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### **Quality and use of Health Information Systems Data in the Eastern Province of the Republic of Rwanda**

Health data is continuously generated in the primary health facilities and fed in the country's health systems to facilitate health situation and trends analysis, support patient and health facility management, provide early warning in case of epidemics, support and stimulate research and enable planning with optimal resource allocation. To be of use, data has to be of quality. To be of benefit, data has to be used by decision makers, policy makers and health service providers at both policy and operational levels to improve health service delivery. Many researchers have described health data in developing countries as of poor quality and insufficiently or not used at all. This study assesses health data quality in terms of availability of source documents, accuracy, content completeness, completeness and timeliness of reporting. The factors influencing data quality have been identified and the level of data use established. Furthermore, the factors influencing data use in the health facilities of the three districts of Bugesera, Kayonza and Rwamagana in the eastern province of the Republic of Rwanda have been identified as a basis for improving health service delivery. 8

The study tries to answer four research questions; what is the level of data quality in the health facilities of Bugesera, Kayonza and Rwamagana districts? What are the factors influencing data quality in the health facilities of Bugesera, Kayonza and Rwamagana districts? What is the level of data use in the health facilities of Bugesera, Kayonza and Rwamagana districts? and what are the factors influencing data use in the health facilities of Bugesera, Kayonza and Rwamagana districts? A descriptive cross-sectional study design has been used with qualitative and quantitative approaches to data collection and analysis. The study population were the health centres in Bugesera, Kayonza and Rwamagana districts and the study unit was a health facility in the same districts. The Kish Leslie formula for sample size of infinite population was used for simple random sampling to get the sample size of the health units and later adjusted using the Cochran formula for sample size of finite population. The three districts of Bugesera, Kayonza and Rwamagana in the eastern province were purposively selected because they are adjacent hence convenience sampling. The three districts have many things in common with other districts in the province with respect to the infrastructure, personnel, disease burden and accessibility. Four district hospitals in the three districts of Bugesera, Kayonza and Rwamagana districts (Kayonza has two district hospitals) were excluded because they do not offer most of the key indicator services in this study like ANC, family planning (they offer surgical methods only) and vaccination. These services are offered in the primary level health facilities. The findings show that in majority of the health facilities data quality was good: availability of source documents, accuracy<sup>1</sup>, accuracy<sup>2</sup>, content completeness, completeness and timeliness of reporting stood at 61.9%, 73.3%, 70.6%, 97.6%, 97.6% and 93.9% respectively with overall quality of 82.3%. However, in most health facilities data use was inadequate. The study recommends that the following issues should be worked upon: deficient staff computer skills, lack of ownership of data, poor quality data, sheer negligence, lack of feedback and work overload. These should be addressed by the Ministry of Health and the district hospitals in order to enhance good use and complete the data management cycle in the three districts.

**Key Words: Quality, Health Information Systems, Data, Eastern Province Republic, Rwanda**

