Building a National HMIS in South Sudan: Investing in Systems

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1. Context (country and area where the intervention was initiated and 'intervention level')

South Sudan is a country coming out of more than two decades of civil war and has a history of marginalisation and under-development. The country has a formidable task in rebuilding a government led health service and improving some of the worst health indicators in the world (for example maternal mortality recorded as 2054 per 100,000[1]).

In March 2010, a rapid assessment took place to assess the status of the routine Health Management Information System (HMIS)[2] – the conclusions were sobering showing that there was not a functional system in place. According to the assessment, data collection was piecemeal and in various formats; the list of indicators to collect were not defined and at times irrelevant; reports (when available) were not completed and, when completed, were not understood by the health staff. Furthermore there was a lack of understanding by health workers of basic concepts of data collection, analysis and feedback. Lastly, the majority of available data has been collected through surveys (Multi-Indicator Cluster Survey 2009, Health Facility Mapping 2010) or specific reports from health facilities to health partners (NGOs, UN bodies and donors).

Development of the national health information system was also further complicated by fragmented external support as evidenced by 216 health projects implemented through 148 NGOs/FBOS[3] each of them with their particular reporting system. Such fragmentation undermined an integrated data collection approach, due to divergent NGO and donor requirements. In addition, NGOs supported systems development at the county-level through management training, support on data collection and data analysis[4] but based on their separate understandings of needs rather than on an integrated approach to support the MoH to track progress.

The participatory process to develop the strategic plan of the health care sector of South Sudan highlighted the need for integration of the data collection for relevant information to reach decision makers. The MoH then started the daunting process of building the system. Two actions took place immediately: firstly, the identification of a basic list of "what to collect" (indicators) and the adaptation to the context of data collection tools Secondly, the MoH decided to use a tried-and-tested database, the District Health Information Software (DHIS) as the software for the South Sudan health care system.

Once these decisions were firm, all other elements of the system started to fall into place disaggregating functions across the management levels, County Health Department (CHD), State Ministry of Health (SMoH) and national MoH. Data flow was clarified and actions to avoid bypass of lower management levels put in place; reporting tools and products from each level were finalized; aggregation and analysis of the data collected to produce the required indicators at each level was identified and the responsibilities to maintain the system were distributed among the management levels in agreement with the decentralization policy of the Government of South Sudan.

2. Brief description of the intervention

In our experience, implementing a working routine HMIS has to be built on two key principles: **simplicity** and **relevance**. The first (**simplicity**) requires development of context-adapted tools that all health managers understand and are able to use; the second (**relevance**) means that the

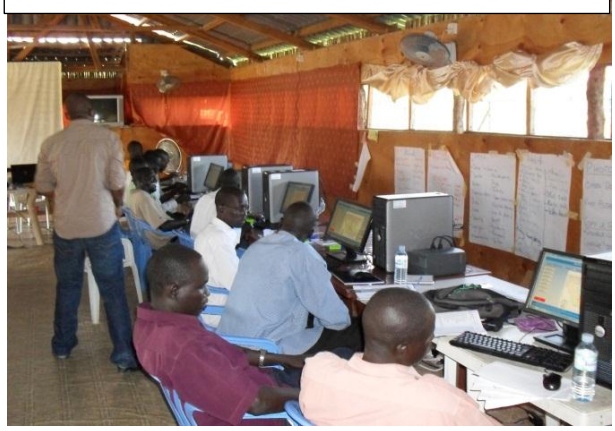
[1] Ministry of Health, Sudan Household Survey, 2006
[2] Carmen M. Camino, William Vargas, Joe Valadez: M&E Scoping Mission Report, LATH- MoH, March 2010
[3] Ministry of Health-NGO Health Forum, Health Matrix, 2011; a similar picture was present in 2010
[4] South Sudan NGO Forum, Capacity Building of County Level Government, 2011

system has to collect only essential information required for planning and management for all levels so as to serve the overarching purpose: build a better system and serve population needs.

Based on these principles, a step-by-step approach was undertaken in 2010 and 2011, to roll out the HMIS to the ten states of South Sudan.

