

# OPTIMIZING DATA USE FOR EFFECTIVE DECISION-MAKING IN MANAGING KENYA'S HEALTH WORKFORCE

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**Francis Mbate, Robert Nguni, Billy Njoroge, Caxton Murira, Dr. Janet Muriuki, Esther Kariuki and Wycliffe Omanya**

## BACKGROUND

Two essential components of human resources for health (HRH)—human resources development (HRD) and human resources management (HRM)—guide the career of a health worker from training to employment to exit from the health workforce.

The effectiveness and efficiency of these two components is anchored in the availability and reliability of an HRH information system robust enough to query workforce numbers and skills mix against present and future needs and to develop appropriate response mechanisms based on data. Such a system takes into consideration labor market dynamics and education policies to address shortfalls and poor distribution of health workers, thereby enabling improvements in health outcomes, social welfare, employment creation, and economic growth.

Before Kenya devolved HRH management to its 47 counties in 2013, health workforce information relied on a manual system centralized at the national Ministry of Health (MOH) and informing recruitment, deployment, management, and development. Health workforce supply and demand data existed in paper forms that were difficult to retrieve and use for HRM. The MOH lacked accurate data on the number of professional health workers

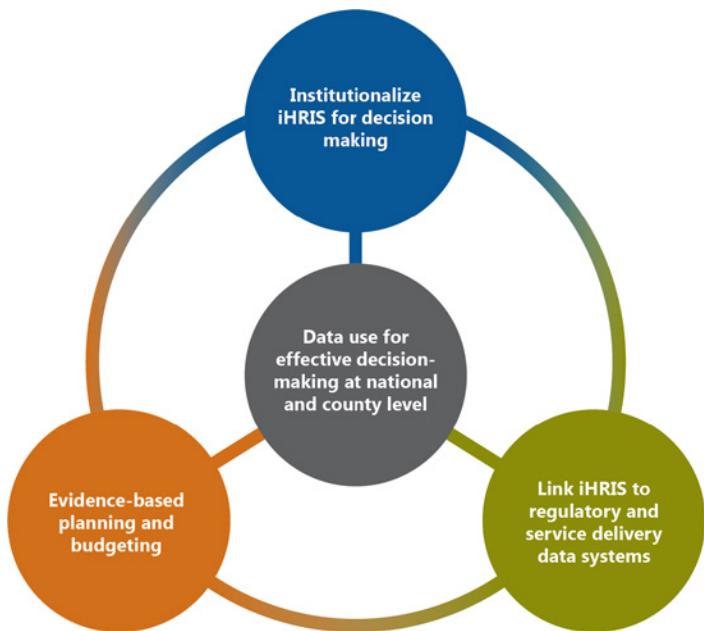
by age, position, cadre/qualification, region, and rate of attrition. Data could not be aggregated and recruitment, training, and placement were not based on evidence but largely on politics and staff preferences. In addition, Kenyan training institutions lacked data on national training and deployment needs.

## TOWARD EVIDENCE-BASED HRH MANAGEMENT

The USAID-funded HRH Kenya Mechanism led by IntraHealth International worked with the Government of Kenya to address information challenges resulting from devolution through the decentralization of iHRIS—a health workforce information system that enables the MOH and counties to design and manage a comprehensive human resources strategy. Hosted centrally at the national MOH and in the 47 counties, iHRIS tracks detailed information about health workers throughout their employment, including where they are deployed, salary history, promotions and transfers, qualifications, in-service training courses, and reasons for attrition, as well as open positions and applicants. For iHRIS to function well at the national and county levels necessitated HRH unit staff with the skills needed to analyze and then use data; investment in infrastructure through annual HRH workplans and budgets; a functional multi-

level iHRIS virtual helpdesk at MOH and inter-county levels, and interoperability among iHRIS, the district health information system (DHIS2), the regulatory human resources information system (rHRIS), and other health information systems. Figure 1 shows the implementation approach for optimization of data use for decision-making at the national and county levels of governance.

**Figure 1: Implementation approach for data use optimization for decision-making**



## CAPACITY DEVELOPMENT

The HRH Kenya Mechanism supported iHRIS utilization through sensitization, training, technical assistance, and mentorship. The Mechanism trained key staff at the national and county levels to collect, manage, analyze, and use HRH data for decision-making for the benefit of their counties. Human resources officers and managers from the counties and implementing partners, county health service delivery implementing partners, training coordinators from training institutions, and county health management teams (CHMTs) were trained as HRH champions. Participants gained skills in collecting health training data, updating data into the system, and analyzing data and sharing with the county leadership to inform planning, recruitment, deployment, and sound decision-making. To simplify the process and standardize operations, the Mechanism developed communication tools in the form of dashboards, density maps, and county bulletins.

