

RHEA PROJECT RWANDA

Health Informatics Standards Infrastructure for Rwanda: Health Care Facility Registry Health Care Professional Registry

| [Version 1.7](#)

Revisions

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1 Introduction

This document is the second deliverable of the standards infrastructure of the Rwanda Health Enterprise Architecture (RHEA). The provider registry consists of two registries: the HC facility and the HC professional registries.

The unique identification of HC providers (professionals and organizations) is necessary and allows for the identification of where a patient receives care, and of the person who delivers it.

2 Objectives

This document presents the business requirements of Rwanda Provider Registry, the second building block of the Rwanda eHealth Architecture. This is also a deliverable for the RHEA project

3 Methods

The first step was to assess the current Rwanda facility registry revising the data collected and the standards currently in use.

Facility registry - the MOH of Rwanda already has a HC facility registry. The list of all HC facilities in the country is available at the MOH home page [here](#), with unique identifications, called the FOSA number. This document proposes an extension on the current HC facility registry as well as a new registry that will contain all the HC professionals in the country.

HC professional registry - the MOH Ubudehe database was identified as the initial source of data for the HC professional database, since this database has almost 90% of the Rwanda population uniquely identified either with the NID or with another unique number. The paper forms filled at the HC facility inform the NID of each HC professional. This will be used to query the client registry and obtain/update the demographic information. Please refer to the Rwanda Client Registry document.

In parallel, a revision of standards and international recommendations on how to build national registries of HC professionals and providers was also made.

Finally, adaptations for the Rwanda context were proposed.

3.1 Reference Standards

The following reference documents and standards apply to the Rwanda Provider Registry:

- ISO TS 22220 Identification of Subjects of Care – provides the data structures to represent and identify clients of the health system [1]
- ISO TS 27527 Provider Identification – provides the data structures to represent and identify HC facilities and HC professionals [2]
- Report of the First Meeting of the Health Workforce Information Reference Group (HIRG), WHO, Geneva 2010 [3]
- Healthcare workers classification – WHO [4]
- International Standard Classification of Occupations. International Labour Organization [5]

4 Requirements for the Health Facilities Registry and HC Professional Registry

4.1 Health Facilities Registry Requirements

- R#1 – Each facility is identified by a unique national sequential number of 5 digits followed by two control digits (MOD 11)
- R#2 – All facilities currently part of the Access database of the MOH should be imported to the facility registry. The FOSA number is the actual unique number. The control digit has to be calculated and added to the unique number after the initial import;
- R#3 – After the initial load, new facilities will have their unique number automatically generated by the system
- R#4 – Inaugurated dates and planned opening date are fields that should accept partial dates in month/year or only year
- R#5 - Inaugurated dates must be lower or equal the current date
- R#6 – Opening date must be greater than current date
- R#7 – The system will automatically calculate the population of the HC facility catchment area by adding the population of the respective geographical area selected. The tables with the population for each village will be stored in the system by database script. In addition to that, the tables with the hierarchical geographical structure from provinces, district, sector, cell and villages with their names and codes will also be stored directly in the database by script. Based on the villages population the system will add and store the population for the respective cells, sector, district and provinces.
- R#8 – According to its type, each HC facility has a catchment area. The data-entry from must first ask for health posts, then health centers, then district hospitals, then provincial hospitals and finally national referral hospitals. For the pilot the catchment area will be defined as follows:
- For health centers and or Health posts the system should first present a list of sectors to be selected. For each sector selected the system should show the list of villages from the sector, allowing for the selection of one or more villages. The field HC_CATCHMENT_AREA_LEVEL should be = “4” meaning “villages” and this should automatically appear in the data-entry form. The field HC_CATCHMENT_AREA_POPULATION should be the sum of all selected villages population. On the table TB_HC_FACILITY_CATCHMENT_AREA the field HC_CATCHMENT_AREA_CODES should contain the codes of the villages selected.
 - For district hospitals the system should first present a list of districts to be selected. For each district selected the system should show all health centers from the district, allowing for the selection of one or more health centers. The field HC_CATCHMENT_AREA_LEVEL should be = “3” meaning “district” and this should automatically appear in the data-entry form. The field HC_CATCHMENT_AREA_POPULATION should be the sum of all catchment area population of the health centers selected. On the table TB_HC_FACILITY_CATCHMENT_AREA the field HC_CATCHMENT_AREA_CODES should contain the codes of the

districts selected.

- For Provincial Hospitals the system should present the list of provinces for selection. The field HC_CATCHMENT_AREA_LEVEL should be = “2” meaning “provincial” and this should automatically appear in the data-entry form. The field HC_CATCHMENT_AREA_POPULATION should be the sum of all selected provinces population and should appear automatically in the data-entry form. On the table TB_HC_FACILITY_CATCHMENT_AREA the field HC_CATCHMENT_AREA_CODES should contain the codes of the provinces selected.
- For National Referral Hospital the system will assume the total population of Rwanda meaning the sum of all provinces population. The field HC_CATCHMENT_AREA_LEVEL should be = “1” meaning national and this should automatically appear in the data-entry form. The field HC_CATCHMENT_AREA_POPULATION should be the sum of all provinces population and should appear automatically in the data-entry form. On the table TB_HC_FACILITY_CATCHMENT_AREA the field HC_CATCHMENT_AREA_CODES should contain the codes of all provinces in Rwanda.

