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The Constitution of Kenya (2010) assures every resident of this country access to healthcare. The health sector is thus tasked with provision of quality preventive and curative health services to all Kenyans. Under the constitution, these services are assigned to national and county governments.

To achieve the right to quality healthcare, county and national government have invested heavily on human resources for health. Through the Public Service Commission (PSC) and County Public Service Boards (CPBs), health workers are hired and deployed to various public facilities across the country. Currently, there are more than 54,000 health workers working in public facilities in the country. With such a huge number and dynamic environment, staff movement is very regular and tracking this movement is of utmost interest. This desires a health workforce management information system to enable health managers and leaders access updated information for decision making including for hiring, transfers, promotions, resource allocation/budgeting.

Over the last few years, the Ministry of Health has been rolling out the Integrated Human Resources for Health Information System (iHRIS) to the national and county governments to support the management of health workforce in the public sector. This integrated system is accessible online and Human Resources for Health (HRH) officers, managers and leaders at both national and county level, as well as contacting institutions and NGOs are able to manage and report on their health workforce. The system captures and manages all details of human resources management and development right from the time employees join service to the period of exit. It also has a document management module (DMS) where key employee records are scanned and uploaded for ease of retrieval.

The purpose of this iHRIS & eRecords User Guide is to provide guidance on how the system will be implemented, and used for decision making in the management of health workers. The User Guide also provide the user with information on how to implement eRecords management in the HRH department or unit. This guide does not substitute other laws and guidelines, but is meant to guide the user. The Ministry of Health wishes to issue this user guide to the national and county governments towards better management of health workers.

Dr. Nicholas Muraguri

Principal Secretary, Ministry of Health
Republic of Kenya

Signed  Date

Integrated Human Resources Information System (iHRIS) and Records Management User Guide
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<td>Country Director of Health</td>
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<td>CEC</td>
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<td>CHMT</td>
<td>County Health Management Team</td>
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<td>COH</td>
<td>Chief Officers of Health</td>
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<td>CS</td>
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<td>EMR</td>
<td>Electronic Medical Records</td>
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<td>GHRIS</td>
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<td>HIS</td>
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<td>ME</td>
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<td>PS</td>
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<td>Technical Working Group</td>
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CHAPTER 1

INTRODUCTION TO INTEGRATED HUMAN RESOURCE INFORMATION SYSTEM AND RECORD MANAGEMENT USER GUIDE

Background

The Global Health Workforce Statistics (2014 update) by the World Health Organization states that there is growing demand for quality and timely information on human resources for health, to inform decision-making for policies and programs at the international, national and county levels.

It is unfortunate that countries most in need of strengthening their Human Resources for Health (HRH) tend to have the most fragmented and unreliable data and information. There is thus need for a harmonized, dedicated system for collecting, processing and disseminating comprehensive and timely information on health workforce. Currently, in Kenya, pieces of information are derived from different sources, including health regulatory bodies, health information records, population or establishment censuses or surveys, payroll records, etc. As a result, the Health Ministry, county departments of health and other stakeholders often depend on ad hoc reports compiled from these different sources, for which the completeness, accuracy, timeliness and comparability are widely variable.

An additional challenge is the lack of timely and reliable information on the various dimensions of HRH imbalances, such as staff establishment and staff distribution by county, gender, and workstation. Even where this data is relatively available, it has not been translated into useful information for planners, decision-makers and other stakeholders.

Devolution of health care services in Kenya

Kenya began her healthcare devolution journey in 2010, with over 43,000 health workers devolved to the counties. This escalated the need for information to assist counties rationalize their human resource requirements both in terms of numbers, cadres, and specialities.

Devolution in Kenya is envisioned to improve access, service delivery, bend the cost curve, increase accountability, and improve responsiveness. This is grounded on the principles of the Constitution of Kenya 2010, specifically aiming to achieve the highest attainable standards of health to all Kenyans and to decentralize health services management through a devolved system of governance. To achieve this, there is need to avail
reliable and comprehensive information on health workforce.

The country continues to struggle with various challenges on HRH including:

- Shortage of human resources for health due to brain drain among other factors;
- Weak human resource management systems and practices (untimely decisions on appointment, training, promotions, transfer, and deployment of new health workers);
- Poor HR records and data management systems;
- Lack of appropriate skills mix for delivery of health services;
- Inadequate financing and planning for HRH; and
- Frequent industrial unrest.

To address these challenges, a variety of interventions including scaling up of the health workforce, deploying the appropriate skill-mix and, or ensuring an equitable distribution of health personnel are being put in place. This is happening in an environment where human resource information system is not widely in use.

