

REPUBLIC OF RWANDA



MINISTRY OF HEALTH  
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# ANNUAL REPORT

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## **ACRONYMS**

|             |   |
|-------------|---|
| ACT         | : Artemisinin Combined Treatment                              |
| AI          | : Avian Influenza   |
| AIDS        | : Acquired Immunodeficiency Syndrome                          |
| ANC         | : Antenatal Care  |
| ARBEF       | : Association Rwandaise pour le Bien-Etre Familial            |
| ART         | : Antiretroviral Treatment                                    |
| ARVs        | : Antiretroviral drugs  |
| BCC         | : Behavior Change Communication                               |
| BCG         | : Bacille de Calmette et Guérin, Vaccin contre la Tuberculose |
| BK          | : Bacille de Koch   |
| BSS         | : Behavior_surveillance_survey                                |
| CAMERWA     | : Centrale d'Achat des Médicaments Essentiels du Rwanda       |
| CBEHPP      | : Community Based Environmental Health Promotion              |
| CBHC        | : Community Based Health Care                                 |
| CBHI        | : Community Based Health Insurance                            |
| CBP         | : Community Based Provision                                   |
| CDC         | : Centers for Disease Control and Prevention                  |
| CDLS        | : Comité de Lutte contre le SIDA                              |
| CDT         | : Centre de Dépistage et de Traitement                        |
| CHUB        | : Centre Hospitalo-Universitaire de Butare                    |
| CHUK        | : Centre Hospitalo-Universitaire de Kigali                    |
| CHWs        | : Community Health Workers                                    |
| C-IMCI      | : Community Based IMCI  |
| CNJ         | : Centre National de la Jeunesse                              |
| CPDS        | : Coordinated Procurement and Distribution System             |
| CPN         | : Consultation Pré Natale                                     |
| CRTS        | : Centre Régional de Transfusion Sanguine                     |
| CS          | : Centres de Santé  |
| CT          | : Centre for Treatment (TB)                                   |
| CTAMS       | : Cellule d'Appui aux Mutuelles de Santé                      |
| CTS         | : Centre de Transfusion Sanguine                              |
| DBS         | : Dry Blood Spot  |
| DDP         | : District Development Plan                                   |
| DFID        | : British Department for International Development            |
| DH          | : District Hospital   |
| DHS         | : Demographic and Health Survey                               |
| RDHS (EDSR) | : Rwanda Demographic and Health Survey                        |
| DOT         | : Direct Oral Treatment                                       |
| DP          | : Development Partners  |
| DRC         | : Democratic Republic of Congo                                |
| DTC         | : Drug Therapeutics Committee                                 |
| DTC3        | : Diphtheria Tetanus and Pertussis Vaccine                    |
| EAC         | : East African Community                                      |
| EDPRS       | : Economic Development and Poverty Reduction Strategy         |
| EEG         | : Electroencephalography                                      |
| EIA         | : Enzyme linked Immuno-Assay                                  |
| EID         | : Epidemic Infectious Diseases                                |
| EMONC       | : Emergency Obstetrical and Neonatal Care                     |

|              |  |
|--------------|--|
| EPI          | : Expanded Programme for Immunization                                  |
| FOSAs        | : Formations Sanitaires (Health Facility)                              |
| FP           | : Family Planning  |
| FRW          | : Franc Rwandais (Rwandan Franc)                                       |
| GBS          | : General Budget Support   |
| GCP          | : General Census of the Population                                     |
| GF           | : Global Fund  |
| GoR          | : Government of Rwanda   |
| HAS          | : HIV/AIDS and STI unit  |
| HBM          | : Home Based Management of Malaria                                     |
| HBs          | : Antigène de surface du virus de l'Hépatite B                         |
| HC           | : Health Centre  |
| HCV          | : Hepatitis C Virus  |
| HDN          | : Hemolytic Disease of the New born                                    |
| HF           | : Health Facility  |
| HH           | : Households   |
| HIV          | : Human Immunodeficiency Virus   |
| HIVDR        | : HIV Drug Resistance  |
| HMIS         | : Health Management Information System                                 |
| HMN          | : Health Metrics Network   |
| HNP          | : Hôpital Neuropsychiatrique (Neuropsychiatric Hospital)               |
| Hosp         | : Hospital   |
| HPV          | : Human Papilloma Virus  |
| HR           | : Human Resources  |
| HRH          | : Human Resources for Health   |
| HSPI         | : Hygiene and Sanitation Presidential Initiative                       |
| HSSP         | : Health Sector Strategic Plan   |
| ICT          | : Information, Communication Technology                                |
| IDHS         | : Intermediate Demographic and Health Survey                           |
| IEC          | : Information, Education, Communication                                |
| IMCI (PCIME) | : Integrated Management of Childhood Illnesses                         |
| IRS          | : Indoor Residual Spraying   |
| IST (STD)    | : Infections Sexuellement Transmissibles (Sexual transmitted diseases) |
| ITM          | : Intermittent Treatment for Malaria                                   |
| ITNs         | : Insecticide Treated nets   |
| IUD          | : Intra Uterine Device   |
| JAWP         | : Joint Annual Work Plan   |
| JHSR         | : Joint Health Sector Review   |
| KFH          | : King Faycal Hospital   |
| KIE          | : Kigali Institute of Education  |
| KMC          | : Kangaroo Mother Care   |
| LABOPHAR     | : Laboratoire Pharmaceutique du Rwanda                                 |
| LCR          | : Liquide Céphalo-Rachidien (Cerebro Spinal Fluid)                     |
| LLINs        | : Long Lasting Insecticide impregnated Nets                            |
| LMIS         | : Logistics Management Information System                              |
| LNR(NRL)     | : Laboratoire National de Référence                                    |
| M&E          | : Monitoring & Evaluation  |
| MARP         | : Most at Risk Populations   |
| MBB          | : Marginal Bottlenecks Budgeting                                       |
| MBZ          | : Mébendazole  |
| MC           | : Male Circumcision  |

|                 |   |
|-----------------|---|
| MCAP            | : Multi Country AIDS Program                            |
| MCH             | : Maternal and Child Health                             |
| MDGs            | : Millenium Development Goals                           |
| MH              | : Mental Health   |
| MIGEPROF        | : Ministère de Genre et de la Promotion de la Famille   |
| MII             | : Moustiquaires Impregnées d’Insecticide                |
| MINALOC         | : Ministry of Local Administration                      |
| MINEDUC         | : Ministry of Education                                 |
| MINICOM         | : Ministry of Commerce and Industry                     |
| MININFRA        | : Ministry of Infrastructure                            |
| MININTER        | : Ministry of Internal Affairs (internal security)      |
| MINISANTE (MoH) | : Ministry of Health                                    |
| MMI             | : Military Medical Insurance                            |
| MMINECOFIN      | : Ministry of Finance and Economic Planning             |
| MMR             | : Maternité à Moindres Risques                          |
| MNH             | : Maternal and Neonatal Health                          |
| MoH             | : Ministry of Health                                    |
| MoU             | : Memorandum of Understanding                           |
| MR-TB           | : Multiresistant-TB                                     |
| MTEF            | : Mid-Term Expenditures Framework                       |
| MTP             | : Monitoring, Training and Planning                     |
| MTR             | : Mid Term Review                                       |
| MUAC            | : Middle Upper Arm Circumference                        |
| MVK             | : Mairie de la Ville de Kigali                          |
| NC              | : New cases   |
| NCBT            | : National Centre for Blood Transfusion                 |
| NEDL            | : National Essential Drug List                          |
| NEHTWG          | : National Environmental Health Technical Working Group |
| NEML            | : National Essential Medicines List                     |
| NF              | : National Formulary                                    |
| NFEM            | : National Formular for Essential Medicines             |
| NGOs            | : Non Governmental Organizations                        |
| NHA             | : National Health Accounts                              |
| NRL             | : National Reference Laboratory                         |
| NTDs            | : Neglected Tropical Diseases                           |
| NTG             | : National Treatment Guidelines                         |
| NSV             | : Non Scalpel Vasectomy                                 |
| NVP             | : Névirapine  |
| OIs             | : Opportunistic Infections                              |
| OMS             | : Organisation Mondiale de la Santé                     |
| OVC             | : Orphans and Vulnerable Children                       |
| OVI             | : Objectively verifiable indicators                     |
| PBF             | : Performance Based Financing                           |
| PCR             | : Polymerase Chain Reaction                             |
| PEC             | : Prise En Charge                                       |
| PEPFAR          | : Present Bush’s Emergency Plan For AIDS Relief         |
| PHC             | : Primary Health Care                                   |
| PIT             | : Provider Initiated Test                               |
| PLWHA           | : People living with HIV/AIDS                           |
| PMTCT           | : Prevention of Mother to Child Transmission            |
| PNBC            | : Programme de Nutrition a Base Communautaire           |



|              |   |
|--------------|---|
| PNILP        | : Programme National Intégré de Lutte contre le Paludisme               |
| PNILT        | : Programme National Intégré de Lutte contre la Tuberculose et la Lèpre |
| PNSM         | : National Multisectoral HIV/AIDS Strategic Plan                        |
| PRSP         | : Poverty Reduction Strategy Paper                                      |
| PTF          | : Pharmacy Task Force   |
| PW           | : Pregnant Woman  |
| MINEDUC      | : Ministère de l'Éducation  |
| QAO          | : Quality Assurance Officer   |
| QMS          | : Quality Management System   |
| RAMA         | : Rwandaise d'Assurance Maladie   |
| RCHC         | : Rwanda Centre for Health Communication                                |
| RDT          | : Rapid Diagnostic Test   |
| RDU          | : Rational Drug Use   |
| RED          | : Reach Every District  |
| RURA         | : Rwanda Utilities Regulation Authority                                 |
| RWF          | : Rwandan Franc   |
| SAMU         | : Service d'Assistance Médicale d'Urgence                               |
| SCPS         | : Service de Consultations PsychoSociales                               |
| SFAR         | : Scholarship Financing Agency of Rwanda                                |
| SIDA         | : Syndrome de l'Immunodéficience Humaine Acquis                         |
| SIMR         | : Surveillance Intégrée de la Maladie et de la Riposte                  |
| SONU-B/EmONC | : Basic Emergency Obstetrical and Neonatal Care                         |
| SONU-C/EmONC | : Comprehensive Emergency and Neonatal Care                             |
| SOPs         | : Standard Operating Procedures   |
| SPIU         | : Single Project Implementation Unit                                    |
| SR           | : Santé de la Reproduction  |
| SRO          | : Solution de Réhydratation Orale (Oral Rehydration Solution)           |
| STG          | : Standard Treatment Guidelines   |
| STI          | : Sexual Transmitted Infections   |
| SWAp         | : Sector Wide Approach  |
| TB           | : Tuberculosis  |
| TB-MDR       | : Multi Drug Resistant TB   |
| TF           | : Task Force  |
| TOT          | : Training of Trainers  |
| TPM+         | : TB Pulmonaire à Microscopie+ (Pulmonar Positive Microscopy TB)        |
| TRAC+        | : Treatment and Research for AIDS Center                                |
| TTIs         | : Transfusion Transmissible Infections                                  |
| TVA          | : Taxes sur la Valeur Ajoutée   |
| UNFPA        | : Fond des Nations Unis pour la Population                              |
| UNICEF       | : Fond des Nations Unis pour l'Enfance                                  |
| USD          | : United States Dollar  |
| UTHB         | : University Teaching Hospital of Butare                                |
| UTHK         | : University Teaching Hospital of Kigali                                |
| VAR          | : Vaccin Anti Rougeoleux  |
| VAT2+        | : Vaccin Anti Tétanique 2eme dose jusqu'à la 5eme dose                  |
| VCT          | : Voluntary Counseling and Testing                                      |
| VIH          | : Virus de l'Immunodéficience Humaine                                   |
| VPO3         | : Vaccin Polio Oral 3eme Dose   |

## **FOREWORD**

This report presents the achievements of the Ministry of Health for the period July 2012 to June 2013. These achievements are strongly linked to objectives set by the Government of Rwanda aimed at attaining economic development and poverty eradication as defined in the EDPRS I, the 2020 Vision and the Millennium Development Goals.

In addition, the attained achievements were as a result implementing high impact interventions in the health sector that aimed at improving the well-being of the Rwandan population in general.

Proper implementation of the Health Sector policy, the second Health Sector Strategic Plan (HSSP-II: 2009-2012) and the development of the HSSP III (2012-2018) heavily contributed to maximizing preventive and curative measures, capacity building, improved provision of quality care services, that are accessible both geographically and financially.

The DHS 2010, the HSSP-II midterm review and many other reports have highlighted tremendous improvements as detailed in table 1.

During this reporting period, the HSSP III was finalized and aligned to EDPRS II while vision 2020 targets were reviewed to attain better results aimed at making Rwanda a Middle Income Country by the year 2020. Targets were reviewed for more ambitious achievements that will make Rwanda a Lower Middle Income Country by the year 2020.

Through HSSP III, new interventions continue to be developed to prevent, treat and control non communicable diseases, which are rapidly becoming an increasing burden on our health system and the general population.

I thank all our stakeholders, health care providers and Development Partners for their active role and participation in the implementation of the health sector programmes. I also acknowledge the role played by the Civil Society for their active participation and contribution to developing the health sector since 2010.



**Dr. Agnes BINAGWAHO**  
**Minister of Health**

## **EXECUTIVE SUMMARY**

During the fiscal year July 2012 to June 2013, the achievements of the Ministry of Health detailed in this report reflect all the efforts invested to realise the objectives of the Government for economic development and poverty reduction, as defined in the EDPRS I, the 2020 Vision and the MDGs, in order to improve the life conditions of the Rwandan population in general by putting in place high impact interventions for the prevention, treatment and control of diseases.

### **The Health Sector Performance, July 2012 - June 2013:**

#### **1. Human Resources for Health**

- a) By June 30<sup>th</sup>, 2013: a total of 17,475 employees were deployed in the Public Health Sector: 171 specialist doctors, 520 GPs, 2536 A1 Nurses, 492 Midwives, 6,163 A2 Nurses, many other health professionals, administrative and support staff.
- b) For Capacity building: An MoU has been signed between Rwanda and 23 US Academic institutions. 92 US specialists have been availed to train doctors for specialization. As of June 2013, some 204 doctors were pursuing postgraduate studies (153 in Rwanda and 51 abroad). A total of 731 nurses and midwives are pursuing A1 program, plus an additional intake of 313 A2 Nurses being trained through e-learning program and 230 Nurses are pursuing Midwifery studies in the 5 nursing and Midwifery Schools of Nyagatare, Rwamagana, Byumba, Kibungo, and Kabgayi. Moreover, upgrading the Laboratory Technicians from A2 to A1 level started in the Gatagara where the first intake comprises 45 students.
- c) According to HMIS 2012: the Ratio Doctor/Population: 1/15428 (target 2017: 1/10000), Ratio Nurse/Population: 1/1200 (Target 2017: 1/1000), Ratio Pharmacist/Population: 1/30565 (Standard : 1/10000), Ratio Midwife/Population: 1/23364 (Note: This does not include Private Health facilities)

#### **2. Improvement of availability of medicines, vaccines and consumables**

- a) **Pharmacy:** 30 District Pharmacies are operational and managed by Pharmacists. The narcotic and pharmacy laws have been published, while the law establishing the Rwanda Food and Medicines Regulatory Agency (RFMA) has been published, as well as the law creating the Pharmacy Council. Also, in order to improve the management on medicines, the Logistics Management Information system, that is currently paper based, will be progressively replaced by electronic system, e-LMIS and the process has started. E-LMIS will be rolled out in District Pharmacies and District Hospitals in 2013-2014. This will help to prevent stock outs of medicines in the Health Facilities.
- b) **Vaccination:** After the introduction of the Rotavirus vaccine to prevent diarrhea in 2011-2012, a combined Measles-Rubella vaccine has been introduced in routine vaccination in 2012-2013. The third campaign of HPV vaccination has been carried out and this will continue with the support of GAVI.
- c) **Blood transfusion:** 42,633 blood units have been collected, processed, qualified and distributed in hospitals.
- d) **Production, Procurement and Distribution** of Drugs and Medical equipment: All the 30 districts are provided with minitruck to facilitate transportation of drugs, and active distribution is operational.

### **3. Improvement of geographical access**

3 hospitals have been constructed, equipped and staffed in 2012-2013: **Ruhango** Hospital in Ruhango District, **Kinihira** Hospital in Rulindo District and **Bushenge** in Nyamasheke are operational in their new buildings. 4 modern Health Centres have been constructed in Kigali City. 2 more hospitals are under construction in Karongi and Kirehe Districts and another is about to start at Nyabikenke in Muhanga District, while works are about to finish for extension of the Rwanda Military Hospital. 12 Health centres have been equipped and operationalized, while several others have been or are being constructed by Districts, using RLSDF funds. Emergency transportation continued to be extended through SAMU. In 2012-2013, some 26 new ambulances have been deployed and 1 boat ambulance is operational in Kivu Lake. 26 incinerators and 18 mortuaries are being constructed in district hospitals. Emergency wards have been constructed in hospitals like Nyagatare (Nyagatare district) and Kabaya (Ngororero district), while 5 laboratories are being constructed in order to provide better services and improve the surveillance and the response to epidemic diseases. A block for Ophthalmology service has been completed and operationalized in Kabgayi Hospital (Muhanga District).

### **4. Improvement of financial accessibility**

The new Community Based Health Insurance Policy, based on stratified payment of premiums using Ubudehe database is operational in accordance with the new policy that started in July 2011. The Government continues to pay Mutuelle premiums for 25% of the population categorized as vulnerable. However, for the fiscal year 2012-2013, only 86% of the population were covered by health insurance, which is a reduction of 10% compared to the FY 2011-2012. The consequence is a gap totalizing 1,927,572,504 RWF observed in 16 District, while 14 other districts had surplus. The overall gap of CBHI (difference between gaps and surplus) is 887,108,401 RWF at District Pooling Risk. Meanwhile, the National Pooling Risk had a surplus of 84,904,050 RWF.

### **5. Improvement of the quality and of the demand for services in the control of diseases**

#### **a) Malaria**

Malaria program continues to be successful in the fight of diseases: Malaria incidence declined by 85% from 2003, and 99% of malaria cases are treated after laboratory confirmation, including at community level. By June 2013, the overall malaria proportional mortality was 5.5% and 10% among U5 children. At community level, 81,484 under five children were treated by CHWs and among them 78,026 (96%) were treated within 24 hours of the onset of the fever. From July 2012 to June 2013, a total number of 2,131,793 LLINs were distributed countrywide during U5 children mass campaign, while a total of 392,252 LLINs were distributed through EPI, ANC. The indoor residual spraying (IRS) has been conducted in targeted districts.

#### **b) HIV/AIDS**

VCT: The number of health facilities offering VCT services has increased to 97% while 93% of health facilities provide full package including ART. The number of HIV tests done increases annually with a total of 11,765,368 tests performed starting in 2003. Meanwhile, the HIV positivity rate in VCT services declined to less than 1% in 2013. 90% of health facilities have staff trained to perform male circumcision. The cumulative number of Condoms distributed is 22,575,096 out of 25,000,000 planned. (90% of the target). Condoms were also availed in 65 public institutions where 1,170,000 condoms were distributed, but they were also availed to the public through 690 condoms vending machine installed country wide.

For PMTCT: Elimination of Maternal to Child Transmission plan has been disseminated. The % of pregnant women attending ANC tested for HIV is 98% and the coverage of ARV prophylaxis is at 90%. The transmission of HIV from mother to child has declined from 10,8% in 2004 to 1,9% in 2012 while the HIV new infections reduced by 50% among born children.

For ARV treatment: the coverage of care and treatment was 91.6% and a total of 122,972 patients were under ARV by end of June 2013.

### **c) Tuberculosis:**

TB treatment success rates for new sputum smear positive (new SS+) has increased from 63% in 1995 to 89% in 2012. There was also an increase of TB cases followed at home by CHWs, from 4% in 2006 to 53% in 2012. HIV testing among TB cases increased from 45% in 2004 to 98% in 2012 and ARTs initiation among HIV+ TB cases increased from 45% in 2005 vs 74% in 2012.

From July 2005 to December 2012, 547 MDR-TB patients were detected. Among them, 52% were successfully treated but currently, the treatment success is 88%. The median time for hospitalization of MDR-TB cases halved from 6.6 months in 2006 to less than 3.3 in 2010. Patients are treated in 3 centres: Kabutare (Huye), Kibagabaga (Gasabo) and Kibungo (Ngoma) district hospitals.

## **6. Maternal and Child Health**

According to the RDHS 2010, the main maternal health indicators continue to improve. The total fertility rate is currently 4.6; the modern contraceptive rate increased to 45% and assisted deliveries to 69% in 2010. The maternal mortality has reduced from 750/100,000 live births to 476/100,000 live births and the maternal death audit indicates that the number of maternal deaths recorded in district hospitals has reduced from 211 in 2010 to 134 in 2012.

During July 2012- June 2013, some 169 maternal death review reports from hospitals were received. The main cause of death is still severe bleeding (39%) of which more than 3/4 cases occurred during postpartum period, the second cause is infection (16%) followed by eclampsia (12%); Malaria as cause of maternal deaths has decreased, while 61% of all maternal deaths occurred at the level of district hospital and 32 % at referral hospital. 54% of women died after giving birth. If no mothers have died in Health centres, the case of mothers dying in community has not been documented, but it is supposed to be currently low.

Training on basic emergency obstetrical and neonatal care continued. The prevention and control of the cervical cancer is made routinely. The cancer center in Butaro District Hospital is operational. Post-abortion care is being introduced as well as the prevention of post-partum hemorrhage using misoprostol at community level. For family planning, community based provision is operational in 22 districts with the objective to complete all 30 districts by end of nex fiscal year and the service provision of long term methods has been availed in Health Facilities, including vasectomy.

The Child mortality was reduced by 50%, from 2005 to 2010 and the infant mortality was reduced by 43%. In 2012, with the rate of 54/1000 live deaths among U5, reports show that Rwanda has already achieved the MDG4. However, the figures remain high and most of child deaths occur

during neonatal period. According to DHS 2010, 35 % of under five deaths are neonates and 66% of infants (of which 54 % are neonates). To reduce significantly the child mortality, focus is being made in improving neonatal care (creation of neonatology services) with more focused in ICATT, HBB, triage and multisectoral efforts are made to reduce the impact of malnutrition.

In the framework of IMCI, a software to report neonatal and child deaths has been created. 2,632 neonatal cases and 752 deaths have been audited most of them associated with hypothermia. The program for Adolescent, Reproductive Health and Rights program continued, and for SGBV, 16 new one stop centres will be operational by December 2013 in different hospitals.

### **7. Nutrition**

The fight against Malnutrition continued to be a top priority and different actions plans have been implemented since 2008. The latest one is the the JAPEM (Joint action Plan to Eliminate Malnutrition), a multisectoral plan to eliminate acute malnutrition in the country. To achieve this, a monthly screening is routinely conducted, but an annual screening of U5 children, pregnant and lactating women has been carried out from June 2013, to identify acute and chronic malnutrition. For this purpose, some 1,085,365 children have been screened, and 19% were found stunted (chronic malnutrition), 2% were found wasting (acute malnutrition) and 6.3% were underweight. Other activities continued with the Community based nutrition program and the prevention of micronutrient deficiency through home based food fortification program.

### **8. Strengthening of Referral Institutions**

In order to strengthen tertiary health care, UTHB (CHUB) and RMH (Rwanda Military Hospital) have been renovated and extended. New equipment has been purchased and is in process of installation. Several specialist doctors have been deployed (currently 171 in total), and teams of specialized doctors come regularly in Rwanda for specialized surgeries (genital fistula, neurosurgery, heart, cleft palates, physical disabilities, etc.). The plan to upgrade some district hospitals to become regional reference hospitals is ongoing.

### **9. Strengthening Institutional Capacity**

The e-Health strategic plan and the National e-Health Enterprise Framework are being progressively implemented. The new HMIS software has been upgraded, and the data management is improved at the district level, as well as other data management softwares, like HRIS.

HSSP III has been developed. Districts have been assisted to develop their District health strategic plans, while the planning and M&E capacity were strengthened at district level. Policies and strategies have been revisited for their alignment to HSSP III. Subsector policies have been merged to reduce their number. The Health Sector Working Group has been revised and reorganized.

The District SWAP guidelines have been developed and are in process of validation. New laws have been prepared and published while others are in process of approval in Parliament. RBC and CHU laws have been revised and KFH has been provided with a private status.

Capacity building has continued at central and district level, mainly in terms of planning and M&E. SPIU continued to manage the sector projects.

## INTRODUCTION

This report presents achievements of the HSSP implementation. The objective of the HSSP is to operationalise the EDPRS II in the Health Sector in order to attain national priorities (Vision 2020, 7Y Government Action Plan) and international targets, including the Millennium Development Goals (MDGs), which Rwanda is committed to achieving.

### Purposes:

- To provide a logical framework of prioritized objectives, outputs and activities for the Sector;
- To plan for the Sector as a whole, based on previous achievements and needs still to be met, as well as on the available resource envelope;
- To ensure all stakeholders have a common vision for the Sector's development;
- To clarify the roles of stakeholders and promote coordination so that partners can combine resources (human, financial, logistical, etc.) to reduce duplication and promote synergies.

The programme areas of the HSSP are categorised along 2 axes to reflect the revised focus of the Health Sector:

a) **Client-oriented service delivery:** contains all objectives and outputs directly related to improving the health of the people. These objectives are:

1. To improve accessibility to, quality of and demand for Maternal Health, Family Planning, Reproductive Health and Nutrition Services;
2. To consolidate, expand and improve services for the treatment and control of diseases;
3. To consolidate, expand and improve services for the prevention of disease and promotion of health.

b) **Systems-focused components (strategic programs),** containing objectives and outputs that provide an enabling environment for service delivery to be optimally effective and efficient (health system strengthening). The **7 strategic programs** are cross-cutting issues related to health system strengthening. Each program contains a system strengthening program objective:

| Strategic program area   | System strengthening program objective  |
|--|---|
| 1. Institutional capacity  | To strengthen the sector's institutional capacity   |
| 2. Human resources for health  | To increase the availability and quality of human resources   |
| 3. Financial accessibility   | To ensure financial accessibility to health services for all and sustainable and equitable financing of the health sector |
| 4. Geographical accessibility  | To ensure geographical accessibility to health services for all   |
| 5. Drugs, vaccines and consumables   | To ensure the (universal) availability and rational use at all levels of quality drugs, vaccines and consumables          |
| 6. Quality assurance   | To ensure the highest attainable quality of health services at all levels   |
| 7. Specialised Services, National Referral Hospitals and Research capacity | To strengthen specialised services, National Referral Hospitals and research capacity                                     |

**Levels of interventions:**

**Family-oriented community based services:** consist of what families and communities can practice by themselves when provided with information and education by health workers. These interventions are mostly preventive and promotive measures and management of neonatal and childhood illnesses. Activities are carried out by the Community Health Program, through Community Health Workers (CHWs).

**Population-oriented schedulable services:** include disease-prevention services delivered to all individuals. Delivery strategy includes both periodic outreaches to communities and/or scheduled services at health facilities (Minimum and complementary package of health care).

Family and Population oriented services basically constitute the Primary Health Care package, and PHC usually takes 75% of the total budget allocated to health.

**Individual-oriented clinical services:** include all types of individual curative care and delivery services that need to be offered by trained healthcare professionals in a healthcare facility. These interventions are offered in a continuous manner so that they can respond to unpredictable health emergencies.

New initiatives have been put in action, and include: PBF, CBHI, Community Health, Accreditation of Health Services, Improvement of Health Education including CPD, Quality emergency transportation, Development of SWAp, Continuing the Decentralization process.

Family Planning is a top priority in order to reach the ambitious target set for fertility. Maternal health still drains more attention. **Family planning, maternal, child health, and nutrition** harbor the majority of essential targets in Vision 2020, MDGs, and EDPRS.

**Non-communicable diseases and injuries are a top priority in the new HSSP III.** They are increasing the burden of diseases, and specific attention is paid to **promoting healthy lifestyles and preventing diseases** with an emphasis on promoting hygiene and addressing unhealthy behaviors (such as drinking alcohol, smoking, dangerous driving, eating unhealthy diets, and unsafe sex) through community health workers and mass media campaigns. Hence, a centre for the cancer treatment has been created in the Butaro District Hospital, and capacity is being built accordingly.

In accordance with the EDPRS, HSSP also stresses **good governance**, in order to improve management and coordination of all sector stakeholders. Finally, a **Health System Strengthening Program**, developed using the Health system building blocks.

**Monitoring and Evaluation Framework**

In order to measure and analyze the success of HSSP-II interventions in terms of reaching outcomes and targets, a set of annual and periodic indicators have been developed through consultations with all stakeholders, and different joint assessments are organized:

**a) Sector Performance Reviews** are undertaken annually as part of Joint Health Sector Reviews (JHSR). In the fiscal year 2011-2012, a self assessment of EDPRS I was conducted and all Stakeholders of the Health Sector participated in the exercise. The recommendations from the assessment have been utilized to prepare HSSP III and EDPRS 2.



**b) The Joint Health Sector Review (JHSR)** is organized twice a year and is a forum agreed upon between the Government of Rwanda and Development Partners, in which a deep analysis of performance is carried out for the implementation of EDPRS actions and policy matrix and an assessment of the CPAF targets and policy actions.

**c) Mid Term Review of HSSP and RDHS:** The HSSP II MTR is conducted to evaluate achievements made in half term of the strategic plan. **The RDHS** is conducted and the final results published to be a reference for further planning exercises. The 2010/2011 status of health indicators served as baseline for HSSP III; Vision 2020 revised targets and EDPRS 2.