## INSTITUTIONALIZATION

The Mechanism supported 19 counties to establish and operationalize iHRIS/HRH technical working groups (TWGs) as a first step toward institutionalization of iHRIS at the county level. TWGs with terms of reference meet monthly to spearhead implementation of iHRIS. Their mandate includes HRH data analyses, collaborative development of dashboards, and sharing data for decision-making. Box 1 presents typical membership of a TWG.

To regulate the use of data in iHRIS, the Mechanism, in conjunction with the MOH, developed iHRIS and eRecords management guidelines on how the system is implemented and used for decision-making in the management of health workers. It also provides users with information on how to implement eRecords management in the HRH department or unit. Additionally, the national MOH developed a stepwise digitization guide to support national and county governments to continually update staff eFiles in iHRIS by scanning, indexing, and uploading any missing records from a staff file including files for newly hired staff. The health departments identified iHRIS focal persons in respective counties; with support from the Mechanism, they were trained as trainers of trainers and mentors of iHRIS utilization skills at devolved levels and to new recruits.

### BOX 1: MEMBERSHIP OF HRH TECHNICAL WORKING GROUP

1. Director HR
2. HRH managers or officer(s)
3. County training focal person
4. County iHRIS focal person
5. Health Records & Information Officer
6. County Health Administration Officer
7. iHRIS focal person from the referral hospital
8. Key subcounty iHRIS focal persons
9. Integrated Personnel and Payroll Database (IPPD) officer/manager
10. HR public service department
11. County Public Service Board
12. Key CHMT members—e.g., Chief Nursing Officer, Constituency AIDS and STIs Coordinator (CASCO), County Community Strategy Focal Person, Reproductive Health Coordinator, Clinical Officer
13. Implementing partners
14. Representative from key training institutions in the county

The MOH developed an iHRIS curriculum to support standardization of skills and enable users of iHRIS to have core learning elements that promote data utilization for efficient and effective management of the health workforce. The iHRIS curriculum and user manual provide general information that introduces users to the concepts of HRM, management of health workforce records, databases, analysis, and reporting. The curriculum is used by the counties and the MOH to mentor and train staff on the use of iHRIS for decision-making.

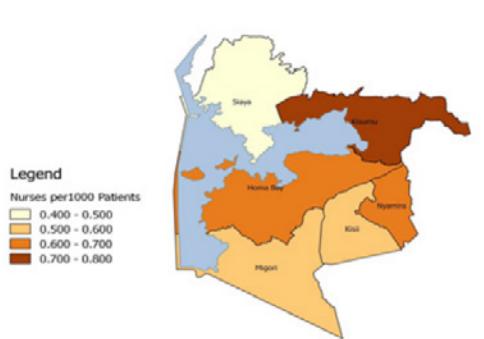
## RESULTS

The HRH Kenya Mechanism has worked with the MOH, county governments and key stakeholders to roll out the iHRIS platform and related system strengthening approaches for national and county health workforce management, using the data to: 1) track, map, manage, and deploy health workers; 2) forecast changes in supply and project the number and types of health workers needed over time; and 3) track and manage preservice and in-service training to gauge the pipeline for scaling-up services. The system is now used in 37 counties to manage HRH data. The collaborative engagement has also led to the development of physical and virtual platforms for peer learning and information exchange among iHRIS users, and facilitated interoperability between iHRIS and DHIS2, Kenya Health Facility Master List, Data Services Layer (DSL), and rHRIS.

## IMPROVED HRH PLANNING AND DECISION-MAKING BASED ON DATA

One key contribution of the HRH Kenya Mechanism to the health sector has been to build adequate capacity of key national and county staff to sustain utilization of iHRIS and data for decision-making toward self-reliance. The Council of Governors—the organ mandated to promote visionary leadership, sharing of best practices, and offer a collective voice

**Figure 2: Density of nurses per 1000 population**



on policy issues for county governments and the MOH—has designated iHRIS as a tool to inform HRH planning and management at the national and county level.