As counties embarked on management of health workers, there arose a need for digitizing the HR records and setting up of a system to manage these digitized records. The Ministry of Health digitized the records for all health workers prior to transferring the files to counties. The digital records were saved in the existing human resource information system. This would ensure quick and timely access of the records and also safeguard the records against physical loss, theft or damage. In place of physical HR files, digital records deliver value addition in records management thereby helping meet HR management needs.

Against this background, there was need to come up with Human Resource Information and Record Management Systems User Guide for utilization by the Ministry of Health and county departments of health in managing HRH data for decision-making and planning. The user guide aims to ensure consistency, completeness in data entry, and ultimately maintain high levels of accuracy and integrity of iHRIS e-records. The user guide is also meant to ensure that e-records management support HR management at national and county levels.
CHAPTER 2

HEALTH WORKFORCE INFORMATION MANAGEMENT

Introduction

The Constitution of Kenya confers authority to both national and county governments to recruit and manage their health workforces. This is premised on the need for both levels of government to have their personnel properly trained, and ensure all HRH decisions that are taken – whether hiring, transfers, promotions or even separation – are based on evidence. To rationalize their HR requirements in terms of numbers, cadres and specialties, health departments need information. The HRIS aims to address the identified needs.

The Kenya Health Sector Strategic and Investment Plan (KHSSP) (2014-2018) prioritizes the Health Information Systems (HIS) pillar for the Ministry of Health (MoH), which identifies health workforce management and training as one of the five domains where utilization of system-based software is beneficial. Experience over the past decade points to the importance of Human Resources Information Systems (HRIS) in providing the data for effective and efficient planning, and deployment of human resources management (HRM) strategies in general. The Kenya’s public service utilizes several systems to carry out various HR management functions and reporting. These include:

1. Government Human Resource Information System (GHRIS): National ministries and counties use it to disseminate pay slips to employees. The system is supported by the Directorate of Public Service Management (DPSM).
2. Integrated Payroll Processing Database (IPPD): National and county governments use the payroll system to process payments for public sector employees.
3. Integrated Human Resources Information System (iHRIS): This is used at national and county level to support HRH management functions at MoH headquarters, county, and at sub-county levels.

Devolution revealed a need to identify a system to assist in managing HRH in the country. Out of this need, the MoH, working with its partners in HRH, designed and implemented the iHRIS to be used as a tool for HRH planning, recruitment, training, and management and reporting.
Integrated Human Resource Information System (iHRIS)

iHRIS is a free, global, open-source, web-based HR software developed for the MoH. The system is designed in conformity with national and international HR practices. iHRIS is a management tool for HR Managers, HR Officers and line managers for use in HR planning and decision-making. iHRIS consists of five modules, namely:

1. **iHRIS Manage;** This supports MoH and other service delivery organizations, to track, manage, deploy and map their health workforce;
2. **iHRIS Train;** It is used to track and manage health worker training activities, including pre-service and in-service education;
3. **iHRIS Plan;** Is a workforce planning and modeling solution that enables decision-makers to assess their workforce needs for the next several years, project the expected health workforce over the same time and make effective policy decisions to close the gap between the two;
4. **iHRIS Retain;** This is a tool for costing health worker retention strategies. Workforce planners and policy makers, as well as health facility administrators and human resource managers can use iHRIS Retain to plan retention interventions at all levels;
5. **iHRIS Qualify;** The tool enables professional councils and associations to maintain a database of registered and licensed health professionals to support increased quality of care.

Currently, only iHRIS Train and iHRIS Manage are in use in Kenya. The user guide is specifically designed for iHRIS Manage. National and county governments use iHRIS to manage their own health workforce, and increase efficiency of reporting in recruitment, deployment, transfer, promotion and separation. iHRIS provides information on HRH status in terms of cadre mix, age distribution, productivity, and workload. The system is programmed to fully cater for each county as an independent entity with controlled access to specific county HR data.

**a. Access to iHRIS**

iHRIS is centrally hosted by the MoH. It is managed by the Information, Communication & Technology Department, and overseen by the National iHRIS Technical Working Group. The system contains workforce data for public health workers in the country.
The authorized national and county HR Managers and officers can access the system from this central location and view/edit data of their own health workers. Controls have been put in place to ensure no county can access data of another county. However, authorized officers at the national level can view and generate reports from all counties.