R#7 – the maintenance of the HC facility registry is done only at the central level directly at the HC facility registry application, based on the information on the paper forms received from the HC facilities across the country. The MOH must establish a minimum frequency for this registry to be updated (trimester? semester? Or whenever a new facility is created). In addition to that, it will be necessary to define the staff who will be responsible for the data entry and quality control of the registry

R#8 – Services provided by the facility should be represented in a hierarchical structure as shown on page 13. Each service has its own classifications/category as the table shows. The category and respective services are:

Category of services	Type of Service Provided		
Code	Description	Code	Classifications
01	Health Promotion and Prevention		
		0101	Ante-natal consultation
		0102	Behavior Change Communication/Health Education
		0103	Community mobilization
		0104	Family Planning
		0105	Post Natal

			Consultation
			Growth
			Monitoring/Nutrition
		0106	Surveillance
		0107	Vaccination
		0108	Psychosocial support
			General Health
		0109	Promotion Activities
02	Diagnostic Services	0201	Laboratory
			Voluntary Counseling
		0202	and Testing
		0203	Laboratory
03	Clinical Services		Primary Outpatient
			Curative Consultation
		0301	(CPC)
		0302	Hospitalization
		0303	Emergency care
		0304	Dentistry
		0305	General
			Ophthalmology
		0306	Integrated
			Management of
			Childhood Illness
			Management of
		0307	gender violence
			Mental Health
		0308	Services
		0309	Physical therapy
			Nutritional
		0310	Rehabilitation
			Cardiovascular care
		0311	and treatment
		0312	TB care and treatment
			Care and treatment for
			persons living with
		0313	HIV/AIDS
			Diabetes care and
		0314	treatment
		0315	Other Non
			Communicable

			disease (NCD) care and treatment
		0316	Management of dystocic pregnancies
		0317	Post-abortion care
		0318	Deliveries - high risk
		0319	Deliveries – normal
		0320	Newborn care
04	Surgical Services		
		0401	Major surgical interventions
		0402	Minor surgical interventions
05	Organ transplants and Blood transfusions		
		0501	Blood bank
		0502	Organ transplants
06	Pharmacy		
		0601	Pharmacy
07	Prosthetics and Medical devices		
		0701	Prosthetics
		0702	Other medical devices
08	Complementary actions to promote health		
		0801	Hygiene and environmental health
		0802	Medico-Legal documentation
		0803	Pre-marital Consultation
		0804	Vector and Zoonosis control
		0805	Epidemiological Surveillance and Response

R#9 – Each HC facility may have one or more implementing partner organizations, as follows:

6. Implementing Partners Organizations

Code	Partner Organizations
10	MSH
1	CAAC
11	Non-affilie
5	GF
8	MAP
7	IHI/HCSP
3	EGPAF
9	ICAP/CU
4	FHI
2	CRS
12	PIH/CF
6	GTZ
13	DREW

4.2 Health Care Professional Registry Requirements

R#1 - All HC professionals must have either an NID number or the Health Number.

R#2 – If the HC professional does not have the NID or the Health Number, it will be necessary the client registry will create the unique health number. This new ID should be printed (label or cardboard) and sent to the HC professional at the HC facility where he/she works. (This could be sent even by an e-mail to HC facility manager).

R#3 – All HC professionals responsible for encounters that will be sent to the SHR must be registered in the client/HC professional registry, otherwise the message with the clinical content will be stored in a temporary area. This will generate an event that will dispatch a message to the MOH data manager that will call the HC facility and ask the data necessary to register this HC professional. Only after that the message with the clinical content will be stored in the SHR

R#4 - Anyone accessing the SHR, must be a registered HC professional in the MOH

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5 Workflow for updating the Rwanda facility and HC professional registry

The proposed workflow for the Rwanda facility registry is described below.

- **Initial load of the HC facility database** - the actual health care access database that has all HC facilities in Rwanda. This is an Access Database that currently has all the facilities in Rwanda. Structure is detailed in Annex 3. Note that although the director name is part of the current database there is no NID. Maybe the facility registry could import the name without the NID and wait for the next update that will come from the paper form to include the NID. Another alternative would be that the central data manager would make a search in the client registry looking for that person in order to get his/her NID to update the HC facility registry.
- **Including a new HC professional** - when including a new HC professional it will always be necessary to query the client registry to check if that person is already included or not. In case of any discrepancy we will consider the paper form the most updated information for all demographic data, except the NID number. In cases of mismatch of the NID number this requires a manual intervention and call to the facility to confirm the NID number. If it is confirmed that the client registry is wrong this should be manually informed to the MOH person responsible for the client registry to sort this out. If the HC professional is not on the client registry it will be necessary to first include he/she in the client registry before entering the HC professional data.
- Information from the facility and providers registry will be manually informed in the respective Facility and HC Professional Forms (Annex 1).
- These forms will be sent to all HC facilities in Rwanda, public and private.
- Each facility will fill on the HC facility form and as many HC professional forms as the number of HC professionals currently working in the facility. For the first iteration only the HC professionals involved in the use cases of maternal and child health will be in the registry. All those who do HC delivery and /or enter data or query the system must be registered in the HC professional registry, otherwise they will not have access to the SHR.
- POC applications, such as OpenMRS will be able to query the HC facility and HC professional registries through web services exchanging HI7 v2 messages (to be defined).

