

# **STANDARD OPERATING PROCEDURES FOR HEALTH INFORMATION**

**Ministry of Health  
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## **Foreword**

The Health Information System is a comprehensive and integrated structure that collects, collates, analyses, monitors, evaluates, stores, disseminates, health and health related data and information for use by all.

The role of Health Information System in the health sector is not just routine collection of health sector data and dutiful conveyance of the same to higher levels of the health care system, but facilitate evidence based decision making at all levels especially at the point of collection. The underlying rationale for the Health Management Information System's efforts is to improve the health status of the population. Information collection, analysis, and presentation should be organized in such a way that the most needy groups and individuals are identified. Subsequently health planning should be based on such information, and strategies should be designed to redress any identified inequalities.

In addition, no Health Management Information System can afford to discourage the successful use of its information resources by producing information products that are not aligned with the needs of the user in the forefront. No information system should be developed without a careful assessment of the levels of the information generation and use. Hence the development of the Standard Operating procedures to help the Ministry guide and coordinate the operations of such systems for the benefit of the entire health sector.

Health Information System is a powerful Monitoring & Evaluation tool for making health care delivery more effective and efficient.



Dr. D. K. W Lwamafa

**For: DIRECTOR GENERAL OF HEALTH SERVICES  
MINISTRY OF HEALTH**

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# 1. Introduction

Health Information System (HIS) is the processes and mechanisms through which health-related data is produced and made accessible to users, through networking within and outside the Health Sector. HIS has several sub-systems, each with specialized roles and responsibilities based on their comparative advantage. HIS sub-systems in Uganda comprise of Health Management Information system (HMIS), Integrated Disease Surveillance (IDSR), Vital Registration (VR) for births and deaths, National Health Accounts (NHA), Human Resource Information System (HRIS), Logistics Management Information System, Population-Based Information Systems, Community-Based Health Information System, Research-generated health information, administrative records.

## 1.1 Definition of Standard Operating Procedures

By definition, Standard Operating Procedures (SOPs) within the context of HIS, is a written description of steps for all significant activities relating to the practice of management of HIS that has been approved by a program/ persons in charge of an HIS sub-system. SOPs should accurately reflect good information management practices, be sufficiently practical and be usable in the HIS sub-system. The good HIS management practices relate to general aspects of HIS management functions including data collection, compilation, analysis, storage, data processing, record storage, handling of urgent data requests/ needs, management of the devices/ tools/ appliances used to manage the data .

## 1.2 Justification for Standard Operating Procedures

There are several challenges the existing HIS is facing these include the following among others;

- Mushrooming of donor-driven parallel information systems which have affected the efficiency of data management in various sub-systems as it overloads the already existing government systems and affects quality of data produced
- Poor and incomplete recording of health data,
- Use of non-standardized forms at service delivery points, has been happening owing to lack of or failure to use existing Standard Operating Procedures (SOPs) for setting up information management systems and on management of HIS.
- Lack of guidance on how to access health data from the producers
- Lack of guidance on how to share data produced e.g. that generated through research and program implementation.

The following are the anticipated benefits of having generic SOPs for HIS;

1. Harmonization of HIS data management procedures of HIS sub-systems to ensure efficiency and effective coordination in the use of scarce resources
2. Complete and good quality health data
3. To provide guidance on how to access health data from the producers
4. To provide guidance on how to share the health data produced

## **2. Health Information System and sub-systems**

### **2.1 Standard Operating Procedures for the Documentation Centre**

The Ministry of Health (MoH) Documentation Centre has the mandate of book-keeping including keeping samples of various tools for training, data management (HMIS tools) among others. The Documentation Centre also stores records of regularly produced reports by the Ministry of Health (e.g. Weekly Epidemiological newsletter, quarterly health bulletin, Ministry of Health Statistical Abstract, Annual Health Sector Performance Reports, etc). Other records stored are in the category of research-generated information including publications and non-published research findings. In addition to this, the Documentation Centre disseminates of health information materials (hard copies), a system that has of now been facilitated through establishment of electronic Documentation Centre (e-Documentation Centre).

#### **2.1.1 Storing Health Records**

Step 1: Write officially to the Librarian expressing the need to send information to the Documentation Centre for storage from both within and outside the health sector.

Step 2: The written request should include the following:

- i. The institution or individual sending the request.
- ii. Producer/originator of the health information, or Author in case it is a publication or the source of information (e.g. a survey, assessment, etc)
- iii. Year of publication or compilation or collection.
- iv. Who published and/or compiled the information.
- v. If it is a publication published in series, identify the Volume and the Number.

Step 3: The Librarian classifies where the information material falls based on the subject, e.g. Malaria, Reproductive Health, Statistics, WHO reports, etc. The librarian receives the health information, after which he/she identifies the appropriate section to store the information material.

Step 4: Storage is done according to Classification, the Subject and Number of series.

#### **2.1.2 Accessing/Handling Health Information Material**

Step 1: To access a publication or information material, the user contacts the Librarian and states what he/ she is seeking to access from the Documentation Centre.

Step 2: He/ She records his/ her particulars in the Documentation Centre computer, namely:

- i. Title/ designation
- ii. Name
- iii. Organization
- iv. Purpose for accessing the Documentation Centre
- v. In case of research, record topic of research being sought.
- vi. Date of request
- vii. Telephone/email contact

Step 3: User should contact the Librarian for directions on how to access the information material.

Step 4: The material should only be read while in the Documentation Centre (NOT TO BE CARRIED OUT), but can be photocopied.

## **2.2 Standard Operating Procedure for the Knowledge Management Portal**

### **2.2.1 Accessing Knowledge Management Portal**

Step 1: To access the KMP, the user contacts the Librarian and states what he/ she is seeking to access from the e-Documentation Centre.

Step 2: The Librarian provides the web-site to be accessed. This web-site is <http://library.health.go.ug>. There is free access to all documents in the e-KMP.

Step 3: This web-site allows users access to the electronic publications and health information materials.

Step 4: The user can download or print or save the health information material or publication on a flush disk. Most of the materials are in **pdf** format to prevent modification by users.