**d) Citizen Report Card study (CRC):** The core aim of the study was to provide public agencies and policy makers with systematic feedback from users of public services regarding the quality and adequacy of public services being delivered at the grassroots.

**e) Evaluation of the Ministry Performance Contract:** this evaluation is new and it conducted in January, to review achievements of the Leadership Retreat action plan and the MoH Imihigo. At the end of year (June) a team from the President’s Office, PMO and MINECOFIN evaluates achievements against the performance contract signed by Honorable Minister.

**f) Sector performance indicators**

**Table 1: Sector Performance Indicators**  
(Baseline 2005 and targets 2015)

| <b>INDICATORS</b>  | <b>BASELINE 2005</b> | <b>MTR June 2008</b> | <b>MTR Aug 2011</b>        | <b>TARGET 2012</b> | <b>TARGET 2015</b> |
|--|----------------------|----------------------|----------------------------|--------------------|--------------------|
| Source of Information  | DHS 2005             | I-DHS                | DHS 2010 Reports 2012      | EDPRS              | MDGs               |
| <b>IMPACT INDICATORS</b>   |                      |                      |                            |                    |                    |
| Population (Million)   | 8.6 M                | 9.31 M               | 10.4 M                     |                    |                    |
| Life Expectancy at birth (NISR)  |                      |                      | 54.5                       |                    |                    |
| Population growth rate (NISR)  |                      |                      | 2.9                        |                    |                    |
| Infant Mortality Rate / 1000 live births   | 86                   | 62                   | 50                         | 37                 | 28                 |
| Under Five Mortality Rate / 1000 live births   | 152                  | 103                  | 76                         | 66                 | 47                 |
| Neonatal Mortality rate  | 37                   | 28                   | 27                         |                    |                    |
| Maternal Mortality Rate / 100.000 live births  | 750                  | NA                   | 476                        | 600                | 268                |
| Prevalence of underweight (Wt/Age)   | 18                   | NA                   | 11                         | 14                 | 14.5               |
| Prevalence of Stunting (Ht/Age)  | 51                   | NA                   | 44                         | 27                 | 24.5               |
| Prevalence of Wasting (Ht/Wt)  | 5                    | NA                   | 3                          | 2.5                | 2                  |
| Total Fertility Rate (%)   | 6.1                  | 5.5                  | 4.6                        | 4.5                |                    |
| Contraceptive Prevalence Rate among married women (modern methods)                     | 17                   | 36                   | 45                         | 70                 |                    |
| <b>OUTCOME INDICATORS</b>  |                      |                      |                            |                    |                    |
| % Births attended by skilled HW/HF   | 39                   | 45                   | 69                         | 75                 |                    |
| % PW receiving 4 ANC Visits  | 13                   | 24                   | 35                         | 50                 |                    |
| Caesarian Section Rate %   | 2                    |                      | 15 (2012)                  | NS                 |                    |
| % Women / Men (15-49 yr) reporting condom use in most recent high risk sex intercourse | 26 / 39              | NA                   | 91/92                      | 35 / 50            |                    |
| HIV prevalence in 15-49 years  | 3                    |                      | 3                          |                    |                    |
| HIV Prevalence Rate in 15-24 yrs %   | 1.0                  | NA                   | 15-19 : 0.5<br>20-24 : 1.5 | 0.5                |                    |

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| <b>INDICATORS</b>  | <b>BASELINE<br/>2005</b> | <b>MTR<br/>June 2008</b> | <b>MTR<br/>Aug 2011</b>           | <b>TARGET<br/>2012</b> | <b>TARGET<br/>2015</b> |
|--|--------------------------|--------------------------|-----------------------------------|------------------------|------------------------|
| Source of Information  | DHS 2005                 | I-DHS                    | DHS 2010<br>Reports 2012          | EDPRS                  | MDGs                   |
| HIV Incidence (/100,000) (TRACnet)   |                          |                          | 150                               |                        |                        |
| Malaria incidence (/1,000) (HMIS)  | 192                      | 80                       | 61                                |                        |                        |
| TB incidence (/100,000) (WHO)  | 162                      | 123                      | 106                               |                        |                        |
| TB prevalence (/100,000) (WHO)   | 192                      | 143                      | 128                               |                        |                        |
| <i>Number HF with VCT / PMTCT services/ART services (Report June 2012)</i> | 234                      | 374VCT,<br>341 PMTCT*    | 485 VCT,<br>467 PMTCT*<br>430 ART | 433                    |                        |
| <i>% HF providing IMCI services</i>  |                          | 80                       | 100                               | 50                     |                        |
| <i>% children Fully immunized / Measles</i>                                | 75                       | 80                       | 90                                | 85                     |                        |
| <i>% children immunized against Measles</i>                                | 76                       | 90                       | 95                                |                        |                        |
| <i>% children &lt; 5 yr sleeping under ITN</i>                             | 18                       | 60                       | 70                                | 90                     |                        |
| <i>% TB Treatm Success Rate / DOTS</i>                                     | 58                       | 86                       | 87                                | 88                     |                        |
| <i>Prevalence of Anemia (children 6-59)</i>                                | 56                       | 40                       | 38                                |                        |                        |
| <i>% children 6-59 months, with one dose Vitamin A in last 6 months</i>    | 69                       | +/- 50                   | 108                               |                        |                        |
| <i>Average OPD attendance / pp / yr</i>                                    | 0,33                     | 0,72                     | 0.95 (2011)<br>1.00 (2012)        | 0.8                    |                        |
| <b>INPUT INDICATORS</b>  |                          |                          |                                   |                        |                        |
| <i># District hospitals / HCs</i>  |                          | 40 / 406                 | 42 / 448 (2012)                   |                        |                        |
| <i># Community Health Workers (CHW)</i>                                    |                          | NA                       | 45.000                            |                        |                        |
| <i>% people living at &lt; 1 hour of HF</i>                                |                          | 77                       | NA                                | 80                     |                        |
| <i>% of GOR budget allocated to health</i>                                 | 8.2                      | 9.1                      | 11.5                              | 12                     |                        |
| <i>Per capita total health annual GOR expenditure on health (USD)</i>      | 16.94 (NHA 2003)         | 33.93 (NHA 2006)         | 39.5 (NHA 2010)                   |                        |                        |
| <i>% Population covered by 'mutuelles'.</i>                                | 12                       | 75                       | 90.7 (2012)                       | 91                     |                        |
| <i>Per capita allocation to PBF (USD)</i>                                  | NA                       | 1.65                     | 1.8                               | 2.0                    |                        |
| <i>Doctor / Pop Ratio</i>  | 1 / 50.000               | 1 / 33.000               | 1 / 16.001                        | 1 / 20.000             |                        |
| <i>Nurse / Pop Ratio</i>   | 1 / 3.900                | 1 / 1.700                | (June 2012)                       | 1 / 5.000              |                        |
| <i>Midwives / Pop Ratio</i>  | NA                       | 1 / 100.000              | 1 / 1.291 (June 2012)             | 1 / 20.000             |                        |
|  |                          |                          | 1 / 66.749                        |                        |                        |

Italics = Included in CPAF as part of SBS funding.

\* = RBC Annual report 2011-2012.

# **ACHIEVEMENTS IN 2012-2013**

## **I. MATERNAL AND CHILD HEALTH**

**Programme objective:** To improve accessibility to quality and demand for Family planning, maternal and Child Health, Reproductive Health and Nutrition services.

### **I.1 Introduction**

The improvement of maternal and child health and nutritional status is among the top national health priorities and is also in line with the achievements of Vision 2020, EDPRS and the Millennium Development Goals to reduce maternal mortality (MDG 4) child mortality (MDG 5), and malnutrition (MDG 1). To achieve the goals, programs continued in the 2 main areas: health facility-based and community-based activities, coordinated from MCH unit, with objectives to:

- Promote good practices of Maternal and Child Health across the country through Mother support programs.
- To support the safe motherhood initiative and reproductive health through establishment of evidence based Programs.
- To encourage facility-based delivery through the provision of MCH high impact services.
- To support newborn care in hospitals.

According to different surveys, the main maternal health indicators continue to improve. The total fertility rate is currently at 4.6%, the modern contraceptive rate among married women increased to 45% and assisted deliveries to 69% in 2010. The maternal mortality has reduced from 750/100,000 live births to 476/100,000 live births and the maternal death audit indicates that the number of maternal deaths recorded in district hospitals has reduced from 211 in 2010 to 196 in 2010-2011 to 158 in 2011-2012 and to 175 in 2012-2013. If the trend continues, the MDG5 of 268 will be achieved.

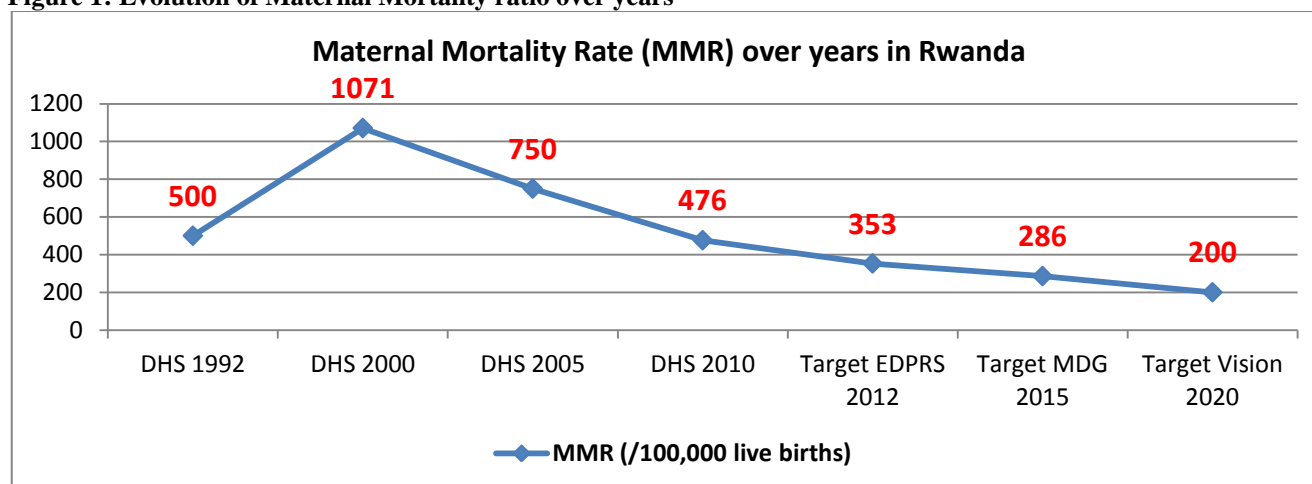
In 2012-2013, strong focus continued to improve mother, infant and young child feeding (MIYCF), newborn care, safe motherhood initiatives, family planning, hospital play rooms, community management of illness, prevention of Post-Partum Hemorrhage and maternal death audits, Community Verbal Autopsy. All interventions have been carried out along with implementation of the strategic plan to eliminate malnutrition 2010-2013, as it has been reviewed to extend its activities in the FY 2013-2014.

### **I.2 Maternal Health**

Activities undertaken to reduce MMR are: ANC (4 visits, at 35% in 2010); Assisted delivery in Health Facility, Emergency obstetrical care, Family Planning, Maternal death audits, Community health, construction and equipment of maternities, training of health professionals including Midwives, emergency transport and organization of the referral system.

In the iscal year 2012-2013, maternal health activities focused on safe motherhood initiatives, family planning, hospital play rooms, and community management, prevention of Post-Partum Hemorrhage and maternal death audits.

Figure 1: Evolution of Maternal Mortality ratio over years



Source: DHS 2010.

Training on basic and comprehensive emergency obstetrical and neonatal care continued in order to improve maternal health. Post-abortion care has been introduced in 6 districts while the prevention of post-natal hemorrhage using mesoprostol at community level has started in 7 districts. For family planning, community based provision of FP commodities and the provision of long term methods has been expanded into 22 districts. All hospitals have currently the capacity to provide long term methods, including surgical methods like vasectomy and tubal ligation during routine and outreach strategies.

### 1. Maternal Death Audit (MDA) from health facilities

According to DHS 2010, the Rwandan woman had a risk of 1/40 (2,5%) to die from a cause related to pregnancy and childbirth during her reproductive life, but this risk is 1/3.200 in industrialized countries (0.03%). However, the maternal death audit indicates that the number of maternal deaths recorded in district hospitals has continuously reduced: from 211 in 2010 to 196 in 2010-2011 to 158 in 2011-2012 and to 175 in 2012-2013. If the same trend continues, the MDG5 of 268/100,000 live births will be achieved by 2015.

Table 2: Reduction of Maternal deaths in Health Facilities

| Reduction of maternal deaths in health facilities |           |           |           |
|---|-----------|-----------|-----------|
| 2010  | 2010-2011 | 2011-2012 | 2012-2013 |
| 211   | 196       | 158       | 175       |

Source: MoH/MCH annual report, 2012-2013

Despite many efforts and the important success recorded today, many women still die each year in Rwanda from causes related to pregnancy complications and/or childbirth.

Maternal death audit approach was adopted in November 2008. Three of the five methodologies for conducting maternal death audit namely verbal autopsy (community based audit), facility based audit, and confidential enquiry into maternal deaths were selected and health personnel was trained in all hospitals to use them. From January 2009 MDA was carried out in all hospitals and have since then been making recommendations aimed at reducing maternal and neonatal mortality.

In the community, verbal autopsy is currently conducted in 14 districts (MUHANGA, KAMONYI, RUHANGO, NYAMAGABE, NYARUGURU, MUSANZE, GAKENKE, RUSIZI, RUBAVU, NYAGATARE, GATSIBO, NYAMASHEKE, RUTSIRO AND NGORORERO).

To do this, a surveillance system of maternal deaths in health facilities (hospitals, health centers) and in community has been created to provide in-depth information on mothers who die, to identify conditions that lead to their death and to take corrective measures to prevent similar situations.

**Table 3: Causes of Maternal Deaths 2010-2013**

| <i>Causes of death</i>   | <i>2010-2011</i> |             | <i>2011-2012</i> |             | <i>2012-2013</i> |             |
|--------------------------|------------------|-------------|------------------|-------------|------------------|-------------|
|                          | <i>Nb deaths</i> | <i>%</i>    | <i>Nb deaths</i> | <i>%</i>    | <i>Nb deaths</i> | <i>%</i>    |
| Severe bleeding          | 79               | 40%         | 72               | 46%         | 69               | 39%         |
| Septicemia               | 33               | 17%         | 26               | 16%         | 30               | 17%         |
| Eclampsia                | 14               | 7%          | 17               | 10%         | 18               | 10%         |
| Malaria                  | 0                | 0%          | 7                | 3%          | 10               | 6%          |
| Other causes             | 6                | 3%          | 5                | 4%          | 8                | 5%          |
| Unknown causes           | 14               | 7%          | 8                | 6%          | 7                | 4%          |
| Amniotic embolism        | 2                | 1%          | 0                | 0%          | 7                | 4%          |
| Anesthesia complications | 6                | 3%          | 4                | 2%          | 6                | 3%          |
| Heart failure            | 5                | 3%          | 2                | 1%          | 5                | 3%          |
| Pulmonary embolism       | 1                | 1%          | 3                | 1,8%        | 3                | 2%          |
| Anemia in pregnancy      | 6                | 3%          | 1                | 1%          | 4                | 2%          |
| Other infections         | 19               | 10%         | 10               | 6,3%        | 0                | 0%          |
| IO/HIV                   | 10               | 5%          | 3                | 1,8%        | 0                | 0%          |
| <b>Total</b>             | <b>196</b>       | <b>100%</b> | <b>158</b>       | <b>100%</b> | <b>175</b>       | <b>100%</b> |

*Source: MoH/MCH: Annual report 2012-2013*

During July 2012- June 2013, 175 maternal death review reports from hospitals were received.

- Main cause of death: severe bleeding (39%) of which > 3/4 occurred in postpartum period;
- Second cause: infection (16%), then eclampsia (12%). Malaria as cause of maternal deaths has decreased.
- 61% of all maternal deaths occurred at district hospital and 32 % at referral hospital; No deaths were registered in Health centres, and the number of deaths occurring in community is not yet fully documented.
- 54% of women died after giving birth;
- 45% of deceased women were aged 21-30 years old and 38 % were aged 31-40 years.
- According to the audit committee, 74% of maternal deaths would have been avoided and 26% others were not avoidable.

**Table 4: MDA: Main causes of severe bleeding**

| Primary diagnostic           | Second diagnostic | Number    | %           |
|------------------------------|-------------------|-----------|-------------|
| PPH (post-partum hemorrhage) | Post c/section    | 23        | 33%         |
|                              | Post partum       | 28        | 41%         |
| Ante partum hemorrhage.      | Placenta previa   | 2         | 3%          |
|                              | Abroptio plac.    | 1         | 1%          |
| Intrapartum hemorrhage       | Uterine rupture   | 10        | 14%         |
| Abortion                     |                   | 3         | 4%          |
| Ectopic Pregnancy            |                   | 2         | 3%          |
| <b>Total</b>                 |                   | <b>69</b> | <b>100%</b> |

*Source: MoH/MCH: Annual report 2012-2013*

88% of severe bleeding is the post partum hemorrhage while obstructed labor leads to uterine rupture. 33% of post partum hemorrhage occurred after caesarian section, and 41% occurred immediately after delivery.

In 2013, a process evaluation has been carried out to get a clear picture and an accurate understanding of how maternal death audits are conducted within district and referral hospitals, to trace the route taken by women during transfers, to identify priorities and appropriate interventions and to understand the major causes of death, and therefore, to adopt effective strategies that may improve the quality of care in order to increase utilization of maternal services.

### **Evaluation of the Maternal Death Audits**

In 2012-2013, the maternal death audits submitted by district hospitals have been evaluated, and there are some discrepancies between the results of evaluation and the reports submitted by district hospitals for the period 2011 and 2012 (Data discordance between HMIS and MDA).

Some of findings are:

1. The partogramme as a source of information for the MDA implementation is used at only 48, 8 %.
2. Only 78% of district teams read MDA Chart or convention before starting their meeting. 11% do not identify any facilitator for the meeting.
3. Only 78% of recommendations are specific. But, 70 % identify the responsible of implementation while 62 % define the timeline for their execution. Only 50% of interviewees said that all recommendations are implemented
4. Facility based maternal death audit and Community based deaths audit are better documented and better conducted than the Confidential Enquiry into maternal deaths, with respectively 97,7% and 2,3% of respondents for community based audit
5. The three main causes of maternal death remain same since 2010 but their proportion is increasing: 41% (2010-2011), 53% (2011-2012) and 57% (2012-2013).

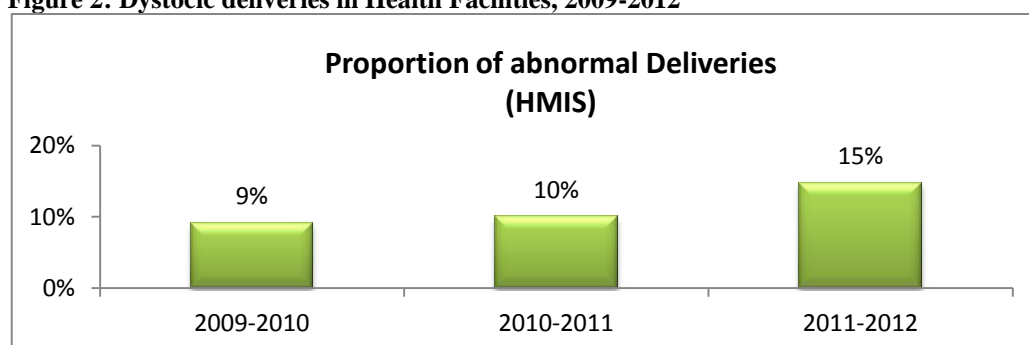
## 2. EmONC (Emergency Obstetrical and Neonatal Care)

### a) Basic EmONC training: emergency care package provided in Health centres

In 2011-2012: 354 health providers from health centres of NYAGATARE, NYARUGURU, GAKENKE, BURERA, NYANZA, GISAGARA, HUYE, NYABIHU, RUBAVU, NYAMASHEKE, KARONGI, BURERA and MUSANZE were trained on B-EMONC.

In 2012-2013: 202 health providers from KARONGI, KAYONZA NGOMA, NYAGATARE, KAYONZA, NYAMASHEKE and GAKENKE were trained in B-EMONC

Figure 2: Dystocic deliveries in Health Facilities, 2009-2012



Source: MoH/MCH annual report 2011-2012

### b) Comprehensive EmONC training: Package of emergency care provided in DHs

In 2011-2012: 208 health providers from hospitals of KIREHE, RUBAVU, NGOMA, NYAGATARE, BYUMBA, KAMONYI, GATSIBO, RUBAVU, RUTSIRO, RUSIZI, GAKENKE, BUGESERA, MUSANZE, NGORORERO and GISAGARA were trained.

In 2012-2013: 101 health providers from GASABO, BUGESERA, RULINDO districts were trained in C-EmONC. Post training supervision was done for KAMONYI health providers trained in c-EmONC

## 4. Post-abortion care (PAC)

Initially, the 4 districts implementing post abortion care focused on misoprostol in NYABIHU, GISAGARA, KICUKIRO and BUGESERA districts. In 2012-2013, PAC was implemented in 6 additional districts using a comprehensive approach that combines medical and surgical methods, in accordance with the adopted comprehensive post abortion protocol. The 6 districts targeted are: GISAGARA, KIREHE, KAYONZA, NYAMAGABE, KAMONYI and RWAMAGANA, where at least 2 providers by health center and 3 or 4 providers by District hospital were trained.

## 5. Cervical cancer

- 2010-2011: HPV vaccine was launched and training of health providers on the management of cervical cancer has started.
- 2011-2012: Training on VIA and Cryotherapy was done for 109 health providers from all referral hospitals and 5 district hospitals.
- 2012-2013: Equipment was purchased and distributed to hospitals and health centers selected for the pilot project: LEEP, colposcopy and cryotherapy machines are in the ordering process and are expected in one month. HPV tests will be available in Q1/2013-2014.



## 5. Post-Partum Haemorrhage Prevention at Community level

Initially, 4 districts were implementing post partum hemorrhage prevention using misoprostol at community level: RUBAVU, MUSANZE, GAKENKE and NYANZA.

In 2012-2013, 4 more districts have been implementing PPH :GISAGARA, NYABIHU and KAYONZA from Southern province, and GAHINI Hospital in Eastern Province. A TOT was made for 14 staff from MOH and Districts hospitals. Thereafter, 2 trainers per Health center and 3 per District Hospital were trained for the training of community health workers. After trainings, provision of misoprostol and reporting tools were distributed to CHWs to ensure the effective implementation of PPH.

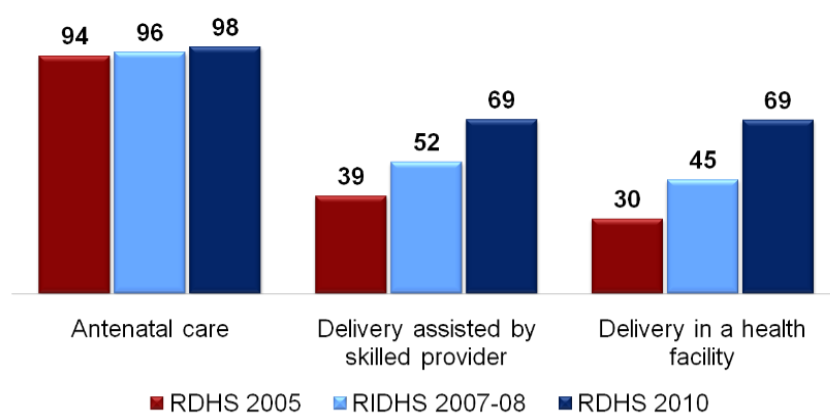
## 6. Neonatal Care.

The main objective of neonatal care program is the reduction of neonatal morbidity and mortality, through improved quality of neonatal care in district. The reference manual and protocols for neonatal care have been developed and training of care providers has started. The creation and strengthening of neonatal units in all district hospitals (neonatology units) is ongoing as one of the most effective strategies to improve the quality of care for newborns.

In 2012-2013: 113 health providers from all district hospitals have been trained along with 307 health providers in 164 Health centers from 8 districts: RUBAVU, MUSANZE, NYABIHU, NGORORERO, BUGESERA, MUNINI, NYAMAGABE and GICUMBI. The process is ongoing.

## 7. Trends of the main Maternal Health Indicators: RDHS 2010

Figure 3: Trends of Maternal Health Indicators, DHS

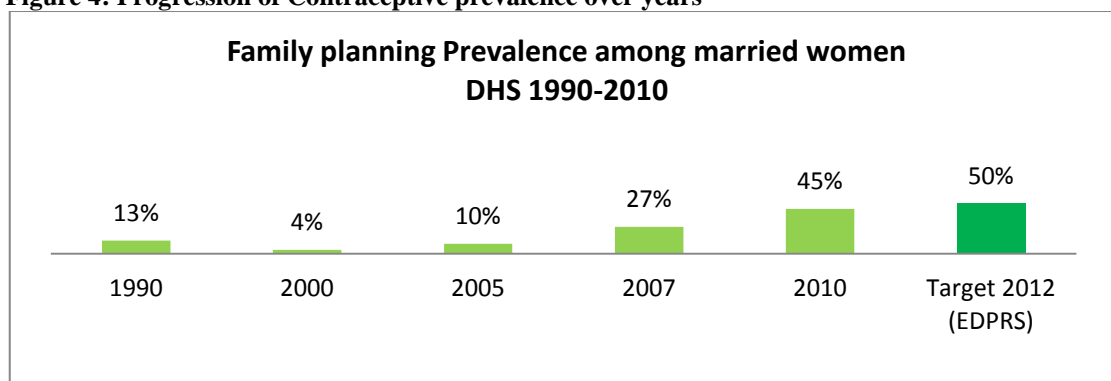


Source: RDHS 2010

## 8. Reinforcement of Family Planning Services

As Family Planning is a routine service provided in all public health facilities, the main activities are currently focused on training for the provision of long term methods and the Community Based Provision (CBP). Those interventions constitute a major innovation in the implementation of FP program. CBP is provided through CHWs who are being trained as a major support for increased use of modern contraception methods in Rwanda. The new program has been implemented in 22 Districts.

Figure 4: Progression of Contraceptive prevalence over years



Source: DHS 2010.

In terms of training, some 150 trainers for CHWs have been trained in 6 districts in 2012-2013: GASABO, NYAGATARE, NYAMASHEKE, GISAGARA, RWAMAGANA, NGORORERO, and NGOMA. Thereafter, 6330 CHW's were trained to provide family health services in their respective districts. Related tools and materials have been distributed (referral book, register book, consumable and requisition card, for monthly report and individual card for the clients where as for the materials; bucket, calendar, bottle for germ killer and artificial penis).

Finally, health posts are being expanded to facilitate accessibility to FP services, and a specific program will be implemented in 2013-2014 to quickly increase the number of health posts.

### 1.3 Child Health

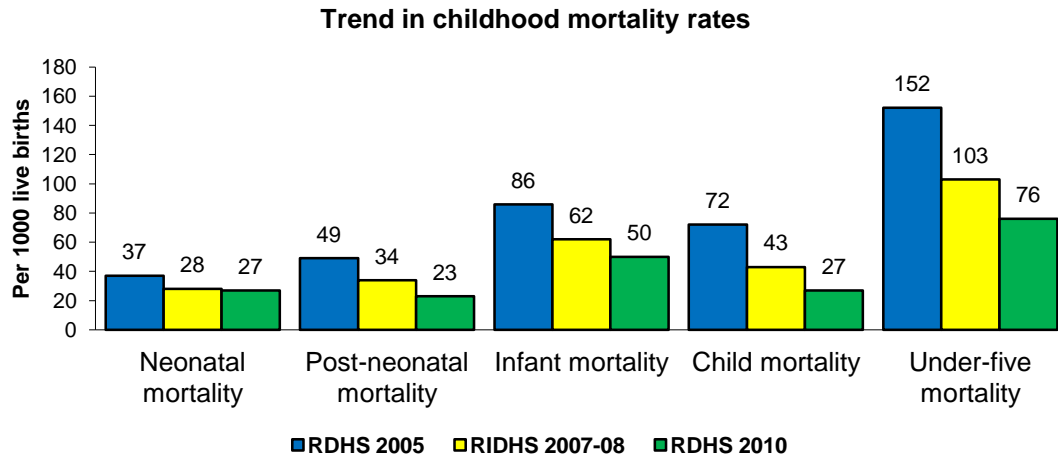
The general objective of Child Health is to contribute in reduction of U5 child mortality from 103/1,000 live births in 2007 to 50/1,000 in 2015 (6.6 by year).

#### Child Health high impact interventions implemented in 2012/2013.

Concerning child survival, specific programs have been reinforced such as the expanded program on immunization, the fight against malaria, HIV, diarrhea, malnutrition, the integrated management of childhood illnesses and the integrated high impact interventions at the community level.

Very important efforts have been deployed to achieve the Millenium Development Goals. Rwanda is on track and has already attained the MDG 4, related to reduce child mortality by 2/3 in 2015. The mortality has reduced from 153/1000 live births in 2005, to 54/1,000 in 2012 (UNICEF), while the target was 50/1,000 live births.