5.1 Health Care Professionals Registry (Identification of individual provider)

The Health Care Professionals Registry will encompass all the health workers in Rwanda. It is a specialization of the Client Registry with additional information specific to the health worker. The classification of health workers adopted follows the WHO recommendation mapping occupation categories into five broad groupings: health professionals, health associate professionals, personal care workers in health services, health management and support personnel, and other health service providers not elsewhere classified. The incorporation of all these categories in the national HRH database should be an incremental and interactive process, as described below. The full implementation of all the functionalities for managing, allocating, monitoring and evaluating HRH is out of the scope of the registry but this should be the national database that the country HRH system will use, update and maintain. Therefore, there will be no duplications of databases for

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HRH. The full functionalities of the country HRH system will be described later in a separate document also part of the Rwanda eHealth Architecture.

5.1.1 Data requirements for the HC professional registry

Element	Description	Length/ TYPE	Status (R = required and O =Optional)	Behavior
TB_PERSON (From the client registry)				
NID_NUMBER	Rwanda NID	16	R	This is the national unique identifier number (NID) as provided by the national NID database..
DOCUMENTS_NID_NUMBER_FK	Link to the table documents with the NID details		R	
MOH_NUMBER	Unique health number	16	R	One these two (NID or Health number must be informed).
DOCUMENTS_MOH_NUMBER_FK	Link to the table documents that describe the MOH identifier details	R		
MUTUAL_HEALTH_INSURANCE_NUMBER	Mutual health insurance number		O	
DOCUMENTS_MUTUAL_NUMBER_FK	Link to the table documents that describe the Mutual Health Insurance details		O	
DOCUMENTS_RAMANUMBER_FK	Link to the table documents with the Rama Health Insurance details			
SOCIAL_SECURITY_NUMBER	Client Social security number			
DOCUMENTS_SOCIAL_SECURITY_FK	Link to the table documents with the Social Security details			
LAST_NAME	Last Name of the client	30	R	
OTHER_NAMES	Other names of the client	50	R	
FATHER_NAME	Full name of the father	80	R	

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TB_ADDRESS (*)				
PROVINCE_CODE_FK	Link to the province code where the client lives, on TB_PROVINCES	STRING (1)	R	TB_PROVINCES 1 = Kigali 2 = North 3 = East 4= South 5 = West
DISTRICT_CODE_FK	Link to the district code where the client lives on TB_DISTRICTS	STRING	R	On the data entry screen, only the district names from the respective province should appear for selection.
SECTOR_CODE_FK	Link to the Sector code where the client lives on TB_SECTORS	STRING	R	On the data entry screen, only the sector names from the respective province/district should appear for selection.
CELL_CODE_FK	Link to the Cell code where the client lives on TB_CELLS	STRING	R	On the data entry screen, only the cell names from the respective province/district/sector should appear for selection.
VILLAGE_CODE_FK	Link to the Village code where the client lives on TB_VILLAGES	STRING	R	On the data entry screen, only the village names from the respective province/district/sector/cells should appear for selection.
POST_OFFICE_BOX	Post Office Box of the client address	STRING	O	
CELULAR_TELEPHONE_	Client cell phone	STRING (12)	O	
BUSINESS_TELEPHONE	Client Business Telephone	STRING (12)	O	
EMAIL		STRING (30)	O	
STREET_NAME	Street name where the client lives	STRING (50)	O	
STREET_NUMBER	Street number where the client lives	STRING (10)	O	
COMPLEMENT	Complement of the street number like apt number	STRING (30)	O	

POSTAL_CODE	Postal code of the address where the client lives		O	
COUNTRY_CODE	Country where the person lives	STRING (2)	O	Use ISO 3166 Country codes
LATITUDE	(degrees, minutes..)	STRING(5)	O	
LONGITUDE	(degrees, minutes..)	STRING(5)	O	

(*) TB_ADDRESS is a separate table that holds all addresses no matter if from an individual or organization. A foreign-key will establish the relationship between either the individual or the organization with the address. Historical data about the addresses will be stored in the database

TB_HC_PROFESSIONAL-QUALIFICATION				
EDUCATION_LEVEL	HC professional education level	STRING (1)	R	0 = Pre-primary education 1 = Primary education or first stage of basic education 2 = Lower secondary or second stage of basic education 3 = (Upper) secondary education 4 = Post-secondary non-tertiary education 5 = First stage of tertiary education 6 = Second stage of tertiary education
PROFESSIONAL_REGISTRATION_BODY_CODE	HC professional registration body code	STRING (1)	R	1 = Physicians 2 = Nurses 3 = Not applicable
PROFESSIONAL_REGISTRATION_NUMBER	HC professional registration number	STRING (10)	O	If there is a professional registration body code = 1 or 2 then this field is mandatory
PROFESSIONAL_REGISTRATION_START_DATE	Date the professional registration was issued	DATE	O	If there is a professional registration body code = 1 or 2 then this field is mandatory
PROFESSIONAL_REGISTRATION_STATUS	Informs the status of the professional	STRING (2)	O	If there is a professional registration body code = 1

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TUS	registration			or 2 then this field is mandatory 1 = Active / full registration 2 = Limited registration 3 = Student registration 4 = Suspended registration 5 = Terminated registration 6 = Nullified 7 = Pending 8 = Inactive registration
PROFESSIONAL_REGISTRATION_ENDED_DATE	Date professional registration ended	DATE	O	If there is a professional registration body code = 1 or 2 then this field is mandatory

TB_HC_CURRENT EMPLOYMENT(*)				
HC_PROFESSIONAL_FK	Holds the key to the HC professional table to establish the relationship among them	STRING (15)	R	
OCCUPATION_GROUP_CODE	Informs the professional occupation group code for this employment	STRING (10)	R	Please see Annex 2
OCCUPATION_CODE	Informs the professional occupation code for this employment	STRING (10)	R	Please see Annex 2
NUMBER_HOURS_WORKED_WEEK	Informs the number of hours per week the HC professional works in this employment	INTEGER	O	

(*) Separate table in an 1 to n relationship from the HC professional table to this one.

