Heath Service Monitoring in South Sudan

Overview of Approaches and Arrangements
Policy Brief 1/5

Health, Nutrition and Population

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***Series Note**: This document is one of a series of briefs produced by the World Bank South Sudan health team that examine health service monitoring in South Sudan. These briefs are based on semi-structured key informant interviews conducted between September 2020 and March 2021 with a range of stakeholders, including representatives of the government, UN agencies, NGOs, donors, and other humanitarian and development partners as well as on document reviews and other data sources. They are intended to provide stakeholders with insights into the landscape of monitoring approaches and arrangements that exist in South Sudan and highlight opportunities for strengthening successful approaches and providing further support where needed.*

Key Points – Brief #1

- Over the past decade, efforts to improve data collection and health service monitoring in South Sudan have been supported by many actors, including the Ministry of Health, donors, UN agencies, NGOs, and other humanitarian and development partners.
- These efforts have faced, and continue to face, significant challenges. Some have been contextual (such as flooding, poor road networks, and COVID-19), while others have involved problems with the health system (such as a lack of human resources, poor infrastructure, and limited health financing), and others have been due to a lack of coordination due to engagement in the country of dozens of international actors with differing priorities and with humanitarian versus development goals.
- These efforts have taken a variety of approaches to data collection and monitoring, including adopting and rolling out health management information systems (HMIS), using programmatic monitoring or organization-specific monitoring systems and tools, and using third-party monitors for data verification and other purposes.
- To better understand the effectiveness of these various approaches, the World Bank has undertaken an in-depth analysis of health service monitoring in South Sudan. The findings of this exercise are laid out in a series of five briefs, including this one.
- This first brief provides an overview of the rationale and methodology for this analysis, an analysis of the main actors, monitoring arrangements, and barriers to conducting effective health service monitoring in the country, and a series of high-level recommendations that are fleshed out in more detail in subsequent briefs in the series.

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Introduction

- Since South Sudan gained independence in 2011, efforts to strengthen the country's health system have faced significant barriers, including ongoing conflict, poor infrastructure, human resource shortages, contextual challenges like flooding and impassable roads, weak governance, a lack of coordination among donors and implementing partners, and, most recently, movement and access restrictions necessitated by COVID-19.
- In fragile and conflict-affected countries, it is essential but also extremely difficult to collect timely and reliable data to monitor project implementation, to inform policies and planning, and to measure the performance of the health system.

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- In South Sudan, a plentitude of actors including the Ministry of Health (MOH), donors, UN agencies, NGOs, and consulting firms have been involved in the delivery and monitoring of health services, which has resulted in an ever-growing amount of data and reports.
- Despite all of these activities, there had been little formal analysis of the various approaches, mechanisms, and arrangements being used to monitor health services in the country, including evaluating the strengths and weaknesses of each and identifying opportunities for improvement. Therefore, the World Bank decided to undertake such an analysis with the aim of discovering valuable information for stakeholders working in the South Sudan health sector.

Methodology

- To analyze health monitoring arrangements in South Sudan, the World Bank South Sudan health team combined a desk-based literature review with a qualitative analysis based on key informant interviews.
- More than 35 individuals representing 17 organizations or agencies working in the South Sudan health sector were interviewed between September 2020 and March 2021, including representatives from the MOH, donor agencies, development partners, UN agencies, NGOs, other humanitarian actors, and third-party monitoring (TPM) firms. .
- The interviews were completely voluntary and semi-structured. They lasted roughly one hour each and focused on key themes, including HMIS, programmatic monitoring, third-party monitoring, data quality, data use and sharing, and technology. Questions and themes evolved as the interviews progressed, reflecting a grounded theory approach in which concepts, relationships, and facts emerge iteratively.
- The interview findings were supplemented by a literature review, which included a PubMed search of peer-reviewed articles on health monitoring in fragility, conflict, and violence (FCV) settings, as well as relevant reports, policy papers, and other documents from the gray literature or those shared by participating organizations. Data from the South Sudan DHIS2 online platform and Health Service Functionality (HSF) monthly monitoring bulletin were also reviewed.
- The findings have been organized into a series of briefs (including this one) focusing on the following key themes: (1) an overview of monitoring arrangements, including key actors, mechanisms, and barriers; (2) HMIS, including DHIS2; (3) programmatic monitoring; (4) third-party monitoring; and (5) the use of technology for health service monitoring. Each of these briefs explore in greater detail the themes introduced in this introductory brief.