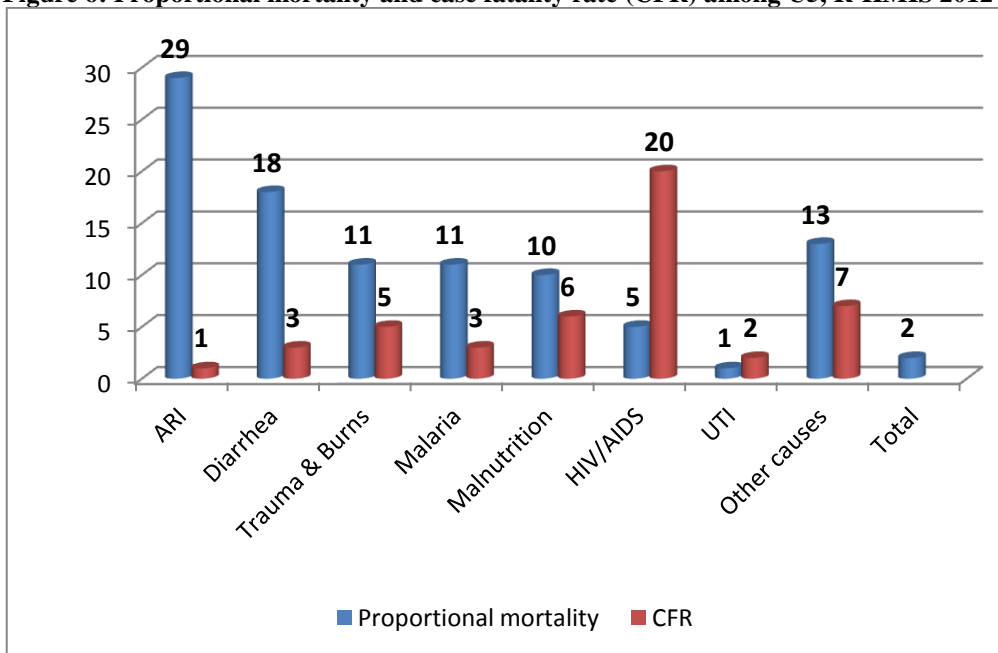
Figure 5: Child Mortality rates over years (/1000 live births)



Source: RDHS 2010

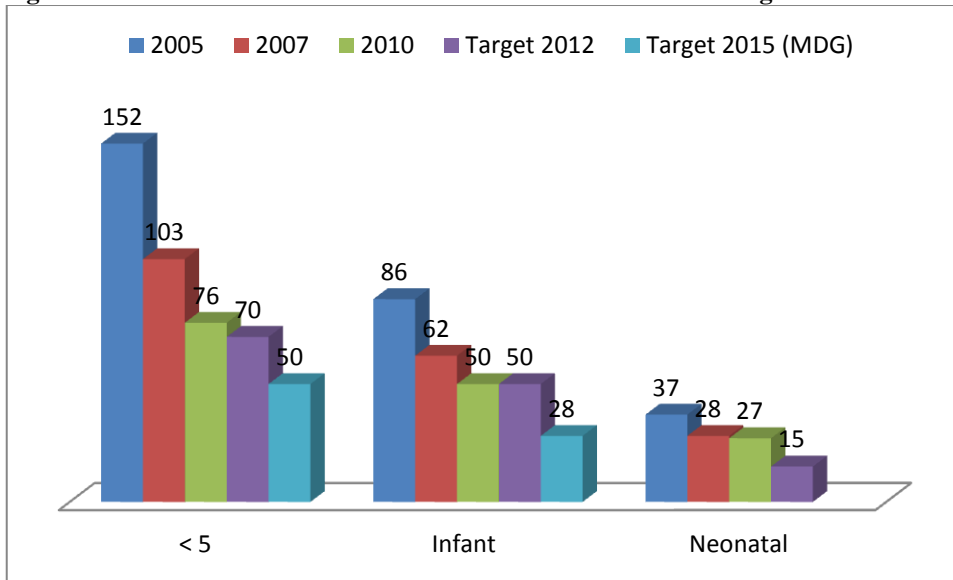
However, in health facilities, according to HMIS 2012, the 5 top killer diseases of U5 remain the same: respiratory tract infections (29 %), followed by diarrhea (18%) trauma and burns (11%), malnutrition (10%) and malaria (11%).

Figure 6: Proportional mortality and case fatality rate (CFR) among U5, R-HMIS 2012



Source: MoH/HMIS 2012

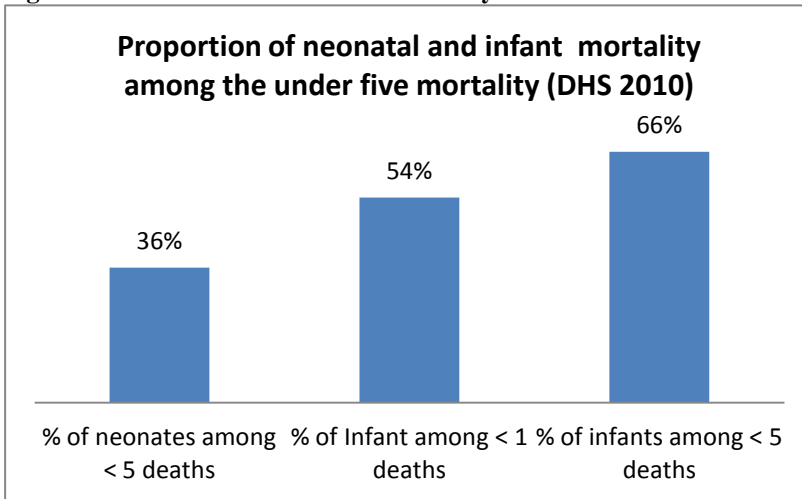
Figure 7: Child Health: DHS results versus EDPRS and MDGs targets



Source: RDHS 2010

As mentioned above, neonatal and infant mortality contribute largely to the U5 mortality and this situation needs to be addressed specifically. According to DHS 2010, 35 % of under five deaths are neonates and 66% infants (of which 54 % are neonates).

Figure 8: Child Health: Neonatal Mortality Rates



Source: MCH annual report, 2011-2012

**Integrated Management of Childhood Diseases:**

One of the major strategies to reduce child morbidity and mortality is the strengthened access to health services through integrated management of childhood illnesses (IMNCI) at health facility and community level. Currently, IMNCI is a routine activity, but it needs to be strengthened.

In 2012-2013: 60 health care providers from districts having < 6 trainers have been trained on clinical IMCI. 15 lecturers and clinical instructors in 3 Nursing Schools have been trained on IMCI.

Finally, a new child survival strategic plan (2012-2015) has been developed. It will be validated and then disseminated during the FY 2013-2014.

**Table 5: Nb of children treated at community level July 2012-June 2013**

| Types of activities                               | Year 2012 | Year 2013 |
|---|-----------|-----------|
| Total number of children from 0-7days             | 10,050    | 30,240    |
| Total number of children from 1 week to 2 months  | 48,947    | 55,896    |
| Total number of children from 2 months to 5 years | 9,781     | 68,975    |

*Source: MoH/HMIS 2012-2013*

In addition to IMCI, it is important to note that CHWs are also actively involved in Family planning (Community based provision, CBP), Community based nutrition program (CNBP), Hygiene, etc.

**Neonatal and Child Mortality Surveillance**

In 2012-2013, a new software was created for the weekly reporting of all neonatal and child deaths and the reporting is made online. Neonatal and child death audit committee is operational in all hospitals. It is composed by 2 health providers and one data managers that were refresher trained on neonatal and child death surveillance.

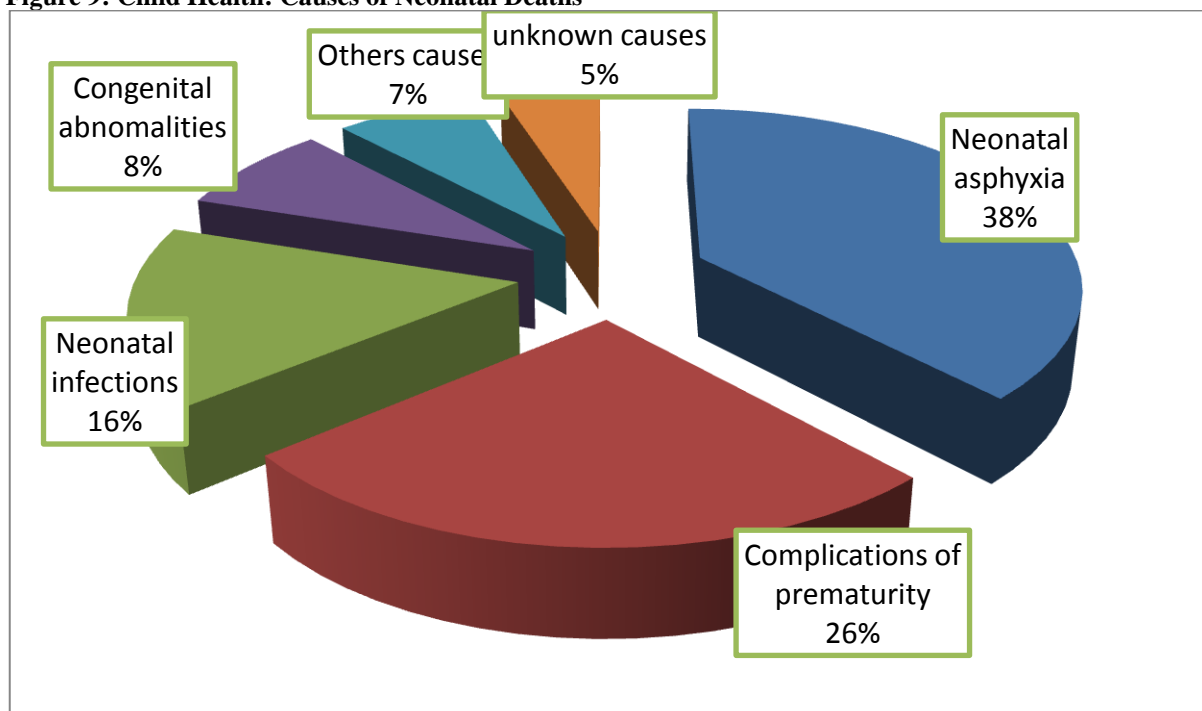
A detailed analysis of neonatal and child deaths was carried out in health facilities in 2012. Some 2632 neonatal cases with 752 child deaths have been audited in 39 hospitals. Findings show that: 88% of neonatal deaths occurred in DHs, 7% in referral hospitals and 5% in HC. 49% of deaths were premature newborns and 58% had low weight at birth. 60% of all neonates dead were born in district hospitals while 37% were referred from health centers to district hospitals, and 2% were referred from district hospitals to referral hospitals.

Hypothermia is the main complication that is associated with deaths independently of place of birth. 75% of all new borns suffered from hypothermia at the time of their admission in neonatology services. To prevent hypothermia, training of health providers on essential new born care with focus on resuscitation and prevention is essential.

Neonatal asphyxia is the top cause of neonatal mortality followed by complications of prematurity and neonatal infections. Congenital abnormalities represent only 8%. For 5% of deaths, the cause was unknown; meaning that follow up of these cases must be improved during hospitalization.

Also, 53% of deceased new borns haven't cried at births. Clinical audit of neonatal asphyxia should help to identify the main causes of neonatal asphyxia.

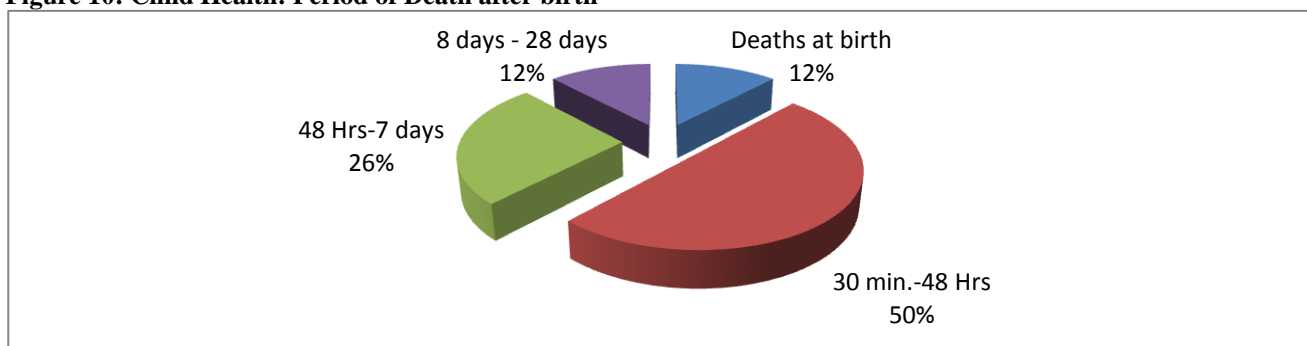
**Figure 9: Child Health: Causes of Neonatal Deaths**



Source: MoH/HMIS 2012-2013

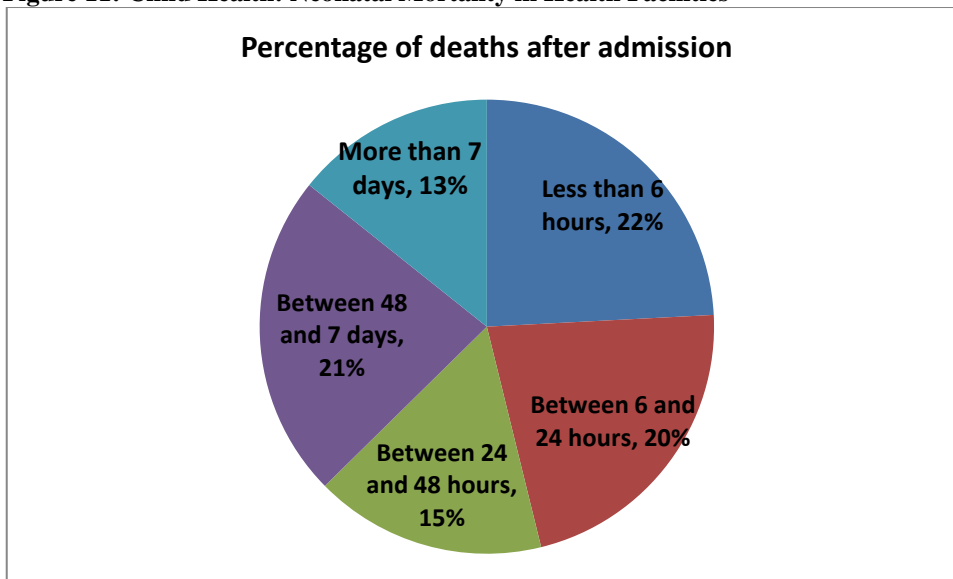
An important proportion of new borns die between 30 minutes and 48 hours after births. 88 % of deaths occur in early neonatal period and 12% in late neonatal period. 66% of all deaths occurred before 48 Hours after admission and 33% of them before 6 hours! In 51% of cases, child deaths are associated with late health seeking.

**Figure 10: Child Health: Period of Death after birth**



Source: MoH/HMIS 2012-2013

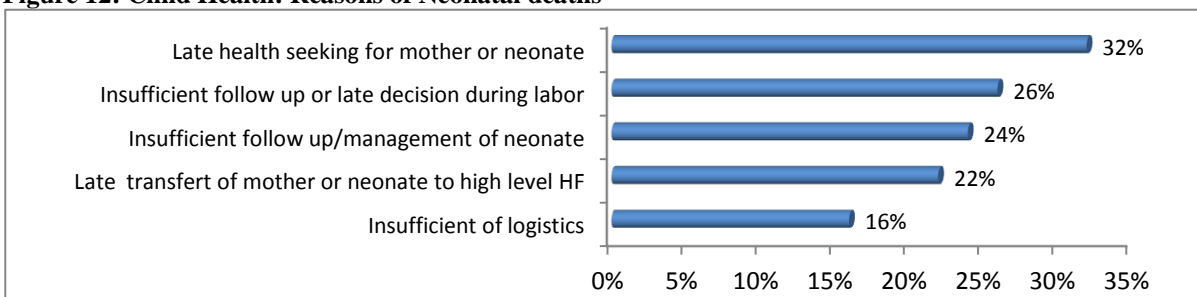
Figure 11: Child Health: Neonatal Mortality in Health Facilities



Source: MoH/MCH, Annual Report, 2012-2013

In 26% of cases, neonatal death can be attributed to insufficient follow up or late decision during labor and 24% to insufficient follow up or poor management of neonates.

Figure 12: Child Health: Reasons of Neonatal deaths



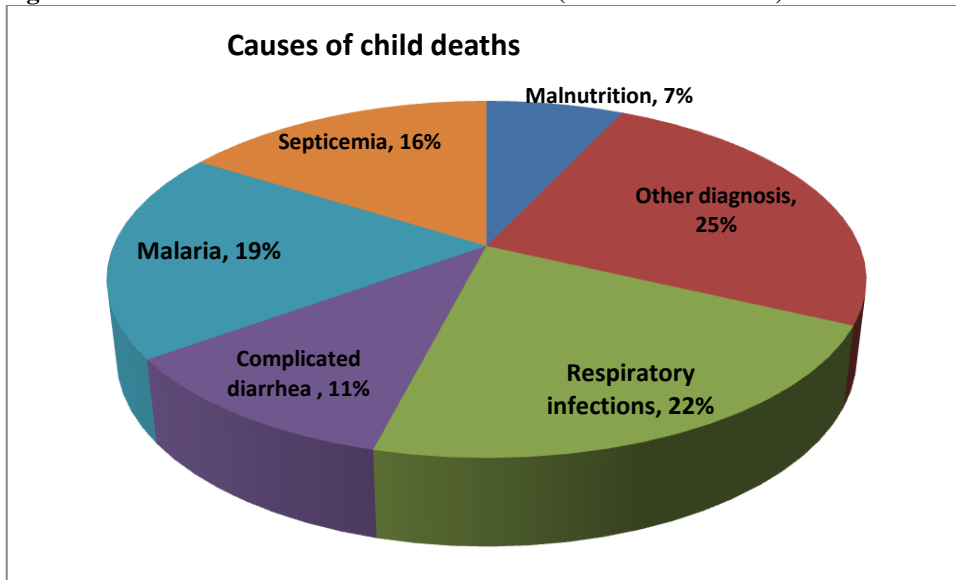
Source: MoH/HMIS 2012

In conclusion, the audit indicates that 76% of occurred deaths could be prevented if some measures were taken during labor, neonate management after birth or follow up during hospitalization.

### Child Death Audits:

When considering child deaths: respiratory infections, trauma & burns and diarrhea are the top 3 causes of child death. Septicemia represents 16% of causes. 23% of deceased children had clinical features of malnutrition and 4% were HIV positive. Note that there is some difference between the proportions reported by HMIS 2012.

Figure 13: Child Health: Causes of Child deaths (Child Death Audit)

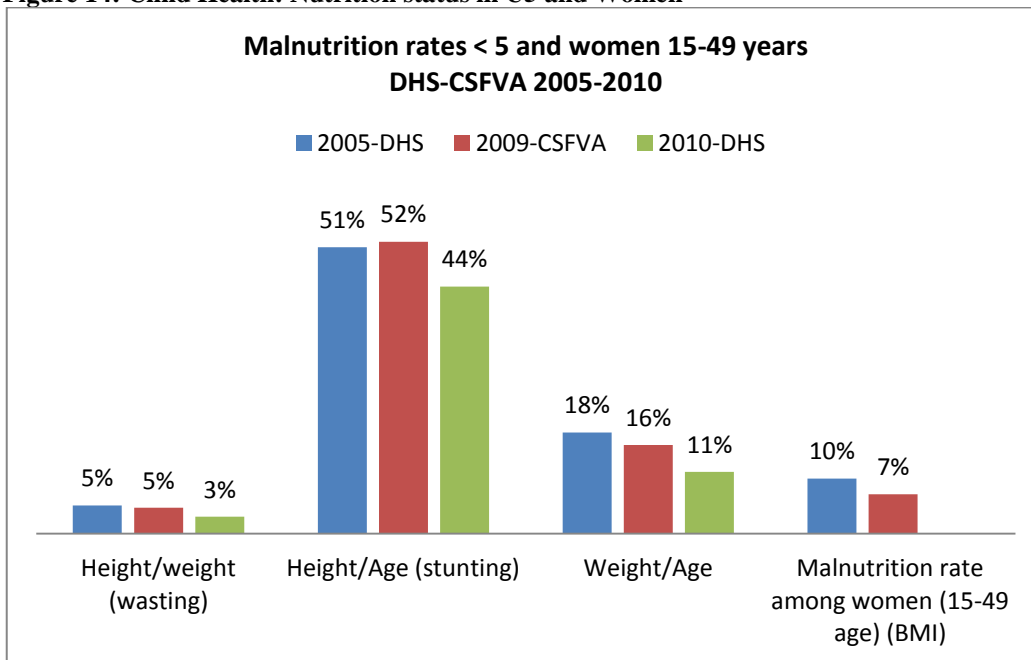


Source: MoH/MCH, Child Death Audit report, 2012-2013

### I.4 Nutrition

**General objective:** To improve the nutritional status of the Rwandan people, prevent and appropriately manage cases of malnutrition.

Figure 14: Child Health: Nutrition status in U5 and Women



Source: DHS 2010



According to the Rwanda DHS 2010, 44% of under five children are stunting or have chronic malnutrition (height/age), 11 % are underweight (weight/age) and 3% suffer from acute malnutrition (height/weight). Micronutrient deficiencies contributing directly or indirectly to the high infant, child and maternal mortality and morbidity in the country, are still high.

**Multi-sectoral and District Plans to Eliminate Malnutrition (DPEMs):**

All districts launched the national Joint Action Plan to Eliminate Malnutrition (JAPEM) which is linked to DPEM and to the National Strategy to Eliminate Malnutrition. JAPEM is a multi-sectoral plan to eliminate acute malnutrition by 2013. The plan has been reviewed in November 2012 in accordance with JDC recommendations, with more involvement of concerned Departments. Its implementation is still ongoing.

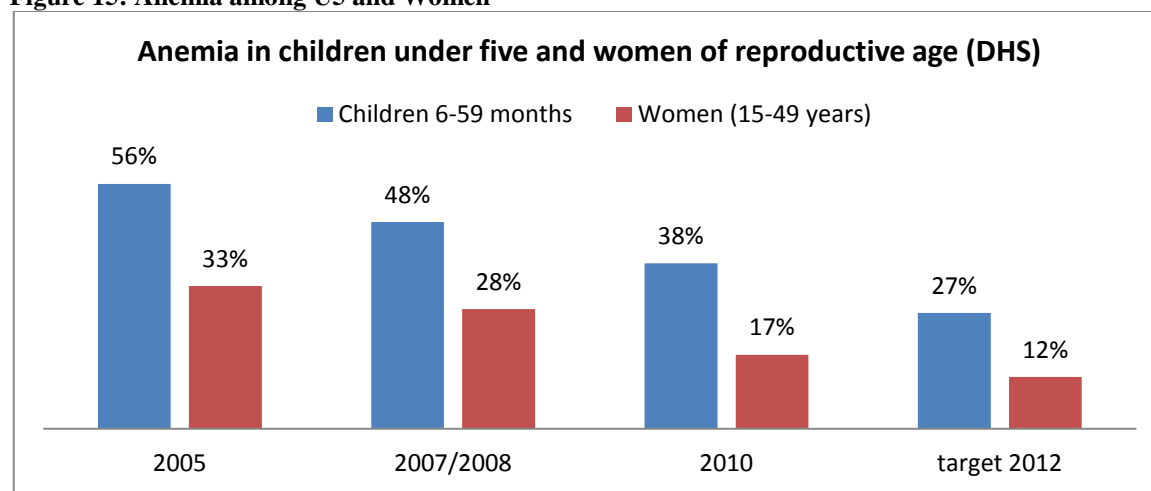
**Achievements of the Nutrition Program 2012-2013**

1. Monthly screening & Identification of malnutrition among U5 by CHW (MUAC: 1,151,827 )  
Weight for age (1,085,365)
2. Annual national screening U5 & Identification of malnutrition using MUAC: WEIGHT-FOR-AGE, WEIGHT-FOR- HEIGHT, HEIGHT-FOR-AGE :1.085.365 children have been screened
  - Stunting (Height/Age): 199.586 (19%)
  - Underweight (Weight/Age) : 66.317 (6.3%)
  - Wasting (Weight/Height) : 20.938 (2%)
  - The screening made using MUAC showed that some 16.955 children were malnourished
3. Regular procurement of nutrition commodities (CSB, F100, F75, RUTF, Spirulina, ReSomal, Vit A
4. Supervisions of nutrition services conducted in 43 hospitals and 43 Health centers

**Regular procurement of nutrition materials:**

- Distribution of Counseling Cards to CHW: 29.952
- Distribution of Counseling Cards to Health Centres : 1.919
- Distribution of Posters: 10.862
- Distribution of Brochures: 282
- Distribution of MUAC tools for children: 29.952
- Distribution of MUAC tools for adults: 29.952
- Distribution of Community charts: 24.000

Figure 15: Anemia among U5 and Women



Source: RDHS 2010

**Anemia** in children < 5 and women of reproductive age is decreasing, but is still high as compared to the target 2012 (see figure above).

### Community Based Nutrition Program

1. Training of health care providers (3 per health centre, 2 CHW per village) on MIYCN :
  - HC: 1,374
  - CHW: 25,709
2. Training modules produced and distributed: CHW: 25,709; HC: 1,374
3. Elaboration of the National IYCF guidelines (Draft)
4. CBNP at Umudugudu level: Child growth monitoring and Promotion is implemented in 95.3 % of villages and in 33.5 % for cooking demonstration.

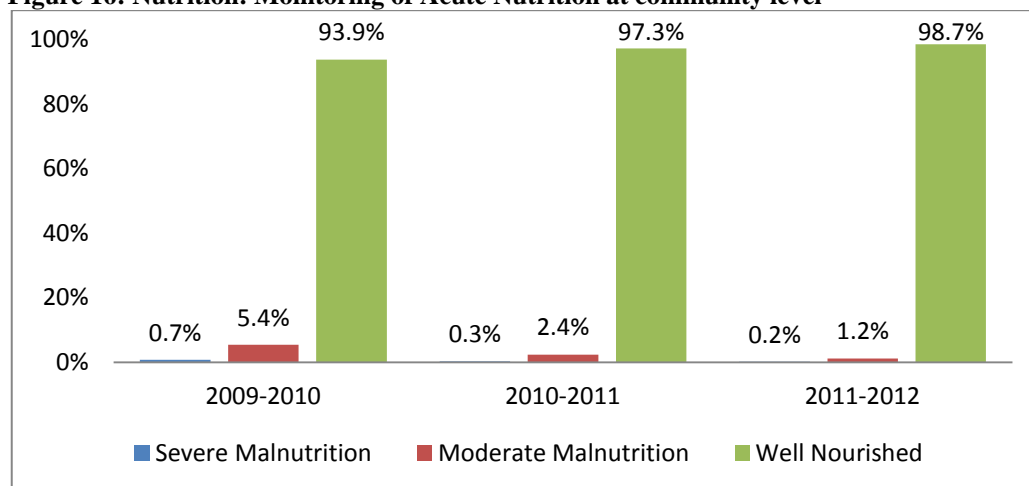
### Elimination of Micronutrient deficiencies

1. Home Based Food Fortification (HF): distribution of micronutrient powders is ongoing in 6 districts: BUGESERA, KAMONYI, KARONGI, KIREHE, MUSANZE and NYARUGURU.
2. Impact evaluation is conducted in NYARUGURU and MUSANZE districts.
3. Industrial Food Fortification supported by the Project Healthy Children (PHC)
4. Vitamin A distribution and use: made through routine activities and MCH week
  - Vitamin A 100,000 distributed: 2,475 boxes
  - Vitamin A 200,000 distributed 3075 boxes
 Target beneficiaries of Vitamin A:  
 6-11 month: 153.507 children  
 12-59 month: 1.289.842 children  
 Lactating women: 31.036
5. The protocol for the prevention and management of nutrition deficiencies is still underway.

**BCC on nutrition:**

- ⦿ Nutrition programs on radios: a CBNP spot radio passing every day through Rwanda Radio.
- ⦿ Monthly messages developed and passed on radios every week
- ⦿ The final draft of the cooking demonstration and recipes booklet has been developed, still awaiting for validation
- ⦿ The “1000 days nutrition campaign’ ready and planned for Q1/2013-2014).
- ⦿ The MIYCN counseling tools are used in both health facilities and community to sensitize the population on maternal, infant and young child nutrition.

**Figure 16: Nutrition: Monitoring of Acute Nutrition at community level**



Source: MoH/MCH annual report, 2012-2013

**I.5 Expanded Program of Immunization (EPI)**

Under RBC, EPI is a division of IHDP (VPDD: Vaccines and Preventable Diseases Division) and is comprised of three principal components: routine vaccination, supplemental immunization activities, and surveillance of target diseases. Routine immunization targets infants aged 0-11 months and pregnant women, during ANC visits and from recently, young girls aged 12-15 years. Strategies to reach the population are: integration of immunization services at fixed health centres, re-establishment of outreach strategy within health catchment’s area and catch-up campaigns.

**Routine Immunization calendar**

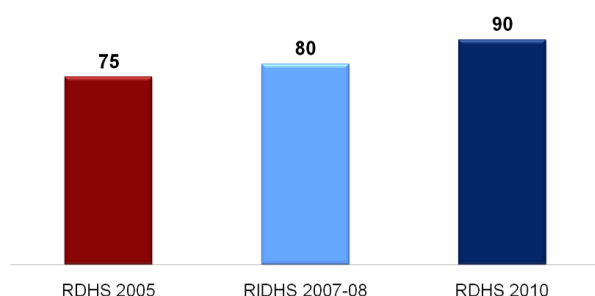
Different antigens used in routine immunization continued to be provided as usual. TT vaccine was available countrywide, no stock out of vaccine at central level and health facilities has been reported. New antigen (Rotateq) has been introduced in routine immunization.