### **2.2.2 Loading Health Information Materials onto the Knowledge Management Portal**

Step 1: Head of the office responsible for management of information in the institution (e.g. Ministry of Health) informs program managers/ Heads of departments about the presence and services provided by the KMP.

Step 2: Head of the office responsible for management of information writes officially by email requesting the programs/ departments, to submit all health information materials that they wish to disseminate to users.



- Step 3: Program manager/ Division Head submits the health information material through the Head of department to the librarian of the institution either by sending through e-mail of the Librarian (in the case of Ministry of Health, it is **librarian.moh@health.go.ug**) electronic copies of the publications or health information materials, preferably in pdf format (but can be in any format), or by taking the electronic file physically to the KMP ready for loading.
- Step 4: Librarian then uploads the health information material onto the KMP
- Step 5: The submitted document is now ready to be accessed.

### 2.2.3 Security for Health Information Materials on the Knowledge Management Portal

- Step 1: The producers of health information materials/ publications should endeavor to convert word documents into formats that are not easily edited, for example **pdf** formats, before they are submitted to the office responsible for management of information in the institution.
- Step 2: The converted material is then submitted to the Librarian using the following steps:
- a) Program manager/ Division Head sends an official written request to the Head of the section responsible for the Documentation Centre.
  - b) The request should include:
    - i) Name of sender of information
    - ii) Title/ designation of the sender
    - iii) Organization
    - iv) Topic of the health information to be sent
    - v) In case of research, record topic the research covered.
    - vi) The geographical area and time period of coverage (in case of data).
    - vii) Telephone/email contact
  - c) Once the Documentation Centre has given a go-ahead to send the health information, the sender can now send, through e-mail of the Librarian (in the case of Ministry of Health, it is **librarian.moh@health.go.ug**), electronic copies of the publications or health information, preferably in **pdf** format (but can be in any format), or by taking the electronic file physically to the Documentation Centre ready for loading.
  - d) Librarian then uploads the health information onto the KMP according to Classification, the Subject and Number of series for the health information.
- Step 3: The submitted document is now ready to be accessed.

## 2.3 Standard Operating Procedure for Resource Centre/ HMIS

Health Management Information System (HMIS) is a routine integrated system of collection, collation, analysis, presentation, dissemination and utilization of relevant health-related information. It is designed for use at the community, health facility, health sub-district, district health office, and Ministry of Health headquarters for planning, resource allocation, managing and evaluating the health care delivery system. It covers other HIS sub-systems like Administrative records, Integrated Disease Surveillance and Response.

HMIS procedure manuals including HMIS Data Management Curriculum developed by the Ministry of Health **should** be used for capacity building at all levels at all times.

### 2.3.1 Collecting HMIS Data

All health data should be collected using the standard HMIS tools developed and produced by the Ministry of Health as reflected in the HMIS procedure manuals.

Not all health data can be collected through the routine HMIS. In such scenarios other HIS sub-systems e.g. UDHS, HIV-Sero Surveys can be utilized to supplement the routine HMIS. It is important however, to note that such results from such surveys/studies be shared with the Resource Centre, so as to enrich the databases and indicators.

Projects carrying out activities utilising the existing health units should report through these health units using the HMIS tools, so that the Ministry of Health is able to capture the information from their services/activities.

No other person/project/partner is allowed to up-date, add or edit the HMIS tools without approval from Director General of Health Services through the Assistant Commissioner of Health Services in-charge of the Resource Centre

No other person/project/partner is allowed to introduce parallel data collection and reporting tools without approval from Director General of Health Services through the Assistant Commissioner of Health Services in-charge of the Resource Centre.

Steps involved in HMIS data collection include;

Step 1: Health data is captured from the clients/patients at the health facility or during out-reaches and recorded on various medical forms.

- Step 2: Data recorded on the medical forms is immediately entered into the individual registers.  
Both steps 1 and 2 above are done by the health workers who are providing the health services.  
This is done by the incharge while being assisted by the Records Assistant, to ensure that forms are available since he/she (Incharge) has the power to make resource allocation decisions, and also has the role of ensuring that the right HMIS tools are available and utilized by the health workers in collecting health data in steps 1 and 2
- Step 3: The Records Assistant should obtain the different registers and respective tally sheets to tally the recorded health data and generate daily summaries.
- Step 4: For any unclear information the Records Assistant should consult the health worker before the end of the day to verify the information recorded in the registers.

### **2.3.2 Reporting HMIS Data**

All health data should be reported using the standard HMIS tools developed and produced by the Ministry of Health. This should be done in the stipulated time to ensure timely decision making.

Please refer to the HMIS procedure manuals for the deadlines for the different datasets for reporting.

Steps involved in HMIS reporting include;

- Step 1: Using the daily summary tables compile the weekly and monthly reports.
- Step 2: Using the monthly summary tables compile the quarterly and annual reports
- Step 3: The health unit in-charge should cross check the HMIS reports for errors before submission to the next level
- Step 4: Submit the respective HMIS form to the next level e.g. HMIS 105 from the health unit to the Health Sub-District (HSD)
- Step 5: The summary tables should be retained and regularly up-dated in the health facility/HSD/District databases.

### **2.3.3 Providing Feedback to Stakeholders**

All health data collected should be analyzed at all levels to generate outputs that will be provided as feedback to improve health service delivery. This should be done regularly on a quarterly basis but can also be done more frequently.

- Step1: Clean the database before and during data analysis
- Step2: Analyse the cleaned data to generate the HSSIP and program specific health indicators
- Step3: Share the findings from your analysis with the stakeholders using any available method e.g. Bulletin, electronic media, meetings etc

## **2.4 Standard Operating Procedure for Storing and Accessing HMIS Data**

Every health unit/HSD/District/National level should have a secure place for storing all HMIS data, preferably metallic cabinets.

The person in-charge of records should be responsible for storing all filled HMIS data in the records store.

Health data should be stored by year and department to ease retrieval.

The most current health files (not more than 5years back) should be kept within the records office while other old files (greater than 5years) should be archived.