The line Cabinet Secretary is responsible for the system at national level and gives authority on who should have access to the system. At the county level, this responsibility lies with the Chief Officer of Health. The process of granting access rights to officers at both national and county level will include:

1. Setting up a TWG to implement iHRIS;
2. Nominating officers to access the system. The following information should be captured in the nomination:
   - Personal number, ID and name/physical details
   - Email and mobile telephone number
   - Title and rank
   - Work station
   - Type of access required (whether ‘update HR data’ or ‘view and generate reports only’)
3. Providing the necessary support, including computers, Internet and facilitation for iHRIS TWG members to carry out their work.

b. iHRIS personnel roles and responsibilities

Roles and responsibilities of personnel involved in iHRIS use are defined in the following manner at different levels:

- Owners have the appropriate rights for creation, handling and storage. This group includes HR managers and officers, and registry staff.
- Users have a defined need to view HRH information such as reports or queries. These include Director HRM&D (national), Chief Officers of Health (CoH), Directors of Health (DoH), Health Administrators and HRIOs, among others.
- System administration will be done by technical staff carrying
out system maintenance, storage and archiving. This function will be overseen by the ICT department.

- Audit and quality assurance rights are given to review and validate records and reports. The rights to undertake record level audit is currently assigned to the Director HRM & D (national) and CoH (county).

c. **Implementation of iHRIS at the National and County level**

To implement iHRIS, the following steps are recommended:

1. Sensitization of the leadership/management: This is critical for ownership;
2. Formation of iHRIS leadership and TWG to conduct training and user support;
3. Training of iHRIS users by the TWG, guided by the iHRIS training curriculum (Appendix I). This training shall cover the following aspects:
   - Introduction to iHRIS
   - Managing iHRIS database (base information)
   - Managing employee records
   - iHRIS database searches
   - iHRIS reporting
   - iHRIS update
4. Identification of iHRIS focal persons from the TWG, who will champion the implementation of the system;
5. Carrying out data update and subsequent data cleaning;
6. Verification of the data against actual establishment;
7. Generation of HRH dashboard reports. This is a management tool that gives an overview of the status of health workforce in terms of numbers and distribution. It can be printed or accessed electronically from iHRIS Manage.
d. Digitization of HR records

National and county governments are required to continually update staff e-files in iHRIS by scanning, indexing and uploading any missing records. Key records for newly-hired staff shall also be scanned, indexed and uploaded into the iHRIS system. The key HRH records to digitize include, but are not limited to:

- Application for employment letter, or Public Service Commission (PSC) 2 form
- Letter of first appointment
- Letter of confirmation
- Letter of promotion
- Copy of ID card
- Passport photo
- Copy of PIN certificate
- Academic certificates
The steps for digitizing records are as outlined below:

1. Identify and record the staff file that needs to be digitized using the personal employment number, e.g. ‘2015100100’;

2. Extract the key documents to be scanned, ensuring the folio numbers are maintained;

3. Scan each document and output it in PDF format except for the passport photo, which shall be in jpeg format;

4. Index the image appropriately, e.g. ‘2015100100 letter of first appointment’;

5. Log into iHRIS, search for the employee electronic file, open it and locate “scanned paper documents”;

6. Upload the document into the staff e-file and assign it a name;

7. To download any document, click on it and download into PDF
Figure 2: Document Scanning Work flow Procedure

**File Extraction**
1. Retrieve files from the shelf and records in a ledger book.
2. Receive files from the registry and sign off the ledger.
N/B retrieval can be done in sizable batches.

**File Preparation**
1. Extract documents from the file.
2. Note the folio number of the document and ascertain the correctness of the name of the document as shown in the check-list.
3. Affix a sticker on the folio number to indicate where each document has been removed from.
4. Remove any pins and staples from documents that have multiple pages.

**Document Scanning**
1. Scan the documents identified.
2. Record the Employment number in an Excel sheet and indicate whether or not each record indicated has been scanned.

**Indexing and upload into iHRIS**
1. Index scanned documents using the protocol [Employment_No_Name_of_Document].
2. Upload the scanned documents into iHRIS and test access of the documents.

**File Retraction**
1. Return files back to the registry for placing back on the shelves.
2. Sign on the ledger to confirm files have been returned.

**File Reconstruction**
1. Return any staples to bind together documents that have multiple pages.
2. Re-file the documents to the same Folio number as guided by the stickers on the files.
3. Mark the file “scanned” at the back and indicate the scanning date.
e) iHRIS help desk

iHRIS users need to be adequately supported. There should be a help desk where iHRIS users can walk to, call in or email for support. There is need to establish two levels of help desk support for iHRIS – national and county.

**National:** The MoH needs to establish a help desk to support national and county iHRIS users. A telephone number, office number, and email address for the national help desk should be shared to all counties.