**Table 6: Immunization Calendar in Rwanda**

| Vaccines                        | Total doses | Age at administration  |
|---------------------------------|-------------|------------------------|
| BCG                             | 1           | Birth                  |
| OPV                             | 4           | Birth, 6, 10, 14 weeks |
| DTP or DTP-HepB-Hib             | 3           | 6, 10, 14 weeks        |
| Measles                         | 1           | 9 months               |
| Tetanus toxoid (pregnant women) | 2           | During pregnancy       |
| Pneumococcal                    | 3           | 6, 10, 14 weeks        |
| Rotavirus Vaccine               | 3           | 6, 10, 14 weeks        |
| HPV                             | 3           | April, July, October   |

Source: RBC annual report, 2011-2012

**Figure 17: Child Health: Trends of Full Vaccination coverage among children aged 12-23 months**

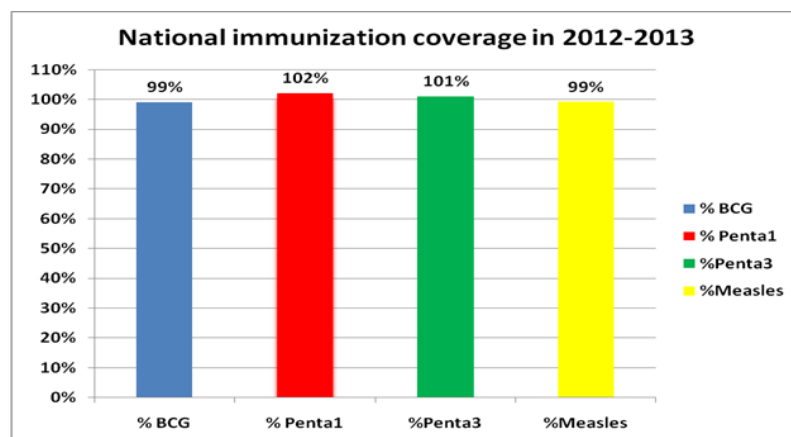


Source: RDHS 2010

### Achievements in 2012-2013

1. Training on Reaching Every District (Reaching Every Child) strategies was conducted in all Health Centers (at least 3 persons/ Health Center).
2. Supervisions of Health facilities were conducted in all the 30 Districts during the HPV (Human Papilloma Virus) vaccination campaigns.
3. Routine Immunization were conducted and Measles immunization coverage reached 105%
4. Second dose of HPV vaccine was provided to adolescent girls in May 2013. Coverage: 98%.
5. Introduction of a new combined vaccine against Measles and Rubella. The Measles and Rubella campaign was conducted in March 2013. Coverage: 102,6% for Measles and 99.2% for Rubella.

Figure 18: Child Health: National immunization coverage, 2012-2013, R-HMIS



Source: RBC Annual Report, 2012-2013

Currently, the Rwandan children are protected against at least 12 infectious diseases through vaccination. Much effort was put in catch up of drop outs and the coverage for measles has increased from 95% to 99% in 2012 and 2013 respectively.

## I.6 Adolescent Sexual and Reproductive Health & Rights

Adolescent Sexual and Reproductive Health & Rights (ASRH&R) is an essential component of the Reproductive Health Policy adopted in 2003. The newly developed ASRH&R policy and its strategic plan were signed in June 2012. Its overall goal is to improve the sexual and reproductive health status of young adolescents, adolescents and young adults in Rwanda.

### Objectives of Adolescent Sexual and Reproductive Health:

1. Improve reproductive health knowledge skills and attitudes by increasing the availability and access to information about adolescent sexual and reproductive health, and providing opportunities to build skills of young adolescents, adolescents and young adults;
2. Expand access and utilization of quality adolescent and young adult friendly sexual and reproductive health services and products;
3. Increase community and political support in the effort to create an enabling and supportive environment for adolescent reproductive health and development;
4. Improve coordination efforts amongst key stakeholders and establish sustainability strategies for programs and services.

**Main Achievements in 2012-2013:**

1. Development and Finalization of ASRH&R Standards and Supervision Tools: 5 standards have been validated by the ASRH&R Technical Working Group.
2. ASRH&R training for Health Care Service Providers in 6 Districts: to expand access and utilization of ASRH&R services throughout the country, with the objective to harmonize and rationalize the provision of youth friendly services by health centers.
3. Nurses have been trained in each health center of the 6 following districts: HUYE, NYARUGURU, GISAGARA, MUSANZE, RUHANGO, NYABIHU, KARONGI and RUSIZI. The district Hospitals concerned are; GIHUNDWE, KIBUYE, MUGONERO, SHYIRA, RUHENGERE, MURUNDA, KIRINDA, GITWE, KIBIRIZI and GAKOMA.
4. ASRH&R training for Teachers in Primary and Secondary Schools: in collaboration with MINEDUC, a 2 days training was organized for teachers in RWAMAGANA, NGORORERO, KARONGI and NYAMASHEKE Districts, where 1600 teachers participated.

**Implementation of 12+ Program:**

The 12+ program is an extra-curricula program that puts together young adolescent girls aged 10-12 years and discuss with them about sexual and reproductive health in an appropriate manner. During the FY12-13, the ongoing activities to implement the 12+ program include:

- The development and finalization of 12+ strategic plan and the annual work plan,
- The development of training manuals (both for mentors and for girls,
- The recruitment of implementing agencies,
- And the scale up plan

**Training of Youth champions:** The training for Youth Champions under the EC-EAC “Invest in Adolescents” Project was convened. 44 youth champions from the 30 (thirty) Districts attended the training.

**Peer learning session for the trained CSOs:** The Peer Learning Session was organized for Adolescents and Youth Serving Civil Society Organizations (AYCSOs) under the EC-EAC “Invest in Adolescents Project”. It was attended by representatives from 21 local AYSCSOs

## **I.7 Sexual and Gender Based Violences (SGBV)**

**Introduction:**

The Rwanda Government commitment to GBV prevention and response initiatives is highlighted by the signing and ratification of international and regional conventions related to gender based violence such as;

- The International Covenant on Economic, Social And Cultural Rights
- The UN Convention on the Elimination of All Forms of Discrimination against Women.
- The UN Convention on the Rights of the Child.
- The UN Convention against Torture and Other Cruel Inhuman and Degrading Treatment Or Punishment
- The Beijing Platform for Action
- The 2000 Millennium Declaration.

**At the national level, the Government has developed both policies and legislative measures that include:**

- The 2003 Rwanda Constitution as amended to date
- The enactment of the Sexual Offences Act 2008
- The enactment of the Children Protection Act 2001 that criminalizes Female Genital Mutilation and Corporal Punishment for Children.
- The Land reform law that stipulates the equality between men and women in land entitlement.
- The Law on succession and matrimonial regimes of 1999
- The Rwanda National Gender Policy of March 2010
- The National Action Plan on UNSCR 1325
- The Rwanda SGBV National Strategic Plan, 2011-2015.

**General objective:** Strengthen the access to health services of SGBV

**Specific objectives:**

- 1) Strengthening health services
- 2) Strengthening referrals from the health facility to other support services
- 3) Strengthening linkages between clinical services and other stakeholder groups to facilitate victims' access to health services.

**Achievements in 2012-2013**

| <b>ACTIVITY</b>   | <b>OBSERVATION</b>  |
|---|---|
| Elaboration and finalization of the National Strategic Plan of scaling up the One Stop Center | Review completed. Waiting for the validation by GSMM  |
| Training of district trainers in psychosocial support and clinical management of SGBV         | 200 health care providers trained from 10 districts hospitals : SHYIRA, RUHANGO, RWINKWAVU, MUHIMA, KIBAGABAGA, KIBUYE, NYAGATARE, NYAMATA , KIREHE and KABAYA  |
| Training of service providers in Multidisciplinary Investigation and Intervention Model Team  | 45 service providers have been trained from NYAMATA and NEMBA One Stop Centers  |
| Community mobilization and training of CHWS in GBV where OSC is being implemented             | 150 CHW have been trained in BUGESERA and GAKENKE districts to support GBV interventions and community sensitization about the availability of One Stop Center services   |
| Creation of One Stop Centers  | 16 One Stop Center will be strengthened GISENYI, GIHUNDWE, BYUMBA, RWAMAGANA, RUHANGO, KINIHIRA, KIBUYE, RUHENGARI, GISENYI, NYAGATARE, KIBUNGO, BUSHENGE, KABGAYI, MUNINI , NYAMATA and NEMBA have been assessed |

Rwanda is becoming a model in fighting gender inequality and GBV issues especially through implementation of Isange OSC as center of prevention and response to GBV' cases.

## I.8 Community Health Program

Community Health interventions/programs include: community performance based financing (community PBF), community integrated management of childhood illnesses (C-IMCI), community growth monitoring of under five, community management of maternal and neonatal health, technical and financial support to community health workers (CHWs) cooperatives, and community health information system (C-HIS) including phones for health (P4H) and Community Based Provision of Family Planning services (CBP)

### Main achievements in 2012-2013

#### 1. Identification of malnourished children aged under five years;

Screening of malnutrition campaign among U5 children was carried out in health centers in May-June 2013. The monthly Child Growth Monitoring is reported by SIScom, including the transferred malnourished children and followed by community health workers.

#### 2. Supervisions of DPEM implementation at district, sector & community levels: twice a year.

#### 3. Train health providers and CHWs/ Binomes on MIYCN: Some 1,501 health providers (100%) from all health facilities and 25,709 CHWs from all districts were trained on Maternal, Infant and Young Child Nutrition (MIYCN).

#### 4. Monitoring and evaluation of MNPs implementation: MNP program aims at improving the nutritional status of children aged 6-23 months. It is currently implemented in six districts: BUGESERA, KAMONYI, KARONGI KIREHE, MUSANZE and NYARUGURU. The assessment was made in 3 phases; baseline, midline and end line evaluation, carried out in MUSANZE and NYARUGURU with comparison with NYAMAGABE and BURERA districts.

#### 5. Distribution of MIYCN commodities: Vit A supplementation was distributed during the maternal and child health week to children aged between 6-59 months and to lactating women in the 6 post delivery weeks (see Nutrition program).

#### 6. Production and dissemination of CBNP materials and tools: CBNP supervisory and reporting tools (MIYCN Counseling Package) were reviewed and are available for distribution and use.

The tools are integrated module including ‘The community based nutrition program, the Infant, Young Child Feeding and Community Management of Acute Malnutrition’, the Facilitator guide; the Participant Materials; the MIYCN Counseling Cards. On the back of every CC, key messages have been printed etc.

#### 7. Purchase of nutrition commodities, materials and tools for CHWs: Child growth chart and MUAC (for children and adults), Cooking demonstration and recipes booklets, Nutrition commodities, MNPs, Vit A ... have been purchased and availed to the CHWs for distribution to the communities.

#### 8. Training: Training of trainers (TOT) in GASABO, NYAGATARE, NYAMASHEKE, GISAGARA, RWAMAGANA, NGORORERO, NGOMA, 150 trainers were trained to train CHW's: 6330 CHW's were trained to provide family health services in the mentioned 7 districts. Refresher training was made for 10,024 CHWs and BCC training for 4,960 CHWs on basic knowledge on mobilization and prevention of U5 illness in community (15 topics).



9. **Individual performance assessment of CHWs:** 12 754 CHW's from 17 districts have been assessed and the final report is available.
10. **CBP (Community Based Provision of Family Planning Services):** Training of trainers for 150 health professionals in GASABO, NYAGATARE, NYAMASHEKE, GISAGARA, RWAMAGANA, NGORORERO and, NGOMA, aimed at training of Community Health Workers in the provision of FP services. 6330 CHWs were trained. FP commodities and materials have been also distributed to CHWs.
11. **Community PBF:** PBF funds have been transferred to health centre sub-accounts. They have been disbursed to the 450 operational CHWs' Cooperatives.
12. **RapidSMS, mUbuguzima and SIScom:** 14 districts have been trained on new Rapid SMS for 1000 tracking days. Target staffs were: CHWs Supervisors (14) and data managers (14) from District Hospitals, 207 data managers and 207 CHWs supervisors from Health center and 20,296 CHWs. The SIScom reporting format has been revised, as well as the CHWs user registry.
13. **Supervision of CHWs cooperatives:** Some 80/450 CHWs cooperatives were visited. Most problems identified are: mismanagement and embezzlement, delay in disbursement of PBF and interference by HC Titulaires and other stakeholders.

## **I.9 Environmental Health**

In the fiscal year 2012-2013, the following key activities were conducted in the various fields of Environmental Health.

### **a) Injection Safety, training and commodity supply:**

- Procurement of injection safety commodities for distribution to Districts.
- Training of 426 community health workers on injection safety and health care waste management in BYUMBA District Hospital
- Promotion of Health Facility Hygiene through educative supervision in RUHENGARI, MASAKA, CHUK, NRL, KIBUYE, la Croix du Sud, and Rwanda Military Hospitals including health centers in their catchment areas.
- Distribution of Disinfectants to promote Hospital Hygiene
- Follow up on the incineration of damaged and/or expired pharmaceutical products.
- 157 Hygiene committee members from KARONGI and RUTSIRO District Hospitals and HCs trained on injection safety, health care waste management and health facility hygiene.

### **b) Community Based Environmental Health Promotion Program (CBEHPP)**

- Celebration of Global Handwashing day and launching of hygiene and sanitation campaign organized in Gakenke and Gicumbi district. 350 households in each district have been provided with jerrycans, strings for installing Kandagirukarabe, etc.
- A total of 184 ToTs of CBEHPP managers have been trained in 13 districts. Training of Trainer's refresher training was also conducted for 21 participants in Muhanga District.

### **c) Training of CHC facilitators:**

- 2114 CHC facilitators have been trained as follows: Rwamagana 474, Rulindo 494, Kicukiro 327, Nyamagabe 234, Gakenke 120, Nyaruguru 98, Burera 289 and Kayonza District 78

**d) Establishment and functionality of community health clubs:**

- Functional Health Clubs are 44% while fully functional CHCs (with training and dialogue tools) have increased from 8% to 19.81% in 12 districts (2,670 out of 13,472 established).

**e) Food Safety, Water and Indoor Air quality Promotion:**

Adequate Hygiene and safe food is one of essential components of Primary Health Care (PHC). Such effective hygiene inspections ensure peoples right to safe food, water and healthy environment.

**Achievements are:**

- Training workshop on Drinking water surveillance: for 44 EH Officers working in DHs.
- Hygiene inspection in hotels, restaurants, super markets and foodstuff ware houses and schools. Problems identified: no medical check for kitchen staff, substandard dustbins, no liquid handwashing soap, no toilet paper, drinking water not covered, etc).
- Several trainings organized for EH Officers, CHWs, and Presidents of Community Hygiene Committees.
- Household instruments (high-effective cooking stoves, hand washing instruments, etc.) distributed in 2,300 households
- Water filters distributed to 2,000 households that were previously trained on water treatment in 10 districts. This exercise is ongoing.
- Through Access project, 7 water treatment systems have been implemented in 7 health centres in Bugesera district.

## **II. PREVENTION, TREATMENT AND CONTROL OF DISEASES**

**Programme objective:** To consolidate, expand, and improve services for the prevention and treatment of disease

### **II.1 Health Promotion**

During FY 2012-2013, several activities related to health promotion have been carried out to **increase health communication** through health messaging, hotlines and documentation services, media as well as campaigns.

As part of increasing awareness on HIV prevention, IEC materials were distributed to Youth Friendly Centers/MINIYOUTH, Imbuto Foundation, Prisons, Fishermen Cooperatives and Army while Urunana drama was produced and broadcasted on health related issues.

Also IEC/BCC materials on non-communicable diseases (NCDs) have been produced.

Radio and TV through spots and Gira Ubuzima program have been broadcasted.

Nutrition program: a CBNP spot radio passing every day and nutrition monthly messages passing on the radio every week. Cooking demonstration and recipes booklet developed. The “1000 days nutrition campaign is ready to be launched.

Town hall meetings have been organized to increase awareness of the population in different areas of health: hygiene, maternal and child health, community based health insurance, nutrition, epidemic and other infectious diseases, introduction of new vaccines, non communicable diseases for awareness and prevention of risks associated to chronic diseases.

The hygiene and sanitation campaign was launched on 18/10/2012 in Gakenke and Gicumbi districts and a town hall meeting was previously conducted on 14th October 2012.

### **II.2 Communicable Diseases**

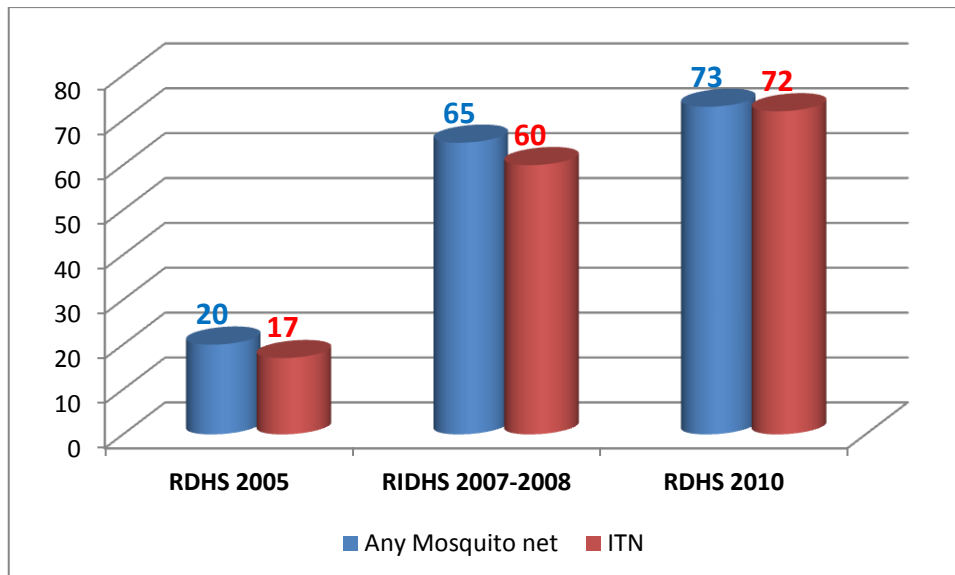
In this chapter, a summary of achievements on the prevention, the treatment and control of Malaria, HIV, TB, Epidemics and other transmittable diseases will be presented. As several reports show, Rwanda is among fewer countries to have reached targets on the implementation of “Abuja call for accelerated action towards universal access to HIV/AIDS, Tuberculosis and Malaria services. It is important to note that preventable diseases through immunization have been discussed on the chapter of Child Health.

## II.2.1 Malaria

The goal of the National Malaria control program is to contribute to the improvement of the health status of the population and the fight against poverty by reducing the burden due to malaria. The main objective is to scale up current interventions and consolidate achievements in order to reach the malaria pre-elimination phase in Rwanda.

An Integrated strategy of Malaria prevention using long lasting insecticide treated nets (LLINs), IRS (indoor residual spraying) for high risk zone and artemisinin-combination therapies (ACTs) treatment combined with a strong healthcare system strengthening resulted in an 85% reduction in the number of malaria cases and deaths. By end of 2012, the rate of malaria cases treated after laboratory confirmation was 99%. Since then, Rwanda has continuously achieved 99% laboratory confirmation of malaria cases before treatment compared to 40% in 2005.

**Figure 19: Possession of mosquito nets in Households**



Source: RDHS 2010

**Figure 20: Utilization of mosquito nets by U5**

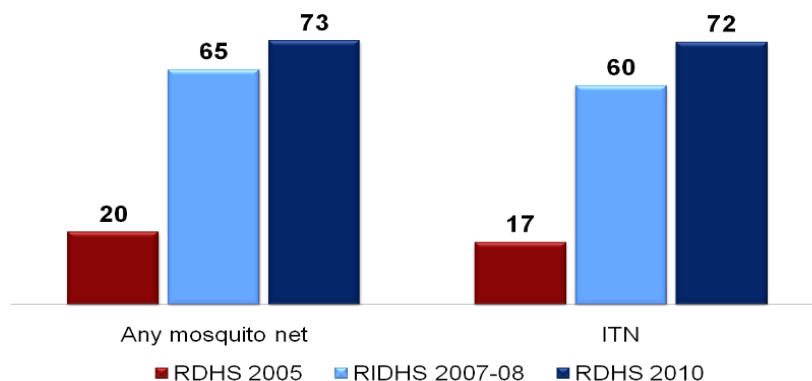
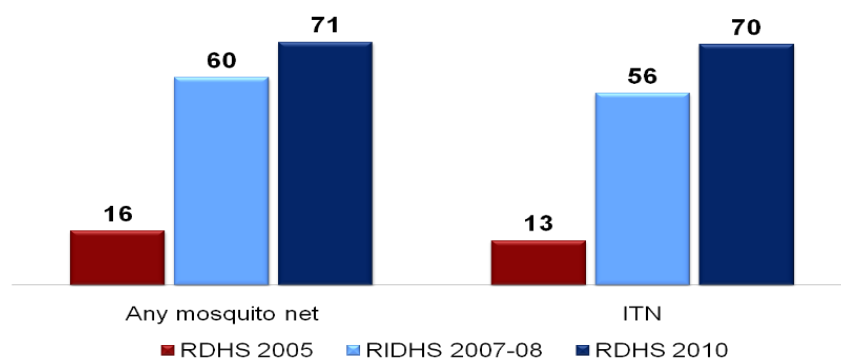


Figure 21: Utilization of mosquito nets by Pregnant Women



Source: RDSH 2010

## Key achievements in 2012-2013:

### a) Prevention of malaria

As prevention strategy, long-lasting insecticide treated mosquito nets (LLINs) are distributed free of charge to pregnant women attending ANC and to children attending EPI. Currently, 8 out of 10 Rwandan households own a mosquito net. In 2012-2013 : 2,131,793 LLINs were distributed through mass campaigns of children under five countrywide as well as 190,854 LLINs distributed during EPI to children under one year, while 129, 410 LLINs were distributed through ANC services. Total LLINs distributed: 2,507,279.

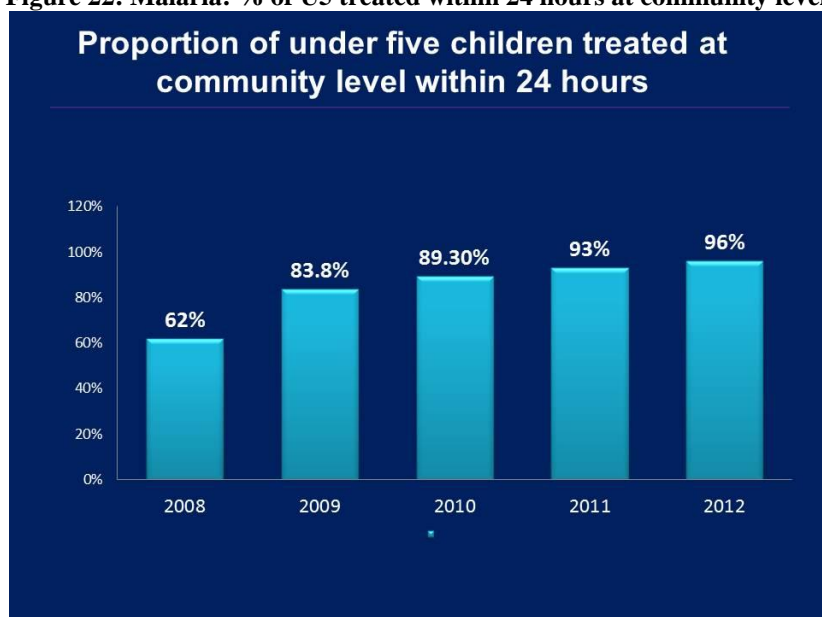
At the community level, 81,484 under five children were treated by CHWs and among them 78,026 (96%) were treated within 24 hours of the onset of the fever. In 2012-2013, the rate of malaria cases treated after laboratory confirmation was 99%.

IRS was carried out in 374,639 structures with coverage of 98, 3% (target: 381,164). From August to October 2012, 236, 610 structures were sprayed in Nyagatare, Gisagara and Bugesera with a coverage of 97, 5% while in December 2012, 11,871 structures in three sectors of Bugarama, Muganza and Gikundamvura in Rusizi district were sprayed with a coverage of 99,9%. In January 2013: 5,004 structures were sprayed in Busoro sector, Nyanza district and in February 2013: 121,154 structures were sprayed in targeted sectors of Bugesera, Nyagatare and Gisagara districts with coverage of 99, 5%.

### Malaria treatment

In 2006, the world's most effective new combination malaria treatment drug was introduced in 100% of health facilities and this treatment drug was extended to community health workers in 21 out 30 Districts and in some interested private pharmacies. Where community health workers have access to this drug, 9 out of 10 children with malaria/ fever are treated within 24 hours.

Figure 22: Malaria: % of U5 treated within 24 hours at community level



Source: RBC Annual Report 2012-2013

As per the above chart, Community Health Workers contributed to the management of childhood malaria cases. The proportion of U5 children treated at community level within 24 hours has increased from 62% to 96% in 2008 and 2012 respectively (Home Based Management of Malaria).

## II.2.2 HIV and AIDS/STI

**Global objective:** To reduce the transmission of HIV/AIDS and STIs and mitigate the personal, family and community effects of AIDS

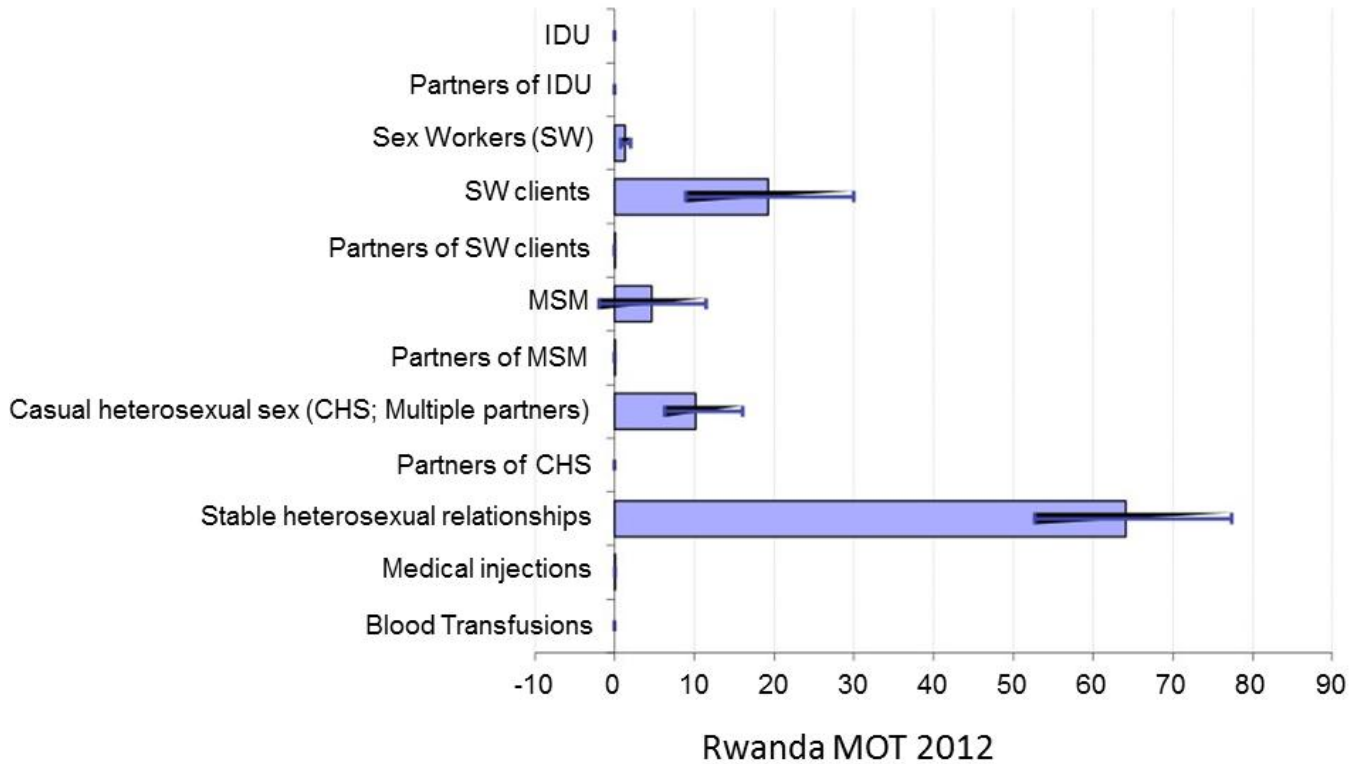
### HIV Prevention

For HIV prevention, routine activities are routinely implemented in health facilities and community with a focus on Most at risk population. Routine data are collected monthly through TRACnet system. Phone and internet based reporting system are used to collect data on ART, PMTCT, VCT, male circumcision and recently discordant couples follow up.

In November 2012, Mode of Transmission exercise (MOT) was conducted using UNAIDS tool to show the main sources of HIV infection in the coming years. They will be from stable heterosexual sex, casual intersexual sex, sex workers and MSM.