TB_HC_PROFESSIONAL_SIGNATURES			
HOC_PROFESSIONAL_ID	STRING (15)	R	Holds the key to the HC professional table to establish the relationship among them
NID_FORM_SUBMITTER	STRING(16)	R	
DATE_FORM_COMPLETED	DATE	R	
NID_PERSON_APPROVED_FORM	STRING(16)	R	
DATE_FORM_APPROVED	DATE	R	

5.1.2 Use cases for the HC professional registry

At the central level, SHR application, the following use cases are implemented:

- Maintain HC professional registry – include, query and update
- Query HC professionals registry – print report of HC professionals from one or more HC facilities

5.1.3 Interoperability Requirements

External systems will be able to interoperate with the MOH Health Worker Registry through the following web services, using the HIX:

- **Query Health Care Professional Registry** - to query the HC professional registry and obtain all the information on one HC professional. The query response will show the demographic data as in the client registry response plus the extensions regarding credentials and current work places. If the professional works in more than one facility each work relation (facility and specific occupation) will be part of the response. A history of previous positions is also part of the registry. The query should allow for the POCs to query the HC professional registry using any of this fields as filters:
 - Name of HC professional (last name / name) or full name
 - NID
 - Health Number
 - Mutual Number
 - Rama Number
 - Social Security Number
 - Gender
 - DOB
 - Country of birth

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- HC Professional Address (province / district / sector / cell / village)
- Cell phone
- HC Professional Qualifications
 - Education level
 - Registration Body
 - Registration Number
 - Registration Status
- Current Employment
 - Occupation Group
 - Occupation Code
 - Type of Contract
 - Number of Hours per Week

The query results should also allow for a printed version.

5.2 Health Facilities Registry (HFR)

The Facilities Registry holds all HC facilities as well as administrative health units identified by a unique national number. There is a relationship between the individual provider registry and the facility registry. This is a 1 to n relationship, meaning that one individual provider can work in one or more facilities with different roles in each. The registry will be updated in a two-step way, always with validation from the central level. The HFR design took into account the work currently being done in the definition of the National Asset Management Information System.

5.2.1 Health Facilities Registry Data Requirements – (TB_HEALTH_FACILITY)

Element	Description	Length/ TYPE	Status (R = required and O =Optional)	Behavior
Identification structure				
HC_FACILITY_ _NUMBER	Number of the HC facility	STRING (10)	R	This is the national unique identifier number for all HC facilities.
HC_FACILITY_NA ME	The name of the HC facility	STRING (80)	R	
HC_FACILITY_CO DE	The code of the HC Facility	STRING (3)	R	1 = National Referral Hospital (HNR) 2 = Provincial Referral Hospital (PH) 3 = District Hospital (HD) 4 = Health Center (CS) 5 = Health Post (PS) 6 = Dispensary (DISP) 7 = Community Dispensary (FOSACOM) 1.1.1.1.1 8= Prison Clinic (PRIS) 9 = Medical Clinic (CLIN) 10 = Military Hospital (HM) 11 = District Pharmacy (DP) 12= Blood Bank (BB) 13 = Other (*)
HC_FACILITY_STA TUS_CODE	The status of the HC facility	STRING (2)	R	1 = Active : 2 = Planned 3 = Closed
HC_FACILITY_OPE NING_DATE_PLA NED	The probable opening date	DATE	O	Required if status is = Planned Should accept partial dates in month/year and or only year
HC_FACILITY_CAT EGORY_CODE	The category of the HC facility	STRING (2)	R	1 = Public 2 = Agrée 3 = Private 4 = Community owned 5 = Parastatal (Military, Police, Prison, State run dispensaries)
HC_FACILITY_DAT E_INAUGURATED	The date the HC was inaugurated	DATE	R	Should accept partial dates in month/year and or only year
HC_FACILITY_DIR ECTOR_NAME	The Name of the HC facility director	STRING (80)	R	

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TB_ADDRESS (*)				
PROVINCE_CODE_FK	Link to the province code where the client lives, on TB_PROVINCES	STRING (1)	R	TB_PROVINCES 1 = Kigali 2 = North 3 = East 4= South 5 = West
DISTRICT_CODE_FK	Link to the district code where the client lives on TB_DISTRICTS	STRING	R	On the data entry screen, only the district names from the respective province should appear for selection.
SECTOR_CODE_FK	Link to the Sector code where the client lives on TB_SECTORS	STRING	R	On the data entry screen, only the sector names from the respective province/district should appear for selection.
CELL_CODE_FK	Link to the Cell code where the client lives on TB_CELLS	STRING	R	On the data entry screen, only the cell names from the respective province/district/sector should appear for selection.
VILLAGE_CODE_FK	Link to the Village code where the client lives on TB_VILLAGES	STRING	R	On the data entry screen, only the village names from the respective province/district/sector/cells should appear for selection.
POST_OFFICE_BOX	Post Office Box of the client address	STRING	O	
CELULAR_TELEPHONE_	Client cell phone	STRING (12)	O	
BUSINESS_TELEPHONE	Client Business Telephone	STRING (12)	O	
EMAIL		STRING (30)	O	
STREET_NAME	Street name where the client lives	STRING (50)	O	
STREET_NUMBER	Street number where the client lives	STRING (10)	O	
COMPLEMENT	Complement of the street number like apt number	STRING (30)	O	