**County:** Counties are also advised to ensure there are help desks to support iHRIS users on a regular basis. This support desk will be administered by an experienced iHRIS user in the county. Any issue from the county that cannot be resolved by county help desk, can be escalated to the national help desk.

Help could be provided to users through direct physical contact with the users to sort out issues; email communication to address issues and provide feedback. Installing a telephone line where users can call and get their issues resolved is recommended.
Chapter 3

HRH Data Management

Introduction

The management of HRH data aims to comply with applicable laws and best practices with regard to the use, retention, and disposal of the records as guided by Kenya National Archive and Documentation Services (KNADS) and other relevant policies and guidelines.

iHRIS is recommended for management of digital records where paper records are scanned, uploaded into the system and linked to an employee profile. The profile consists of basic employee details like name, employment number, demographic information, designation among other details. Sound HR information management requires that principles, practices and procedures are defined and followed. This necessitates that HR information, regulations, personnel, and infrastructure issues be well defined.

Guidelines for management of HR information

a. HRH Information sources

HR information should be handled, used and transmitted securely by authorized users only. This information is useful if it is complete, accurate, and current. Digital records in iHRIS shall strive to meet these requirements at all times.

HR information exists in paper form or as unstated knowledge held by HR manager and staff. The paper form sources include personal files, generic HR registry or staff return tool aggregated by facility, sub-county and county. In their basic form, these sources contain name, job designation and station of deployment of staff. This information on individual personnel forms the basic record for HRH work. It is incumbent on HR to authenticate information from sources before it is input into the system.

b. Completeness of iHRIS Records

HR information collected for processing and subsequent input in iHRIS must be complete to ensure that HRH queries and reports are satisfactory. Key questions to consider for completeness of HRH
records shall include definition of the following:

- HR information required;
- Ways to authenticate HR information before input;
- Minimal system input validation and data and report quality checks to be employed.

- For iHRIS, the minimal HR dataset required includes:
  - Name
  - Identification; employment number, national ID or PIN
  - Demographic information; date of birth, gender, marital status, and dependants
  - Contact information; address, mobile and email
  - Job-related data indicating work station, designation with respective dates
  - Scanned personnel documents (See Chapter 2d)

At input stage, it is recommended that data be entered accurately. This is especially important for unique identifiers like national ID, employment number and personal number. If in doubt or where source is unclear, confirm with staff or local administrator. iHRIS designates certain required fields that must be filled for the HR record to be acceptable.

c. Quality Control and Assurance

Quality control and assurance of HR records ensure data collection and input processes run as designed, outputs meet set standards, accuracy and authenticity of records, and identification and correction of erroneous e-records.

Human-level quality control

The following are the human level quality control measures required for iHRIS data entry and information management process:

- Confirm that required information is entered based on record completeness criteria defined in (b) above;
- Verify staff names and personal identifiers against payroll, staff returns or any other form of HR record;
• Carry out routine quarterly data update audits/checks to confirm if all staff changes have been updated in iHRIS;
• Generate quarterly HRH reports from iHRIS and disseminate to leadership for confirmation;
• Monitor data update activity, trends and growth of HR records and information;

**System-level quality control**

In iHRIS, data integrity checks work at cell, field and row level. Common system controls here include input checks like character masks, field length, and data type. Logical integrity check works with such fields such as dates, accounts, etc. At the record level, system computation integrity will assure correct results each time and every time. iHRIS database integrity checks include referential integrity, unique record constraint, valid values, and NULL values in tables.

d. **Storage and archival management of HRH data**

The prime objective of archiving records is to preserve them for future use. Electronic archiving has the advantage of bulk storage in thin digital volumes while making such records available almost in perpetuity. Moreover, current ICT systems ensure faster and easier search and retrieval of details and records themselves.

The iHRIS database is accessible directly from a host server on the Internet. iHRIS data is backed up daily both on-site and off-site. The iHRIS database stores digitized files in text format to allow for ease of retrieval and reference to personnel profiles. The MoH and county departments of health are advised to regularly back up their own data. Such practice must adhere to existing guidelines on electronic archives management and the records and archival management policies of the government.

e. **Security of HR records and HR information**

According to the information security standards developed by the Kenya Bureau of Standards (KEBS), national and county governments should put in place data and record management procedures that spell out clear roles and responsibilities for staff involved in information management. Standard procedures will therefore be defined, and applicable security controls implemented to guide
data collection, transmission, processing, storage and output of e-records that meet business needs for confidentiality of e-records, and complies with applicable laws and regulatory requirements.