### **2.4.1 Accessing Health Facility HMIS Data**

- Step 1: The person seeking health data from the health facility begins by expressing his request, in writing, to the District Health Officer copied to the HSD In-charge and Health Unit in-charge.

The letter (hardcopy or scanned softcopy) should include:

- The person/ institution requesting the data
- The reason why the data is being requested (e.g. research purpose, production of report, monitoring, etc)
- Data variables required and the period of coverage for the data, indicating:
  - specific area like maternal deaths, number of live births, number of DPT3
  - disaggregation by year and or month (Jan, Feb, March, etc), or by sex, or by
  - geographical coverage (can be the entire country or it may be for list of districts).

This applies to only health facility aggregated data as individual data is confidential. For individual data the individual/institution requesting for data MUST present a letter from the Uganda National Council for Science and Technology (UNCST).

- Step 2: After being granted permission from the District Health Officer (through an authority note/letter granting him/her permission to access data), the person requesting presents the authority letter to the health unit in-charge.
- Step 3: The person responsible for giving out data, records the details of this person in a register/form, and then the data request is processed.
- Step 4: After the data has been processed, the data requested is given to the person/institution.

Data accessed through the HMIS MUST be acknowledged and the period. The period for which the data was accessed and the date accessed should be quoted.

#### **2.4.2 Accessing Regional/National Referral Hospital HMIS Data**

- Step 1:** The person seeking health data from the hospital begins by expressing his request, in writing, to the Executive Director/Medical Superintendent copied to the Director General Health Services.

The letter (hardcopy or scanned softcopy) should include:

- The person/ institution requesting the data
- The reason why the data is being requested (e.g. research purpose, production of report, monitoring, etc)
- Data variables required and the period of coverage for the data, indicating:
  - specific area like maternal deaths, number of live births, number of DPT3
  - disaggregation by year and or month (Jan, Feb, March, etc), or by sex, or by
  - geographical coverage (can be the entire country or it may be for list of districts).

This applies to only health facility aggregated data as individual data is confidential. For individual data the individual/institution requesting for data MUST present a letter from the Uganda National Council for Science and Technology (UNCST).

- Step 2:** After being granted permission from the Executive Director/Medical Superintendent (through an authority note/letter granting him/her permission to access data), the person requesting presents the authority letter to the in-charge of the records office.

**Step 3:** The person responsible for giving out data, records the details of this person in a register/form, and then the data request is processed.

**Step 4:** After the data has been processed, the data requested is given to the person/institution.

Data accessed through the HMIS MUST be acknowledged and the period. The period for which the data was accessed and the date accessed should be quoted.

### **2.4.3 Accessing District/HSD HMIS Data**

**Step 1:** The person seeking health data from the district/HSD begins by expressing his request, in writing, to the Chief Administrative Officer copied to the District Health Officer and Director General of Health Services.

The letter (hardcopy or scanned softcopy) should include:

- The person/ institution requesting the data
- The reason why the data is being requested (e.g. research purpose, production of report, monitoring, etc)
- Data variables required and the period of coverage for the data, indicating:
  - specific area like maternal deaths, number of live births, number of DPT3
  - disaggregation by year and or month (Jan, Feb, March, etc), or by sex, or by
  - geographical coverage (can be the entire country or it may be for list of districts).

This applies to only district/HSD aggregated data.

**Step 2:** After being granted permission from the Chief Administrative Officer (through an authority note/letter granting him/her permission to access data), the person requesting presents the authority letter to the District Health Officer.

**Step 3:** The person responsible for giving out data, records the details of this person in a register/form, and then the data request is processed.

**Step 4:** After the data has been processed, the data requested is given to the person/institution.

Data accessed through the HMIS MUST be acknowledged and the period. The period for which the data was accessed and the date accessed should be quoted.

#### 2.4.4 Accessing the National Health Databank

Note that: There is a link between the HIS web-page and the Ministry of Health web-site ([www.health.go.ug](http://www.health.go.ug)). SOPs will be posted to the HIS web-page,

This is provided in the steps narrated below:

**Step 1:** The person seeking data from the National Health Data-bank begins by expressing his request, in writing, to the Assistant commissioner Resource centre copied to Principal Biostatistician, and to the Director General The letter (hardcopy or scanned softcopy) should include:

- The person/ institution requesting for data
- The reason why data is being requested (e.g. research purpose, production of report, monitoring, etc)
- Data variables required and the period of coverage for the data, indicating:
  - specific area like maternal deaths, number of live births, number of DPT3
  - disaggregation by year and or month (Jan, Feb, March, etc), or by sex, or by
  - geographical coverage (can be the entire country or it may be for list of districts).

**Step 2:** After being granted permission from the Assistant commissioner Resource centre (through an authority note/letter granting him/her permission to access data), the person requesting presents the authority letter to the Principal Biostatistician, who then forwads it to the National Health databank to provide required data.

**Step 3:** The person responsible for giving out data, records the details of this person in a register/form, and then the data request is processed.

**Step 4:** After data has been processed, the data requested is sent to the Principal Biostatistician, who then sends it to the recipient through the person's/ institution's email.

## 2.5 Standard Operating Procedure on ICT for HIS

### Software platform:

- Choice of software to be used for data management will be determined by the data management unit of the Ministry of Health in consultation with other users of health information in the institution like the programs.
- Relevant operating systems, applications, programs, and modules that are to be used for management of health information will be tried out by the MoH or designated institution. This will be done to ensure that operating systems, applications, programs, and modules for use at the various levels of health care (health facility, HSD, district and national levels) can withstand the bulk of the database.
- The final software selected will be determined based on the technical soundness of the software, usability, inter-operability and preferably in the public domain.

### Equipment maintenance:

- Coordination for maintenance of equipment used for data management will be a responsibility of the data management unit of the Ministry of Health or any other designated institution.
- User department/ program/ division/ section should have their data management equipment maintained at least once every 6 months.
- Actual maintenance will be carried out by a company identified by the MoH.