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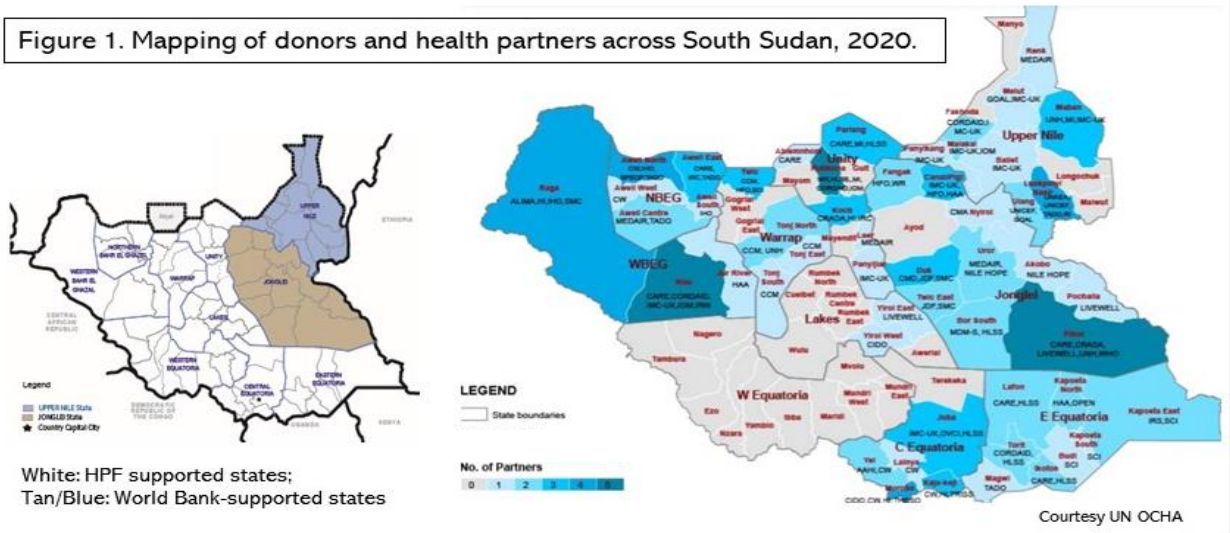
Main Actors

Table 1: Overview of Key Actors in Health Service Delivery and Monitoring

Actor	Examples	Description
Ministry of Health (MOH)	National MOH, State MOH, County Health Departments (CHDs)	The MOH is the main steward of South Sudan's health system. It is organized along administrative lines, with a national ministry based in Juba, state ministries, and a county health department in all 80 counties. In Juba, the ministry is structured into departments or directorates, including a directorate of budgeting, planning, and research, as well as a monitoring and evaluation (M&E) department
Donors	HPF (DFID, USAID, SIDA, EU, GAVI), World Bank	Eight of South Sudan's ten states are supported by the Health Pooled Fund, a consortium of donors including the UK (FCDO/DFID), US (USAID), the EU, Canada, Sweden (SIDA), and GAVI. The remaining two states, Jonglei and Upper Nile, are supported by the World Bank. Donors contract with implementing partners (UN agencies or NGOs) to implement programming.
Other Development Partners	Gates Foundation, CDC	In addition to the donors above, other development partners support specific programming, including the Gates Foundation and PEPFAR/CDC.
UN agencies	WHO, UNICEF, UNFPA, UNDP, IOM	WHO supports the MOH in the areas of health system strengthening and policy development and functions as a third-party monitor (see below). UNICEF is a major implementer of primary care services. UNFPA supports midwife training, MCH services, and demographic data collection. UNDP funds HIV and TB projects, among others. IOM tracks internal displacement, delivers services, and provides monitoring for some programming.
NGOs/ other humanitarian actors	World Vision, Cordaid, Med Air, MSF, ICRC, many others	NGOs are key implementing agencies for health services. As shown in Figure 1, dozens of NGOs are active in the health sector. Some counties are supported by multiple NGOs, while others receive no support.
Third-party monitors	Liverpool School of Tropical Medicine (LSTM), Management Systems International (MSI), WHO	Donors and implementing agencies have contracted with independent firms to perform data verification, assess program implementation, and conduct surveys, among other activities.
Coordinating Bodies	South Sudan Health Cluster	The health cluster functions as a coordinating body for humanitarian bodies in the health sector. Additional working groups have been formed centered on specific services or themes such as WHO's Expanded Programme on Immunization (EPI) and M&E.

Figure 1. Mapping of donors and health partners across South Sudan, 2020.