Security guidelines are an essential part of HR information management. The guidelines define organizational and technical safeguards of iHRIS service with regard to HR information, personnel and infrastructure. The following are key guidelines:

**Regulation and administration:** HRH data management shall conform to MOH/DOH policy on its use and practice and adhere to GoK, ICT Authority, KNADS, and e-Health policies. Data protection shall be guided by relevant prevailing DPA in the country/county.

**Classification and labeling:** Appropriately label the physical media or files with “HR” and “SENSITIVE” so that they are treated with care. Onscreen database should carry this classification and offer disclaimers. For electronic data, consider use of indexes and meta data as descriptive values. Labeling of digital files, media copies (e.g. tapes, disks, CDs) should clearly identify HR data contained and indicate sensitivity.

**Custodianship:** Where electronic media copies are created, documentation of custody will be enforced. The HR officer in whose custody such documents exist will be responsible for its safe keeping.

**Authorized access:** Physical access to files, personal computers and other equipment used for data entry and processing shall be limited to those authorized to handle HR staff. E-records media or files for data input shall not be moved outside a defined perimeter of an agency for which it is responsible for the security. In addition, logical iHRIS access shall be limited to staff properly authenticated and authorized by the Principal Secretary/CoH or their designated officers.

System access shall be restricted to approved HR staff with required clearance. The roles of these persons shall be clearly defined and documented. When staff move, their accounts will stand de-activated. New staff assuming system roles will have their accounts created by designated administrators upon appropriate authorization by the Permanent Secretary at the MoH or the CoH in the county.
**Authentication of records:** Personnel profiles ought to be checked against standard reference documents, such as employment lists and deployment schedule, while personal information may be verified with staff individually.

HR information existing as records, database, reports or summaries in electronic or printed form must be clearly identified as such to avoid ambiguity and possible wrongful use or mishandling. Such HR information will include name or title, type and category, time of creation, ownership and purpose for its creation.

**Storage:** Where e-records require to be stored on servers, networks and end-user devices, care will be taken to encrypt and limit access accordingly. Appropriate physical infrastructure for storage and office shall be provided to prevent damage from fire, theft, attack or unauthorized access.

Physical storage or transmission of files or media should be on strong, non see-through bags. Electronic storage shall seek to make the data available on demand, primarily as online database, and to support business continuity.

**Encryption:** Where HR data is at rest (in storage media), it shall be encrypted through appropriate techniques to ensure that, at minimum, it is not openly accessible. Network-based transactional encryption shall be the responsibility of host. HRH data shall be encrypted in electronic copies in storage or in transit with keys (password) made known to only permitted parties for privacy and confidentiality.

**Back-up of sensitive e-records:** SQL backup of the database (including digitized records) is automatic and periodic. Optical media copies of digitized records are stored off-site.

**Awareness creation:** Staff shall be made aware that any unauthorized access to personal identifiable information is not permitted. Any disclosure of personnel data to a party other than HR without proper authorization will be against HR ethics as provided in the HR manual.

**HR information-sharing:** HR information is classified “SENSITIVE”, to be shared with only authorized recipients. Where HR data is to be exchanged between agencies, it shall be
necessary to have third parties and non-authorized personnel sign non-disclosure agreements against the HR information received.

**Data use:** HR information will be principally used to support HR planning, decision-making, deployment, reporting and communications by concerned agencies. HR information will be analyzed and interpreted for evidence-based policy decisions. Efforts will be made to appropriately communicate HR information to the public.

**Privacy:** Removal of any personally identifiable information where record-level processing is not required, or in data aggregation and research activities, shall be enforced.

**Incident handling:** Appropriate controls shall be put in place to identify records leakages, and an incident management procedure be put in place. Responsibility for incident management rests with accountable officer for the agency. Communication of incidents and their management shall follow a laid-down procedure.

**Capacity building:** Target iHRIS users and HR staff will be trained to use, maintain and manage agency-level datasets.

**Destruction:** Destruction of media upon appraisal should conform to standards for destroying “SENSITIVE” information so as not to be recoverable.
HRH DATA USE FOR DECISION-MAKING

Background

The health sector across the world is advocating for availability of data in the field of human resources. The push for HR departments to embrace data-driven decision-making strategies is a major focus across the industry. Health managers are being pushed to grow their ability to apply quantitative and qualitative analysis techniques to support HR decision-making across the industry.

Informed by the above advocacy, health managers are analyzing their employee data with workforce analytics to answer a variety of critical questions.

a. Skills for HRH data use for decision-making

Most HRH managers possess requisite skills and experience in HR management. However, adopting the use of HRH data for decision-making at all levels will require HR personnel with a set of skills that has not traditionally been part of the human resources function. To ensure institutions realize the benefits of data-driven decision-making, here are a few key skill sets they will want to make sure they are part of the designated officers:

Health sector awareness - This empowers the user to collect HRH data, analyze, interpret it, and link it to key performance indicators.