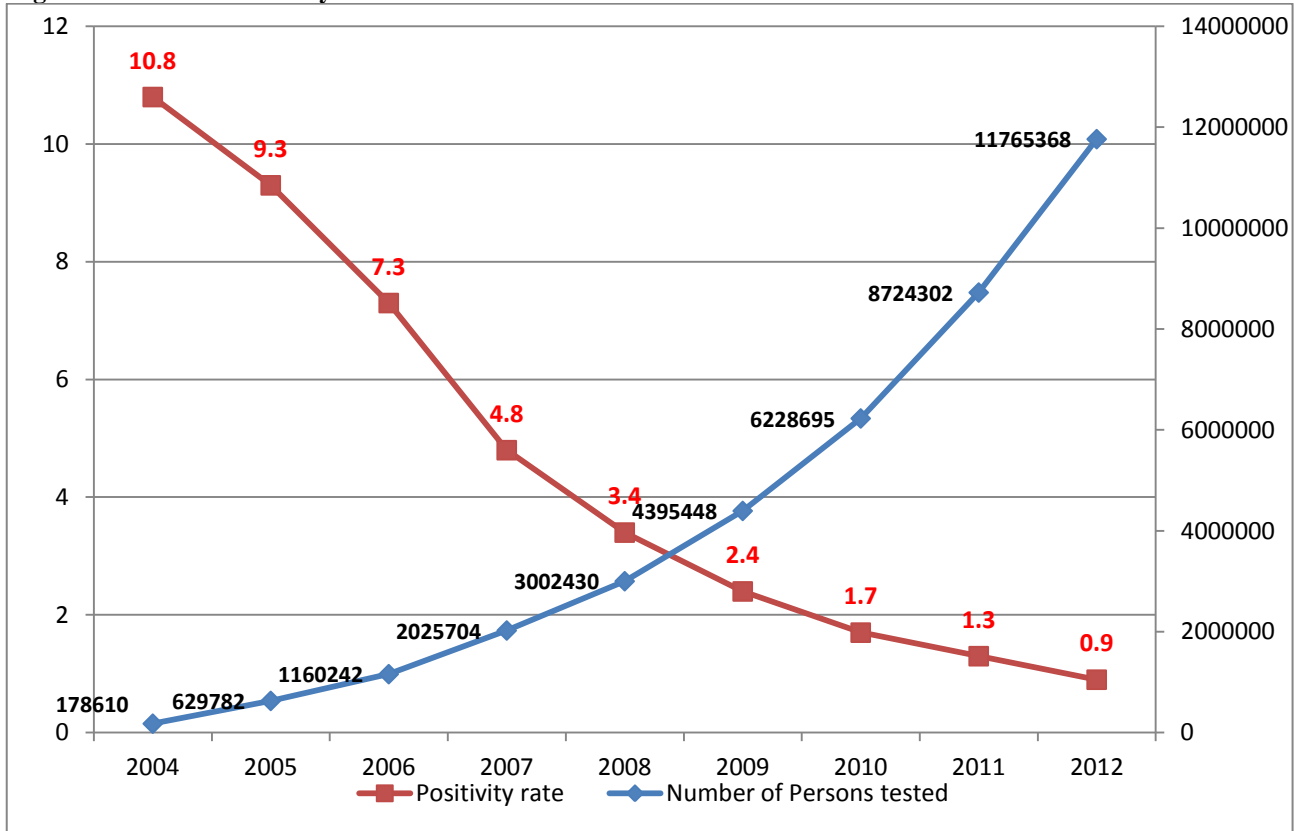
Figure 23: HIV: Modes of transmission of new infections

## Distribution of new infections by mode of transmission



The number of health facilities offering HIV services has increased to 98%, 97% for VCT and PMTCT respectively; while 93% of health facilities provide full package including ART. The number of HIV tests done increases annually. Contrary, the HIV positivity rate in VCT services declined to less than 1% in 2013.

Figure 24: HIV: VCT over years



Source: RBC Tracnet, 2013

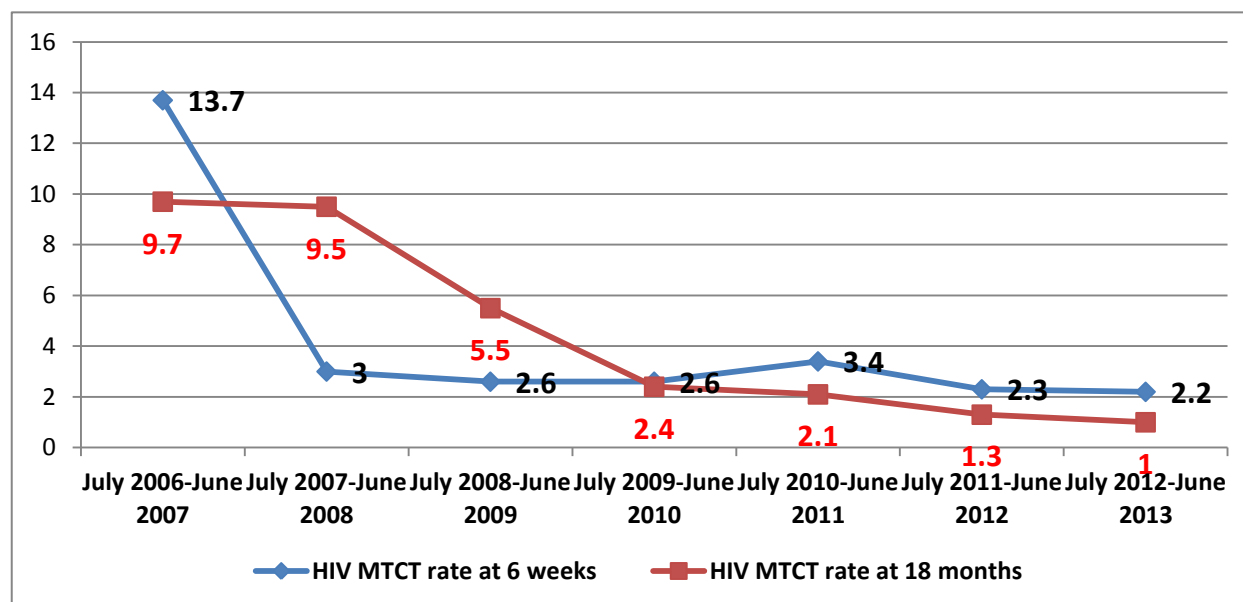
**PMTCT (Prevention of Mother to Child Transmission):**

Pregnant women attending ANC are counseled and tested according to the national protocol and the percentage of pregnant women tested for HIV is 98% while their partners' testing is at 84%.

PMTCT (Prevention of maternal to child transmission) is expanded and the coverage of ARV prophylaxis is currently 90%. The transmission of HIV from mother to child has declined from 10,8% in 2004 to 1,9% in 2012 and HIV new infections reduced by 50%. During 2012-2013, the new plan to eliminate mother to child transmission has been developed and disseminated while NSP 2013-2018 development is at its final stage.



Figure 25: HIV: HIV MTCT rates at 6 and 18 months of age for exposed children

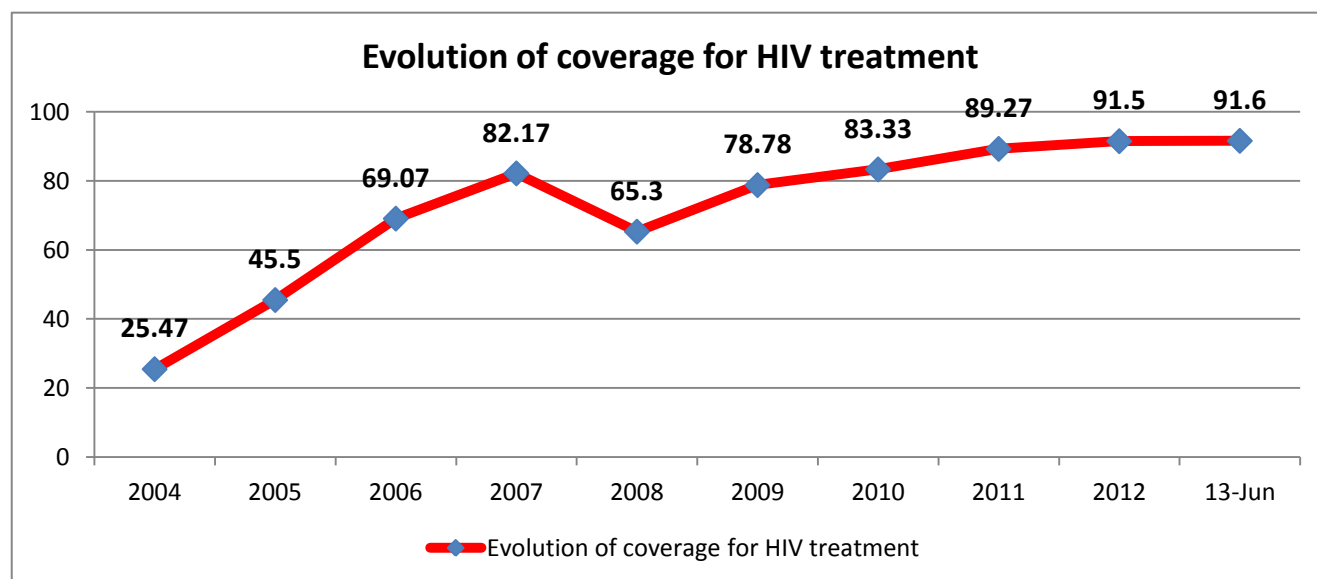


Source: RBC/Tracnet, 2013

### HIV Care and Treatment

All eligible HIV patients continue to get medicines according to the national protocol. Currently **122,972** patients are on ART treatment. ART coverage among patients in need is at 91.6%. With new emerging evidences, it is planned to update the treatment protocol to include most at risk population.

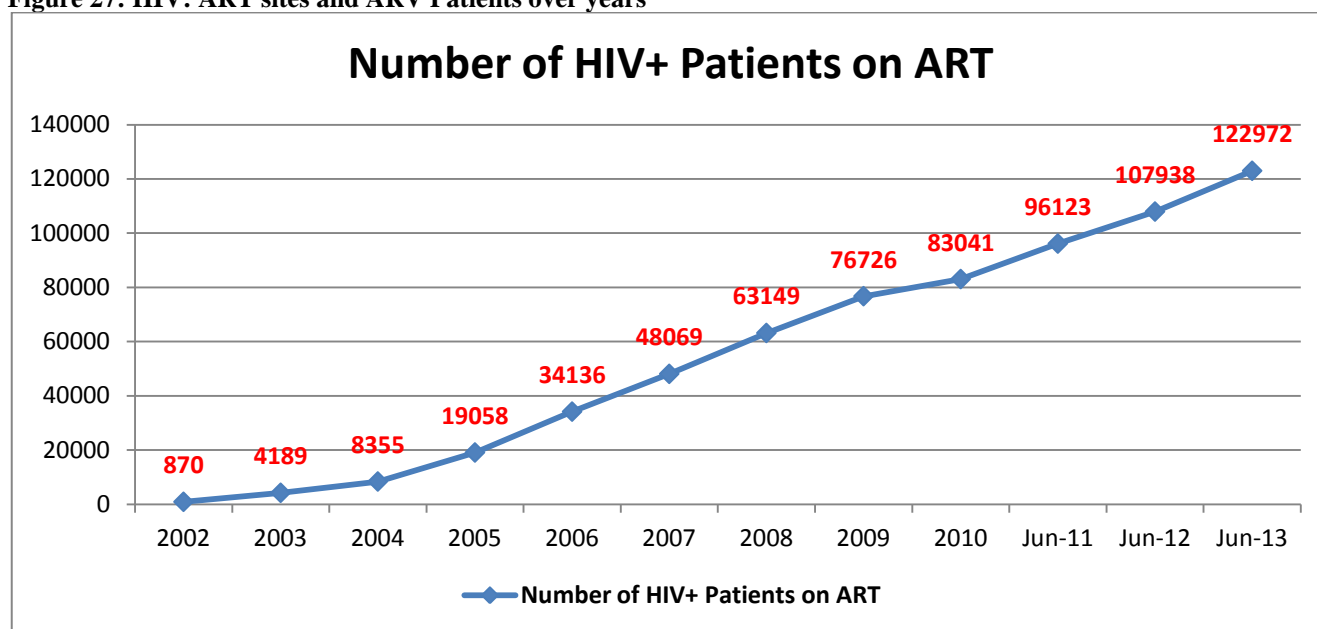
Figure 26: HIV: % of HIV+ Patients receiving ART vs expected patients



Source: RBC/Tracnet, 2013

In order to increase the number of HIV patients under treatment, the immunologic criteria for initiation to ART have been changed from 200 CD4 cells/mm<sup>3</sup> to 350 CD4 cells/mm<sup>3</sup>.

Figure 27: HIV: ART sites and ARV Patients over years



Source: RBC Tracnet, 2013

**91.6% of People Living with HIV in need of ART receive it. This represents one of the highest coverage Worldwide.**

### AIDS Indicator Survey :

The first national survey on the AIDS Indicator and HIV Incidence was launched on June 17th, 2013 and will serve as baseline of HIV-1 incidence data from cohort study, generating a real figure of the HIV/AIDS epidemic dynamics in Rwanda. The survey will also be used to track progress towards achieving the National Strategic Plan goal and the MGD6 of stopping and reversing the spread of HIV & AIDS by 2015.

### II.2.3. Management of Tuberculosis

**Rwanda National TB Strategic Plan (NSP) focuses on the six objectives of the Stop-TB Strategy:**

1. Pursue high quality DOTS expansion and enhancement;
2. Address TB/HIV, MDR-TB and other challenges;
3. Contribute to health system strengthening (HSS);
4. Engage all care providers;
5. Empower people with TB and communities;
6. Enable and promote research.

With the high quality DOTS expansion and enhancement related to TB management: laboratory, drugs, M&E, training, patient support, the TB mortality rate fell by 73% between 1990 and 2010, the prevalence by 68% and incidence reduced by 70%.

**2012-2013 Achievements**

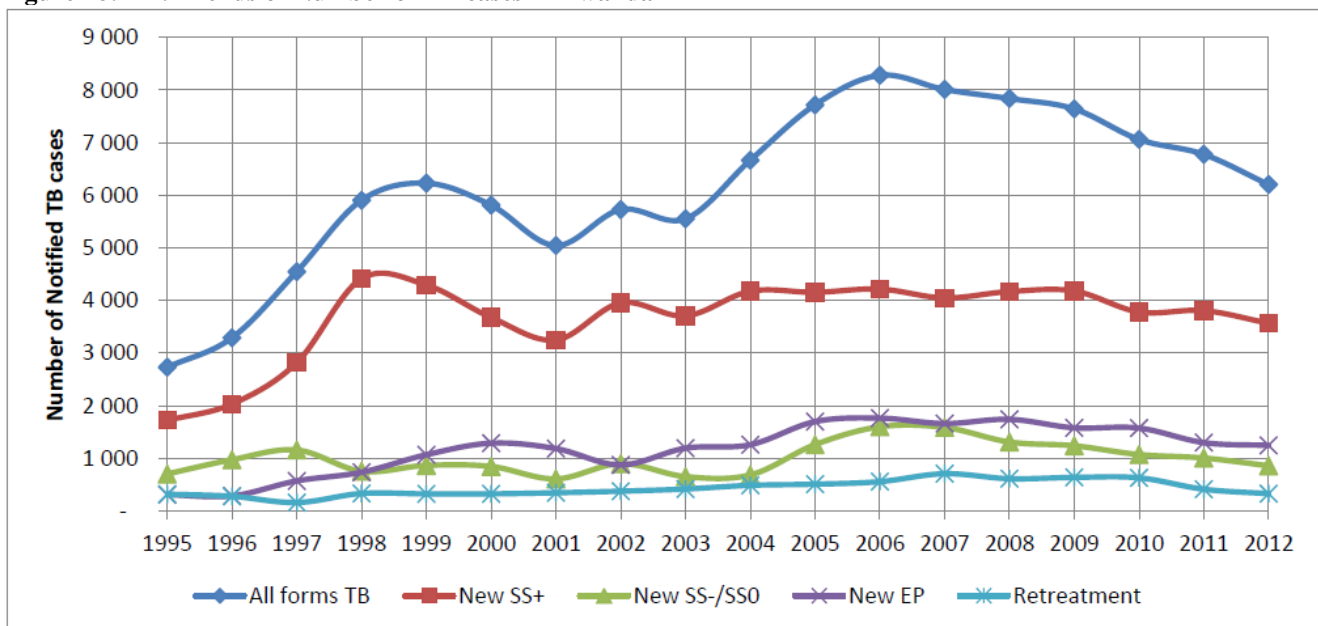
**Detection:** With support from CHWs, the coverage in TB screening among general population (suspicion rates) has increased from 0.33% in 2005 to 1.57% in 2012. Among them, 50% of suspects are brought to health center by CHWs, up from 10% in 2005 and 48% in 2012. In addition, new and more sensitive tests were introduced to strengthen lab capacity; LED microscopy and GeneXpert were availed in 6 sites:

**Care and Treatment:** TB treatment success rates for new sputum smear positive (new SS+) has increased from 63% in 1995 to 89% in 2012. There was also an increase in TB cases followed near their homes by CHWs from 4% in 2006 to 53% in 2012.

“**TB/HIV One stop centers**” is a Patient centered approach providing treatment to coinfectd patients for both HIV and TB. This approach was implemented in all TB centers of diagnosis and treatment (CDTs) resulting in improved management of both diseases. HIV testing among TB cases increased from 45% in 2004 to 98% in 2012 and ARTs initiation among HIV+ TB cases increased from 45% in 2005 versus 74% in 2012.

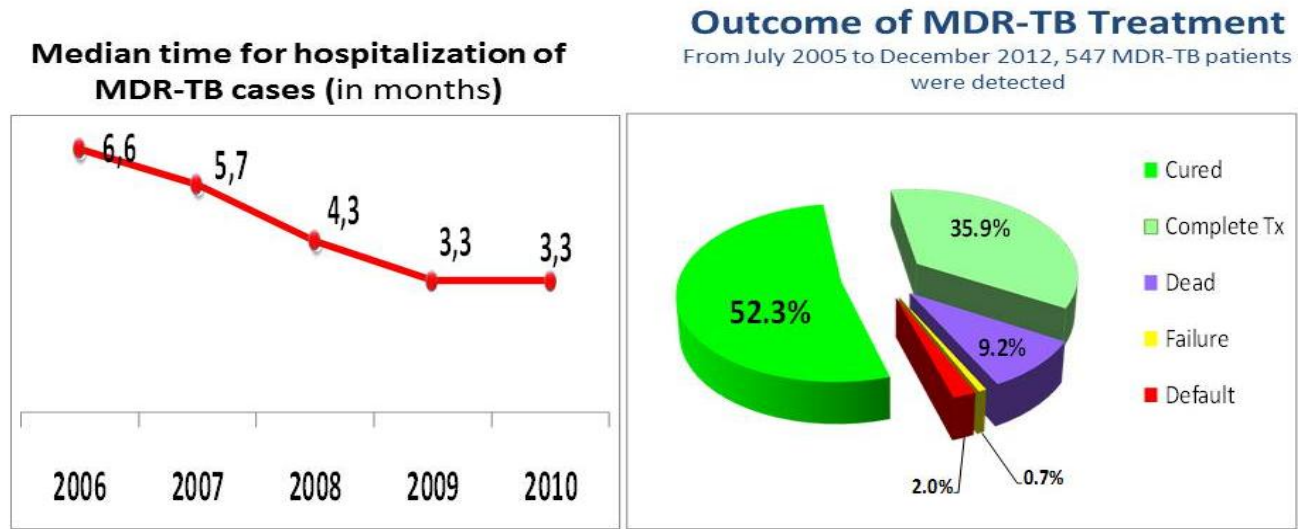
**MDR-TB management:** For early detection of MDR-TB cases, there has been extension of definition of high risk groups for MDR-TB. In addition, new techniques of MDR-TB diagnosis were introduced and even decentralized in peripheral laboratories. From July 2005 to December 2012, 547 MDR-TB patients were detected. Among them 52% were cured (bacteriologically). Currently, the treatment success is 88%: Average time for hospitalization of MDR-TB cases halved from 6.6 months in 2006 to less than 3.3 months in 2010.

**Figure 28: TB: Trends of Number of TB cases in Rwanda**



Source: RBC Annual report 2012-2013

Figure 29: TB: Outcomes of MDR-TB treatment



Source: RBC Annual report. 2012-2013

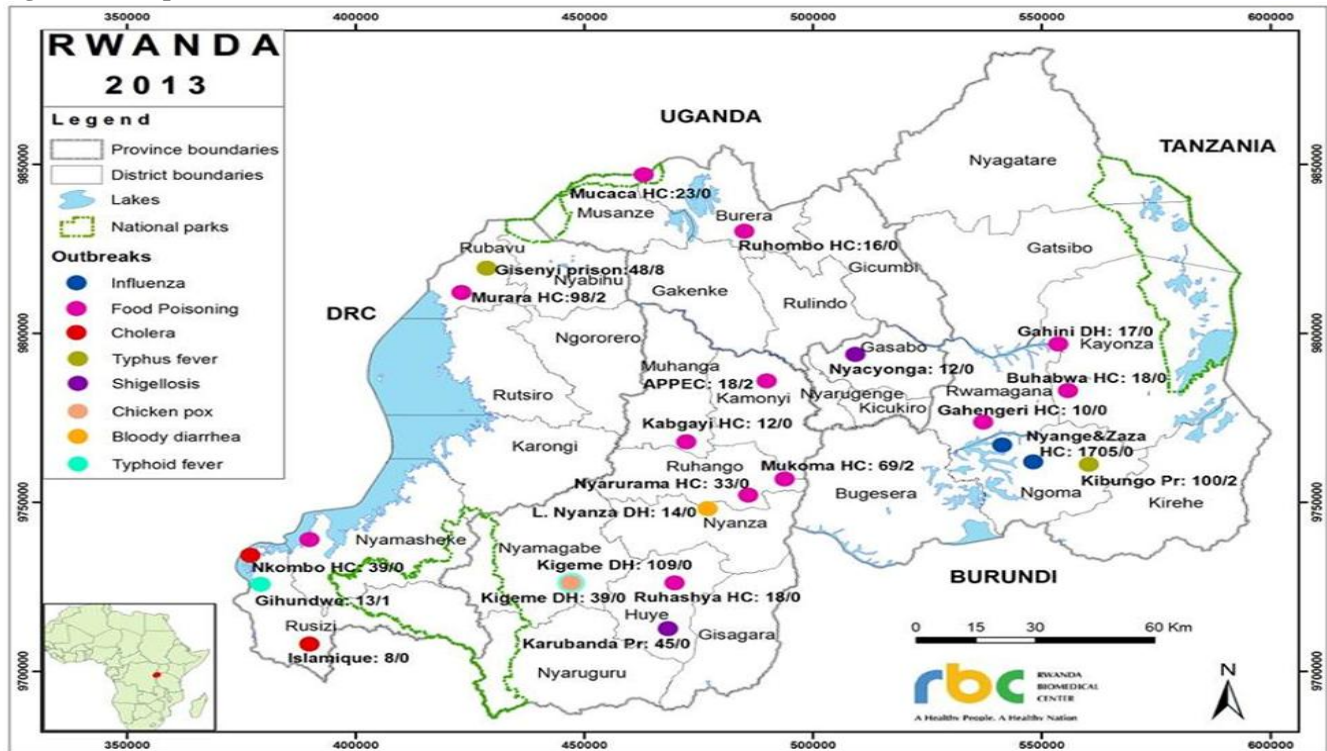
#### II.2.4 Management of Epidemic Infectious Diseases

In order to cope with emerging and re-emerging outbreaks, a national rapid response team composed of epidemiologist, clinicians, veterinarians environmental health; SAMU and laboratory personnel was established and operationalized. To ensure timely and adequate response to epidemics, a preposition of essential drugs, supplies and materials (tents, personal protective equipment's, cholera beds, emergency kits,etc) was established.

A joint cross-border surveillance committee between Rwanda, Burundi and Tanzania was established. To ensure public awareness on potential national or international health threat, messages were broadcasted through public and private local media (radio and TV program) on corona and influenza virus, etc.

From July 2012 to June 2013, a total of 23 outbreaks were investigated and confirmed, 3299 cases followed up with a case fatality rate of 0.4%. E-IDSR is well maintained and upgraded; weekly epidemiological bulletins are also released. A multi-disciplinary team comprising an IDSR focal person (normally a nurse or a public health specialist), a laboratory technician and data manager were trained for disease detection, electronic reporting, data analysis and laboratory confirmation. A total of 1524 persons were trained for a total of 508 health facilities. Additional 144 health care providers and 132 medical students received a two weeks short courses program of field epidemiology.

Figure 30: Map of Outbreaks in the FY 2012-2013



Source: RBC Annual report, 2012-2013

### II.3 Non Communicable Diseases (NCDs)

Being aware of NCDs increase and its burden on the health system, a national policy for Non Communicable Diseases is under development, along with the renal health policy. An ambitious five-year national strategic plan is also under development to introduce NCDs prevention, screening, and treatment on a national level.

A national cancer center has been opened in Butaro district Hospital and protocols have been developed for the diagnostic and treatment of 6 main pediatric cancers. Also, as complement of routine prevention against cervical cancer, protocols for early diagnostic and treatment are available and utilized.

Annual check up for the prevention and early identification of some chronic diseases like hypertension, diabetes and other chronic diseases has started for all persons beneficiaries of health insurance, including community based health insurance.

For renal diseases, CHUB dialysis center has done 1,200 dialysis sessions with 53 patients since 2011. KFH has currently 40 patients on dialysis and has transferred through Medical Referral Board 10 patients for kidney transplant in India since 2012.

A third dialysis center is planned in CHUK for the FY 2013-2014. MoH will continue collaboration with foreign surgeons to do kidney transplants in Rwanda as we build our own capacity to run a kidney transplant center.

## **II.4 Mental health program:**

Capacity building was strengthened and the Rwanda psychiatry postgraduate program was approved by the Cabinet and three candidates are in Belgium in residency for their first academic year. The process for two others to go to Switzerland is ongoing. 86 GPs from all district hospitals and 480 General Nurses working in all health centers were trained in mental health care. MH is integrated in the training module for community health workers and the trainers have been trained.

Four clinical supervision sessions were carried out per month at central level; four days of psychiatric and neurological consultations were performed by a psychiatrist and a neurologist per month. Eight clinical supervision sessions per month were carried out in district hospitals by professionals from referral services.

The MHD performed a weekly radio session on mental health issues and a one week drug fighting sensitization campaign was organized all over the country. The sensitization against drug abuse in schools and universities but also using media is still ongoing; and MHD has been part of in an interministerial team to elaborate a national strategy to fight drug abuse.

In addition, the Mental Health Division participated in various activities regarding the 19<sup>th</sup> Genocide Commemoration. Mental health professionals and trained trauma counselors have been available to deal with trauma cases in the community, so 100% of trauma victims received appropriate care during the commemoration period at all levels.

The World Mental Health Day was celebrated under the theme “Depression”. It was an opportunity to sensitize the health professionals and all the population about this disease, its causes and consequences. Under the leadership of the Honorable Minister of Health, an international conference with the theme “mass violence, mental rehabilitation and reconstruction of social ties”. The articles presented during the conference will be published chez l’Harmattan. The Rwanda Mental Health care law has been drafted.

## **III INSTITUTIONAL CAPACITY**

**Program objective:** To Strengthen the Sector’s institutional capacity

### **III.1 Planning, Health Information System**

#### **III.1.1 Planning & HIS**

In the fiscal year 2012-2013, most of activities were related to the development of Health Sector strategic plan (HSSP III: 2012/2013 to 2017/2018).

To date, HSSP III is finalized and has been submitted to MINECOFIN for quality check. Meanwhile HSSP III is being used for further strategic planning, as has been used for the development of EDPRS II (2012/2013-2017/2018), the District development strategic plans (DDPs 2012/2013-2017/2018), the

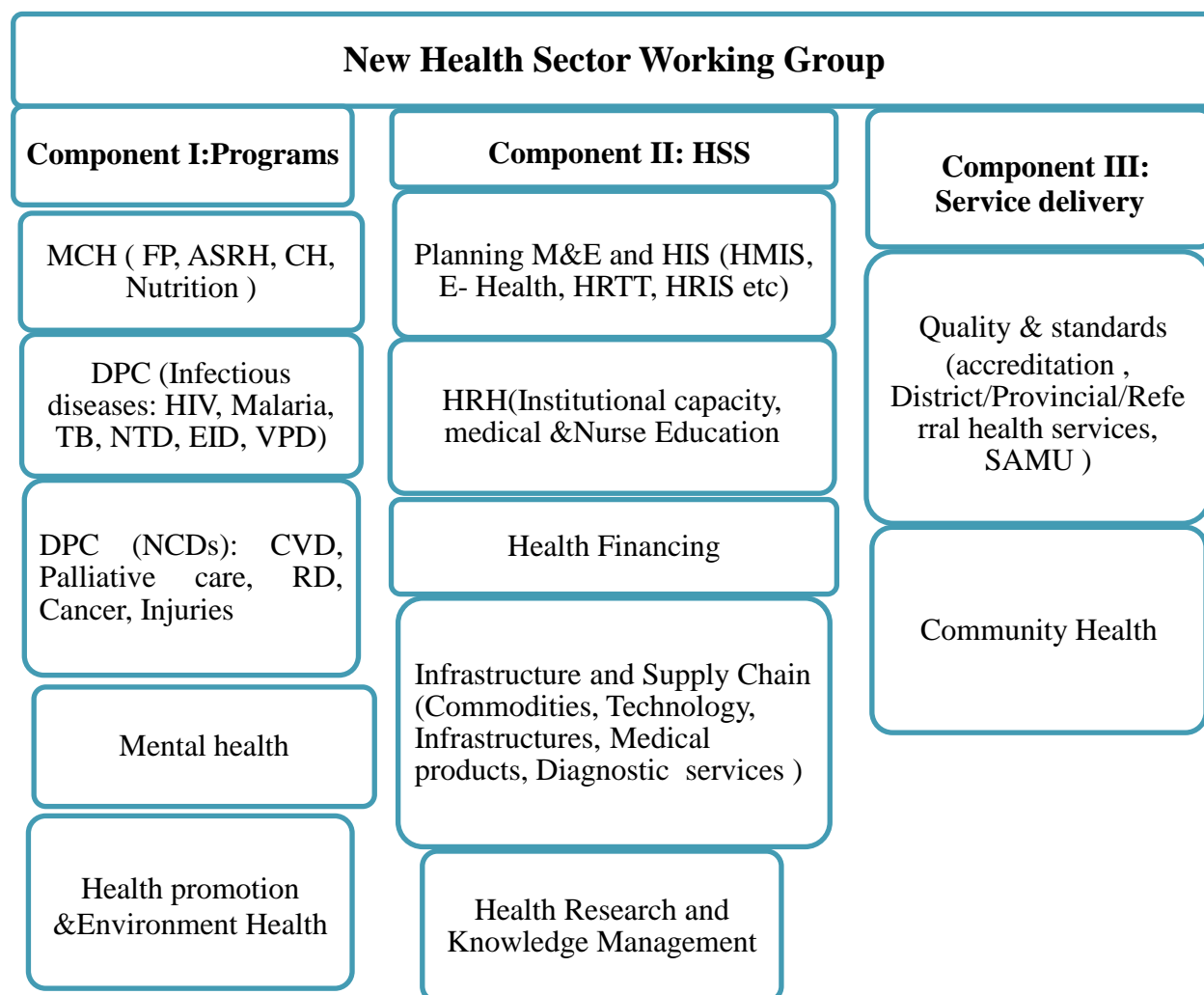
District Health strategic plans and the District Hospital strategic plans. In addition to planning activities, a mid-term evaluation of the MoH IMIHIGO 2012/2013 has been conducted.