White: HPF supported states;
Tan/Blue: World Bank-supported states

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Key Mechanisms

- According to the key informant interviews, most monitoring arrangements in South Sudan fall into three main categories: (1) HMIS; (2) programmatic and internal monitoring; and (3) third-party monitoring.
- As described in Table 2, examples of HMIS include the DHIS2; surveillance networks for communicable diseases (Early Warning, Alert, and Response System or EWARS); and systems for pharmaceutical and human resources tracking. Programmatic monitoring encompasses all activities undertaken by stakeholders to monitor services outside of HMIS. Third-party monitoring refers to monitoring performed by contracted firms who are not directly funding or implementing projects.
- Each actor's interest in one or all of these approaches reflects their respective responsibilities, priorities, and missions. Each approach has strengths and weaknesses, which will be described in subsequent briefs.
- As the steward of the country's health system, the MOH has articulated a clear desire to organize reporting and monitoring under DHIS2, as reviewed in detail in Brief #2.
- Given that DHIS2 is still being rolled out in South Sudan and because each program has specific data needs and requirements, donors and implementing agencies undertake a variety of program-based monitoring activities. These range from specific tools and surveys undertaken to supplement HMIS data collection to entirely separate proprietary data collection systems (such as that of the International Committee of the Red Cross or ICRC). These are reviewed in detail in Brief #3.
- Many donors have engaged TPM agencies to meet a variety of their monitoring and verification needs. These are reviewed in Brief #4. These TPM activities are often aimed at addressing specific threats to verification and accountability, including facility access issues, poor data quality, and data gaps.

Table 2: Overview of Key Health Sector Monitoring Mechanisms

Monitoring Arrangement	Examples	Key Stakeholders/Supporters
HMIS	DHIS2	MOH, Donors, UN agencies, IPs
	ISDR/EWARS	MOH, WHO
	Pharmaceutical system	MOH, USAID
	Human resources system	MOH, WHO
Programmatic monitoring	Nutrition indicator monitoring	Nutrition cluster
	Monitoring of the EPI	Health Cluster/IPs
	Internal monitoring systems	ICRC, MSF
	Internal monitoring tools and protocols	UNICEF, IPs
	Donor-funded M&E teams	HPF

Third-party monitoring	Data verification visits	Donors, TPM agencies, IPs
	Health facility and service availability assessments	Donors, TPM agencies, IPs
	Quality of care assessments	Donors, TPM agencies, IPs
	Client satisfaction surveys	Donors, TPM agencies, IPs
	LQAS household surveys	MOH, World Bank, LSTM

Key Barriers

- The interview respondents universally acknowledged that monitoring in South Sudan is highly challenging, at times "bordering on impossible" in certain facilities and areas. These barriers are organized thematically in **Table 3,** with representative quotes taken from various key informant interviews.
- These barriers include: (1) contextual challenges related to violence, insecurity, flooding, and other accessibility issues; (2) pervasive weaknesses within the health system itself, including weak stewardship, limited infrastructure, human resource gaps, and reliance on external financing; and (3) coordination and harmonization issues, reflecting the large number of actors in the South Sudan health sector with varying priorities and perspectives, including what several stakeholders described as a challenging humanitarian-development divide.
- At the ***contextual level,*** respondents cited geographical accessibility as one of the key issues affecting their capacity to effectively monitor health services and programming. Access to many areas is limited by endemic challenges, including seasonal flooding and poor road networks that render some areas unreachable from the outside for months as well as a lack of mobile and wireless networks that makes it difficult to contact facilities located outside of larger cities or towns and sporadic and unpredictable intercommunal violence that can interrupt field visits and supply deliveries.
- At the ***health system level***, barriers to health monitoring are reflected in almost all of the health systems building blocks:
  - *Stewardship and Governance*: The respondents generally complimented the MOH for prioritizing the roll out of DHIS2 and articulating a clear strategy encouraging all facilities to report data to the DHIS2. However, some respondents were critical of the MOH's capacity to oversee this rollout, noting a lack of clear organizational structure within the national ministry as well as weak capacity in the county health departments (CHDs) that have been designated as the linchpins for the rollout.
  - *Health Management Information Systems*: As discussed in Brief #2, South Sudan's DHIS2 implementation is accelerating but has yet to involve a significant fraction (at least 20 percent) of the country's health facilities. Moreover, even among those facilities that are reporting their data to the system, there are still significant concerns about the timeliness, completeness, and accuracy of the reported information.
  - *Human Resources*: Respondents frequently commented on several issues related to human resources, including high staff turnover at the health facility and CHD level, the limited skill set of data collectors that leads to data inaccuracies, and the heavy

burden put on facility workers, particularly when transmitting data to CHDs. Given that some primary health care centers and units have only one health worker responsible for seeing patients and filling out registers, they have at times viewed monitoring as either secondary or unnecessary.