HR research techniques - These enable users to design appropriate data collection tools and methods in order to obtain the information needed by HR and leaders in other functional areas.
**Data analysis** – Users should be competent enough to apply the right statistical analysis tools. They should possess ability to calculate and appropriately interpret key statistical metrics like mean, mode and median; more general analyses such as filters, sorting and date calculations will be essential in correctly interpreting the results of data analysis.

**Data reduction** – Users are required to effectively employ tools and techniques for defining and implementing the funnels and filters needed to create a manageable dataset from big data reports.

**Evaluating and presenting results** – Users will need to review and analyze work performed by others and translate the results into useful and useable visual displays. Additionally, health managers will need the ability to verify that the methods and tools employed were appropriately used, that the data appropriately addresses the question at hand, and that the results are correctly interpreted. The manager should be able to organize the results into meaningful visual presentations that clearly explain linkage to performance indicators and other institutional metrics.

**b. Making use of HRH data**

Health sector leaders need a process in place to analyze reports and information, get the information to the right decision-maker/s at the right time, and have the power and resources to act on the data. Effective data utilization requires a mindset as well as organizational ethos that actively invest in a culture of inquiry that helps people question the status quo.

The following are some of the uses of HRH data:

- Recruitment of health workers;
- Redistribution of existing workers;
- Cleansing the payroll;
- Tracking health workers turnover;
- Influencing policies on staffing norms and standards, recruitment, deployment, career path development and continuing professional development;
- Succession planning;
Mechanisms for facilitating the sharing and use of these data shall be developed. This may include health department meetings, senior management meetings, quarterly/annual sector review meetings, HRH technical working groups, HRH stakeholder forum, etc. To implement the above uses of HRH data, different levels of health care will need to weave in the recommendations in their work plans for implementation.

c. **HRH reports and linkage to service delivery and performance**

The health sector leadership will need to guide HRH officers and the iHRIS technical working group to share the following reports on periodic basis:

- Current staff listing;
- Cadre distribution;
- Health workforce by gender;
- Retirement planning report;
- HRH dashboard showing status of health workforce – semi annually;
- Health workload and performance;
- Health workers employed in the last quarter by cadre and gender;

d. **iHRIS integration with other applications**

There exists various systems in use in the Kenya public health sector. Each of these systems provide service delivery information with limited view. The main systems currently deployed include iHRIS, District Health Information System (DHIS2), IPPD, and various health management information systems (HMIS), as well as electronic medical records (EMRs) applications at facility level. DHIS2 provides integrated data on service delivery at all levels while EMRs are limited to facility level. IPPD, in turn, contains remuneration information. The linkage of indicators from the above systems and iHRIS will give a wholesome picture on health service sector performance.

iHRIS is capable of interoperability with DHIS2 and other applications that use SQL database platform for purposes of linking health workforce and service delivery. The next step is to fully integrate iHRIS and DHIS2 to provide wholesome health sector performance.
reports. The current indicator derived from iHRIS-DHIS2 integration is the workload report. Additional reports will be defined in future.

e. **Responsibilities for information sharing**

There should be clear responsibilities for sharing information with all stakeholders. The following sample of HRH data sharing matrix could be adopted by the institutions.

**County sample:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Report to share</th>
<th>Recipient</th>
<th>Frequency</th>
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<td>Chief Officer of Health</td>
<td>Quarterly</td>
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<td>HRH Dashboards</td>
<td>Chief Officer of Health, CHMT, Med Sup, sub-county HMT</td>
<td>Monthly</td>
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<tr>
<td>Chief Officer of Health</td>
<td></td>
<td>Health Workforce Establishment Report</td>
<td>Management meetings,</td>
<td>Quarterly</td>
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<tr>
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<td>County Assembly, Governor</td>
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**National sample:**

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<th>Frequency</th>
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<td>CS, PS, DMS, Director HRM&amp;D</td>
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<td>Health Workforce Establishment report</td>
<td>CS, PS, DMS, Director HRM&amp;D</td>
<td>Quarterly</td>
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Implementation Plan

Introduction
This focuses on the implementation needs of iHRIS its role being to assist managers understand the requirements necessary to implement a comprehensive Integrated Human Resource Information System (iHRIS). The implementation requirements needs include human resource, infrastructure, governance and linkage to other systems and stakeholders.

a. Human resources needs

Successful implementation of the the system will require leadership commitment and support from the highest level at the national and county government. At the national level, this will include:

- The Principal Secretary (PS) who will make provisions for budgets;
- The Director HRM/D who is the focal person in its implementation and who will provide the required human resources to implement the system;
- The human resources officers appointed by the Director HRM/D to carry out day to day implementation of the system, updating of records including digitized files in the system and providing required reports for decision making;
- Other players will include ICT officers who will ensure system integrity and security, maintenance, troubleshooting, back-up and systems upgrades.