### Technical support on ICT including Data security for transmission and storage sites, provision of system back-up and data recovery procedures

When a user department/ program/ division/ section is in need of technical services, including anti-virus security update, these are the steps to follow:

- Step 1: User department/ program/ division/ section writes a request to the Head of the data management unit of the Ministry of Health, expressing nature of technical support being sought.
- Step 2: Data management unit Head assigns a person to touch base with the user department/ program/ division/ section and provides the needed technical support, anti-virus security updates, firewalls, or carry out data back-up or recovery for computers that have crashed.



Step 3: In case of total equipment failure, the Data management unit Head will communicate to the relevant user so that steps can be taken to replace the equipment.

Step 4: Thereafter, the user department/ program/ division/ section should log onto the internet at least twice a week, in order to update the anti-virus security.

The Systems Administrator (SA) will maintain security standards for the use of computing infrastructure in the sector. The SA will also provide support in establishment of Local Area Networks/ Wide Area Networks (LAN/WAN), internet and intranet connectivity, data encryption and decryption methodologies.

- This will detail data storage, backup, restore, and disaster-recovery mechanisms and approaches.
- The ICT technical staff will continuously provide direction on relevant systems security to ensure zero level fault tolerance.

## **2.6 Standard Operating Procedure for Web-based Health Information System**

### **2.6.1 Accessing Data from the National Health Information System Web-Page**

Health information materials handled by the webpage through linkages with the respective web-pages or web-sites include:

- Ministry of Health web-site: National documents/reports produced by Ministry of Health, e.g. like National strategies, National policies, emerging epidemics, current events, weekly epidemiologic newsletters, reports, any reports on health issues that require urgent dissemination. Also handles information on medicines, financing, equipment and health supplies
- UNHRO web-page: For research related publications.
- UBOS web-site, which is [www.ubos.org](http://www.ubos.org) : For population-based survey results and relevant statistics
- Births and Deaths web-page: For births and deaths statistics.

When a “user” of health data/ information wishes to access health information from the HIS web-page, these are the steps that should be followed:

- Step 1:** The person seeking health data from the HIS web-page should first log into internet, ensure that he is on internet. Then type [www.health.go.ug](http://www.health.go.ug) in the browser window to access the Ministry of Health web-site on the internet.
- Step 2:** Click the “Health Information System” link to access the HIS web-page. There is a linkage to the UBOS, UNRHO web-sites.
- Step 3:** Once on the HIS web-page, click onto the category of health data that you wish to access.
- Step 4:** Data is now displayed and is ready to be either printed or saved onto a flush disk or CD.

## 2.6.2 Updating the National HIS Web Page

### STORING HEALTH RECORDS:

b) Health information materials handled by the webpage include:

- National documents/reports produced by Ministry of Health, e.g. like National strategies, National policies, emerging epidemics, current events, weekly epidemiologic newsletters, reports, any reports on health issues that require urgent dissemination.
- For research related publications, they should

When a “producer” of health data/ information wishes to have any health information posted onto the HIS web-page, for the purpose of dissemination to users, these are the steps that should be followed:

- Step 1:** The data producer expresses his intention, in writing, to the Officer in-charge of updating the HIS web-page, under the Head of IT, in the Ministry of Health. The letter should include:
- The person/ institution requesting to post health information onto the HIS web-page
  - A brief on nature of health information to be posted onto the web-page, indicating:
    - specific area covered by the information, e.g. maternal health, child health, weekly epidemiological reports, statistical data from MoH, Nutritional policy, Strategic Plan on health, etc.
    - If it is health data, indicate year and or month (Jan, Feb, March, etc), geographical coverage.

- Step 2:** The request letter together with an electronic version of the information to be posted, should then be handed over to the Officer in-charge of updating the HIS web-page.
- Step 3:** The Officer in-charge of updating the HIS web-page records the details of this person in a register/form, and then the health information is posted onto the web-page.
- Step 4:** Officer in-charge of updating the HIS web-page updates the inventory on health information available on the HIS web-page.

## **2.7 Standard Operating Procedure for Integrated Disease Surveillance Response**

Integrated Disease Surveillance and Response (IDSR) is part of HMIS. It is a systematic data management system that deals with epidemic-prone diseases, diseases targeted for eradication/ elimination and selected diseases of public health importance. Data is gathered through health facility-based and community-based information systems. There already exists many guidelines regarding data management, from the point of collection to data utilization during control of the health condition. However, it has been noted that under the International Health regulation, IHR, there are no guidelines, nor SOPs to facilitate early detection of potential health conditions that may pose a major health hazard to the community working within or the communities living in the vicinity of an area with environmental pollution. The environmental pollution may be in form of gas, chemical, biological hazard, etc. The following SOPs, have therefore, been developed as a guide to establishing surveillance systems in such environments.

Other details are available in existing IDSR guidelines. These can be accessed from the HIS web-page.

### **Standard Operating Procedure for Establishing Surveillance (Data Management) Systems in areas with High Risk of Environmental Pollution**

**Step 1:** All working environments with more than 100 people converging and staying in close proximity to transact business, or work, should set up a health desk.

**Step 2:** The Health desk will maintain a Data Recording Form for all health conditions registered among its employees and business contacts. Data recorded will be analyzed on a regular basis (weekly, monthly, quarterly, annually) as a way of establishing an early warning system for health conditions of public health importance. The Data Recording Form should capture data on the following:

- Name of the patient
- Age
- Sex
- Occupation
- Presenting symptoms
- Presenting signs
- Duration of illness
- Treatment given
- Outcome of treatment
- Risk factor and duration of exposure (where applicable)

- Step 3:** The health desk will set up mechanisms for appropriate response in collaboration with the District Health authority, following the IDSR guidelines.
- Step 4:** The health desk will report as per the IDSR guideline, to the District Health Office.
- Step 5:** The Health desk will set up and maintain storage for health records, for clients and reports on outbreaks in the working place.