POSTAL_CODE	Postal code of the address where the client lives		O	
COUNTRY_CODE	Country where the person lives	STRING (2)	O	Use ISO 3166 Country codes
LATITUDE	(degrees, minutes..)	STRING(5)	O	
LONGITUDE	(degrees, minutes..)	STRING(5)	O	
TARGET_POPULATION	The target population of this facility		R	
YEAR_POPULATION_ESTIMATE	The year of the population estimate	YEAR	R	

TB_HC_FACILITY_CATCHMENT_AREA_POPULATION

HC_FACILITY_NUMBER_ID	ID of the facility	STRING(10)	R	
HC_CATCHMENT_AREA_LEVEL	The level by which the catchment area was calculated	STRING (1)	R for all HC facilities type 1,2,3,4, or 5.	1 = National 2 = Province 3 = District 4 = Villages
HC_FACILITY_CATCHMENT_AREA_POPULATION	The code of the village that is part of the catchment area of this HC facility	STRING (10)	R	

TB_HC_FACILITY_CATCHMENT_AREA

HC_FACILITY_NUMBER_ID	ID of the facility	STRING(10)	R	
HC_CATCHMENT_AREA_CODES	The codes of the regions used to calculate the population	STRING (4)	R for all HC facilities type 1,2,3,4, or 5.	

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TB_HC_FACILITY_INFRASTRUCTURE

HC_FACILITY_NUMBER_ROOMS	The number of rooms at the HC facility	INTEGER	R	
HC_FACILITY_NUMBER_PT_BEDS	The number of patient beds at the HC facility	INTEGER	R	
HC_FACILITY_NUMBER_AMBULANCES	The number of functional ambulances at the HC facility	INTEGER	R	
HC_FACILITY_NUMBER_CARS	The number of functional cars at the HC facility	INTEGER	R	
HC_FACILITY_NUMBER_MOTORCYCLES	The number of functional motorcycles at the HC facility	INTEGER	R	
HC_FACILITY_ELECTRICITY_SOURCE_CODE	The main electricity source for the HC facility	STRING(2)	R	1 = National Grid 2 = Generator 3 = Solar panels 4 = No electricity
HC_FACILITY_GENERATOR_KVA	The generator KVA	REAL	O	Required if electricity source is = Generator

HC_FACILITY_WATER_SOURCE_CODE	The main water source for the HC facility	STRING(2)	R	1 = National piped water supply 2 = Local piped water supply 3 = Protected well 4 = Open well 5 = Surface water (river, lake, etc.) 6 = Rain water reservoir 7 = Water Truck 8 = No regular water source
HC_FACILITY_NUMBER_REFRIGERATORS	The number of functional refrigerators or freezers	INTEGER	R	
HC_FACILITY_COMPUTERS_NUMBERS	The number of functioning computers of the HC facility	INTEGER	R	
HC_FACILITY_INTERNET_CONNECTION_PRIMARY_CODE	The HC facility primary Internet connection	STRING (2)	R	1 = Cell Modem 2 = Fixed Line (ADSL, fiber) 3 = Satellite (VSAT) 4 = Wireless (WINMAX) 5 = No Internet connection
HC_FACILITY_INTERNET_CONNECTION_SECONDARY_CODE	The HC facility secondary Internet connection	STRING (2)	R	1 = Cell Modem 2 = Fixed Line (ADSL, fiber) 3 = Satellite (VSAT) 4 = Wireless (WINMAX) 5 = No Internet connection

TB_HC_FACILITIES_SERVICES OFFERED (one record for each service provided)				
HC_FACILITY_NUMBER_ID	The ID of the HC facility	STRING(10)	R	

CATEGORY_SERVICE_CODE	The HC service provided category_code	STRING(03)	R	
SERVICE_PROVIDED_CODED	Service provided code	STRING(04)	R	

TB_HC_FACILITY_PARTNER_ORGANIZATIONS (one record for each partner organization)				
HC_FACILITY_NUMBER_ID	The ID of the HC facility	STRING(10)	R	
PARTNER_ORGANIZATION_CODE	The partner organization code	STRING(3)	O	

TB_HC_FACILITY_SIGNATURES				
HOC_PROFESSIONAL_ID	STRING (15)	R		Holds the key to the HC professional table to establish the relationship among them
NID_FORM_SUBMITTER	STRING(16)	R		

DATE_FORM_COMPLETED	DATE	R	
NID_PERSON_APPROVED_FORM	STRING(16)	R	
DATE_FORM_APPROVED	DATE	R	

5.2.2 Interoperability Requirements

External systems will be able to interoperate with the MOH Facilities Registry through the following web services, using the HIX:

- Query Health Facility – to query Health Care Facilities by any of the filters below:
 - HC Facility number
 - HC facility name
 - Type of HC facility
 - HC facility status
 - HC facility category
 - HC facility date inaugurated (should be able to query before, or after partial dates)
 - HC facility director name
 - HC facility director NID
 - HC facility partner organizations (need to structure this field)
 - HC facility referral villages
 - HC facility latitude or longitude
 - HC address (province, District, Sector, Village, Cell)
 - HC facility number of rooms (less or greater than should also be allowed)
 - HC facility number of patient beds (less or greater than should also be allowed)
 - HC facility number of ambulances (less or greater than should also be allowed)
 - HC facility number of cars (less or greater than should also be allowed)
 - HC facility number of motorcycles (less or greater than should also be allowed)
 - HC facility electricity source
 - HC facility water source

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- HC facility number of freezers (less or greater than should also be allowed)
- HC facility number of computers ((less or greater than should also be allowed)
- HC facility type of Internet connection
- HC facility telephone number (cell and or fixed)

The query results should also allow for a printed version.