At the county government level, the leadership will include:

- The County Executive Committee member for Health (CEC);
- Chief Officer for Health (COH);
- County Director of Health (CDH);
- County health management team (CHMT);
- Other players will include county Public Service Boards, Public Service Management Department represented by County HR Director/ Manager, HR Registry, Finance Department, and County ICT department.
The leadership outlined in this structure will form the County HRH oversight committee. The leadership team will ensure the infrastructure is in place and budgets are allocated for smooth running of the system. The implementation team will include County HRH Manager/Officers, county health records and information officers; and county ICT officers.

b. Governance and leadership

The roll-out and smooth implementation of iHRIS requires leadership provided by various committees at the national and county level. These will include:

- National iHRIS Steering Committee;
- National iHRIS TWG;
- County HRH Oversight Committee;
- County iHRIS TWG;

i. National iHRIS leadership structures

At the national, two levels of leadership are established. The top most committee is the National Steering Committee on iHRIS, and the National Technical Working Group (TWG) on iHRIS.

The **National iHRIS Steering Committee** guides the implementation of iHRIS, provides the strategic direction required, and feeds /reports to the top management and the HRH-ICC on iHRIS implementation activities. Under the steering committee is the National TWG on iHRIS, which is tasked with the actual technical implementation of iHRIS at the national and county level.

Membership of National iHRIS steering committee includes the following:

- Secretary Administration
- Director HRM&D – Chair
- Chief, Planning – MoH
- DMS Representative
- Head of ICT, MoH
- Head of HIS
- Record Management Unit
The ToRs of the National iHRIS steering committee are to:

- Identify the values and principles which should govern the development and implementation of the HRIS;
- Provide leadership in implementation of iHRIS, and ensure it conforms to the relevant policies, strategies and legislation;
- Provide good governance of the system, infrastructure and health workers’ data;
- Ensure that all MoH stakeholders’ interests are adequately addressed and safeguarded;
- Provide independent oversight of the development of the HRH database;
- Represent departmental and external stakeholders and ensure resources are available for implementation of iHRIS;
- Formulate and support an inclusive communications strategy which makes use of the stakeholders network;
- Identify risks and difficulties in the implementation of the HRH database;
- Set agenda for the national stakeholders group meetings (HRH-ICC);
- Develop guidelines in accordance with the requirements of the stakeholders and MoH priorities;

The National iHRIS Technical Working Group (TWG) is composed of the technical representatives of the departments represented at the national steering committee. The membership of the iHRIS TWG is as follows:

- Representation from administration;
- Representation from Human Resources Management and Development;
- ICT Officer;
The ToRs of the National iHRIS TWG include:

- Plan for and execute iHRIS training and implementation at the national and county level;
- Establish data systems security and ensure iHRIS and its implementation conforms to laid down policies and guidelines;
- Establish and maintain a national host site for iHRIS and brief the national steering committee on resources required;
- Set up and maintain a national help desk for iHRIS users and provide ad hoc and routine support to county users through the county iHRIS TWGs and inter-county iHRIS forums;
- Provide system administration services, iHRIS user management and safeguard data against unauthorized physical and logical access;
- Act as direct link between implementing partners and the MoH on iHRIS implementation, interoperability with other systems and infrastructure;
- Update HRH data at the national level and provide period reports on health workforce status at the national level; and
- Provide county HRH status summary reports to management for decision-making within agreed upon timelines, e.g. quarterly.

**ii. County iHRIS Leadership Structures**

There shall be two main structures: County iHRIS Oversight Committee and County iHRIS Technical Working Group.
County iHRIS Oversight Committee

There will be establishment of the County iHRIS Oversight Committee, whose terms of reference shall enable the county realize automation of HRH Information system. The membership will comprise of the following county health officers:

<table>
<thead>
<tr>
<th>Role</th>
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<tbody>
<tr>
<td>• Secretary to County Public Service Board</td>
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<tr>
<td>• Chief Officer for Health – Chairperson</td>
</tr>
<tr>
<td>• Director of Health Services</td>
</tr>
<tr>
<td>• County Head of Human Resource</td>
</tr>
<tr>
<td>• Chief Officer for ICT</td>
</tr>
<tr>
<td>• Chief Officer for Public Service Management</td>
</tr>
<tr>
<td>• HRH Manager/ Officer – Rapporteur</td>
</tr>
<tr>
<td>• County Health Administrative Officer</td>
</tr>
<tr>
<td>• Medical Superintendent for County Referral Hospital</td>
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</table>