In partnership with the USAID-funded Kenya Health Management Information System (KeHMIS) project and CDC-funded health information system projects, the Mechanism has worked to integrate iHRIS with rHRIS on registration and licensure status for medical specialists, nurses, clinical officers, and laboratory specialists, derived from the respective boards—Kenya Medical Practitioners and Dentists Council, Nursing Council of Kenya, Clinical Officers Council, and Kenya Medical Laboratory Technologists and Technicians Board. HRH managers in the counties are now able to generate reports on the 1) registered staff with active licenses; 2) registered staff with expired licenses and 3) staff in the establishment who are not registered or licensed. This interoperability has enhanced health workers' compliance with respective regulatory bodies. iHRIS pushes placement and position information to rHRIS thus enabling regulatory bodies to confirm current placements and due dates for the renewal of practicing licenses for health workers.

## HEALTH WORKFORCE DENSITY MAPS

In strengthening the capacity of counties to make data-informed decisions, the HRH Kenya Mechanism developed health workforce density maps to show health worker distribution by gender and service delivery areas (see Figure 2). These maps have become critical visual complementary tools that inform HRH planning, budgeting, learning, and adapting.

## INCREASED MANAGEMENT AND OPERATIONAL EFFICIENCIES

iHRIS has a built-in tool to identify data quality gaps thereby enabling efficient data cleaning and building trust in the validity of the data generated from the system. Counties have captured into iHRIS more than 1,390 community health extension workers (CHEWs) not previously reflected in the system. iHRIS has also been enhanced to identify the level of effort health workers put on providing HIV services—for every health worker employed by the county or contracting partner, iHRIS can indicate the percentage (0-100) of time spent in providing HIV services.

**Table 1: Examples of data use and results**

Data Use	Result of Data Use
Attrition data to budget for replacements	<ul style="list-style-type: none"> <li>Avail budget for replacements</li> <li>Recruitment to replace retirees</li> </ul>
Staff distribution per level of facility	Redistribution of health workers for balanced workload
Use of retirement projections	Identify those retiring and issue notices to staff and public service boards
Cadre distribution data for annual budgeting	County budgets developed
Recruitment planning	Plan for bridging staff gaps and replacement developed
Payroll preparation, budgeting	<ul style="list-style-type: none"> <li>Remuneration of health workers</li> <li>Preparation of supplementary budget</li> </ul>
<ul style="list-style-type: none"> <li>Redeployment</li> <li>Succession planning</li> <li>Development of County Integrated Development Plan (CIDP)</li> </ul>	<ul style="list-style-type: none"> <li>Redeployments done</li> <li>Recruitment plan developed</li> <li>CIDP produced</li> </ul>