An integrated supervision tool has been developed to facilitate assessment of data quality in Health facilities (HC and District Hospital). Different M&E trainings have been organised to reinforce the capacity of M&E at district and hospital levels.

In relation with the Health System Analysis, 4 important activities have been achieved: (i) an Assessment of health subsector policies and strategic plans alignment to the HSSP III, (ii) Development and review of Standards Operating Procedures for Planning Directorate, (iii) Review of Health Sector Technical Working Group and (iv) Analysis and technical support in development of sub sector and decentralized health strategic plans. The assessment has been made and policies have been classified according to their degree of alignment to HSSP III. Also, in order to reduce their number, policies having common objectives or having similar aspects have been proposed to be merged. Strategies for harmonization and alignment to HSSP III have been adopted.

A consolidated SOPs manual was developed with the purpose to provide guidance on the planning, M&E and HIS, roles, responsibilities and activities of all MOH and RBC departments. The document covers the six key areas of Planning, M&E and HIS : (i) Development of policies, strategic plans and actions plans, (ii) M&E processes, (iii) Health Information System, data use and data management, (iv) Coordination requirements (including internal meeting coordination), (v) NGO registration and TA visa application processes, (vi) Scholarship, training needs and distribution.

The Health Sector Technical Working Group (HSTWG) has been reviewed in order to make it better functional. Instead of 30 working groups, their number has been reduced to 13, as detailed below :



### III.1.2 E - Health

The mission of e-Health is to provide and maintain highly effective, reliable, secure, and innovative information systems to support clinical decision making, patient management, education, and research functions of the Health Sector in Rwanda, in order to improve healthcare service delivery.

E-health aims at building the foundational components of nationally integrated e-health architecture in order to set the stage for implementing key e-health systems that have been identified as priorities by the Ministry of Health. Achievements of FY 2012-2013 are:

#### a) RHEA Project

E-Health unit has started working on the Rwanda Health Enterprise Architecture project (RHEA). Under RHEA, the development of the Provider Registry, Facility Registry, and Terminology services was completed. These registries are being implemented in Rwamagana DH in Musha, Ruhunda, Gishari, Rwamagana, AVEGA and Karenghe health centres, where Health Information Exchange (HIE) system is used to channel data.



**b) Individual record systems**

Two individual health record information systems have been rolled out: OpenMRS and RapidSMS: **OpenMRS** (Open Medical Record System) aims at improving primary care service. The development of different modules has been completed. As of June 2013, more than 250 sites are using the minimum package of OpenMRS to track HIV/AIDS. One Hospital (KACYIRU Police Hospital) is using full package of OpenMRS. More than 100 new users have been trained and the system has been upgraded.

**c) RapidSMS**

RapidSMS is used by Community Health Workers (CHW) to track pregnancies across the 14,837 villages in the country. The system is fully functional in 21 districts hospitals. In 29 districts, one CHW per village was trained in RapidSMS. The system has been upgraded to accommodate new features to be able to track 1000 days of mother and child health, from pregnancy up to 2 years of age.

**d) Routine aggregate reporting systems**

The reporting system has been improved by adopting DHIS-2 renamed R-HMIS for our Health Management Information Systems (HMIS). Meanwhile, other systems such as the Système Informatique de Santé Communautaire (SIScom), TRACnet and Electronic Integrated Disease Surveillance and Response (e-ISDR) remain and were maintained to report helpful health data for decision makers. HMIS staff and other staff from central level have been trained in M&E skills. Also, district data managers, M&E and other staff were trained in data analysis.

**e) Health Resource Systems**

Health resource systems selected by the Ministry of Health comprise CBHI membership modules, Resource Tracking Tool, DHSST, iHRIS, LIS, Blood bank Information system, LMIS, and PBF.

- (a) CBHI/Mutuelle Membership:** a web-based mutuelle membership module is functional and linked to the Ubudehe categorization database located in MINALOC. The Ministry of Health started the development of Mobile Mutuelle Membership Module System to facilitate the payment of Mutuelle by the community.
- (b) Resource Tracking Tool:** used every year to collect information related to different donors, types of funding, and funding categories. It has been revised to create a suitable categorization for friendly usage of the system
- (c) DHSST:** a planning tool, fully operational in all district hospitals. It generates reports on an annual basis.
- (d) iHRIS:** system to track personnel-related information in the health sector. All health sector human resource data have been entered in the system. The system has been updated and refresher training was carried out for users, but improvement is still needed.
- (e) Blood bank information:** Blood Bank Information System has been introduced (ePROGESA) to track data in 5 sites (KIGALI, BUTARE, MUSANZE, KARONGI AND RWAMAGANA).
- (f) Logistic Management Information System (LMIS):** its development is almost complete. The next step will be to test the system and to train the users, before its rolling out in all HFs.
- (g) Lab Information System (LIS):** the system has been developed, completed and users trained.

### III.1.3 HMIS: Health Sector Resources

In this section, only infrastructures, equipments and some other clinical indicators will be presented. For more details on all health indicators, readers are referred to the Annual health statistical booklet 2012, published separately.

#### a) Health Facilities

By end of 2012, the number of health facilities including privates, was 748, up from 720 in the previous year. This increase was primarily due to the opening of 19 new Private dispensaries and operationalization of 9 public health centers.

Table 7: Number of Health Facilities in 2012, as recorded in R-HMIS

| Health Facility type        | 2010       | 2011       | 2012       |
|-----------------------------|------------|------------|------------|
| National Referral Hospitals | 4          | 4          | 5          |
| District Hospitals          | 40         | 40         | 41         |
| Police Hospital             | 1          | 1          | 1          |
| Health Centers              | 436        | 442        | 451        |
| Prison Dispensaries         | 18         | 13         | 16         |
| Health Post                 | 45         | 60         | 60         |
| Private Dispensaries        | 35         | 95         | 114        |
| Private Clinics             | NA         | NA         | 60         |
| <b>Total</b>                | <b>579</b> | <b>720</b> | <b>748</b> |

Source : Annual statistical yearbook 2012

Out of 748 health facilities registered in HMIS, 58% are health centers, 5% district hospitals, 8% health posts and 15% private dispensaries and clinics, with 5 national referral hospitals.

Table 8: Minimum Package of Activities in Health Facilities

| Health Facilities           | Minimum Package of Services Provided   |
|-----------------------------|--|
| National Referral Hospitals | Advanced inpatient/outpatient services, surgery, laboratory, gynecology, obstetrics, and radiology; specialized services including ophthalmology, dermatology, ear nose and throat (ENT), stomatology, and physiotherapy |
| District Hospitals          | Inpatient/outpatient services, surgery, laboratory, gynecology, obstetrics, and radiology.   |
| Health Centers              | Prevention activities, primary health care, inpatient and outpatient, maternity, laboratory, referral  |
| Dispensaries                | Primary health care, outpatient, and referral.   |
| Health Posts                | Outreach activities (i.e immunization, family planning, child growth monitoring, ANC)  |
| Community                   | IMCI, CBP, CBNP, Hygiene, Maternal health  |

Source : Annual statistical yearbook 2012

### Health Facility Equipment and Utilities

Due to delays in implementing the District Health Systems Strengthening Tool survey in 2012, HMIS adopted an on-line survey tool (Lime survey) to conduct a survey on infrastructures in all health facilities. In total, 748 health facilities responded to the survey (100% response rate), 41 of which are district hospitals and 451 health centers. According to this survey, 67% health facilities have electricity from the national power grid, 41% use Generator, 33% use solar energy, 0.3% use Biogas and 1% use other sources of energy.

The Lime Survey also showed improvement in availability of reliable electricity sources between 2011 and 2012. There was a high increase in the proportion of facilities connected to the national grid, from 51% in 2011 to 64% in 2012. Solar energy use decreased from 26% in 2011 to 22% in 2012. Most other electricity sources remained proportionally the same (see Table 4).

**Table 9: Primary source of energy in Health Facilities, 2012**

| Primary Electricity Source | 2011 | Percentage | 2012 (N=363) | Percentage |
|----------------------------|------|------------|--------------|------------|
| Electricity Grid           | 260  | 51%        | 234          | 64%        |
| Generator                  | 41   | 8%         | 33           | 9%         |
| Solar Energy               | 134  | 26%        | 81           | 22%        |
| Biogas                     | 0    | 0%         | 1            | 0%         |
| Other                      | 0    | 0%         | 15           | 4%         |

Source: Lime Survey Tool, 2012

According to the Lime Survey, the proportion of facilities using local surface water rose from 17% in 2011 to 50% in 2012. This difference may have been due to lack of clarity on the definition of local water system (system that is not linked to national grid).

**Table 10: Primary sources of water in Health Facilities, 2012**

| Water sources               | 2011   |     | 2012    |       |
|-----------------------------|--------|-----|---------|-------|
|                             | Number | %   | Number2 | %     |
| Local Water System          | 82     | 17% | 184     | 32.1% |
| National Grid               | 125    | 26% | 119     | 20.8% |
| Rainwater Harvesting        | 95     | 20% | 220     | 38.4% |
| Local Surface Water         | 123    | 26% | 13      | 2.2%  |
| Well or Borehole, Covered   | 4      | 1%  | 1       | 0%    |
| Well or Borehole, Uncovered | 1      | 0%  | 1       | 0%    |
| Tanker Truck                | 7      | 1%  | 29      | 5.0%  |
| Other                       | 12     | 3%  | 5       | 0.8%  |

Source: Lime survey Tool, 2012

**Table 11: Number of inpatient beds by Health Facilities, 2012**

| Facility types     | 2011   | 2012   |
|--------------------|--------|--------|
| District Hospital  | 6,663  | 6,742  |
| Health Center      | 9,684  | 9,756  |
| Referral Hospitals | 946    | 920    |
| Total              | 17,293 | 17,418 |

Source: R-HMIS, 2012

**Table 12: Ratio Health Workers to Population, R-HMIS 2012**

| Staff Category                   | 2011  | Population/health workers | 2012  | Population/health workers 2012 |
|----------------------------------|-------|---------------------------|-------|--------------------------------|
| Doctors                          | 625   | 17,149                    | 683   | 15,428                         |
| Nurses                           | 8,273 | 1,296                     | 8,779 | 1,200                          |
| Midwives                         | 240   | 44,660                    | 451   | 23,364                         |
| Mental Health                    |       |                           | 140   | 75,266                         |
| Paramedical                      | 656   | 16,339                    | 1,334 | 7,899                          |
| Pharmacist                       | 83    | 129,137                   | 99    | 106,437                        |
| Laboratory Technician            | 1,187 | 9,030                     | 1,164 | 9,053                          |
| Administrative and Support Staff | 2,156 | 4,971                     | 2471  | 4,264                          |
| Social Workers                   | 1,192 | 8,992                     | 988   | 10,665                         |
| Environmental Officers           | 230   | 46,602                    | 254   | 41,485                         |
| Educators                        | 142   | 75,482                    | 142   | 74,206                         |

Source: MOH's Human Resources Database, 2012,

### Outpatient Care

By December 2012, health facilities have received a total of 8,331,011 new patients. Among them: 7,757,135 (93.1%) were patients received in health centers, 457,259 (5.5%) in district hospitals, 114,605 (1.4%) in referral hospitals, while 273,322 (3.3%) were treated by community health workers (CHWs) through community-integrated management of childhood illnesses (C-IMCI).

In the year 2012, the primary health care utilization rate (in community and public health centres) was approximately 0,76 visits per inhabitant (8,030,467 visits/ 10,537,222).

**Table 13: Number of Outpatient Visits, 2009-2012**

| Health service level | 2009              | 2010              | 2011              | 2012              | % change  |
|----------------------|-------------------|-------------------|-------------------|-------------------|-----------|
| Health centers       | 7, 996,598        | 8, 437,850        | 6,985,028         | 7,757,135         | 11%       |
| District hospitals   | 544,284           | 590,290           | 444,463           | 457,259           | 3%        |
| CHW Home-based care  | 514,069           | 750,423           | 291,230           | 273,322           | -7%       |
| Referral hospitals   | 214,512           | 197,278           | 220,206           | 114,605           | -48%      |
| <b>Total</b>         | <b>9, 271,472</b> | <b>9, 977,851</b> | <b>7, 942,938</b> | <b>8, 331,011</b> | <b>9%</b> |

Source: R-HMIS, 2012

**Table 14: Top 10 causes of morbidity in IMCI, 2012**

| Rank | Diseases groups                           | Health Center | Percentage of all cases |
|------|---|---------------|-------------------------|
| 1    | Pneumonia                                 | 122,705       | 20.5%                   |
| 2    | Diarrhea                                  | 108,347       | 18.1%                   |
| 3    | Malaria                                   | 75,802        | 12.7%                   |
| 4    | Febrile disease very severe               | 21,455        | 3.6%                    |
| 5    | Acute Ear infection                       | 13,506        | 2.3%                    |
| 6    | HIV infection (probable or suspected)     | 10,936        | 1.8%                    |
| 7    | Bacterial infection severe or very severe | 6,191         | 1.0%                    |
| 8    | Bacterial infection local                 | 4,415         | 0.7%                    |
| 9    | Mastoiditis                               | 2,350         | 0.4%                    |
| 10   | Other diseases                            | 232,982       | 38.9%                   |
|      | Total                                     | 598,689       | 100.0%                  |

*Source: R-HMIS, 2012*

**Table 15: Top 10 causes of morbidity in Health Centres, 2012**

| Rank | Diseases groups              | Health Center | Percentage of all cases |
|------|------------------------------|---------------|-------------------------|
| 1    | Acute Respiratory infections | 1,682,321     | 21.7%                   |
| 2    | Intestinal parasites         | 569,562       | 7.3%                    |
| 3    | Physical trauma              | 406,641       | 5.2%                    |
| 4    | Malaria                      | 399,809       | 5.2%                    |
| 5    | Gastritis and duodenitis     | 375,178       | 4.8%                    |
| 6    | Teeth and gum Infections     | 306,109       | 3.9%                    |
| 7    | Skin Infections              | 190,897       | 2.5%                    |
| 8    | Urinary Tract Infections     | 186,619       | 2.4%                    |
| 9    | Eye problem                  | 163,277       | 2.1%                    |
| 10   | Diarrhoea                    | 153,877       | 2.0%                    |
|      | Other diseases               | 3,322,845     | 42.8%                   |
|      | Total                        | 7,757,135     | 100%                    |

*Source: R-HMIS, 2012*

**Table 16: Top 10 causes of morbidity in Hospitals, 2012**

| Rank | Disease groups               | <5 years     | >=5years      | Total cases   | Percentage of all cases |
|------|------------------------------|--------------|---------------|---------------|-------------------------|
| 1    | Teeth and gum Infections     | 5492         | 92650         | 98142         | 21.5%                   |
| 2    | Eye problem                  | 8258         | 73520         | 90036         | 19.8%                   |
| 3    | Acute Respiratory infections | 11474        | 19493         | 30967         | 6.8%                    |
| 4    | Physical traumas             | 2521         | 24185         | 29227         | 6.4%                    |
| 5    | Gastritis and duodenitis     | 172          | 22493         | 22665         | 5.0%                    |
| 6    | Urinary Tract Infections     | 1402         | 19717         | 21119         | 4.6%                    |
| 7    | Gynecological problems       | 0            | 18641         | 18641         | 4.1%                    |
| 8    | Diarrhea with no dehydration | 5514         | 5036          | 16064         | 3.5%                    |
| 9    | Bone and Joint disorders     | 759          | 12676         | 13435         | 2.9%                    |
| 10   | Intestinal parasites         | 3169         | 9841          | 13010         | 2.9%                    |
|      | Other diseases               | 15510        | 103336        | 102553        | 22.5%                   |
|      | <b>Total</b>                 | <b>54271</b> | <b>401588</b> | <b>455859</b> | <b>100.0%</b>           |

Source: R-HMIS, 2012

### Hospitalisation and Mortality

During the year 2012 a total of 548,068 patients have been admitted for hospitalization. This number is much higher than in 2011 (509,023 admissions). The average duration of stay for discharged patients was double in hospitals (4.8 days) compared to Health centers (2.4 days). This is likely because only minor cases are hospitalized in health centers (mostly for observation), while more severe cases are referred to district hospitals.

The total number of registered deaths that occurred in 2012 was 10,237. This represents an increase of 23% (39% in health facilities, 29% in district and provincial hospitals).

**Table 17: Number of Deaths in Health Facilities, 2012**

| Deaths             | 2010         | 2011         | 2012          | % change   |
|--------------------|--------------|--------------|---------------|------------|
| Health centers     | 341          | 307          | 428           | 39%        |
| District hospitals | 5,206        | 6,000        | 7,715         | 29%        |
| Referral hospitals | 2,055        | 2,012        | 2,094         | 4%         |
| <b>Total</b>       | <b>7,602</b> | <b>8,319</b> | <b>10,237</b> | <b>23%</b> |

Source : R-HMIS, 2012

**Table 18: Intrahospital mortality rates in Health Facilities, 2012**

| Facility type  | Admission | Deaths | Discharged | Number of days | % hospital mortality | Average duration of stay |
|----------------|-----------|--------|------------|----------------|----------------------|--------------------------|
| Health centers | 272,196   | 428    | 222,196    | 532,539        | 0.2%                 | 2.4 days                 |
| Hospitals      | 275,872   | 7,747  | 267,240    | 1,273,153      | 2.8%                 | 4.8 days                 |

Source: R-HMIS, 2012

**Table 19: Top 10 causes of deaths in Health Facilities, 2012**

| Rank | Cause of death                    | Grand Total   | % of total |
|------|-----------------------------------|---------------|------------|
| 1    | Neonatal illness                  | 2,722         | 22%        |
| 2    | Pneumopathies                     | 660           | 5%         |
| 3    | Cardio-vascular disease           | 608           | 5%         |
| 4    | Malaria                           | 603           | 5%         |
| 5    | Obstetrical problems              | 595           | 5%         |
| 6    | Physical Trauma and Fractures     | 550           | 5%         |
| 7    | HIV/AIDS opportunistic infections | 432           | 4%         |
| 8    | Diarrhea                          | 335           | 3%         |
| 9    | Cancer                            | 321           | 3%         |
| 10   | ARI                               | 283           | 2%         |
| 11   | All other reported deaths         | 5,063         | 42%        |
|      | <b>Grand Total</b>                | <b>12,172</b> |            |

*Source: R-HMIS, 2012*

## III.2 Legal Department

The attributions of the Legal Department are:

- Develop legal and regulatory provisions (decrees and instructions) of the institution
- Provide legal opinions on cases or dossiers and contracts engaging the institution
- Give legal opinions on litigious issues involving the institution

### Status of Laws and other instructions in 2012-2013

| Law, Ministerial instruction or Policy   | Status   |
|--|--|
| Law on Tobacco Control   | <b>Published in the Gazette N° 08/2013 of 01/03/2013</b> |
| Law establishing medical professional liability insurance  | <b>Published in the Gazette N° 49/2012 of 22/01/2013</b> |
| Bill Establishing Health Insurance Schemes   | Passed in the SENATE                                     |
| Law Modifying the Rwanda Medical and Dentist Council   | Published in the Gazette N° 44/2012 of 14/01/2013        |
| Law relating to the regulation and inspection of food and pharmaceutical products  | Published in the Gazette N°47/2012 of 14/01/2013         |
| Law on organisation, functioning and competence of the Council of Pharmacists  | Published in the Gazette N°45/2012 of 14/01/2013         |
| Law establishing the Rwanda Allied Health Professions Council and determining its organisation, functioning and competence   | Published in the Gazette N°46/2012 of 14/01/2013         |
| Law modifying and complementing the Law n° 54/2010 of 25/01/2011 establishing Rwanda Biomedical Center (RBC) and determining its mission, organisation and functioning | Published in the Gazette N°48/2012 of 14/01/2013         |

### III.3 Decentralization

The Decentralisation and Integration is currently under the Planning & HIS General Directorate. Its main objective is to ensure the implementation of decentralization framework. The strengthening of the District health system is the key element to achieve this objective, in order to improve the health service delivery in health facilities.

The following main duties are assigned to Decentralization:

- Support districts in planning (strategic plans and operational plans) and in implementation of planned activities
- Mentor health facilities to ensure the continuous quality improvement and utilization of standards, protocols and guidelines.
- Mentor health facilities in order to improve the financial management
- Coordinate integrated supervisions from central level
- Support districts in trainings of health care providers
- Coordinate all HIV partners in order to ensure equity in HIV service delivery.

#### Activities achieved in 2012-2013

| Activities planned to deliver output  | Achievements   |
|---|--|
| Assist and coordinate the elaboration of master plans of DHs                            | 34 Hospital master plans developed and available   |
| Provide technical support HF's for the elaboration of operational plans                 | 42 health facilities have a Operational plans  |
| Training different staff from DHs on the use of hospital training manual on management: | <ul style="list-style-type: none"> <li>• HR officers: 42</li> <li>• Procurement Officers: 84</li> <li>• Customer care officers: 42</li> <li>• Accountants: 42</li> <li>• District Health M&amp;E officers: 30</li> </ul> |
| TA to districts in the development of district health strategic plans                   | 30 Districts have their five years strategic plans   |
| TA to the DHs to develop their strategic plans  | 42 District Hospitals have their five years strategic plans  |
| TA to develop District Health M&E plans   | 30 Districts Administrative are provided with District Health M&E plans  |
| Train district health M&E officers in M&E basics.                                       | 28 District Health M&E were trained in M&E fundamentals  |
| Training of District Health Officers in M&E basics.                                     | 30 District Health M&E were trained in M&E fundamentals  |
| Board of directors trained and oriented on decentralized health activities              | 87 members of Mutuelle boards, 90 members of Pharmacy Boards and 126 members Hospital boards were trained  |



### **III.4 SPIU (Single Project Implementation Unit)**

Initially, PMU (Projects Management Unit) in charge of managing Global Fund Grants, its attributions have been extended to the management of all the Health Sector Projectes managed by the Ministry of Health, under SPIU (Single Project Implementation Unit).

SPIU is responsible for the management, implementation and monitoring and evaluation of health-sector projects that are funded by the Government of Rwanda, Multi/Bilateral Organizations, Private Sector and Foundations of which the Ministry of Health (MoH) is the Primary Recipient (PR), and/or assumes the responsibility of overall implementation.

For the fiscal year 2012-2013: activities continued as planned.

### **III.5 Coordination of Partners and SWAp**

Partners/SWAp Coordination Desk deals with cooperation relatedhealth activities and is under the supervision of the Directorate General of PHIS (Planning & HIS) since January 2013. During the FY 2012-2013, its activities were centered on: (i) following up the implementation of SWAp principles in the Health Sector, notably by coordinating the development of the District SWAp Reference Guide for SWAp principles to be implemented in Districts, (ii) keeping the CDPF secretariat activities, (iii) following up the bilateral and multilateral health cooperation and (iv) facilitating NGOs administrative and legal requirements. **Achievements in 2012-2013 are:**

#### **1. Development of District SWAp Reference Guide**

The process started in October 2012. Districts, MOH Central level and Development Partners participated in that exercise. The draft guide was validated in March 2013. In the booklet are defined: the SWAp principles, their meaning for the Rwandan Health Sector, aid modalities instruments and SWAp Guiding Principles. Also are detailed: roles and responsibilities of Districts, Development Partners and others stakeholders.

#### **2. Capacity Building Pooled Fund (CPDF)**

CPDF is a co-managed financing pool by the Ministry of Health (MoH) and Development Partners (DPs). The co-management includes the Belgian Cooperation, UK Aid (DFID), German Development Cooperation (GIZ and KfW) and the Swiss Development Cooperation (SDC). Since the date of signing the grant agreement (Belgian Cooperation, SDC, and GIZ) and the MoU (DFID) with the MOH, major decisions concerning the CDPF activities have been undertaken by the CDPF Steering Committee.

Table 20: CDPF: Grands from DPs, 2008-2013

| Name of Donor  | Date received | From 01 October 2012 up to 20 June 2013 (RWF) | Previous situation from 2008 to 30 September 2012 (RWF) |
|----------------|---------------|---|---|
| <b>DFID</b>    |               |   | 2 051 795 833   |
| <b>GIZ</b>     | 10/12/2012    | 80 825 076                                    | 307 221 609   |
| <b>SDC</b>     | 12/04/2013    | 407 704 200                                   | 694 072 020   |
| <b>BTC</b>     |               |   | 386 218 300   |
| <b>GIZ/KfW</b> |               |   | 76 488 270  |
| <b>TOTAL</b>   |               | <b>488 529 276</b>                            | <b>3 515 796 032</b>                                    |

Overview of HRH training programs currently supported by the CDPF

| Institution   | Program                             | Target population                        | Duration | Objective/Content   | Final output                                   |
|---|-------------------------------------|--|----------|---|--|
| <i>Byumba Nursing School</i>                                  | Nursing program, upgrading A2 to A1 | A2 nurses                                | 3 years  | Upgrading A2 nurses to A1   | Diploma  |
| <i>Byumba Nursing School</i>                                  | Midwifery program                   | A2 nurses                                | 3 years  | Training A1 midwives  | Diploma  |
| <i>Kabgayi Nursing School</i>                                 | Nursing program, upgrading A2 to A1 | A2 nurses                                | 3 years  | Upgrading A2 nurses to A1   | Diploma  |
| <i>Kabgayi Nursing School</i>                                 | Midwifery program                   | A2 nurses                                | 3 years  | Training A1 midwives  | Diploma  |
| <i>Kibungo Nursing School</i>                                 | Nursing program, upgrading A2 to A1 | A2 nurses                                | 3 years  | Upgrading A2 nurses to A1   | Diploma  |
| <i>Kibungo Nursing School</i>                                 | Midwifery program                   | A2 nurses                                | 3 years  | Training A1 midwives  | Diploma  |
| <i>Nyagatare Nursing School</i>                               | Nursing program, upgrading A2 to A1 | A2 nurses                                | 3 years  | Upgrading A2 nurses to A1   | Diploma  |
| <i>Nyagatare Nursing School</i>                               | Midwifery program                   | A2 nurses                                | 3 years  | Training A1 midwives  | Diploma  |
| <i>Rwamagana Nursing School</i>                               | Nursing program, upgrading A2 to A1 | A2 nurses                                | 3 years  | What type of training (clinical o   | Diploma  |
| <i>Rwamagana Nursing School</i>                               | Midwifery program                   | A2 nurses                                | 3 years  | Training A0 midwives  | Diploma  |
| <i>Kigali Health Institute</i>                                | Clinical officer                    | A1 general nurses or A1 clinical officer | 2 years  | Trained in:<br>1) Management of Health center<br>2) Community health (plan, implement, monitor, and evaluate)<br>3) Clinical care | Diploma  |
| <i>Kigali Health Institute</i>                                | Midwifery program                   | A2 nurses                                | 2 years  | Training A0 midwives  | Diploma  |
| <i>National University of Rwanda/ School of Public</i>        | Masters of Hospital Management and  | Bachelors degree students in             | 2 years  | Training hospital managers  | Masters degree                                 |
| <i>National University of Rwanda/ Faculty of medicine</i>     | Undergraduate program               | Students in the fac                      | 3 years  | Funds will be use to buy books  | Bachelors degree/ general medecine and surgery |
| <i>Rwanda Biomedical Centre/ Medical Maintenance Division</i> | Undergraduate program               | Students in the fac                      | 3 years  | Train biomedical technicians  | Certificate                                    |

All above mentioned activities are planned to be conducted in three years: Jan 2012 - Dec 2014.

The CDPF's overall priority is in line with the efforts of strengthening HRH under HSSP III, and thereby to ensure availability of an adequate, equitably distributed, quality, motivated and productive health workforce responsive to the country's changing needs and demands

### **III. 6 Private Health Facilities**

**Objectives:**

To ensure policy formulation and dissemination of norms and standards in relation with health care provision. (2) To conduct the accreditation process. (3) To ensure the quality of services delivered. (4) To coordinate capacity building for a proper quality of services delivered in private health settings

For the period of July 2012 – June 2013, the main activities achieved are:

1. Training on Maternal death audit for 60 health staff in 26 private clinics, Polyclinics and Hospital.
2. Inspection and supervision in all private health facilities
3. To review the tariffs of Private Clinic, Polyclinic and Hospital
4. Norms and standards and Ministerial instruction governing private health facilities, done but still awaiting for signature.