## **2.8 Standard Operating Procedure for Program-Generated Data**

Several programs and projects have initiated mechanisms for generating extra data to meet the demands of the programs and to offset Monitoring and Evaluation mechanisms. It is crucial that clashes between the program-generated data management system and the established Ministry of Health data management system are avoided though it should be remembered that program-generated data systems can also enrich available databases on health. The goal should therefore aim at having these systems feed into the main Health database, in this case, the data management unit of the MoH and eventually into the HIS web-page.

### **Merging Program-Generated Health Data with HIS**

The following Standard Operating Procedures should support this process:

- Step 1:** Once a program/project has generated health-related data, it should send the data to the Head of the Data Management unit within the MoH, with a covering letter, specifying the following:
- a) The area the data addresses, e.g. Sexual Gender-Based Violence data, or malaria data, etc.
  - b) Period covered, in years, months, etc.
  - c) Variables by which the data is disaggregated, e.g. Geographical coverage (e.g. names of districts, sub-counties, etc), gender, age-group, occupation, etc.
  - d) The “producers” of the data.
  - e) The program/project sending the data.
- Step 2:** The data producer expresses his intention, in writing, to the Officer in-charge of updating the HIS web-page in the Ministry of Health. The letter should include:
- a) The person/ institution requesting to post health information onto the HIS web-page
  - b) A brief on nature of health information to be posted onto the web-page, indicating:

- The area the data addresses, e.g. Sexual Gender-Based Violence data, or malaria data, etc.
- Period covered, in years, months, etc.
- Variables by which the data is disaggregated, e.g. Geographical coverage (e.g. names of districts, sub-counties, etc), gender, age-group, occupation, etc.
- The “producers” of the data.
- The program/project sending the data.

**Step 3:** The request letter together with an electronic version of the information to be posted, should then be handed over to the Officer in-charge of updating the HIS web-page.

**Step 4:** The Officer in-charge of updating the HIS web-page records the details of this person in a register/form, and then the health information is posted onto the web-page.

**Step 5:** Officer in-charge of updating the HIS web-page updates the inventory on health information available on the HIS web-page.

## **2.9 Standard Operating Procedure for Health Financing/National Health Accounts Information System:**

National Health Accounts (NHA) provides evidence to monitor trends in health spending for all sectors- public and private, different health care activities, providers, diseases, population groups and regions in a country. Health spending can also be tracked for specific areas of health, for example, health spending for Malaria in a country, Reproductive Health, Child Health, Environmental Health, etc. Informed decision-making requires reliable information on the quantity of financial resources used for health, their sources and the way they are used. Information can then be used to make resource allocation, financial projections of a country’s health system requirements and compare their own experiences with the past and other comparable countries.

Standard Operating Procedures have been developed to guide programs/ institutions on how to use the Health financing/NHA information to track expenditure on Health.

### **Collecting Health Financing/NHA Data**

Source of data on NHA includes Government (Ministry of Health, Local Governments, other line ministries where applicable, UBOS for household as a source of health financing), Private Not

for Profit health facilities, Private health facilities, NGOs, Development Partners, Insurance, employers among others.

Health financing/NHA data is collected by the planning department of the MoH at agreed intervals.

- Step 1:** At least once every year, the Planning Department of the Ministry of Health or a Consultant given the assignment, should consult stakeholders at both Central and at District levels (Development partners, Government institutions, other implementing partners) regarding their respective expenditures as far as Health is concerned. Consultations with District Local Governments in order to track expenditures at that level should also be undertaken.
- Step 2:** At agreed intervals, as stipulated in the institutionalization of NHA, health expenditure data/NHA data should be collected from all private entities (NGOs, Employers, Insurance, households)
- Step 3:** MoH should obtain updates from the Ministry of Finance and Economic Development, on funds budgeted and funds released to each district.
- Step 4:** MoH should obtain information from each of the districts on the funds that they receive per quarter, against the funds that the district spends during the quarter. The information on expenditure at the district is also used to fill the Quarterly Performance Report, Form B, that is eventually sent to the Ministry of Finance and copied to Ministry of Health.
- Step 5:** MoH and districts should compile data on funds spent on the specific area of health. Sources of information include:
- Financial records of the organization/ institution; these give information on total funds spent on a specific area of health.
  - The financial equivalent of health materials given in kind.
  - Financial expenditures on infrastructure (construction, rehabilitations, equipping of health facilities).
  - Expenditure on all inputs; human resource for health, medicines etc.
- Step 6:** During compilation of the financial information, disaggregate by:
- Source of funding, e.g. Government funds, Donors, Private (if available).
  - Year (Financial Year or Calendar Year).
  - Level of health care, i.e. national, district and health facility level (HCI, II, III, IV, Hospitals- general, regional, national).
- Step 7:** The NHA should be updated at least once every year so that it can be used for tracking health expenditures. Planning Department of Ministry of Health once

every year, posts this information onto the Ministry of health web-site, at [www.health.go.ug](http://www.health.go.ug)

**Step 8:** A user that wishes to access health financing/NHA data can do so by logging onto the HIS web-page, then access the NHA by linking onto the Ministry of Health web-site.

## 2.10 Standard Operating Procedure for Human Resource Information System

The purpose of the Human Resource Information System should be to track health human resource graduating from health training institutions, and numbers of health human resource in the public sector. Coordinating centre for Human Resource Information System (HRIS) is in the Human Resource Division of Ministry of Health.

### Updating the Human Resource Information System

**Step 1:** The first step for updating HRH information commences with the source of HRH information. Sources of information on human resource for health include:

- Health facility: All health units must complete the Staff Listing HMIS form once every 6 months and send it through the HSD to the District Health Office. Information recorded on the Staff Listing is as follows:
  - Post
  - Approved No.
  - No. of Filled posts
  - Salary Scale
  - Name
  - Cadre
  - Qualification
  - Date of Birth
  - Computer No.
  - File number
  - Current assignment
  - Date of first appointment
  - Date of present appointment
  - Sex
  - Status of employment
  - Status (Died, transferred, resigned, etc)



- District Health Office: This office collates all information on HRH that is recorded on the Staff Listing Form, sent from the public health facilities (HC II, HC III, HC IV and general hospitals). The compiled information for the district (on all the health workers that work in public facilities within the district) is sent by the District Health Office twice a year to the Ministry of Health.
- Regional referral Hospitals and the National Referral hospitals should also send a filled Staff Listing form to the Ministry of Health Resource Centre, once every 6 months, for compilation.
- MoH: Data from the District Health Offices is collated at the National level in the Ministry of Health Resource Centre (RC). The compiled data on HRH should be sent to the Human Resource Division of Ministry of Health by RC for use to update the HRIS.