6 References

- [1] ISOTC 215. ISO TS 22220:2009 Identification of Subjects of Care.
http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40782
(accessed October 5,2010)
- [2] ISO TC 215. ISO TS 27527:2010 Provider Identification.
http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=44216
(accessed October 5,2010)
- [3] WHO. Report of the First Meeting of the Health Workforce Information Reference Group (HIRG). WHO/HSS/HRH/HIG/2010.1. Geneva 2010.
http://whqlibdoc.who.int/hq/2010/WHO_HSS_HRH_HIG_2010.1_eng.pdf Acesso em 20 Ago 2010
- [4] WHO. Classificação de Profissionais de Saúde -
http://www.who.int/hrh/statistics/workforce_statistics/en/index.html Acesso em 20 Jul 2010
- [5] International Standard Classification of Occupations. International Labour Organization.
<http://www.ilo.org/public/english/bureau/stat/isco/index.htm>, Acesso 11 Jan 2009

7 Annex 1 - HC Facility and HC Professional Registry Forms (mandatory fields are marked with an *)

1. Identification

Health Facility Name* : Facility ID*: (HMIS unit only)
 (mandatory for updates, blank for new facilities)

Type of health care facility*:

<input type="checkbox"/> National Referral Hospital (HNR)	<input type="checkbox"/> Prison Clinic (PRIS)
<input type="checkbox"/> Provincial Referral Hospital (PH)	<input type="checkbox"/> Medical Clinic (CLIN)
<input type="checkbox"/> District Hospital (HD)	<input type="checkbox"/> Military Hospital (HM)
<input type="checkbox"/> Health Center (CS)	<input type="checkbox"/> District Pharmacy (DP)
<input type="checkbox"/> Health Post (PS)	<input type="checkbox"/> Mutuelle/CBHI section (MU)
<input type="checkbox"/> Dispensary (DISP)	<input type="checkbox"/> Blood Bank (BB)
<input type="checkbox"/> Community Dispensary (FOSACOM)	<input type="checkbox"/> Other, Specify : .

Status*:

Active :

Planned, specify probable opening date :

Closed :

Category*:

Public

Agrée

Private

Community owned

Parastatal (Military, Police, Prison, State run dispensaries)

Date inaugurated*: (at least year must be informed) DAY: MONTH: YEAR:

Name of titulaire/director* : NID #*

eMail of titulaire/director: Cell phone #*

Name of health facility that provides supervision and receives HMIS reports* ID of the health facility that provides supervision and receives HMIS reports

Implementing partner organizations: (List partners organizations in section 6)

2. Geographic Coordinates

Province*: Street:

District*: Number

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Sector*:	Complement	
Cell*:	PO box:	
Village*:		
Latitude*:	Longitude*:	Catchment area population section 7)*:
Target Population*:	Year target population*:	

3. Infrastructure

Number of rooms (clinical and administrative) :	Number of Patient beds:		
Transport available : (and functional)	# of ambulances	Principal Water Source:	<input type="checkbox"/> National piped water supply <input type="checkbox"/> Local piped water supply <input type="checkbox"/> Protected well <input type="checkbox"/> Open well <input type="checkbox"/> Surface water (river, lake, etc.) <input type="checkbox"/> Rain water reservoir <input type="checkbox"/> Water Truck <input type="checkbox"/> No regular water source
	# of cars		
	# of motorcycles		
Principal Electricity Source :	<input type="checkbox"/> National Grid <input type="checkbox"/> Generator, specify KVA : <input type="checkbox"/> Solar panels <input type="checkbox"/> No electricity		
Cold chain:	# of functional refrigerators/freezers:	Computers :	# functioning

4. Communications

Communication: (belonging to the HC facility)	<input type="checkbox"/> Fixed Telephone <input type="checkbox"/> Mobile Telephone	N°	Primary Internet Connection:	<input type="checkbox"/> Cell Modem <input type="checkbox"/> Fixed Line (ADSL, fibre) <input type="checkbox"/> Satellite (VSAT) <input type="checkbox"/> Wireless (WIMAX, etc.) <input type="checkbox"/> No internet connection
Secondary Internet Connection:			<input type="checkbox"/> Cell Modem <input type="checkbox"/> Fixed Line (ADSL, fibre) <input type="checkbox"/> Satellite (VSAT) <input type="checkbox"/> Wireless (WIMAX, etc.) <input type="checkbox"/> No internet connection	

5. Services offered (check all services that are offered)					
03	Clinical services	06	Pharmacy		
0301	<input type="checkbox"/>	Primary Outpatient Curative Consultation (CPC)	0601		Pharmacy
0302		Hospitalization	07	Prosthetics and Medical devices	
0303		Emergency care	0701		Prosthetics
0304		Dentistry	0702		Other medical devices
0305		General Ophthalmology	08	Complementary actions to promote health	
0306		Integrated Management of Childhood Illness	0801		Hygiene and environmental health
0307		Management of gender violence	0802		Medico-Legal documentation
0308		Mental Health Services	0803		Pre-marital Consultation
0309		Physical therapy	0804		Vector and Zoonosis control
0310		Nutritional Rehabilitation	0805		Epidemiological Surveillance and Response
0311		Cardiovascular care and treatment	02	Diagnostic services	
0312		TB care and treatment	0201		Laboratory
0313		Care and treatment for persons living with HIV/AIDS	0202		Voluntary Counseling and Testing
0314		Diabetes care and treatment	0203		Ultrasound
0315		Other Non Communicable disease (NCD) care and treatment	0204		Medical Imagery (x-ray)
0316		Management of dystocic pregnancies	01	Health promotion and prevention	
0317		Post-abortion care	0101		Ante-natal consultation
0318		Deliveries - high risk	0102		Behavior Change Communication/Health Education
0319		Deliveries - normal	0103		Community mobilization
0320		Newborn care	0104		Family Planning
04		Surgical services	0105		Post Natal Consultation

