Short communication

FIRST EXPERIENCES WITH A WHO TOOL FOR ASSESSING HEALTH INFORMATION SYSTEMS

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ABSTRACT

At the request of Member States, the World Health Organization Regional Office for Europe developed a support tool for the assessment of health information systems (HIS) and generation of health information strategies. Recently, a shortened version of the HIS assessment component of this tool was applied in four countries of the European Region. This paper presents preliminary experiences of using the support tool, and the common strengths and challenges across Albania, Bulgaria and Ukraine in particular. Key challenges faced by countries in the Region include the poorly functioning intersectoral coordination mechanisms for HIS and limited use of existing health information for policy-making. Furthermore, there are concerns regarding data quality and access to these non-integrated systems. Overall, there is a great need for capacity-building activities to support strategic development and assessment of HIS. It has also been suggested that a condensed version of the support tool be created to facilitate self-assessment. This pilot exercise highlights the benefit of creating a mechanism to facilitate the exchange of country experiences.

Keywords: ASSESSMENT, E-HEALTH, HEALTH INFORMATION MANAGEMENT, HEALTH INFORMATION SYSTEM, TOOLKIT, WHO EUROPE

BACKGROUND

Demographic, epidemiological and technological developments are putting considerable pressure on health systems in European countries. Robust health information systems (HIS) are more important than ever and necessary to inform decision-making processes. However, improving complex and multistakeholder HIS is no easy task.

Existing HIS assessment tools are fragmented and require significant contextualization to meet the needs of European Region countries. To address this void, in 2013, the Standing Committee of the Regional Committee tasked the World Health Organization Regional Office for Europe to create a practical support tool to assist Member States in assessing and developing their national HIS, thereby supporting the implementation of the Health 2020 Policy Framework *(1)*.

A working group consisting of representatives from 17 Member States, co-chaired by the Netherlands and Russian Federation, led the development of the *Support tool to assess health information systems and develop and strengthen health information strategies* (henceforth referred to as "support tool") *(2)*. The European Health Information Initiative framework was used to contextualize the support tool for the European Region and health information activities that were under way as well as those in the planning stages *(3)*.

After publication of the support tool in 2015, several Member States requested the World Health Organization Regional Office for Europe to support HIS assessments in their countries using the new tool. Between October 2015 and April 2016, HIS assessment missions were conducted in the above mentioned countries using the support tool. This paper presents the support tool and some lessons learnt from its application in these four countries. It also describes some of the key successes and challenges of HIS in the Region.

KEY FEATURES OF THE SUPPORT TOOL AND METHODS OF APPLICATION

The support tool is largely based on existing frameworks and materials developed by World Health Organization's former Health Metrics Network (HMN) (4, 5), and comprises two modules – HIS assessment and strategy development – that require extensive stakeholder involvement through a series of workshops, checklist assessments and interviews. The support tool covers the following domains of HIS:

- resources
- indicators
- data sources
- data management
- national HIS data quality/information products
- dissemination and use.

These four assessment missions were modest in nature, and were carried out by one or two consultants over the course of a country visit over three to five days. Logistical support was provided by World Health Organization country offices, with technical assistance from counterparts within the country and the World Health Organization Regional Office for Europe.

The scope of these missions was limited to HIS assessment, and therefore did not include the module of HIS strategy development. A condensed version of the score sheet was developed for this purpose by shortening the original itemized list from 200 to about 50 criteria. Semi-structured interviews were held with representatives of the main health information stakeholders in the countries. The number of experts interviewed per institution ranged from one to eight, and included representatives from the ministries of health, public health institutes, national insurance companies and national statistics offices.

On the last day of the mission, a joint stakeholder meeting was held where a summary of assessment outcomes, including a consolidation of interview responses and recommendations, were presented by the consultants.

FINDINGS ACROSS THE ASSESSMENTS

While each of the four countries possesses unique HIS – resulting from their historical, cultural and governance contexts – common strengths and challenges emerged from across these assessments (Table 1).

An important observation in all countries is the promising development under way in the area of e-health (e.g. electronic health records, e-prescription and cloud solutions for data storage). While there is a clear desire from countries to shift towards the use of e-health technologies, the main sources of funding for this are ad hoc initiatives or are mostly donor based; thus, the sustainability of these types of investments and projects is of concern.