## IV. HUMAN RESOURCES FOR HEALTH

### Program Objective: To increase the availability and quality of human resources

The overall objective of HRH Department in the Ministry of Health is to improve the availability, quality and rational use of HR for Health. The focuses are:

- Increase the availability of health personnel related to the reduction of maternal mortality, more specifically midwives.
- Improve the geographical distribution of health personnel across the country, between rural and urban areas.

### Main achievements for the period July 2012 – June 2013:

#### IV.1 Human Resources Information System (HRIS)

HRIS is a tool used to collect data on Human resources and is helpful in the management of the health workforce. Training on HRIS has been conducted at Muhanga and Rwamagana Districts on September 25-28, 2012 (Central level HR Managers, Administrators and HRs for District Hospitals). Training on HRIS in November 2012 (29-30) concerned IT of District Hospitals and HRs of CHUK, RMH.

Human Resource for Health Information System (HRIS) is operational in different health facilities. All district hospital users tried to update their data, except Kibagabaga, Rwinkwavu, Kabgayi, Remera-Rukoma, Ngarama that started recently. The challenges are that all Health facilities don't record data as requested and timely. Other challenges are the high turnover of HR officers in some health facilities, while the process is not fully operational in RBC where 600 staff need to be filed through HRIS.

#### IV.2 Human Resources Development Desk

The Capacity Building plan has been developed and is being implemented. Training for specialized doctors and upgrading A2 Nurses to A1 is ongoing.

1. **A 7 year MoU has been concluded between the Rwanda and 23 US Academic Institutions** that availed 92 specialists to train doctors for specialization. For the first year of the MoU, some 82 doctors have been enrolled in 7 different specialties. As of June 2013, a total of 153 doctors were pursuing a specialization program in Rwanda in different areas of Clinical services, while 51 others were pursuing clinical specialization abroad (heart surgery, neurosurgery, oncology, eye surgery, maxilla-facial surgery, heart diseases, etc). For the year 2012-2013, 7 new doctors have been enrolled to pursue clinical specialization abroad. The specialization program is ongoing and 91 new doctors are expected to start in Q1/2013-2014.
2. **Doctors that will finish their specialization in 2013:** A total of 25 doctors are supposed to finish their specialized studies abroad by Dec 2013. Currently, the situation is as follows: 3 doctors have finished and have returned, 5 have finished but are in process to return, 17 will finish by end of December 2013.
3. **For Nursing and Midwifery:** A Total 731 nurses and Midwives students are currently enrolled in the 5 Nursing Schools and KHI as well as 313 A2 nurses that are enrolled in e-learning programs

for being upgraded to A1 level, while 230 A2 Nurses have been enrolled to pursue Midwifery studies in order to be upgraded to A1 level after one year.

4. **In the year 2012-2013**, some 281 Students passed the final exam (81%). Several refresher workshops have been organized for Teachers on TB management, Nursing care process, Neonatal midwifery, e-learning pedagogy training, etc.

### **IV.3 Continuous Professional Development (CPD)**

CPD Program is also designed to empower Rwandan physicians and dentists and the health sector team to deliver quality service to the Rwandans, as well as citizens of the world who live in Rwanda, so they can be able to access quality health care without traveling abroad.

Rwanda Medical Council has approved and established a Continuing Professional Development (CPD) Program to improve, and update the skills and ability of all doctors and to ensure that appropriate, high-quality health services are being provided to patients with the ultimate goal of improving health care delivery. Achievement in FY 2012-2013 (July-December 2012) are : (1) Development of the CPD Program M&E Plan ; (2) CPD flyers and posters developed ; (3) CPD forms developed ; (4) Accreditation of 24 Health Professional Societies as CPD providers ; (5) Accreditation of 45 Hospitals as CPD providers ; (6) Organization of 39 CPD trainings& Courses.

### **IV.4 Deployment of Health Professionals in Health Facilities**

By end of June 2013: Using the HRIS tool, the situation of the HRH was as follows in the public sector: a total of 17475 Health Staff with 171 Medical Specialists, 520 General Practitioners, 22 Master’s in Nursing, 147 A0 Nurses , 2536 A1 Nurses, 492 Midwives and 6163 A2 Nurses.

At Central level, 6 News Civil Servants and 47 New staff under contract have been recruited. 10 position for Civil Servants are in recruitment process while 35 position for under contract staff were in process of recruitment. Meanwhile, 9 Civil servants and 11 staff under contract have resigned.

**Table 21: Deployment of Health Staff in 2012-2013**

| <b>Intern Doctors</b> | <b>Doctors</b>         | <b>Nurses</b>      | <b>Midwives</b> | <b>Radiologists</b> | <b>Anesthesiolo.</b> | <b>Mental H.</b>  |
|-----------------------|------------------------|--------------------|-----------------|---------------------|----------------------|-------------------|
| 92                    | 130                    | 254                | 148             | 11                  | 30                   | 10                |
| <b>Hygienist</b>      | <b>Clinical Psycho</b> | <b>Pharmacists</b> | <b>Dentists</b> | <b>Laboratory</b>   | <b>Physiotherap.</b> | <b>Ophthalmo.</b> |
| 9                     | 9                      | 8                  | 6               | 20                  | 5                    | 3                 |

*Source: MoH*

FY 2012- 2013 HR Budget: 20 billions were allocated to District Health Facilities

FY 2013-2014 HR budget: 22.8 billions were allocated to District Health Facilities

In collaboration with MINECOFIN and MIFOTRA, a commitment of 3.5 billions as additional budget for Districts Health Facilities has been made.

The Tools for HR Management have been developed. A new PBF index and index value for Teaching Hospitals have been proposed and implemented. A new structure for MOH has been proposed to MIFOTRA. Training on Workload indicator staff needs (WISN) was conducted. Training on HRIS was carried out and 80% of Health facilities are using the tool, but the process needs to be improved.

## V. FINANCIAL ACCESSIBILITY

**Program Objective:** To ensure universal health insurance and risk equalization achieved for all and sustainable and equitable financing of the health sector

Through HSSP, the objective of the program is to improve the financial access of the population to health services. Within this overall objective, the programme is expected to:

- Increase financial resources to the Health Sector in line with requirements to meet the HSSP targets.
- Improve efficiency, allocation, and utilisation of financial resources in the Health Sector in line with the objectives of EDPRS and HSSP.
- Reduce cost and affordability barriers in accessing essential health care through expansion of CBHI across the country, based on a thorough analysis of best practices and financial sustainability.
- Contract “Mutuelles de santé” to cover membership of the poorest through block grant transfers to administrative districts.
- Develop a pricing policy on high impact health services receiving public subsidies.

There are 4 major funding sources for the Rwanda Health Sector:

1. Government Revenues which include revenues generated from taxation, loans, grants, donations, and DP contributions through General and Sector Budget Support, thus being “on-budget”
2. Health insurance pooled funds (Mutuelles de Santé or Community based health insurance) from household expenditures, which are currently subsidized by the Government
3. Private funds and internally generated funds from health facilities
4. Donor funds, partially on budget as seen in the development budget, and partially earmarked and project related, thus being “off-budget”

### V.1 The proportion of the Government Budget allocated to health

The percentage of Government budget for health has also increased from 8.2% in 2005 to 9.1% in 2008. In the fiscal year 2009-2010, the percentage of Government budget allocated to Health was: 10.2% and 11.5% in 2010-2011. When all the budgets allocated to health in the public institutions are put together, the allocation rate was 16.05% 2011-2012 and 15.5% in 2012-2013.

## V.2 Budget allocation and Budget execution

Table 22: Budget allocation and execution, 2012-2013

|  | <u>APPLROVED</u>      | <u>COMMITTED</u>      | <u>BALANCE</u>         | %           |
|--|-----------------------|-----------------------|------------------------|-------------|
| <b>PROGRAMS</b>  | <b>45,936,369,547</b> | <b>50,762,149,289</b> | <b>- 4,825,779,742</b> | <b>111%</b> |
| 01 DEVELOPMENT OF SECTOR INSTITUTIONAL CAPACITY                        | 2,189,342,810         | 2,313,782,966         | -124,440,156           | 106%        |
| 02 HUMAN RESOURCES FOR HEALTH  | 6,883,547,534         | 7,105,309,608         | -221,762,074           | 103%        |
| 03 FINANCIAL ACCESSIBILITY TO HEALTH SERVICES                          | 4,654,189,344         | 4,650,743,947         | 3,445,397              | 100%        |
| 04 GEOGRAPHIC ACCESSIBILITY TO HEALTH SERVICES                         | 11,351,540,512        | 15,862,409,119        | - 4,510,868,607        | 140%*       |
| 05 AVAILABILITY OF DRUGS AND CONSUMABLES                               | 803,845,402           | 603,298,799           | 200,546,603            | 75%         |
| 06 QUALITY AND DEMAND FOR SERVICES IN THE CONTROL OF DISEASES          | 9,499,096,484         | 9,465,249,016         | 33,847,468             | 100%        |
| 07 DEVELOPMENT OF NATIONAL SPECIALISED REFERENCE AND RESEARCH SERVICES | 6,239,944,857         | 6,249,302,089         | -9,357,232             | 100%        |
| 08 REINFORCEMENT OF FAMILY PLANNING AND REPRODUCTIVE HEALTH            | 925,612,219           | 921,561,529           | 4,050,690              | 100%        |
| 09 DISEASES PREVENTION   | 1,635,803,127         | 1,796,913,427         | -161,110,300           | 110%        |
| 10 DIGNOSTIC AND TREATMENT OF DISEASES                                 | 1,753,447,258         | 1,793,578,789         | -40,131,531            | 102%        |
|  |                       |                       |                        |             |

Note : \* over spending in Geographical accessibility is caused by Activities of medical infrastructures and medical equipments financed by KfW budget support.

Table 23: Health Budget allocated to Districts, 2012-2013

| <u>BUDGET EXECUTION FOR DISTRICT BUDGET</u>                              | <u>APPLROVED</u>        | <u>COMMITTED</u>        | <u>BALANCE</u>      | %          |
|--|-------------------------|-------------------------|---------------------|------------|
| 33 HUMAN RESOURCE DEVELOPMENT (MINISANTE)                                | 19, 906, 413,636        | 19, 460, 576,567        | 445, 837,069        | 98%        |
| 34 FINANCIAL ACCESSIBILITY TO HEALTH SERVICES(MINISANTE)                 | 1, 598, 856,755         | 1, 588, 715,727         | 10, 141,028         | 99%        |
| 35 GEOGRAPHICAL ACCESSIBILITY TO HEALTH SERVICES(MINISANTE)              | 2, 206, 173,816         | 1, 977, 619,340         | 228, 554,476        | 90%        |
| 36 QUALITY AND DEMAND FOR SERVICES IN THE CONTROL OF DISEASES(MINISANTE) | 1, 039, 490,176         | 1, 039, 490,176         | 0                   | 100%       |
| <b>TOTAL</b>   | <b>24, 750, 934,383</b> | <b>24, 066, 401,810</b> | <b>684, 532,573</b> | <b>97%</b> |

Source: MoH/Finance Unit 2012-2013

### V.3 Community Based Health Insurance (CBHI): Mutuelles de Santé

The Community Based Health Insurance (CBHI) scheme is one of the Rwanda’s flagship health financing policies, and a major program put in place to improve financial accessibility to health services across the population, and address the major challenges facing the Rwandan Government of reducing the financial burden of access to health services, increasing equity in access, in a country where 45 percent of the population is living under the poverty line.

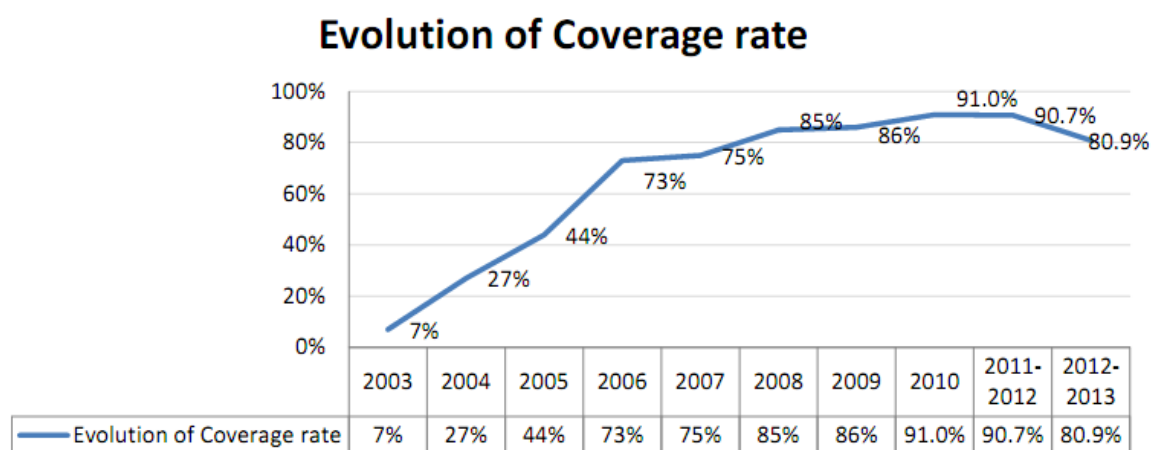
In 1999, the Government of Rwanda introduced the Community Based Health Insurance in three districts as part of a pilot phase (KABGAYI, KABUTARE and BYUMBA) which covered at least 52 health centers and three district hospitals. In 2005, the Government extended the CBHI scheme to all the 30 districts and in 2006, a Ministerial instruction was issued to strengthen the program.

From 2006 to 2010, a flat premium of 1,000 RWF/person was used but not sufficient to allow full payment of invoices, generating important arrears. Since then, a new policy based on a stratified payment of premiums is in place. After the development of the SoP manual, a routine data quality assessment tool and manual have been produced for an easy monitoring and management of CBHI data quality at decentralized level.

#### Achievements in 2012-2013:

In the fiscal year 2012-2013, according to reports from Districts, the CBHI adherence has reached 81%, down from 90.7% in 2011-2012. Total payment of CBHI: 16.2 billions. However, those figures are being cross-checked prior to the final validation. The population contributed for 66% (11bn), while the Government paid 24% (OB + GF). The OB part was used to cover the contributions for indigents, the payment of referral hospital bills and support to cover the running costs of CBHI.

Figure 31: Evolution of CBHI coverage rate.



Source: HFU/CBHI Annual report, 2012-2013



Table 24: CBHI: Total Contribution per category by Province, 2012-2013

|                 | NORTHERN             | SOUTHERN             | EASTERN              | WESTERN              | KIGALI               | NATIONAL              |
|-----------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|
| <b>Cat. I</b>   | 750,208,000          | 1,407,240,000        | 822,444,000          | 1,109,640,000        | 327,650,000          | 4,417,182,000         |
| <b>Cat. II</b>  | 2,176,583,713        | 2,707,325,784        | 3,180,085,318        | 2,690,169,773        | 1,017,073,592        | 11,771,238,180        |
| <b>Cat. III</b> | 2,453,500            | 924,000              | 36,543,500           | 4,354,000            | 3,570,000            | 47,845,000            |
| <b>TOTAL</b>    | <b>2,929,245,213</b> | <b>4,115,489,784</b> | <b>4,039,072,818</b> | <b>3,804,163,773</b> | <b>1,348,293,592</b> | <b>16,236,265,180</b> |

Source: MoH/HFU/CBHI annual report, 2012-2013

CBHI Financial Statement: FY 2011/12 VS. FY 2012/13

| CBHI Sections                                   |                       |                       |
|---|-----------------------|-----------------------|
| <b>REVENUES</b>                                 |                       |                       |
| <b>Source of Revenues (Millions of RWF)</b>     | <b>FY 2011-2012</b>   | <b>FY 2012-2013</b>   |
| Premiums Cat I                                  | 4.649.588.000         | 4.417.182.000         |
| Premiums Cat II                                 | 12.829.485.028        | 11.771.238.180        |
| Premiums Cat III                                | 20.744.825            | 47.845.000            |
| Co-payment                                      | 1.212.859.004         | 1.334.935.712         |
| Other revenues                                  | 755.596.824           | 714.708.756           |
| <b>TOTAL</b>                                    | <b>19.468.273.681</b> | <b>18.285.909.648</b> |
| <b>EXPENDITURES</b>                             |                       |                       |
| <b>Source of Expenditures (Millions of RWF)</b> | <b>FY 2011-2012</b>   | <b>FY 2012-2013</b>   |
| Health Care Reimbursement                       | 7.215.225.721         | 8.030.727.934         |
| Operation cost                                  | 1.296.192.915         | 678.054.637           |
| Salaries  | 611.230.879           | 113.137.296           |
| Total Transfer to District Risk Pool            | 8.171.812.812         | 6.373.797.028         |
| Transfer to Common Account                      | 871.107.835           | 1.901.516.906         |
| Transfer from Premium Account to Petty Cash     | 7.872.885             | -                     |
| <b>TOTAL</b>                                    | <b>18.173.443.047</b> | <b>17.097.233.801</b> |
| <b>RESERVES at Section Level</b>                | <b>-</b>              | <b>1.188.675.847</b>  |

Source: MoH/HFU/CBHI annual report, 2012-2013

| CBHI District   |                       |                       |
|---|-----------------------|-----------------------|
| <b>REVENUES</b>   |                       |                       |
| <b>Source of revenues (Millions of RWF)</b>                               | <b>FY 2011-2012</b>   | <b>FY 2012-2013</b>   |
| Opening Balance   | -                     | 2.193.521.757         |
| Premiums 45% (received from sections)                                     | 6.108.037.499         | 8.798.538.605         |
| Total Revenue from National Level Received                                | 1.143.087.941         | 1.298.479.695         |
| Other transfers from section/ district (Including for the common account) | 1.102.208.927         | 2.262.933.187         |
| Other revenues  | 2.148.379.655         | 33.525.424            |
| <b>TOTAL</b>  | <b>10.501.714.022</b> | <b>14.586.998.668</b> |
| <b>EXPENDITURES</b>   |                       |                       |
| <b>Source of Expenditures (Millions of RWF)</b>                           | <b>FY 2011-2012</b>   | <b>FY 2012-2013</b>   |
| DH Health Care reimbursement  | 8.095.878.048         | 10.717.472.077        |
| Operation cost  | 848.646.259           | 815.072.916           |
| Salaries  | 1.468.740.168         | 3.284.290.681         |
| Transfers to the NPR  | 394.437.364           | 657.271.395           |
| <b>TOTAL</b>  | <b>10.807.701.839</b> | <b>15.474.107.069</b> |
| DEFICIT   | -305.987.817          | -887.108.401          |

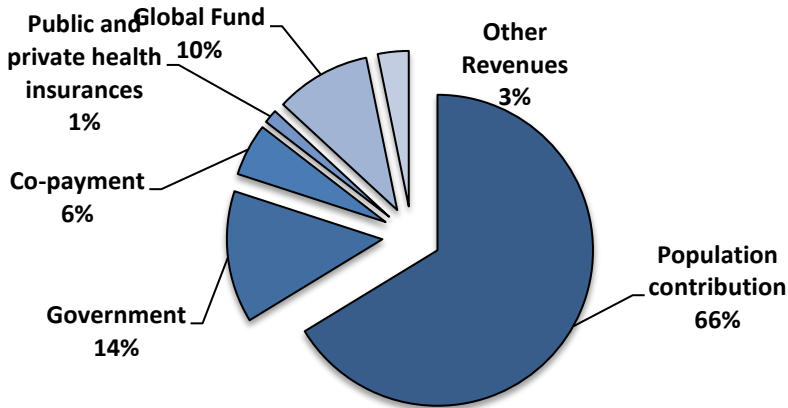
| National Pooling Risk  |                      |                      |
|--|----------------------|----------------------|
| <b>REVENUES</b>  |                      |                      |
| <b>Source of revenues (Millions of RWF)</b>                          | <b>FY 2011-2012</b>  | <b>FY 2012-2013</b>  |
| Opening balance  | 298.854.273          | 344.303.637          |
| Cash transfers from MINECOFIN  | 2.113.047.078        | 2.674.991.347        |
| Transfer from district   | 384.514.355          | 1.011.903.190        |
| Private health insurance contribution and other income from district | 530.384.098          | 349.627.101          |
| Other Revenues   | 114.211.560          | 36.398.000           |
| <b>TOTAL</b>   | <b>3.441.011.364</b> | <b>4.417.223.275</b> |
| <b>EXPENDITURES</b>  |                      |                      |
| <b>Source of Expenditures (Millions of RWF)</b>                      | <b>FY 2011-2012</b>  | <b>FY 2012-2013</b>  |
| NRH Health Care reimbursement  | 3.201.651.384        | 4.321.585.055        |
| Operation cost   | 129.474.089          | 10.734.170           |
| Transfers  | 75.413.639           | -                    |
| <b>TOTAL</b>   | <b>3.406.539.112</b> | <b>4.332.319.225</b> |

#### CBHI UTILIZATION RATE

| Utilization- CBHI Members                                | FY 2011-2012 | FY 2012-2013 |
|--|--------------|--------------|
| Total Number of external Consultations at Health Centres | 6,778,117    | 6,507,952    |
| Total Number of Hospitalizations at Health Centres       | 559,232      | 366,343      |
| Total visit  | 7,337,349    | 6,874,295    |
| Number of members enrolled                               |              |              |
| Utilization rate OPD                                     | 0.98         | 1.16         |
| Utilization rate OPD & IPD                               | 1.06         | 1.23         |

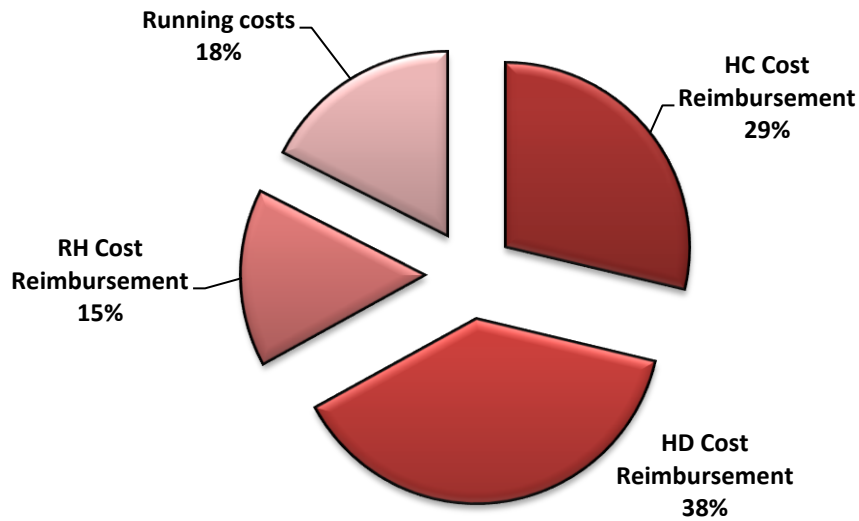
Source: MoH/HFU/CBHI annual report, 2012-2013

Figure 32: CBHI: Sources of Funds, 2012-2013



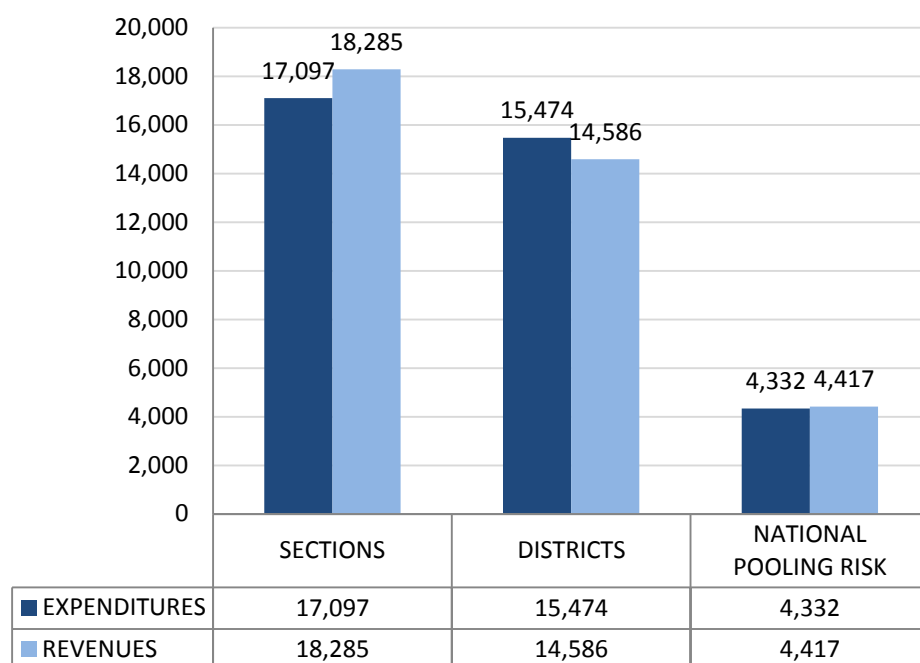
Source: MoH/HFU annual report, 2012-2013

Figure 33: CBHI: Expenditures in 2012-2013



Source: MoH/HFU annual report, 2012-2013

Figure 34: CBHI: Total amounts of expenditures, 2012-2013



Source: MoH/HFU annual report, 2012-2013

In general at section level all expenses are covered (HC bills, running costs and transfers of 45% of premiums to the district pooling risk). However, a gap totalizing 1,927,572,504 RWF was observed in 16 Districts, while 14 other districts had surplus. The overall gap of CBHI (difference between gaps and surplus) is 887,108,401 RWF at District Pooling Risk. Meanwhile, the National Pooling Risk had a surplus of 84,904,050 RWF.

## V.5 Performance Based Financing (PBF)

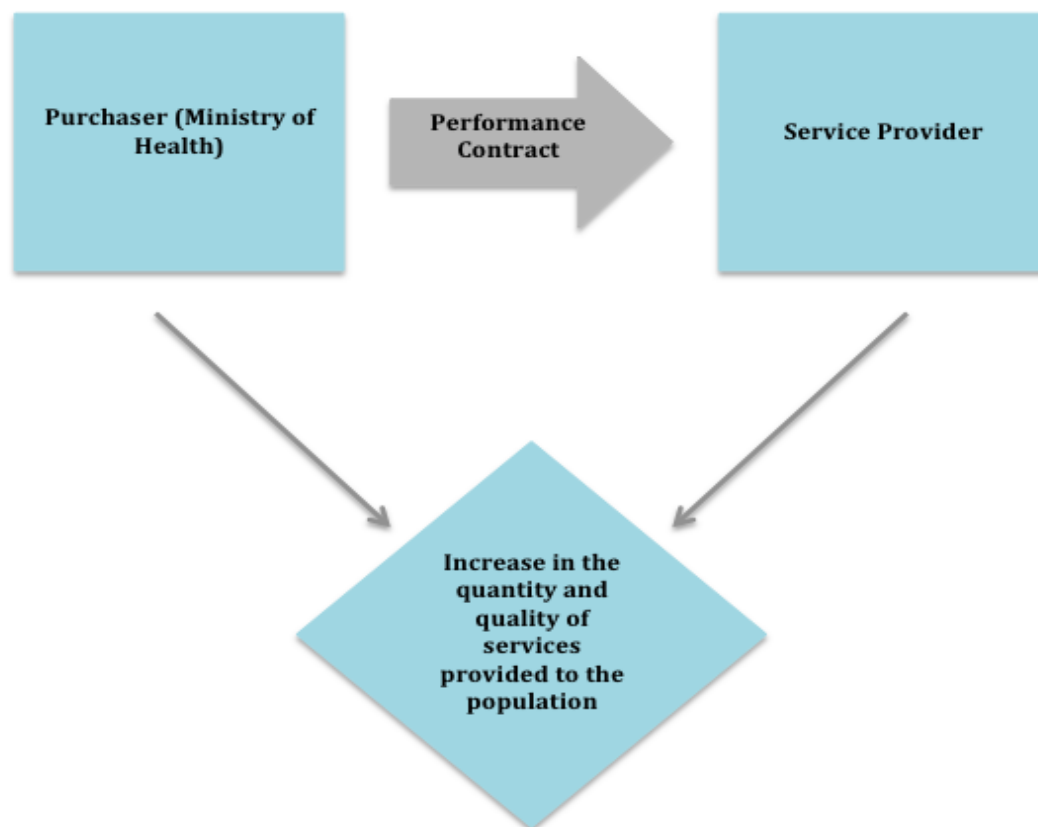
### Context:

Improving the quality of health care and health services is a constant concern of the Ministry of Health and, this constitutes one of the priorities of the Health Sector Policy and Strategic Plan.

Addressing the financial barrier through community-based health insurance (CBHI) is not enough to guarantee access to health services when the quality and the quantity of services provided is poor and/or insufficient. To avoid such constraints, the Ministry of Health, in collaboration with Development Partners, has developed and implemented a performance-based financing scheme (PBF), along with CBHI and quality assurance, to ensure good quality healthcare.

Also, in order to achieve MDGs and other health targets as recommended in the 2020 Vision, the Performance Based Financing (PBF) was introduced as a strategy to motivate care providers and support health establishments to improve the quality of services.

## Principles of PBF



PBF has the potential to overcome important demand and supply constraints, thus increasing utilization of health care services. By linking incentives to the achievement of pre-defined outputs, PBF can raise staff motivation and increase resources in health facilities. PBF can empower users of health services by giving them a way to rate the quality of the services provided. It can also improve efficiency and equity in resource allocation. Improving all these aspects can lead to overall better performance, which ultimately can raise utilization of health services.

### Achievements in 2012-2013

#### 1. Evaluation of DHs for CPA, TB and HIV

One peer evaluation and three central level evaluations are conducted annually. Each type of evaluation is organized once per semester.

**Peer evaluations:** measuring the quality of the care provided as well as providing DHs with an opportunity to exchange experiences with DH peer evaluators.

