the health system, a lack of feedback loops of information that could support improvement and poor documentation leading to poor reporting performance[2]. In response to data quality problems, the health sector transformation of the country give due emphasis to ensure data quality. The country put forward four transformational agenda that will help to achieve the health sector transformation plans ambitious targets: transformation towards quality and equity in health service, woreda transformation, a movement towards compassionate, respectful and caring health professionals, and information revolution [6]. The transformation agenda can only be achieved if the data qualities are ensured at all levels. If the quality of data is not ensured at all levels, the decision making based on evidence will be hampered. So health personnel's and other concerned body should give due emphasis on ensuring data quality to achieve the five year health sector transformational plan and sustainable development goals of health.

The deployment of health information technician at facility and administrative is one of the important step the country so far started. Deployment of health information technician only cannot ensure data quality. So, in-service and pre-serve training on data management should be given for every health professionals and other personnel, who can directly or indirectly engage in data management. The better the quality of data, the better the decision would be and implying better health to the people.

Many facilities have no especially assigned personnel for health information system activity. In many health facilities data quality is below the national expectation level. Low data quality was found at health posts compared to health centres and hospitals [7]. Solution for the above mentioned problems should be given at every levels of health system.

Private facilities are relatively less likely to report to the government reporting system than facilities managed by government authorities [5]. If this problem is not solved, we will not be able to see the complete picture of the performance at different levels.

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