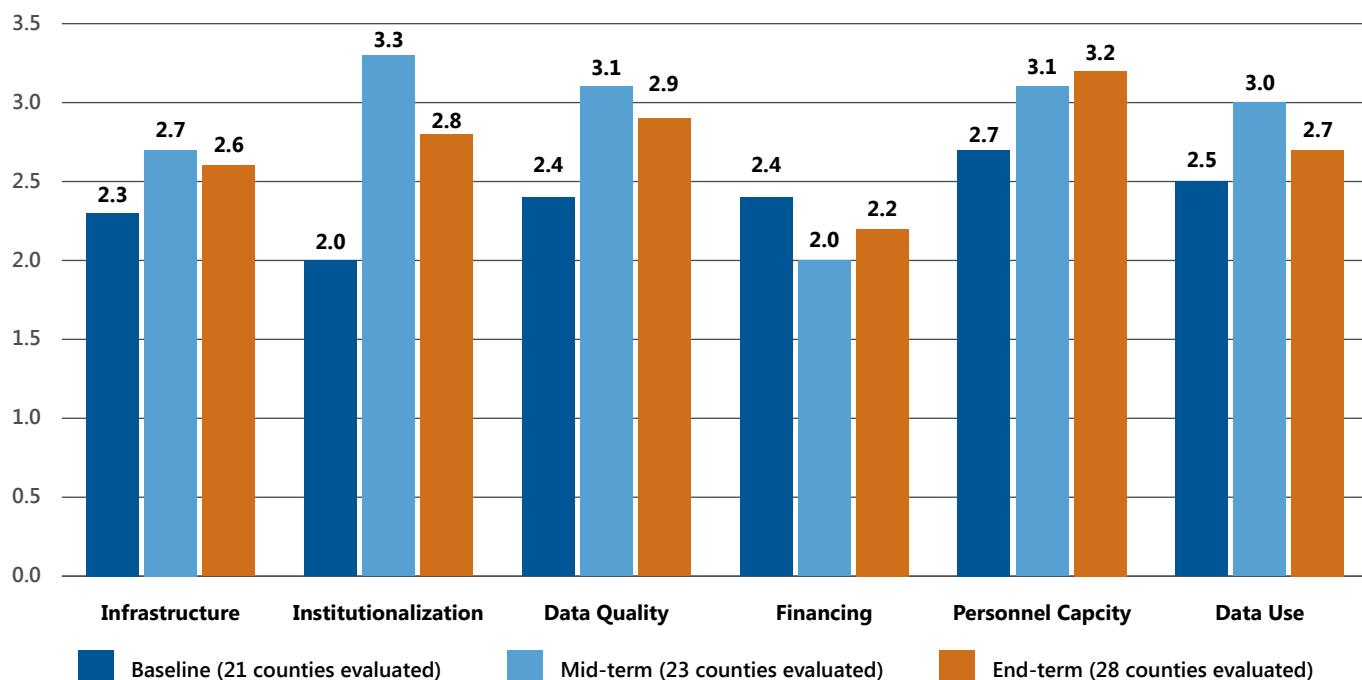
## iHRIS SUSTAINABILITY

The HRH Mechanism conducted a baseline assessment to inform HRH data needs aligned to specific interventions. The sustainability index identifies the maturity scale for each county with regards to HRM, with 1 being the lowest and 4 being the ideal. The sustainability index tracks six indicators: technology infrastructure; institutionalization of iHRIS; data quality; sustainable financing; personnel and human capacity; and data use. Counties self-administered the iHRIS Sustainability Tool and scored their own progress against the baseline. Figure 3 shows aggregated performance for 28 counties.

## iHRIS CHAMPIONS AND MENTORSHIP

To ensure iHRIS sustainability beyond donor support, the HRH Kenya Mechanism developed an iHRIS user guide, data demand and information use (DDIU) strategic plan, mentorship guide, and support structures, grounded in county and inter-county TWGs designed to enable the health sector to continue to address its HRM challenges. This was complemented by capacity building of county iHRIS users (“iHRIS champions”), inter-county peer-to-peer best practice sharing, and on-the-job training linking champions to an iHRIS trainers of trainers mentorship program. The training has covered 29 counties since its inception in December 2018 with 30 iHRIS mentors reaching 60 mentees.

**Figure 3: Average iHRIS sustainability index scores for counties at baseline, mid-term, and end-term**



The iHRIS champions and mentorship program have proved effective in demonstrating that counties and training institutions can scale up iHRIS utilization in providing data for decision-making, iHRIS technical assistance, and training within and between counties. iHRIS champions are able to maintain their county data, update the data, conduct data quality analysis and generate reports and dashboards that have been utilized for critical HRH planning. In Mombasa County, for example, skills applied from training in data analytics contributed to successful advocacy to hire additional health workers to compensate for the county's high attrition rate over the previous five years.

## CHALLENGES

**Reliance on donor support.** While the HRH Kenya Mechanism has collaboratively supported the counties to implement iHRIS-related activities and advocate for increased financing, the pace of budgetary inclusion has been slow. The Mechanism has therefore developed a budgeting template to help counties advocate for HRH funding, including iHRIS.

**HRH unit staffing.** The current number of staff in county HRH units do not match the amount of work demanded in management of county health workforces. This understaffing affects the pace of iHRIS implementation due to overwhelming workload. Advocacy initiatives have begun to bear fruit—the units have been established with job descriptions of relevant officers, including for HRH data management.