- *Infrastructure*: Basic infrastructure is lacking at many health facilities, particularly primary health care centers and units, including electricity for charging and tablets/computers and phones to enable mobile data entry.
- *Financing*: Several respondents commented that monitoring is very expensive given the long travel times, need for security arrangements, and investments in continuous training, and must be planned and budgeted appropriately. Monitoring activities are highly dependent upon donor funding, which raises concerns about their sustainability after the donor support is withdrawn.

- At the ***coordination level,*** respondents expressed concerns that the humanitarian and development communities are not well-aligned in terms of their data collection activities and reporting mechanisms, despite engaging in overlapping programming.

Table 3. Key Cross-cutting Barriers to Effective Health Monitoring in South Sudan

Challenge	Sub-themes	Perspectives of Key Informants
Accessibility	-Flooding -Road networks -Insecurity	○ "The biggest problem is accessibility. We support facilities in several counties but are only able to access one easily. The rest are…a bit far. The only means of transportation is the river. When you get to the facility, you have limited time, you have nowhere to spend the night." ○ "There is flooding for almost half the year. You walk through water to get to the facilities. You canoe. Sometimes there are crocodiles. The time it takes to get to one facility may take several days or [it may] be inaccessible during the flooding."
Infrastructure	-Mobile networks -Wireless availability -Electricity	○ "The infrastructure problem cannot be stressed enough. Regular communication is a challenge. Even to get the forms and data collection tools [to the facilities] is a challenge."
Human Resources	-Turnover -Renumeration -Qualifications -Motivation	○ "The staff are changing all the time. There are too few staff." ○ "Some facilities have one nurse, one cleaner. If you try to implement at that level, there is no one to take over." ○ "The salary is one of the lowest. That's why it's very difficult to get qualified personnel to work in remote locations. Many people prefer to work where they get better services." ○ "The staff may not have the capacity to use a mobile device to input data." ○ "In some facilities, staff are unable to write, forget to record data, or are unable to record. We find it difficult to get quality data." ○ "You can train someone today and tomorrow they left. Sometimes you get a relative instead. These are areas where you have to tread lightly."
Stewardship	-National MOH structure -County health department capacity	○ "As of now the ministry does not have a clear staffing structure, [and] some of the staff we work with do not have any formal documentation or appointment with the Ministry of Health. There is no clear structure from the national ministry." ○ "You don't find well-structured departments in the ministry. The MOH is still suffering from lack of a strong workforce, and the few that are

		there are overwhelmed. Altogether it means the M&E is might not be well-structured." ○ "I have not had the sense that there is a department within the ministry dealing with M&E guidelines." ○ "The [lack] of CHD capacity is a barrier. They are supposed to be ones in overall charge of DHIS2 reporting."
Health Management Information Systems	-Data quality, including timeliness, completeness, and accuracy	○ "Timeliness is an issue. Since it is web based, locations that have access issues find it difficult to upload data on time." ○ "Data submitted to DHIS2 is very delayed, and [we] need data earlier to submit donor reports."
Coordination and Data Sharing	-Coordination mechanisms -Humanitarian-development divide	○ "At times we feel [the data demand] is too much. We provide information through DHIS2, we do a program report; we also have to give the 5Ws." ○ "Workers complain about number of indicators that they have to capture." ○ "The health cluster looks at things in terms of emergency, with a lens of humanitarian response, emergency. They want to get data through the 5W and EWARS. But when you look at the other side, the development approach, the ministry wants to have data captured in the DHIS." ○ "Coordination is being done in a kind of disparate way. Maybe it means having a well-identified entity within the ministry."
Cost	Logistics Budgets Sustainability	○ "It is expensive. To go to one facility to deliver a box of vaccines, you spend more than $500 on oil for the motorboat." ○ "Data collection is extremely expensive because of issues with accessibility and logistics." ○ "As we are seeing the amount of resources drop, data [reporting] is often the first thing that gets dropped."