1. **A common purpose was established** across all health partners and MoH representatives to collaborate in establishing a system unique to South Sudan. Collaboration was essential in designing the system as well as the piloting data collection tools and the selected software (DHIS).
2. The **content of the information system was defined** – the "what to collect". An important aspect of this phase was to separate the routine and the non-routine systems. An essential data-set was drafted, based on M&E Framework of the health sector developed in 2008, aimed to be simple enough for health facility staff to operate. A user-friendly one-page monthly form and a quarterly Quantified Supervisory Checklist were drafted.
3. **Registers** had already been developed for health facilities; and were fine-tuned ensuring known formats remained and routine reporting information was collected.
4. Basic responsibilities for data collection and reporting were defined for each level of the health system as well as the data flow.
5. **The system was pretested** across three states: Central Equatoria, Upper Nile and Jonglei.
6. **Training courses** were conducted to incorporate health staff to the system. A modular approach was followed and national training capacity developed.
7. After pretesting was conducted for six months, a **broad and open review** of the tools and the essential data-set took place. NGOs, UN agencies, donors, MoH Departments and vertical programme came together to discuss tools and results so as to provide input for improvement. The results were the launch of the integrated monthly report and the HMIS Manual of South Sudan.
8. **Training materials were updated and disseminated**, incorporating feedback from MoH and health partners. The materials focused to be more low-literacy friendly and were printed for all health NGOs, the national MoH, SMoHs, CHDs and facilities.
9. **The needs and capabilities of the national MoH, SMoH** as well as individual programmes were considered, so that plans to operationalize the HMIS were developed for each state.
10. **Programmes and NGOs were given the opportunity to integrate their paper systems** into the DHIS, and support the roll-out, so that an integrated system was possible in some counties and localised peer-to-peer support was provided.

Jonglei State DHIS Training Course Sept. 2010



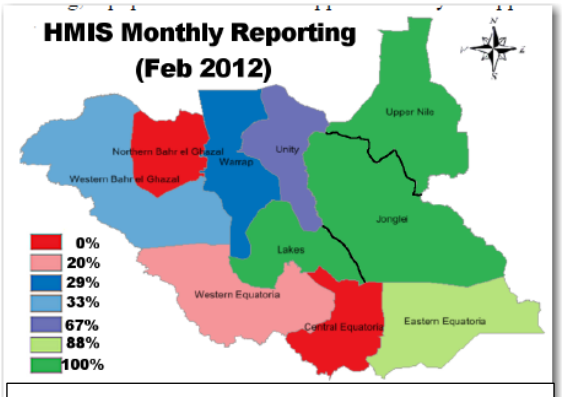
4. Brief description and reflection on the challenges encountered

In terms of inputs, the **low-literacy rates** and education in South Sudan will continue to be an issue, which can be partly overcome through continuous mentoring and additional learner-centred training. The **lack of infrastructure**, access to power and internet throughout the country will continue to complicate services and data collection; however both are slowly improving.

The management of the rollout suffered from **staff turnover within the MoH, donors and other health partners** leading to loss of institutional memory; hence partners were continuously reminded of the concepts/plans in coordination forums such as the NGO Health Forum.

Competing priorities of individual programmes and funding mechanisms inhibited quicker roll-out and created parallel systems. To date, in 2012, the monitoring of community-based activities and nutrition interventions continue to be outside the national HMIS.

Some states were able to implement the national system quicker than others, shown by the **differences in HMIS monthly reporting** in the map opposite; which illustrates the CHD reporting to state and national levels. It was assumed during the planning, states with greater external support or development would implement the system with more ease; this was not the case. As shown opposite, in February 2012, Central Equatoria State did not report, though the state is the most developed in South Sudan, while all counties, from the less supported and developed, Lakes State reported. Factors explaining what makes the system function have not been explicitly studied but SMoH senior management have highlighted the leadership and willingness of the CHDs and SMoH officers.



Proportion of CHDs Reporting to state and national level, February 2012 (Source MoH)

5. Evidence of impact of intervention on health, health system, and/or conflict transformation

"The DHIS is clearly taking root. There is something about the software that people find satisfying and useful. So I am optimistic that it is here to stay." - WHO Consultant

Weak leadership and governance are defining characteristics of a fragile state[5]. In such a setting, developing government-led HMIS ensures that there is information for evidence-based planning and management and this reinforces leadership and governance of the system. The South Sudan system is in its infancy, with further inputs needed to ensure country-wide HMIS coverage and the use information for action. Nevertheless the impacts noted to date include:

South Sudanese SMoH staff leading HMIS training sessions for all states, Sept 2011

- A common objective has been established across MoH officers, with MoH staff recognizing the need for routine monitoring for assessing progress towards targets, and providing guidance to NGOs.
- Consensus has been reached among the main primary health care donors (World Bank, USAID and the Health Pooled Fund) to use the national HMIS and DHIS rather than create parallel systems.
- Evidence of data and system ownership by the MoH with increased social cohesion among MoH staff including formation national M&E Team, officers from all states supporting each other and working together despite cultural or ethnic differences.
- MoH presentations of information at health coordination meetings and the production of National Health Bulletins have contributed to display the somehow hidden work from staff of SMoH and MoH. This has resulted in increased visibility and leadership among the MoH as well as a well-deserved pride in their work.
- Substantial improvements in the number of counties reporting to the SMoH and the national level, means that the government has a better understanding of the services available, as well as critical gaps in facilities and counties.

In conclusion, the building of a routine HMIS is a first step to develop an effective and efficient health care system while empowering health officers, promoting governance and ensuring partners and heath staff accountability.

[5] Health Systems Strengthening in Fragile Contexts: A Report on Good Practices & New Approaches, 2009