0401		Major surgical interventions	0106		Growth Monitoring/Nutrition Surveillance
0402		Minor surgical interventions	0107		Vaccination
05		Organ transplants and Blood transfusions	0108		Psychosocial support
0501		Blood bank	0109		General Health Promotion Activities
0502		Organ transplants			

6.
Implementing
Partners
Organization
s (check all
that apply)

Code Partner Organizations

10

MSH

1

CAAC

11

Non-affilie

5

GF

8

MAP

7

IHI/HCSP

3

EGPAF

9

ICAP/CU

4

FHI

2

CRS

12

PIH/CF

6

GTZ

13

DREW

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7A. List of villages in health facility catchment area (Health Centers, Health Posts only)

Code ¹	Village Name	Code	Village Name
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7B. List of health centers that refer to this districtal hospital

Code ²	Health Center Name	Code	Health Center Name
-------------------	--------------------	------	--------------------

1 Select 10 digit code from MiniLoc village code list

2 [Select 10 digit code from MiniLoc village code list](#)

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7C. List of provinces that refer to this provincial hospital

Code ³	Province
-------------------	--------------------------

4. Signatures and Approvals

Prepared by:	NID
------------------------------	---------------------

Date of submission:	
-------------------------------------	--

Approved by:	NID	—
------------------------------	---------------------	---

Date of approval:	
-----------------------------------	--

3 [Select 10 digit code from MiniLoc village code list](#)

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Rwanda Health Facility Employee Registration Form

(Version 1.7)

(one form per HC professional)

Health Facility Name : _____ Health Facility ID: (HMIS unit only) _____

1. HC Professional Identification

NID: _____ Health Number: _____

Last Name*: _____ Other Names*: _____

Drivers License: _____ Mutual Number: _____

Full name of the father: _____ Full name of the mother: _____

Date of birth DD/MM/YYYY: _____ Estimated age (if date of birth is not available)
DD: _____ MM: _____ YYYY: _____ <number> years

Gender: () masculine () feminine _____ Marital Status:
 () single () married () widow/widower
 () divorced () cohabitation

Country of birth: () Rwanda () Other Please fill foreigner information below _____ District of Birth: _____

2. Foreigner Information

Country of Birth (see codes below) : _____ Country passport was issued (see codes below): _____
Date passport was issued: DD/MM/YYYY _____ Passport expiration date: (DD/MM/YYYY) _____

3. HC Professional Address

Province: () Kigali () North () East () South () West _____ Client Business Telephone : _____

District where the client lives: _____ Street name where the client lives: _____

Sector where the client lives: _____ Street number where the client lives: _____

Cell where the client lives: _____ Complement of the street number like apt number : _____

Village where the client lives: Postal code of the address where the client lives:
Post Office Box of the client address: Country where the person lives:
 (please use two letter codes from list below ISO 1366 country codes)
Client cell phone:

3. HC Professional Qualifications

Education Level: Professional Registration Body:
 Level 0 - Pre-primary education Physicians
 Level 1 - Primary education or first stage of basic education Nurses
 Level 2 - Lower secondary or second stage of basic education Not applicable
 Level 3 - (Upper) secondary education
 Level 4 - Post-secondary non-tertiary education
 Level 5 - First stage of tertiary education
 Level 6 - Second stage of tertiary education

Professional Registration Number: Registration Start Date: DD/MM/YYYY

Registration status: Registration End Date: DD/MM/YYYY
 Active / full registration
 Limited registration
 Student registration
 Suspended registration
 Terminated registration
 Nullified
 Pending
 Inactive registration

4. Current Employment (all different contracts in this facility should be informed – codes on Annex 2.)

<u>Occupation group:</u>	<u>Occupation code:</u>	<u>Number of hours per week:</u>
<u>Occupation group:</u>	<u>Occupation code:</u>	<u>Number of hours per week:</u>
<u>Occupation group:</u>	<u>Occupation code:</u>	<u>Number of hours per week:</u>
<u>Occupation group:</u>	<u>Occupation code:</u>	<u>Number of hours per week:</u>

4. Signatures and Approvals

<u>Prepared by (name):</u>	<u>NID:</u>
<u>Date of submission: (dd/mm/yyyy)</u>	
<u>Approved by (name):</u>	<u>NID:</u>
<u>Date of approval: (dd/mm/yyyy)</u>	
-	