**Step 2:** Human Resource Division of Ministry of Health should contact Ministry of Health Resource Centre once every 6 months for updates on Health workers that are serving in the public sector.

**Step 3:** Human Resource Division of Ministry of Health should contact other sources of HRH information, namely:

- Training schools for health workers: Medical Schools, Nurses and Midwives' schools, paramedical schools: These institutions have information on the health workers that graduate from their schools each year and should therefore be contacted once annually.

**Step 4:** Human Resource Division of Ministry of Health can now make comparisons between the numbers of health workers that graduate and the numbers that eventually end up in the public sector. The division can track HRH in the country.

## **2.11 Standard Operating Procedure for Logistics Management Information System**

The country has developed a Commodity Security Data Management System, which is computerized. It is based in the Pharmaceutical Division of MoH and should be updated at least once every 2 months. This package provides information on the following:

- Data on the logistics by type and amounts that come into the country,
- Data on the logistics by type and amounts that go to health facilities through the ordering system,
- Data on level of stocking by health facility (stock at hand),

- Data on what is available at the National Medical stores.

The country also uses the “Contraceptive use pipeline” database to develop contraceptive procurement tables; these tables are mostly used for forecasting contraceptive needs and to determine how much to order nationally.

Sources of data to update the Commodity Security Data Management System:

- Information system for management of medicines and related medical supplies is integrated within HMIS. Forms like Stock Cards, Records’ of Issue, Medicine Order forms are used in health units to monitor movement, use and availability of these logistics.
- Consumption data, which should be extracted from the stock cards and registers at health facility level.
- Losses and adjustment, extracted from the stock cards and registers at health facility level.
- Stock on hand, Average Monthly Consumption, losses and adjustment that are obtained from the stock cards and registers at health facility level, and from the logistics order form.

Management Information system for medicines and health-related supplies is very crucial to inform programs, implementing partners and development partners, the status of procured items at national level, together with stocks status at district and health facility levels.

### **2.11.1 Updating and Accessing Information on Medicines, Health Supplies and Equipment at National Level**

Standard Operating Procedures on medicines and health supplies management will allow stakeholders to obtain information in the following areas:

- a) At the National Medical Stores (NMS):
  - National stock status in NMS
  - What is in the pipeline, i.e. what medicines or supplies have been procured and are expected to arrive in NMS
  - The status of performance by NMS in regard to the district needs.
- b) At the Ministry of Health:
  - Updated medicines information originating from NMS
  - Districts medicines and supplies stock status.
  - NMS compliance to schedules they set to deliver medicines and related supplies.
- c) At the District level:
  - Compliance to timely placing of orders for medicines and health supplies.
  - Compliance to procedures for receiving medicines and health supplies.

- Compliance to procedures for providing feedback to NMS regarding damages or under-deliveries.
- Districts medicines and supplies stock status.

d) At the health facility level:

- Updated information systems for medicines and health supplies.
- Monthly stock-taking.

**NOTE:**

1. All orders placed by the District Health Office should be copied to the Head of Pharmaceutical Division of Ministry of Health.
2. When issues are ready for delivery to districts, copies should be availed to the Head of Pharmaceutical Division of Ministry of Health, in order to update the Commodity Security Data Management System.
3. Pharmaceutical Division of Ministry of Health obtains updates on procurements conducted by NMS monthly and these are used to update the Logistics Management Information System.
4. Pharmaceutical Division of Ministry of Health should share updates on available stock at NMS for Medicines and other logistics to all stakeholders at least once every 6 months.
5. At the health facility level, Stock cards and records of issue must be regularly updated

**Step 1:** National Medical Stores, on a quarterly basis, compiles Tables with the following information:

- Quantities of medicines/ health supplies or medical equipment available at NMS.
- Quantities of medicines/ health supplies or medical equipment that have been procured and are in the process of being shipped and the expected arrival dates by item (in the pipeline).
- Quantities of medicines/ health supplies or medical equipment that have been delivered by NMS to districts against orders that have been placed by each district.

**Step 2:** NMS avails the compiled data (on medicines/ health supplies or medical equipment) to Pharmaceutical Division of Ministry of Health once every quarter.

**Step 3:** At the Ministry of Health: Pharmaceutical Division posts the information from NMS, onto the Ministry of Health web-site, [www.health.go.ug](http://www.health.go.ug)  
**These updates can also be accessed by logging onto the HIS webpage and then click on the link to MoH web-site to access the information.**

### **2.11.2 Updating and Accessing Information on Medicines, Health Supplies and Equipment at District Level**

- Step 1:** Each health facility updates the stock cards and acknowledges receipt of medicines by endorsing on the delivery note, as soon as a delivery of medicines and health supplies is done. Available quantities are used to determine which medicines or health supplies should be ordered.
- Step 2:** The District Health Team, on a quarterly basis, compiles a Table with the following information:
- A list of orders that the district made during the quarter by health facility
  - A list of deliveries that NMS made indicating the quantities of medicines and health supplies made to the district in the quarter.
- Step 3:** In case there have been damages in the deliveries and/or the quantities delivered are less than the amounts the district had ordered, the District Health Officer should compile this information for all health facilities that were affected. The DHO should then write to the National Medical Stores, copied to the Ministry of Health, with this information on quantities by medicine damaged, and medicines that were under-delivered.
- Step 4:** Quantities by medicine damaged, and medicines that were under-delivered, is compiled by the Ministry of Health, Pharmaceuticals division and a feedback is provided to NMS.