TABLE 1. COMMON STRENGTHS AND CHALLENGES ACROSS FOUR COUNTRY HIS ASSESSMENTS

Common strengths	Common challenges
Promising developments in the area of e-health	Lack of a clear HIS strategy
Functioning data collection systems	Central multi-sectoral coordination mechanisms missing or functioning poorly
Dedicated HIS personnel	Limited prospect for sustainability of e-health (predominantly donor funded)
Understanding of policy-makers on the need for sound evidence for decision-making	Limited analytical capacity
	Data quality issues
	Unclear roles and responsibilities for data exchange
	Limited use of health information for decision-making

While there are long-standing processes for data collection within the respective countries, there is a striking absence of a central multisectoral coordination mechanism to bring together health data and information to users. As a consequence, alignment between the various HIS-related projects and activities is suboptimal, leading to inefficiencies in the use of existing financial and human resources, as well as in the uptake of the generated evidence for decision-making in health. Furthermore, the lack of a long-term HIS strategy can be seen as a threat to the coherence and sustainability of health information products, policies and activities in the countries. Moreover, there are common problems related to data quality and lack of clearly identified data flows, as well as limited access to data for secondary monitoring and research purposes. In some instances, this is the result of restrictive legal frameworks for data privacy. To overcome this, the current lack of dialogue between key stakeholders (in particular, technical and legal authorities) would need to be tackled. There are also issues related to data availability for key indicators. For example, often data cannot be disaggregated according to key stratifiers such as socioeconomic status or at the subnational levels.

Progress is also hindered by limited analytical capacity, in terms of both analysis of the data collected and its translation into meaningful evidence for decision-making. As a consequence, the missions highlighted a disconnect between the development of evidence derived from health information and policy-/decision-making processes. Indeed, while most policy-makers are open to using evidence for decision-making, this is not yet commonplace or has not yet matured.

CONCLUSIONS ON THE USABILITY OF THE TOOL

The aforementioned assessments proved to be an informative exercise to identify the strengths and challenges of HIS within and across countries in the European Region. The initial assessment examined all relevant HIS domains, and resulted in concrete recommendations for improvement and subsequent strategy development. Extending the time by one or two days to allow for a week-long mission would have permitted a broader scope of assessment that could

have also included other stakeholders and users of health information, such as medical associations, patient organizations, parliamentarians and nongovernmental organizations.

Another conclusion of the missions is that the broad definition of a HIS is not widely known and/or implemented by country staff. The HMN framework and support tool go beyond simple data collection mechanisms to include analysis, translation, dissemination, and use of health data and information. Within countries, HIS was often defined as a health *data* system, which focuses primarily on infrastructure and data collection, rather than on a health *information* system.

Most items in the assessment score sheet focus on data and indicators; less emphasis is placed on analysis, reporting and knowledge translation. This is largely a conceptual legacy of the HMN framework that primarily focused on developing countries. Therefore, the support tool can be improved to reflect the context of HIS capacity across the European Region. Furthermore, these missions highlighted the proliferation of e-health activities and their importance within HIS. The itemized list of assessment criteria should reflect these advancements and include a component on e-health.

FURTHER IMPROVEMENTS TO THE SUPPORT TOOL

Based on these initial assessment experiences, several modifications to the support tool are suggested.

- Adapt the itemized list of criteria to better align to the context of the middle- and high-income European Region countries. An emphasis on the actual use of health data and information could be explored, similar to the data–information–knowledge–wisdom pyramid *(6)*.

- Include criteria that address developments within the domain of e-health.

- Provide clear and comprehensive definitions of HIS and HIS governance.

- Provide a shortened version of the checklist for rapid assessment and self-assessment.

- Explore the development of a condensed version of the entire assessment methodology to facilitate a less resource-intensive exercise, thus allowing

flexibility for local adaptation and engagement of relevant stakeholders.

- Furthermore, the second component of the support tool – strategy development – can be made leaner to ensure its uptake in the assessment exercises.

Last, it should be understood that a country HIS assessment is not simply an evaluation but also an opportunity to engage with policy-makers and other stakeholders to trigger a reflection on the role of health information in the overall health strategy. This ensures that such a strategy becomes a dynamic and cyclical process, guiding itself through the monitoring of its own progress. Ultimately, facilitating intercountry exchange of experiences and solutions for overcoming problems and improving HIS performance is also an important next step in increasing its utility and supplementing the support tool itself.

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