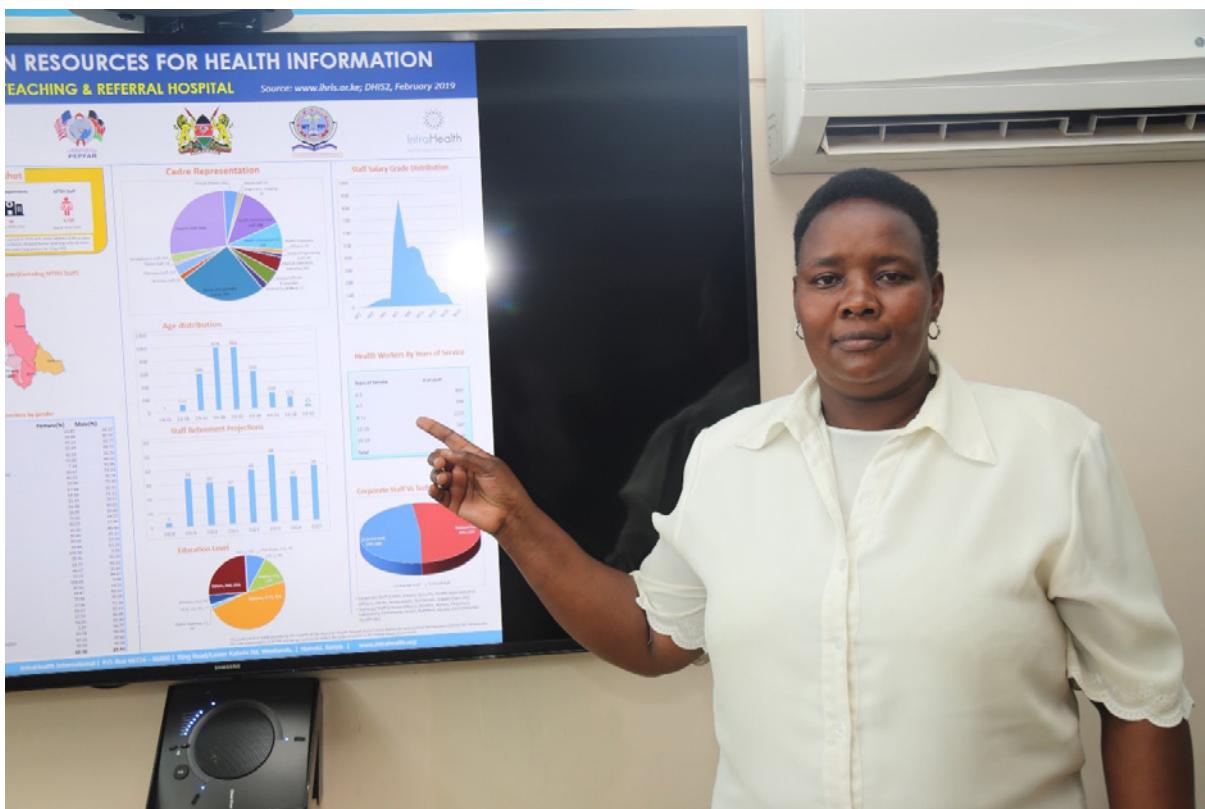
## LESSONS LEARNED / RECOMMENDATIONS TO GOVERNMENT AND DONORS

- As iHRIS becomes more integral in the management of health workers in public health facilities, there is an opportunity for the system to be expanded to include all health sector workers including those in faith-based organizations and private health facilities. This would eventually enable Kenya to have real-time, national status reports on its full health workforce.
- The journey to self-reliance relies on a county's commitment and capacity to plan, finance, and implement solutions to further its own development. This calls for intentional government-led funding of HRH activities in counties through formal instruments such as annual workplan and budgetary provisions. Funding should also be put in place to support HR data activities such as management, audits, and data cleaning.
- Consistent engagement of key stakeholders at national and county level using the 3i framework (include, involve, inform) in the implementation of iHRIS has contributed to speedy acceptance and ownership of, and minimized resistance to, the system.
- An online e-induction platform conceived of by the Mechanism has saved counties significant resources that would have been used in the face-to-face orientation of staff. There is potential for counties to rack up more savings as they continue to use the platform to onboard new staff.

# CONCLUSION

As Kenya strives to attain universal health coverage, it behooves the government to take stock and assess the value of HRH data for decision-making not only in relation to health care but also as a broader development component. Counties have used iHRIS data to validate their staff and eliminate ghost workers hence reducing wastage of resources. The forecasting of health workforce needs, along with planning and managing through linkage with performance appraisal systems, ensures that health service providers are present and responsive in offering quality health services to citizenry.

iHRIS has enabled the MOH and the counties to design and manage their human resources in a more robust and comprehensive manner. Counties better understand their health workers and iHRIS has created a path for improving advocacy, planning, management and development of HRH at both national and county levels.



iHRIS champion shows the displayed iHRIS dashboard with key HRH indicators



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## CONTACT

Dr. Janet Muriuki  
Country Director, Kenya  
Program Lead, HRH Kenya Mechanism  
jmuriuki@intrahealth.org

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