The main roles of iHRIS Oversight Committee are to:

<table>
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<tr>
<th>Role</th>
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<tbody>
<tr>
<td>• Develop corporate level strategies and plans that ensure cost-effective application and management of iRHIS resources throughout the county;</td>
</tr>
<tr>
<td>• Promote use of HR data for decision-making;</td>
</tr>
<tr>
<td>• Monitor and evaluate iHRIS implementation and usage against set targets;</td>
</tr>
<tr>
<td>• Review current and future requirements to identify opportunities to increase the efficiency of iRHIS resources and make appropriate recommendations;</td>
</tr>
<tr>
<td>• Guide the implementation of HRHIS and supporting the iRHIS TWG in iHRIS implementation;</td>
</tr>
<tr>
<td>• Enhance ownership of the HRHIS and support resource mobilization for iRHIS ICT infrastructure; and</td>
</tr>
<tr>
<td>• Share HRH Data with County Health Management Committee and Sub-county Health Management Committees, County Public Service Board, and County Assembly Health Committee for their planning and organization.</td>
</tr>
</tbody>
</table>
County iHRIS Technical Working Group (TWG)

There will be establishment of a Technical Working Group (TWG) under oversight of the County iHRIS Oversight Committee. The primary responsibility of the TWG will be to implement HRHIS in the County and ensure iHRIS use, as well as data update and dissemination to decision-makers within agreed timelines. The membership of the iRHIS TWG in the County will include the following:

- County Director of Health – Chairperson;
- County HRH Officer – Rapporteur;
- County Health Administrative Officer;
- Health Administrative Officer of the county referral hospital;
- County Information and Communication Technology (ICT) Officer;
- County Health Records Information Officer;
- Health Records Information Officer for the county referral hospital;

The ToRs for the TWG include:

- Identifying and promoting the values and principles which should govern the implementation of the iRHIS;
- Developing work plans for HRH data collection, updating and dissemination in accordance with county priorities and stakeholder requirements;
- Planning and executing the implementation of the iRHIS, and routinely briefing the county iRHIS leadership committee on progress;
- Enabling users of the HRH dashboards to be included, engaged and supported in their work through an appropriate user network within the county;
- Identifying risks and challenges to establishment of HRH database and iRHIS sustainability, and proposing solutions for the county leadership committee on iRHIS;
- Setting the agenda for the County leadership oversight committee;
• Developing and implementing data use responsibility matrix, and monitoring and evaluating the implementation and usage of the iHRIS;
• Developing and implementing dashboards sharing and availability matrices in the county, and monitoring data availability and data use for decision-making; and
• Resource mobilization and allocation for iRHIS activities, including ICT infrastructure and coordination of partner support for HRIS.

c. **Linkage to other stakeholders**

Implementation will take into consideration other stakeholders, like the MoH and county ICT departments, ICT Authority (ICTA), Kenya Bureau of Standards (KEBS), MoH eHealth and Health Information Systems (HIS) units, and Kenya National Archives and Documentation Services (KNADS) that regulate creation, storage, access and disposal of records.

National and County governments shall make budget allocations for implementation of iHRIS and eHealth initiatives. There is need to communicate to donor and private partners to align their investment and support plans models.

d. **Infrastructure needs**

The choice of appropriate information systems infrastructure and its careful management is necessary for implementation of the iHRIS. iHRIS will rely on a comprehensive information systems infrastructure to support the HRH data management business processes and competitive strategy. This is in line with the ever-increasing speed, transactions conducted and growing amounts of data to be captured, analyzed, and stored. The infrastructure needs will include computers, server (at the central host location), Internet connectivity, scanners for documents digitization and accessories for backup and storage e.g. media disks.
References


Health Sector ICT Standards and Guidelines, Ministry of Health, June 2013


Standards and Guidelines for Electronic Medical Record Systems in Kenya, Ministry of Medical Services and Ministry of Public Health & Sanitation

Connected Kenya 2017 Master Plan, ICT Authority, 2013
Annexes

Annex 1: Standard HR data collection template

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<td>Deputy Chief Economist</td>
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<td>Permanent (Pensionable)</td>
<td>10 Engineer</td>
<td>VCT</td>
<td>14180</td>
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</table>
Annexes 2: List of Contributors

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