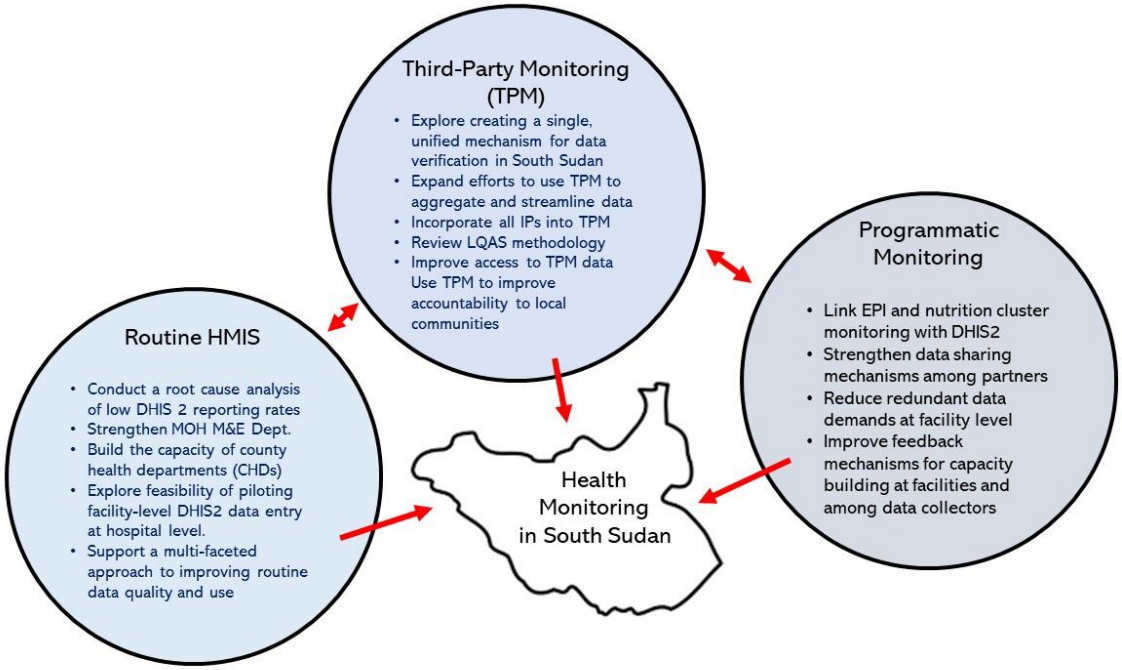
Opportunities and Recommendations

- This brief provides an overview of key actors, arrangements, and barriers related to monitoring health services in South Sudan. Subsequent briefs in this series give more details of the strengths, weaknesses, and opportunities related to specific monitoring arrangements, including HMIS, programmatic monitoring, and TPM, while a separate brief looks at the use of technology for health monitoring in South Sudan.
- In reflecting on the above actors, arrangements, and barriers, the interviews with the key respondents yielded a series of recommendations for improving monitoring arrangements (Figure 2), which are explored in greater detail in subsequent briefs.
- In terms of HMIS (Brief #2), the respondents offered several suggestions for strengthening DHIS2, including conducting a root cause analysis for continued low reporting rates, for increasing key human resource capacity in the MOH, both at the national level and in the county health departments, and for exploring the possibility of piloting facility-based DHIS2 at a handful of appropriate facilities (such as busy hospitals).
- In terms of third-party monitoring (Brief #3), the respondents generally noted the important role played by TPM for data verification but offered several recommendations, including: (1) harmonizing the disparate TPM activities for

different donors and partners into a common, sustainable approach and framework; (2) adopting better practices to ensure that TPM data are shared more widely and in a more timely manner with implementers and facilities; and (3) reviewing certain TPM methodologies to ensure buy-in from end users.

- In terms of programmatic monitoring (Brief #4), the respondents recommended attempting to link all non-DHIS2 data collection systems with DHIS2 itself, reducing redundant data collection tools and demands on facilities, and strengthening coordination among stakeholders.

Figure 2. High-level recommendations for strengthening health monitoring approaches in South Sudan



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Acronyms

5Ws	Who does What, Where, When, and for Whom (UN)
CDC	Centers for Disease Control and Prevention (US)
CHD	County health department
DFID	Department for International Development (UK)
DHIS	District Health Information Software
DHIS2	District Health Information Software 2
EPI	Expanded Programme for Immunization
EWARS	Early Warning, Alert and Response System
FCDO	Foreign, Commonwealth, and Development Office (UK)
FCV	Fragile, conflict-affected, and vulnerable settings
GIS	Geospatial Information System
GPS	Global Positioning System
HMIS	Health Management Information Systems
HPF	Health Pooled Fund
ICRC	International Committee of the Red Cross
IOM	International Organization for Migration
IP	Implementing partner
LATH	Liverpool Associates in Tropical Health
LMIC	Low and middle-income countries
LQAS	Lot Quality Assurance Sampling
LSTM	Liverpool School of Tropical Medicine
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MSI	Management Sciences International
NGO	Non-governmental organization
NIS	Nutrition Information System
PEPFAR	President's Emergency Plan for AIDS Relief (U.S.)
PHCC	Primary health care center
PHCU	Primary health care unit
TPM	Third-party monitoring
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization

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