8 Annex 2. Rwanda Enterprise architecture framework: Occupation and Education codes for Provider registry

<u>Occupation Groups Code</u>	<u>Occupation Groups</u>	<u>Occupations Code</u>	<u>Occupations Description</u>
<u>001</u>	<u>Health Professionals</u>	<u>2211</u>	<u>Generalist medical practitioners</u>
		<u>2212</u>	<u>Specialist medical practitioners</u>
		<u>2212.1</u>	<u>Doctors in obstetric and gynaecological specialties</u>
		<u>2212.2</u>	<u>Doctors in paediatrics</u>
		<u>2212.3</u>	<u>Doctors in psychiatric specialties</u>
		<u>2212.4</u>	<u>Doctors in the medical group of specialties</u>
		<u>2212.5</u>	<u>Doctors in the surgical group of specialties</u>
		<u>2212.6</u>	<u>Doctors in specialties not elsewhere classified</u>
		<u>2221</u>	<u>Nursing professionals</u>
		<u>2222</u>	<u>Midwifery professionals</u>
		<u>2230</u>	<u>Traditional and complementary medicine professionals</u>
		<u>2240</u>	<u>Paramedical practitioners</u>
		<u>2261</u>	<u>Dentists</u>
		<u>2262</u>	<u>Pharmacists</u>
		<u>2263</u>	<u>Environmental and occupational health and hygiene professionals</u>
		<u>2264</u>	<u>Physiotherapists</u>
<u>2265</u>	<u>Dieticians and nutritionists</u>		

		2266	Audiologists and speech therapists
		2267	Optometrists and ophthalmic opticians
		2269	Health professionals not classified elsewhere
002	Health Associate Professionals	3141	Life science technicians
		3211	Medical imaging and therapeutic equipment technicians
		3212	Medical and pathology laboratory technicians
		3213	Pharmaceutical technicians and assistants
		3214	Medical and dental prosthetic technicians
		3221	Nursing associate professionals
		3222	Midwifery associate professionals
		3230	Traditional and complementary medicine associate professionals
		3251	Dental assistants and therapists
		3252	Medical records and health information technicians
		3253	Community health workers
		3254	Dispensing opticians
		3255	Physiotherapy technicians and assistants
		3256	Medical assistants
		3257	Environmental and occupational health inspectors and associates
		3258	Ambulance workers
		3259	Health associate professionals not classified elsewhere
003	Health Management and Support Personnel	1342	Health service managers
		2131	Health management personnel not elsewhere classified

		2133	Life science professionals (including bacteriologists, pharmacologists and related
		2635	Social work and counselling professionals
		2635.1	Non-health professionals not elsewhere classified
		3141	Life science technicians
		3344	Medical secretaries
		3344.1	Non-health technicians and Associate professionals not elsewhere classified
		3344.2	Clerical support workers
		3344.3	Service and sales workers
		3344.4	Trades workers
		3344.5	Plant and machine operators and assemblers
		3344.6	Elementary occupations
		3344.7	Armed forces occupations
		3344.8	Data Manager/Statistician
		3344.9	Other health management and support personnel
		5321	Health care assistants
		5322	Home-based personal care workers
		5329	Personal care workers in health services not classified elsewhere

8.1 [Education level](#)

EdLevel	
CD	Education Level

<u>01</u>	<u>Level 0 - Pre-primary education</u>
<u>02</u>	<u>Level 1 - Primary education or first stage of basic education</u>
<u>03</u>	<u>Level 2 - Lower secondary or second stage of basic education</u>
<u>04</u>	<u>Level 3 - (Upper) secondary education</u>
<u>05</u>	<u>Level 4 - Post-secondary non-tertiary education</u>
<u>06</u>	<u>Level 5 - First stage of tertiary education</u>
<u>07</u>	<u>Level 6 - Second stage of tertiary education</u>

9 Annex 3 . Health care facility database - current structure

Name:

Address:

Province:

District:

Sector:

Nom du Chef : (name of director)

Email du Chef: (email of director)

Date PBF : (????) not sure what that is.

Reseau: (????) not sure what that is.

Reseau PBF Communautaire: (????) not sure what that is.

Nom du chef de Comite de Sante : (don't have this in our form

Type FOSA:

Code: (which code is this?)

Latitude:

Longitude:

Date Created : (which date is this? The date the form was filled?)

Date Modified:

Population Cible: (target population)

Annee Population Cible: (year target population)

Phase PBF: (???)

Code FOSA.:

-

10 Annex 4 - WHO Recommendations for Health Information Systems for Human Resources for Health

WHO recognizes the importance and key factor that a county Human Resources for Health system represents to organize health care. By having proper information on who is your human resource it is possible to do better allocation, control and evaluation. In March 2010, the World Health Organization's Department of Human Resources for Health, the Global Health Workforce Alliance and the Health Metrics Network, who have called for the establishment of a Health Workforce Information Reference Group (HIRG). A technical meeting was organized in Montreaux Switzerland and the final recommendations from this meeting were:

- a) "Country HRH information systems should be a sub-component of the national health information system.
It is important to look at HRH data with different lenses depending upon the source – administrative records, facility-based data and population based data – and to be transparent about the coverage, definitions and limitations for each.
- b) Baseline data on the current HRH situation need to be identified and validated among key stakeholders to be useful and accepted for decision-making and to strengthen the existing HRH information system.
- c) Consistent assessment and validation is required of the status and results of the HRH information system; an independent technical body could take on this role.
- d) Agreed standards and protocols are necessary for disseminating, sharing and using different types of data sources within the overall HRH information system.
- e) Harmonization and alignment of HRH classifications and definitions with other frameworks and classifications for social and economic data and statistics is important; this includes international standard classifications for occupation, education and industry statistics (and their national equivalents).
- f) Harmonization and alignment of HRH indicators and information with other population and development monitoring and evaluation frameworks is important.
- g) Capacity building of health system personnel in collection, management, analysis, interpretation and use of HRH data and information is required at every level of the system.
- h) Routine administrative data should use unique identifiers that correspond to individual health workers within the overall information system.
- i) While many existing data sources can be used for monitoring the health labour and educational system in countries, they may occasionally need to be supplemented with ad hoc surveys and complementary research."^[3]