# DECENTRALIZING MALI'S HEALTH WORKFORCE INFORMATION SYSTEM

**October 2020**

Mamadou M'BO, Jeanne TESSOUGUE, IntraHealth International/Mali; Djeneba TOGORA, Etienne COULIBALY, Human Resources Directorate, Health and Social Development Sector, Mali

## BACKGROUND

Mali is one of the countries identified by the World Health Organization (WHO) as facing a human resource for health (HRH) crisis.

Improving the health of populations requires sufficient quantity and quality of HRH to provide effective services with a focus on workforce planning, development, and management. Meeting HRH needs is a challenge for Mali, which has only six qualified providers per 10,000 inhabitants (Ministry of Health HR Directorate, 2017). This deficit is accompanied by an uneven distribution of HRH, with only 31% of medical specialists and pharmacists working outside the capital, Bamako; and a critical shortage of doctors and nurses in hard-to-reach areas affected by inter-community conflicts and jihadists.

Further, inadequate management of the health workforce has resulted in:

- Insufficient coordination of HR management
- Over-centralization of personnel management decisions
- Loss of information on HR management due to paper-based archives, resulting in inability to use data for effective decision-making
- Non-rational planning of training needs, recruitment, and deployment of health workers
- Lack of understanding regarding the workload, organization of services, and retention of health workers, especially in rural areas.

All of these factors have been compounded by a lack of oversight of the workforce and poorly motivated staff who lack continuous training necessary to maintain quality health care provision.

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The gaps in available HRH data contributing to these issues highlighted the need for a reliable, up-to-date HR information system (HRIS) that could be used for decision-making at both national and decentralized levels.

Going forward, Mali aims to align with the WHO National Health Workforce Accounts (NHWAs), a system by which countries progressively improve the availability, quality, and use of data on the health workforce through monitoring a set of indicators. A strong HRIS will be a key component of a well-functioning NHWA.

# APPROACHES

To meet its health workforce challenges, the government of Mali—with support from the USAID/Mali HRH Strengthening Activity implemented by IntraHealth International—updated its HR policy and developed a Strategic Plan (2018-2022) for HRH Development that covers the strategic areas of governance, HR management, information system and research, and increasing investments.

One of the strategic axes of the plan is the digitization and decentralization of HRH management using **iHRIS**, the open source health workforce information system developed by IntraHealth, to include all personnel in the public, para-public, community, and private sectors. IntraHealth supported the introduction of iHRIS in Mali in 2014; however, it was initially used only at the national level for decision-making related to planning and provision of HRH.

The decentralization process started in 2015 and focused on the following actions:

- Customization of the iHRIS software to the context of Mali's health system
- Provision of IT equipment and materials (computer, multifunction scanner, camera, hard disk, 3G Internet connection key) from the Human Resources Department (HRD) at national level to regions and health districts
- Design and validation of tools for collecting HR data
- Training for managers at different levels of the health system on iHRIS and how to interpret and use the data for decision-making
- Mapping of HRH in eight of the nine regions and the district of Bamako (to be extended to health districts and hospitals across the country) to allow real-time use of HRH information from the national iHRIS in all regions, districts, and hospitals
- Regular monitoring and updating of the database using monitoring sheets and a platform to share information and experiences among HR managers
- Facilitating supervision by HRD throughout the process to support regions to efficiently perform their work.

# RESULTS

Decentralized iHRIS has been recognized by the government of Mali as a national reference tool in HR management for the three components of the health sector: Health, Social Development, and Advancement of Women. iHRIS is used in 8 regions and 40 health districts, 7 hospitals, and all of the central technical services of the Ministry of Health (MOH). The private sector has also been involved and 13 private-sector orders and associations have been trained and regularly update the iHRIS database.

iHRIS is being used as a planning tool for the short- and long-term recruitment of HR and the deployment of providers as needed.

## "iHRIS is synonymous with transparency, integration, and strengthening of

## governance for the enlightened management of mobility and the workforce of health staff in real time."

*— National Director of Human Resources in the health sector, Mali*

iHRIS also serves as an advocacy tool for the MOH in planning and improving HRH recruitment and retention with technical and financial partners as well as the other government departments involved in HRH management such as the ministries of budget, labor, public service, and communities.

The use of iHRIS data allows the MOH to know and follow the progression of its ratio of health personnel per 10,000 inhabitants and compare it with international thresholds (e.g., 33.45 qualified health professionals per 10,000 population as presented in the 2013 WHO report, *A Universal Truth—No health without a Workforce*). From 2014 to 2017, the national ratio improved from 4 to 6/10,000, with extremes between 3 and 23, respectively, in Mopti and Bamako in 2017.

The data completeness rate of iHRIS improved from less than 60% before the decentralization of the system to around 90% in 2018. iHRIS allows decision-makers to disaggregate human resources data by sex, qualification, and sources of funding.

To date, over 20,000 public doctors, nurses, and midwives are registered in iHRIS, along with 3,604 private health workers; 402 HR managers and other decision-makers use iHRIS to make decisions in real-time.

The workload formerly needed for HR management at national and regional levels as well as delays in updating information have considerably decreased. Data and file loss due to slow processing is almost nonexistent resulting in increased availability of real-time data at reduced time and cost.

Planning now reflects reality and all levels of the health system have access to data. The dynamism of the system has enabled the quarterly production of dashboards (Figure 1) at regional level as a periodic reporting system that allows cross-checking of HRH data with other health indicators to better guide decisions and deployment of HR within a region.

The Regional Director of Health of Sikasso, for example, reorganized obstetrics and gynecology services on the basis of iHRIS data by making an equitable distribution of nurses between the two services.

## "I have much easier decisions to make on the movement of staff since iHRIS gives me the exact situation of HR in the region."

*— Regional Director of Health, Sikasso*

# CONCLUSION

The USAID/Mali HRH Strengthening Activity supported the MOH to institutionalize iHRIS and make complete and up-to-date HRH data available at decentralized levels. Today, Mali has an HR information system that allows informed management of HR in terms of planning, recruitment, and deployment at all levels of the health system.

Capacity has been built among regional HR managers to facilitate use of iHRIS data and other integrated data sources going forward, enabling the key actors to continue relying on these tools for decision-making.

To increase national ownership, the next steps are to finalize the decentralization of iHRIS to all health districts, fully include the private sector, and expand the system to cover community health workers.

The gains achieved in Mali through decentralizing HRH decision-making and capacity building can be achieved in other country contexts where iHRIS is already in use at the national level.

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**Figure 1. HRH Dashboard example**



*Cover photo: Trevor Snapp for IntraHealth International*

*This publication is made possible by the support of the American people through the United States Agency for International Development (USAID). The contents of this document are the sole responsibility of IntraHealth International, Inc. and do not necessarily reflect the views of USAID or the United States Government.*

## CONTACT

Dr. Cheick Oumar Touré
*Country Director, IntraHealth Mali*
ctoure@intrahealth.org

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