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Titolo tesi: Integrating maternal and child data into a newly developed health information system in the Iraqi Kurdistan

ABSTRACT

Improving access to maternal and under 5-child health (U5-Y) data is a public health priority to improve maternal and child health. However, to achieve progress in maternal and U5-Y health is challenging to fragile Eastern Mediterranean Regions, with Iraq and the KRI in particular, affected by aspects such as demographic changes, impacts of war, humanitarian crisis.

Having said that, in paper one, "Supporting Iraqi Kurdistan Health Authorities in Post-conflict Recovery: The Development of a Health Monitoring System", we explore the lack of appropriate data collection and management system. The aim is to support evidence-based health policy decisions, by providing a Health data Management System, preparing local experts, and ensuring the future self-sufficiency in the KRI. The methodology employed consisted of a Pilot Phase which assessed the applicability of the program through the District Health Information System (DHIS2), officially named KRG-HIS. We had adopted the WHO-ICD-10 coding system, followed by updates in the technical infrastructure of each PHC or PH. The main results include: Between (2015-2019), project implementation, training of staff on (DHIS2) and on disease coding, and training of local team of experts to create highly specialized personnel. Collection of over one million disease events including data on maternal and U5-Y. Finally, 734 medical doctors, statisticians, and health managers have been trained on the basics of public health practice.

Subsequently, we have published paper two entitled "COVID-19 and Iraqi Kurdistan: a regional case in the Middle East". In May 2020, COVID-19 pandemic had infected over 5.8 million people and caused the death of more than 360,000 people worldwide. Within this scenario, the aim of this paper was to explore the KRI's governmental measures for COVID-19 containment and response, management approaches, prevention interventions, and assess the public opinion reactions regarding the government's initiatives. The study reveals that the governmental response, its coordination between national and regional authorities, and data transparency have contributed to temporarily mitigate the infection spread. However, the measures did not receive widespread public support due to: 1) lack of public awareness, 2) long-term underinvestment in the public health sector, and 3) economic and health consequences of long-lasting lockdown policies, which impair a countries' ability to implement preventive measures and to achieve wider public support.

As for paper three, entitled “Integrating maternal and child health data into the Iraqi Kurdistan health information system”, the objective was to provide appropriate data to inform and support evidence-based decision-making for planning and improving civil registration and vital statistics (CRVS) systems for maternal and U5-Y progress toward 2030 SDGs agenda. To this end, the study has fostered the integration of Maternal and Child Health Care Services (MCHCS) data into DHIS2 (KRG-HIS), training of a cohort of PhD students on the project, and a preliminary analysis on MCHCS from PHC and PH data entered into the DHIS2 (KRG-HIS) project. Among the main results, it was possible to identify that previous studies reveal that the KRI health policies are often based on flawed evidence and health care quality not efficiently monitored or evaluated, with serious qualitative issues in the Iraqi statistics and data being classified as of low quality, particularly for birth and death registrations RBBDs. Maternal and U5-Y health records were found to be scattered, with missing files inaccurate/unavailable information. Moreover, the collection of new statistical aggregated data is still paper based, which causes the loss of important pieces of information. Besides, the absence of integrated system across hospitals represents a major obstacle in collecting and accessing information.

In conclusion, the study suggests that the implementation of the health monitoring system DHIS2 is suitable also in the context of socio-political fragility. However, the delivery of DHIS2 with stakeholders’ shared responsibilities and the provision of local health expert team facilitates the accurate and timely collection of data. This aspect contributes to support health policy investment in the implementation of epidemiological surveillance as a routine public health practice and the development of a culture of using data for decision-making and preparedness for future crises. Moreover, it also adds a share of contribution towards fulfilling the SDGs 2030 especially regarding maternal and U5-Y. Finally, the study also reveals that the lessons learned from the KRI experience can be beneficial for other geographical areas experiencing similar circumstances of social-political instability.

Keywords: Maternal and child health; post-conflict EMR; Iraqi Kurdistan; Epidemiological surveillance; DHIS2 (KRG-HIS); WHO-ICD-10; public health; Covid-19 Pandemic Disaster response.