### **2.12 Standard Operating Procedure for Community-Based Health Information System**

Community-based health information systems are those systems through which data is collected and reported directly from/by the community. Main purpose for establishing such systems are:

- For outbreaks:
  - For early identification of outbreaks/ epidemics since people begin to fall sick while in the community, thereby establishing appropriate control and prevention measures.
  - To reduce morbidity (reduce spread) and mortality due to some of the common health conditions in the community by early detection and early response.
  - For prompt initiation of treatment of cases

- To capture cases and deaths in the community since some people fall sick and seek treatment in the community, e.g. Village Health Teams (VHTs), traditional healers, herbalists.
  - To ensure community participation in health matters / issues that affect them.
  - To enable the surveillance system capture/identify more patients who have not been captured by the current system that is based mainly on established health facilities (government/non-government).
- To capture information on health interventions that are carried out in the community in order to get a better estimate on coverage, e.g:
    - Deliveries by traditional birth attendants, village-based immunizers, family planning providers
- Registration of births
    - In order to know the age of the child (for school entry), capture data on births including those in the community for more accurate estimates of population size (especially useful for planning purpose)
- Registration of deaths:
    - In order to identify orphans in the community and plan for their support, get better estimates on deaths and Crude Mortality Rates.

***NB: Registration of births and deaths is handled under the section on Vital Registration.***

## **Linking Community-Based Information Systems with the mainstream Health Information System**

- Step 1:** Any member of the community can alert the VHT) responsible for collecting health-related data at community level, about a health issue that requires action by the health sector.
- Step 2:** Once the VHT member gets to know about the health issues, for which he/she is responsible for reporting, he/she should record the information according to the guidelines he/she was given.
- Step 3:** The VHT member, at the end of every quarterly, should submit data gathered to the nearest government health facility. But in case of an outbreak, the data should be submitted immediately.
- Step 4:** At the health facility, the data is received by the health unit in-charge. The in-charge ensures that it is compiled and incorporated into the Health Unit HMIS

quarterly report as required. The report is then sent to the Health Sub-District level.

**Step 5:** The data from all the HSDs is collated by the District Health Office and a District HMIS report is sent to the Resource Centre of Ministry of Health.

## **2.13 Standard Operating Procedure for Research-Generated Health Information**

Research on health is conducted by individuals, institutions or organizations. It is intended to influence policy formulation, introduce new approaches to treatment or health management and to prove or disprove a hypothesis but all in all, to generally lead to betterment in health care. Efforts to utilize research findings have been minimal. Researchers do their research and there is nobody to encourage use of the findings. For example, findings of research done as part of fulfillment of PHD or Masters degree, are hardly used mostly because they are not disseminated and the researchers do not know how to share this information.

### **2.13.1 Conducting Research or any Population-Based Survey on Health**

**Step 1:** The researcher(s) write(s) to the Uganda National Council for Science and Technology, copied to the Uganda National Health Research Organization (UNHRO) of Ministry of Health, indicating the following:

- Study to be done
- Reasons for carrying out the study
- Intended beneficiaries of the study
- Geographical area that the study will cover
- In case biological samples will be taken, this should be stated and the specific samples (blood, urine, spinal fluid, etc) and the study subjects indicated
- Duration of the study

**Step 2:** submission to appropriate Institutional Review Board (IRB) should be ensured.

**Step 3:** Following IRB approval, the researcher should submit to the National Council for Science and Technology then uses its criteria to determine whether to give the authority or not.

**Step 4:** The National Council for Science and Technology then gives the response to the researcher(s) in writing, copied to the Uganda National Health Research Organization (UNHRO).

**Step 5:** The researcher can now prepare for the study provided authority has been granted.

### 2.13.2 Sharing Research Findings with other Users of Health Information

**Step 1:** The researcher(s) should express their intention, in writing, to UNHRO on their desire to disseminate research findings. The letter should include:

- The name of the person/ institution requesting to disseminate health research findings
- Attachment of an abstract of the research including:
  - Specific area covered by the research, e.g. Maternal health, Child health, Nutrition, HIV; and the Title of the research
  - Year and or Month (Jan, Feb, March, etc), geographical coverage the research covers.
  - Methodology used
  - The major findings.

This information is used to update the **Inventory of research** in the country and the **Inventory of researchers** in the country. These inventories can be accessed by opening the HIS web-page and then linking to the UNHRO web-page.

**Step 2:** Committee/ board under UNHRO, responsible for management of findings of research, scrutinizes the abstract and takes a decision on whether the findings should be disseminated. The decision made is then communicated to the researcher by UNHRO, advising the researcher on the next course of action – findings to be disseminated or not to be disseminated (reasons clearly indicated in the response).

**Step 3:** In case the response is positive, the researcher should provide an electronic version of the research, preferably in pdf format, to UNHRO in order to have it posted to the UNHRO web-page.

**Step 4:** After UNHRO has posted the research onto UNHRO web-page, it can then be accessed by users of research findings through the HIS web-page.  
**All users of this research finding that access this web-page, are automatically registered and added onto the Inventory of users in the HIS web-page.**

## 2.14 Standard Operating Procedure for Vital Registration for Births and Deaths

UBOS is charged with the overall coordination of production of information in the country. Data the bureau collects belongs to the category of Population-based information system. This includes research-based data and Vital Registration (VR). Re-vitalization of registration of vital statistics like deaths and births is the responsibility of Ministry of Justice. However the registration per se takes place at community level and in health facilities especially hospitals

### 2.14.1 Collecting Vital Statistics at Health Facility Level

All births and deaths that occur in a health facility must be recorded and registered.

#### **For all births:**

The following steps should be followed to record a birth:

- Step 1: The midwife or doctor that has just conducted a delivery should record the birth in the Maternity register. Specifically, the information to be recorded is as follows:
- i. Under the column for “Date of delivery”: record Date for the day the baby(ies) is(are) born.
  - ii. Under “Sex”: record “Female” if the baby born is female; record “Male” if the baby born is male.
  - iii. Weight of the baby(ies) in Kgs.
  - iv. Under “Status of the baby”: record alive if baby is alive; record dead if baby is dead).
  - v. The name of the Mother.
  - vi. The name of the Father.
  - vii. Tribe of the Father.
  - viii. Nationality of the Father.
- Step 2: The Birth Registration certificate should be filled in and be sent to the District Population office for further compilation.
- Step 3: All the births data received by the district should be sent in electronic format to the National Bureau for Registration of Births and Deaths at the national level for storage/archiving, then be posted to the Births and Deaths web-page.
- Step 4: The HIS web-page has a link with the Births and Deaths web-page; hence data users can access Births data nationally through the HIS web-page.



## **For all deaths:**

The following steps should be followed to record a death that has occurred in a health facility:

- i) As soon as a patient dies in a health facility, the health worker that attended to the patient should record the death in the patient register used on the respective ward (where the patient died). The section filled is the column indicated as "Status". Under this column, fill "Died" and write the date of death under the same column. Also fill in the final diagnosis at death.
- ii) The health worker should then read the patient's inpatient file, to extract details regarding the patient's condition from the time of admission to the day the patient died.
- iii) Information extracted should be used to fill in the Death Certificate; it includes:
  - a. Name of the patient
  - b. Age at death
  - c. Sex
  - d. Locality where death occurred
  - e. Village of residence: record where the dead person used to live.
  - f. Parish of residence.
  - g. Sub-county of residence.
  - h. Tribe of the deceased.
  - i. Nationality of the deceased.
  - j. Admission at health facility where death occurred or from where it was reported
  - k. Cause of Death, using the International Classification of Diseases (ICD) 10 to give a proper classification of the cause of diagnosis at death. This is broken down into 2, namely:
    - The medical/ surgical/ obstetrical condition which led to the death (Primary or underlying cause of death). This is the initiating condition or disease that led to the death of the patient and is the diagnosis at death. There can be only one primary cause of death. This classification is oriented towards prevention.
    - Final and contributory (or antecedent) cause of death. This is the event that finally resulted in death of the patient and can only be one. There may be contributory (or antecedent) factors that lead to the final cause of death. The contributory factors have the same classification as the final cause. The classification is oriented towards the organ systems that fail and lead to death.
  - l. If autopsy/ post-mortem was done, use findings to perfect the cause of death.
  - m. Summary of interventions that were carried out before death

- iv) The Death should also be registered by filling in the Death Registration; this is then sent to the District Population office for further compilation.
- v) All the deaths data received by the district should be sent in electronic format to the National Bureau for Registration of Births and Deaths at the national level for storage/archiving, then be posted to the Births and Deaths web-page.
- vi) The HIS web-page has a link with the Births and Deaths web-page; hence data users can access Deaths data nationally through the HIS web-page.

### **2.14.2 Collecting Vital Statistics at Community Level**

All births and deaths that occur in the community must be recorded and registered.

#### **For all births:**

The following steps should be followed to record a birth at community level:

- i) As soon as a baby is delivered at community level, the parents of the newborn should report the birth to the Sub-county office (where the village is located) responsible for registration of births.
- ii) At the sub-county office, the parent(s) fill an Application form requesting registration of the birth.
- iii) The sub-county office uses information in the filled application form to process a Birth Registration certificate for the baby, which they later give to the parent(s).
- iv) The sub-county office uses information in the filled application form to also update the sub-county Registration book for births. Information to be filled in this sub-county Birth Registration book should include the following:
  - a. Under the column for “Date of delivery”: record Date for the day the baby(ies) is(are) born.
  - b. Under “Sex”: record “Female” if the baby born is female; record “Male” if the baby born is male.
  - c. Village of residence.
  - d. Parish of residence.
  - e. Sub-county of residence.
  - f. Under “Status of the baby”: record alive if baby is alive; record dead if baby is dead).
  - g. The name of the Mother.
  - h. The name of the Father.

- i. Tribe of the Father.
  - j. Nationality of the Father.
- v) On a quarterly basis, the sub-county office compiles all births registered during that period, and forwards a summary of all recorded births (summarizing all the above information in “iv” above), to the District Population office.
- vi) The District Population office, once every quarter, collates all information on births sent by all the sub-counties, and forwards it to the National Bureau for Registration of Births and Deaths at the national level.
- vii) At national level, all births are compiled and a summary containing information (in “iv” above), is posted onto the Births and Deaths web-page.
- viii) Users of the data on births can access the Births and Deaths web-page by linking to it through the HIS web-page.

**For all deaths:**

The following steps should be followed to record a death at community level:

- i) As soon as a person dies while at community level (exclude all deaths that occur in a health facility), the relatives of the deceased should report the death to the Sub-county office (where the village is located) responsible for registration of deaths.
- ii) At the sub-county office, the relatives fill a Form for recording a death.
- iii) The sub-county office uses information in the filled form to process a Death Registration certificate for the deceased, which they later give to the relatives.
- iv) The sub-county office uses information in the filled form to also update the sub-county Registration book for deaths. Information to be filled in this sub-county Death Registration book should include the following:
  - a. Under the column for “Date of death”: record Date for the day the deceased died.
  - b. Under “Sex of the deceased”: record “Female” if the deceased was female, “Male” if it was a male death.
  - c. Age at the time of death.
  - d. Village of residence: record where the dead person used to live.
  - e. Parish of residence.
  - f. Sub-county of residence.
  - g. Cause of death.
  - h. Tribe of the deceased.
  - i. Nationality of the deceased.

- v) On a quarterly basis, the sub-county office compiles all deaths registered during that period, and forwards a summary of all recorded deaths (summarizing all the above information in “iv” above), to the District Population office.
- vi) The District Population office, once every quarter, collates all information on deaths sent by all the sub-counties, and forwards it to the National Bureau for Registration of Births and Deaths at the national level.
- vii) At the National level, all deaths are compiled and a summary containing information (in “iv” above), is posted onto the Births and Deaths web-page.
- viii) Users of the data on deaths can access the Births and Deaths web-page by linking to it through the HIS web-page.

### **2.14.3 Disseminating and accessing Vital Statistics**

For SOPs to update, access or send Vital statistics on the HIS web-page data on vital statistics, refer to section 2.6 above