**Evaluation by central level:** It is carried out by HFU/CAAC evaluators. They are not expected by DHs and so they serve to measure the quality of health services during their daily work. They use direct observations and interviews with patients to get their opinion on the quality they receive.

## 2. Evaluation of PBF in Health Centers

The payment for performance based on PBF indicators in Health Centres occurs quarterly. The amount paid depends on the performance of health facilities on both quantity and quality indicators, as evaluated during the evaluation period.

**Quantitative Evaluation:** every month, the District Steering Committee mandates a team to evaluate each health centre on quantity data - the volume of services provided for each indicator: registries, patient records and all available sources of information are reviewed.

**Qualitative Evaluation:** the DHs mandate a team of evaluators with PBF supervisors among the team. The schedule for these evaluations is not shared with HCs in order to maintain a surprise effect. These evaluations occur on a quarterly basis.

### 2. PBF Results for 2012-2013: District Hospitals: CPA indicators for 2012- 2013.

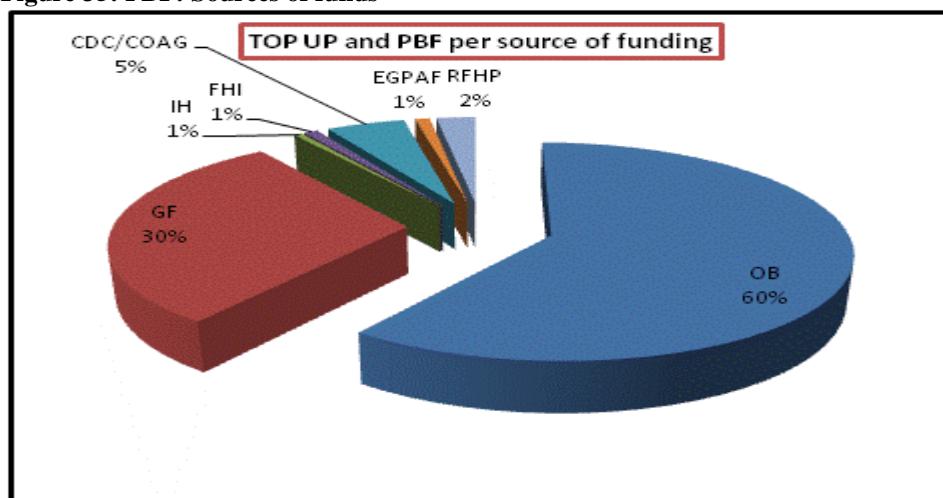
The overall average score for all DHs was just above 80 percent. The highest average score was 89% while the lowest score was 72%. All hospitals are evaluated on three main components: functioning, supervision and clinical services.

**Table 25: PBF: Financial contributions, 2012-2013**

| Source                     | Indicators  | TOTAL CONTRIBUTION FOR JULY 2012-JUNE 2013 (Frw) |                      |                      |                      |                       |
|----------------------------|-------------|--|----------------------|----------------------|----------------------|-----------------------|
|                            |             | July-Sept12                                      | Oct-Dec12            | Jan-Mar 13           | April-June 13        | Total                 |
| <b>OB</b>                  | CPA         | 1,149,768,542                                    | 1,556,470,256        | 1,241,899,960        | 1,556,557,351        | 5,504,696,109         |
|                            | MPA         | 469,376,876                                      | 383,203,358          | 402,788,900          | 424,579,138          | 1,679,948,272         |
|                            | CP          | 29,018,400                                       | 29,018,400           | 29,018,400           | 29,018,400           | 116,073,600           |
| Subtotal Ordinary Budget   |             | <b>1,648,163,818</b>                             | <b>1,968,692,014</b> | <b>1,673,707,260</b> | <b>2,010,154,889</b> | <b>7,300,717,981</b>  |
| <b>GF</b>                  | HIV         | 751,875,940                                      | 642,621,740          | 708,828,877          | 396,626,924          | 2,499,953,481         |
|                            | TB          | 132,218,500                                      | 329,014,179          | 323,076,874          | 338,104,395          | 1,122,413,948         |
| Subtotal GF Budget         |             | <b>884,094,440</b>                               | <b>971,635,919</b>   | <b>1,031,905,751</b> | <b>734,731,319</b>   | <b>3,622,367,429</b>  |
| IH                         | HIV         | 34,521,360                                       | 28,888,771           | -                    | -                    | 63,410,131            |
| FHI                        | HIV         | 59,531,503                                       | 50,684,604           | -                    | -                    | 110,216,107           |
| CDC/CO<br>AG               | CPA and HIV | 179,036,527                                      | 142,146,470          | 147,902,801          | 143,931,221          | 613,017,019           |
| EGPAF                      | HIV         | 64,129,899                                       | 49,359,634           | -                    | -                    | 113,489,533           |
| RFHP                       | HIV         | -  | -                    | 148,338,949          | 157,541,904          | 305,880,853           |
| Subtotal US Gov Agencies   |             | <b>337,219,289</b>                               | <b>271,079,479</b>   | <b>296,241,750</b>   | <b>301,473,125</b>   | <b>1,206,013,643</b>  |
| Total PBF Clinical Budget  |             | <b>2,869,477,547</b>                             | <b>3,211,407,412</b> | <b>3,001,854,761</b> | <b>3,046,359,333</b> | <b>12,129,099,053</b> |
| GF contribution ( in US\$) |             | 1,361,612  | 1,496,436            | 1,589,259            | 1,131,574            | 5,578,881             |

Source: HFU Annual report, 2012-2013

Figure 35: PBF: Sources of funds



Source: HFU/MoH Annual report, 2012-2013

According to the table above, the GoR is the most important funding source for PBF and TOP UP. Through the ordinary budget, the GoR funded CPA, MPA and district SCs. The Global Fund was the second funding source and contributed for the reimbursement of TB and HIV indicators. HIV indicators were also funded by IH, FHI 360, EGPAF and CDC/COAG contributed for CPA indicators.

The funds utilized by the GoR accounted for 60% of the total PBF budget. The Global Fund made up 30%, followed by a 10 percent made up jointly by CDC/COAG (5%), RFHP (2%) EGPAF (1%) , FHI (1%) and IH (1%).

Table 26: PBF: Revenues and Expenditures

|                                   | FY 2011-2012         | FY 2012-2013         |
|-----------------------------------|----------------------|----------------------|
| <b>Total Revenues (A)</b>         | <b>4 593 899 875</b> | <b>4 631 114 935</b> |
| <b>Operating expenses</b>         |                      |                      |
| Compensation of Employees         | 416 724 362          | 372 433 606          |
| Use of Goods and Services         | 345 415 397          | 219 621 735          |
| Transfers to Reporting Entities   | 18 976 501           | 16 598 980           |
| Grant and other transfer payments | 3 800 106 536        | 3 802 009 310        |
| <b>Total operating expenses</b>   | <b>4 581 222 796</b> | <b>4 410 663 631</b> |
| <b>Total expenses (B)</b>         | <b>4 581 222 796</b> | <b>4 410 663 631</b> |
| Surplus/deficit (C=A-B)           | 12 677 079           | 220 451 304          |

Source: MoH/HFU, Annual report 2012-2013

## VI. GEOGRAPHICAL ACCESSIBILITY

**Program Objective:** To ensure geographical accessibility to health services for all

**Global objective:** Expand geographical access of the population to operational health services.  
By end of June 2013, the following activities were achieved:

### VI.1 Construction of Health Facilities

Table 27: Constructions of Health Facilities: updates 2012-2013

| Designation  | Progress   | Observation  | Source of Funds   |
|--|--|--|---|
| <b>Completed infrastructures</b>   |  |  |   |
| Kinihira District Hospital   | Constructions finished at 100%   | Already operationalized  | GoR   |
| Bushenge District Hospital   | Bushenge already constructed at 98%. Partial handover was made on Nov. 16 <sup>th</sup> , 2012   | Operational, except Operating theatre and X-Ray, Also, water waste equipment is not yet supplied.  | GoR and Belgian Cooperation   |
| 3 District hospitals partially constructed by June 2013 :<br>- KIREHE 80%,<br>- KIBUYE: 70%<br>- NYABIKENKE: 20% | (1) Construction works of Kirehe Hospital are at 78%.<br>(2) Construction works of Kibuye (Karongi) Hospital are at least at 75%.<br>(3) For Nyabikenke hospital, the expropriation process has delayed. | Kirehe and Karongi are on track. For Nyabikenke, delay was due to mistakes made in the expropriation document. However, the company has been selected. | GoR.<br>For Kirehe and Karongi, the contracts are managed by the District. MoH is responsible for paying. PIH participates in payment for Kirehe. |
| Architectural design for 3 hospitals developed: RUTARE, MUHORORO BYUMBA  | Detailed architectural and technical designs of Rutare and Byumba hospitals are on final phase.  | For Muhororo, the typical District Hospital design will be used.   | GoR   |
| Construction of Mukura HC (Huye) and of Mbogo HC (Rulindo)   | The construction works of Mbogo Health Center are at 65% and for Mukura are at 80%   |  | GoR   |
| 20 Mortuary infrastructures constructed in 20  | The construction works done are estimated at 90% for 20 mortuaries.  | Constructions in Shyira and Kabutare have have been delayed due  | GoR   |



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|   |  |   |     |
|---|--|---|-----|
| District hospitals  |  | to problems to find appropriate sites.  |     |
| 5 Maternities constructed in various hospitals and health centers:<br>Ruhengeri hospital<br>Gatsibo, Mulindi,<br>Gacuba II and<br>Mataba health centers | For Ruhengeri, Gatsibo, Mulindi and Mataba, and Jarama the construction works are done at 95%.     | Note: Maternity of Jarama Health center (in Ngoma District) that replaced Gacuba II, because there is already another maternity in Gacuba II. | GoR |
| 13 new health centers equipped  | Installation completed for 12 HCs.   | Mukura HC is still under construction but equipment is available.   | GoR |
| 10 incinerators supplied to 10 District hospitals   | Civil works completed. The supply of 26 incinerators (instead of 10). Installation is done at 90%. |   | GoR |
| Emergency ward constructed in Nyagatare Hospital  | The construction works are done at 95%.  |   | GoR |
| 9 Ambulances distributed in District hospitals and 1 boat ambulance operational in Kivu Lake  | Water ambulance already functional in Kivu Lake. 18 ambulances have been distributed in Feb. 2013. | 2 ambulances from KFW and 16 from SPIU.   | GoR |
| Rehabilitation and equipment of Rwanda Military Hospital  | Maternity and Intensive Care Unit constructed at 100%  | Equipments have been purchased and are under installation   | GoR |

*Source: RBC Annual Report 2012-2013*

Many other Health Centres have been constructed by Districts under RLSDF funds. The City of Kigali has completed the construction of 4 modern Health centers and the process of their equipment is ongoing.

Figure 36: Bushenge District Hospital



To improve accessibility construction of different health facilities has been achieved or is ongoing: construction of Bushenge, Kinihira, Kibuye and Kirehe Hospitals, maternities in different hospitals and Health centres, emergency awards, 18 mortuary blocs in different hospitals and construction of 26 incinerators in health facilities and installation of an industrial incinerator in Mageragere (Nyarugenge District)

## VI.2 Emergency Medical Aid Service (SAMU)

**Mission of SAMU:** To ensure a permanent medical listening 24h/24 hrs all days of year providing appropriate response to the demand formulated by the population in terms of:

- Carrying rescue interventions according to the emergency;
- Transporting patients in adapted health facilities respecting their choice;
- Regulating air ambulance according to the minister's instructions;
- Providing advanced life support whenever and wherever necessary;
- Participating in elaboration of emergency and contingency national plans.

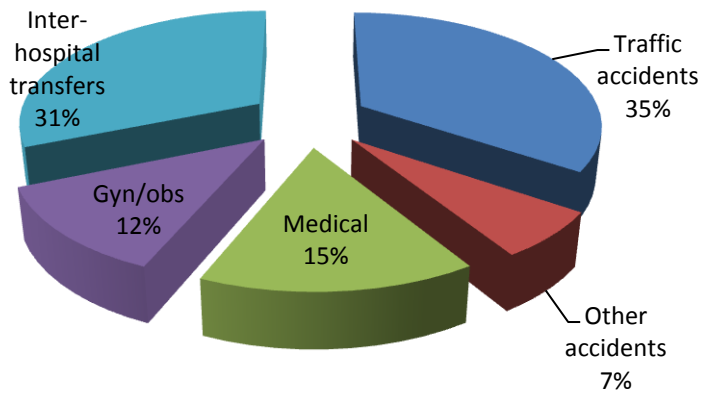
### a) Deployment of Emergency and Resuscitation Mobile Service (ERMS) in City of Kigali and in Provinces

SAMU deployed **5 ERMS** in the City of Kigali aiming at timely and effectively responding to any emergency call arriving at 912-Call Centre. The deployment sites are: Avega Health Centre, RMH, Gahanga Health Centre and CHUK. One ERMS was deployed in Karongi to work as pre-hospital care providers using **a water ambulance in Lake Kivu**. **26 ground ambulances** were distributed in different Districts.

### b) Pre-hospital emergency care interventions

The total number of emergency care interventions during 2012/2013 fiscal year was 3155. As shown by the chart below, they were dominated by saving victims of traffic accidents and transfers between Health Facilities.

Figure 37: SAMU: Interventions in 2012-2013

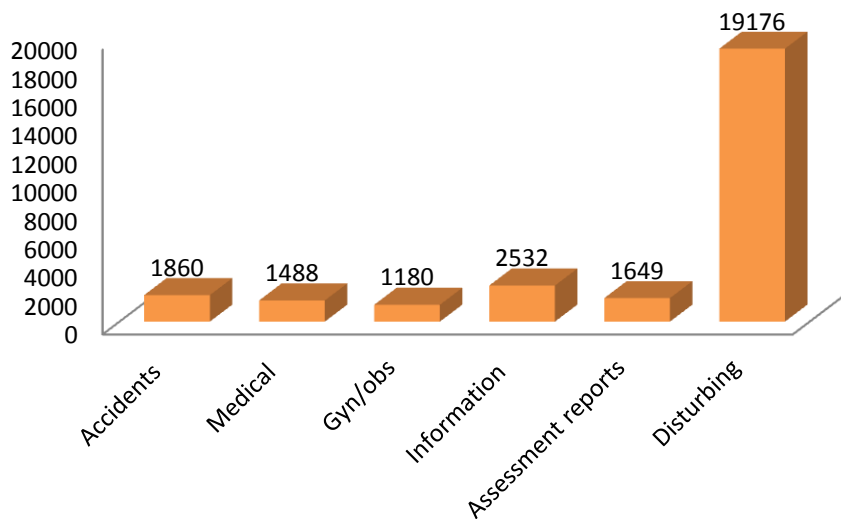


Source: SAMU annual report, 2012-2013

c) Calls received at 912-Call Centre: 26518\

In 2012/2013, the 912-Call Centre received a total of 26,518 calls. Disturbing calls were high as usual. Those requesting information and interventions for accident victims were also significant as shown by the chart below.

Figure 38: SAMU: Calls received at 912 Call Centre (26,518)



Source: SAMU, annual report 2012-2013

## VII. DRUGS, VACCINES AND CONSUMABLES

**Program objective:** To ensure availability and rational use at all levels, of quality drugs, vaccines and consumables

**Global Objective:** Improve the availability of medicines, vaccines and consumables

### VII.1 Regulatory Body for the Pharmaceutical Sector

The mission is to protect and promote public health by ensuring availability of quality, cost effective, safe and effective use of medicines, food, cosmetics and medical devices to the population. The production, procurement and distribution of medicines and commodities are ensured by the Rwanda Biomedical Centre (RBC), D/DG Medical Production and Distribution (RBC-MPD) for public health facilities.

**Main achievements:**

Apart from routine activities of licensing and inspections, Pharmacy Desk has achieved the following:

- 1 The Laws regulating the pharmacy sector and pharmacy profession have been published and gazetted in the official gazette on 17th January 2013.
- 2 The law establishing the RFMA has been approved by Parliament and wait to be published in the official gazette.
- 3 Law enforcement: ministerial orders have been drafted, those orders include those related to control of narcotics and pshychotropic; Pharmaceutical Importation control, Medicine Registration, code of ethic and conduct of pharmacists.
- 4 All documents related to Registration, GMP inspection, QMS and IMS have been developed and are ready for validation.
- 5 The African traditional medicine week has been organized and 100 participants attend it in October 2012.
- 6 Traditional medicine practioners organization started  
9 district pharmacies constructed and available for use
- 7 The 11th CPDS for HIV commodities and the 7th CPDS for lab commodities have been completed
- 8 Harmonized LMIS system with new design; and the new reporting tools have been distributed in all Health facilities. E-LMIS processes development re-engineering, integration and implementation under process and go live of the system. Developed a national supply chain strategic plan

In order to improve the management of medicines, the Logistics Management Information system (LMIS), that is currently paper based, will be progressively replaced by electronic system, e-LMIS and the process has started. E-LMIS will be rolled out in District Pharmacies and District Hospitals in 2013-2014 and this will help to prevent stock outs of medicines in the Health Facilities.

## **VII.2 Production Procurement and Distribution of Drugs/Medicines**

Drugs and vaccines are very important for the provision of the Primary Health Care and, the availability of medicines is one of the key measurements in the supply of health services to the population. For this purpose, the priority has been given to essential and generic medicines.

In accordance with the pharmaceutical policy of Rwanda, RBC/MPPD/MPD (old CAMERWA) was given as specific mission to ensure the availability of the essential drugs, medical equipments and consumables of quality at an affordable price.

Availability of vital products to Health Facilities on a weekly basis and other pharmaceutical products for MoH vertical programs (HIV, TB, Malaria, NRL, NCBT...). For the quality of products and the safety of patients, the Quality Control of pharmaceutical products was carried out.

Active distribution program started in 2009 and is currently running routinely. The distribution of medicines is made in all 30 districts pharmacies on a monthly basis.



Truck used for active drug distribution

According to internal reviews, at least 85% of all needs are met and for this reporting period, 97% of the most commonly used medical products have been procured. Finally, the management of stock outs for essential medicines has started in June 2012 and is thought to reduce drastically the % of stock outs in District and Hospital pharmacies. Weekly reports are submitted to PMO and overall stock outs are maintained at less than 5% in district pharmacies.

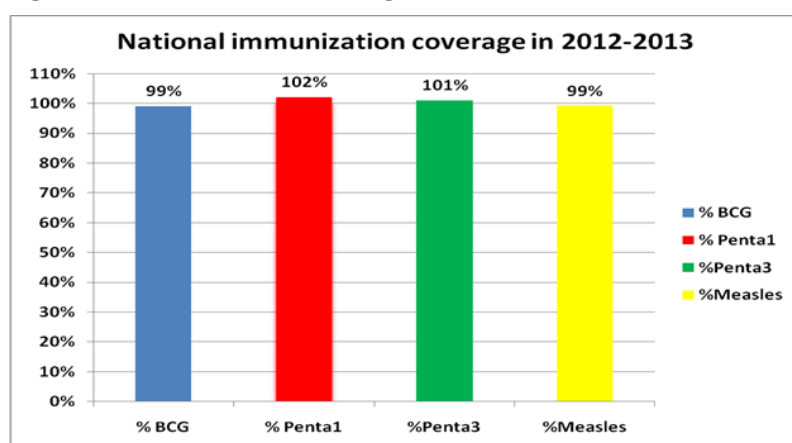
For the production, a study on profitability was done in the and it was recommended to prioritize the production of infusions instead of conceptual design of an MPD plant. In this context 72.000 (32.000 liters) of normal salines 0.9% infusions, complying with international standards were produced locally by RBC-MPD (ex LABOPHAR) and delivered to RBC-MPDD (ex CAMERWA) for distribution.

### VII.3. Supply of Vaccines

The activity comprises three main components: routine vaccination, supplemental immunization activities, and surveillance of target diseases. Routine immunization is intended to reach infants 0-11 months of age and pregnant women, during antenatal care visits.

The procurement and distribution of vaccines were well completed. Moreover, Rwanda has introduced a new combined vaccine against Measles and Rubella, and the vaccine to prevent the cervical cancer is currently provided to young girls aged between 12 and 15 years. Now, children are protected against at least 12 infectious diseases through vaccination. Much effort was put in catch up of drop outs and the coverage for measles has increased from 95% to 99% in 2012 and 2013 respectively.

Figure 39: Immunization: coverage in 2012-2013



### VII.4 Blood Transfusion Services Achievements

In order to increase accessibility of transfusion services, NCBT has completed the decentralization of its activities at provincial level. Every province has currently a blood center for blood transfusion. NCBT has strengthened blood donor recruitment and retention resulting in increased number of blood units collected to 42,633 from Voluntary, non Remunerated Blood Donors.

Each blood unit collected is tested for TTIs markers through automated machines to mitigate human errors, separated into blood components (Red blood cells, plasma and platelet) in a quality manner to be distributed to all hospitals in Rwanda, public and private.

NCBT is implementing the Blood Establishment Computerization System (BECS) for better management of blood transfusion activities. 3 blood transfusion centres are already interfaced and the remaining 2 others will be interfaced by December 2013. A quality management system is being implemented, based on international standards under the assistance of the American Association of Blood Banks (AABB). For capacity building, 2 medical doctors have been trained in transfusion medicine. One technician has been trained on production of blood component and one Data Manager has been trained on blood bank softwares.

## VIII. QUALITY ASSURANCE

**Programme objective:** To ensure the highest attainable quality of health services at all levels

**Strategic interventions for quality assurance:**

- Strengthening the health system to effectively and efficiently improve quality of services with input from civil society and community representatives
- Institutionalizing standard setting, monitoring and regulation
- Developing and ensuring the implementation of an operational plan for accreditation and certification process at all levels of the health system

### VIII.1 Quality and Accreditation of Health Care and Health Services

The main objectives of accreditation are **(i)** to standardize systems and practices; **(ii)** to institutionalize a culture of quality and safety; **(iii)** measure performance, by implementing a structured system for measuring compliance to standards for improving outcomes; and **(iv)** to improve accountability of HFs to regulatory or other agencies, such as health professional bodies, government and to protect the interests of patients.

**The main achievements of the Accreditation program in 2012-2013 are:**

1. **Developed and adapted the Rwanda Essential Hospital Accreditation Standards:** The process started with the adaptation of the *International Essentials of Health Care Quality and Safety* designed by Joint Commission International (JCI) to address the five risk areas for patients in hospitals. Standards were developed according to the International Society for Quality in Healthcare (ISQua) standards, an organization that accredits accrediting bodies.
2. **Establishment of the accreditation steering committee at central level:** It is transposing the roles of the in country Accreditation agency that approved the Rwanda Essential Hospital Accreditation Standards. The Ministry of Health officially launched the accreditation program.
3. **Dissemination of the Rwanda Essential Hospital Accreditation Standards in all 42 district hospitals,** and ensured that standards were effectively explained and understood by implementers.
4. **ToT for 254 staffs on continuous quality improvement from district hospitals and Ministry of Health:** 6 staff from each DH was trained.
5. Policies and Procedures were disseminated and communicated in all 42 hospitals:
6. Training of 18 accreditation surveyors from Ministry of Health and referral hospitals
7. Training of 40 accreditation facilitators from Ministry of Health and district hospitals
8. Accreditation baseline assessment conducted in 15 hospitals, and facilitated hospitals in development of Hospital Standards Implementation Plans
9. Developed the Rwanda Healthcare Accreditation Strategic Plan 2013-2018
10. Developed the Rwanda accreditation system model.

## **VIII.2 International Accreditation**

**King Faisal Hospital (KFH)** was awarded a full 2 year accreditation status during FY 2011 - 2012 after a 4-year process of training and facilitation, with an overall score of 99%. Its annual external evaluation has been conducted in the year 2012-2013. KFH now has in place 74 committees that are monitoring compliance with the COHSASA standards and they are guided by Terms of Reference to ensure the committee meetings are properly prepared for.

**CHUK:** The process of accreditation has also started. Its annual external evaluation has been conducted in Q2/2012-2013. Ongoing activities are:

- Strengthening of departmental steering committees
- Drafting policies and procedures, guidelines and protocols.
- The Findings of two projects of quality improvement and patient satisfaction were presented and disseminated in the departments

**CHUB and RMH:** Baseline assessment has already been conducted in CHUB after its important renovation works. It is now ready to start Accreditation process. RMH has also undergone important renovation and extension works. Baseline assessment will be conducted in the year 2013-2014.

## **VIII.3 Accreditation of District Hospitals:**

Norms and clinical standards have been developed and implementation started. Baseline assessment for accreditation has been conducted in 15 district hospitals (Bushenge (PH), Rwamagana (PH), Ruhengeri (RH), Kibungo (RH), Ruhango (PH), Kinihira (PH), Kabgayi (DH), Ruli (DH), Nyamata (DH), Byumba (DH), Gisenyi (DH), Kibuye (RH), Nemba (DH), Gihundwe (DH), Nyagatare (DH).

Teams for quality improvement appointed and trained in all DHs. Teams of surveyors for accreditation have been trained. Teams of external facilitators who will assist DHs in quality improvement and accreditation have been trained. Standards, policies and procedures have been introduced into all District Hospitals and they are in use. Quality Assurance teams are operational and the accreditation support committees have been appointed.

## **VIII.4 Customer Care**

After the Patient's Charter of Rights and Responsibilities disseminated in 2009, the Customer care check list has been availed in District Hospitals for implementation and regular monitoring is ensured. Customer care check list includes also hygiene indicators.

To improve interaction with the population, the Ministry of Health has set up a hotline (114) to receive all complaints from the population. Complaints are received, processed and feedback systematically provided. For better monitoring and evaluation of customer care, a process of hospital ranking has been put in place.

Finally, regular press conferences and town hall broadcasts are organized to allow the population to ask questions and give their opinions on how the health system can address their health problems.



In 2012-2013, many other activities have been achieved:

1. Customer care norms and standards have been defined and disseminated in all Hospitals
2. A Ministerial order on customer care has been issued and monitored during supervisions
3. Every DH has been provided with a Customer care officer
4. District Hospital Staffs have been sensitized on the issues of customer care
5. Standards for ranking hospitals in customer care, hygiene and service delivery have been issued and disseminated. The first DHs ranking exercise has been conducted, but it needs to be improved.
6. International Standards have been customized for RHs and DHs Standards with emphasis on quality of care, patient safety and service delivery. They are already implemented in RHs and will be soon introduced to DHs.
7. The quarterly customer satisfaction survey is integrated in the quarterly PBF evaluation.
8. Exemplary staff is recognized and poor services are sanctioned based on their consequences to patients.
9. Training of the 42 staff in charge of customer care service in District Hospitals. Items discussed: Concepts and definitions, Customers in health facilities, Health customer needs, Best quality of services provider in health facilities, Major Do's and Don'ts of customer services, Development of a customer friendly approach, Communication with unsatisfied customers, Instructions on Customer care.

## IX. SPECIALIZED SERVICES: NATIONAL REFERRAL HOSPITALS, RESEARCH

**Program objective:** To strengthen specialised services, National Referral Hospitals and research capacity

**The objectives of this program are to:**

- Strengthen the national referral hospitals and specialised treatment and research centres. Within the overall objective, the aim is to:
  - Achieve significant progress towards national self-sufficiency in the field of tertiary medical care.
  - Strengthen the basic skills of the medical body through training of specialized medical personnel.
  - Develop a policy framework for clinical research on high morbidity and mortality diseases and to increase research capacities.

### IX.1 University Teaching Hospital of Kigali (CHUK/UTHK)

#### IX.1.1 Introduction

It is one of the national referral hospitals with a capacity of 576 beds (30/06/2013) including those of the former Muhima District Hospital, currently merged with UTHK. Its mission is to provide care to the population, to provide education, to develop clinical research, to provide technical support to district hospitals.

At the end of June 2013, CHUK employed 674 people including 50 specialists, 3 dental surgeons and 12 Medical officers. CHUK has also 424 Nurses and 51 Midwives, 102 Paramedicals and 3 Pharmacists.

#### 1. The 20 leading causes of admission at CHUK (June 2012-June 2013)

**Table 28: UTHK: 10 leading causes of admission, 2012-2013**

| Nr | Causes                              | Number of cases | %     |
|----|-------------------------------------|-----------------|-------|
| 1  | Delivery uncomplicated, child alive | 886             | 5.84% |
| 2  | Delivery complicated, child alive   | 547             | 3.60% |
| 3  | Disease of the digestive system     | 251             | 1.65% |
| 4  | Femoral fracture                    | 201             | 1.32% |
| 5  | Toxemia pregnancy                   | 197             | 1.30% |
| 6  | Tuberculosis                        | 167             | 1.10% |
| 7  | Spontaneous abortion                | 151             | 0.99% |
| 8  | Other fracture                      | 149             | 0.98% |
| 9  | Pneumonia                           | 145             | 0.96% |
| 10 | Uterine fibroids                    | 134             | 0.88% |

Source: UTHK, annual report, 2012-2013

**Table 29: UTHK: 10 most killer diseases, 2012-2013**

| <b>N°</b> | <b>Denomination</b>         | <b>Nb of deaths</b> | <b>Mortality /pathology</b> |
|-----------|-----------------------------|---------------------|-----------------------------|
| <b>1</b>  | Virus infection HIV         | 44                  | 37,61%                      |
| <b>2</b>  | Liver Disease of NCA        | 37                  | 37%                         |
| <b>3</b>  | Infectious disease NCA      | 36                  | 39,13%                      |
| <b>4</b>  | Tuberculosis                | 33                  | 19,78%                      |
| <b>5</b>  | Disease of urinary system   | 31                  | 24,60%                      |
| <b>6</b>  | Heart diseases              | 23                  | 24,47%                      |
| <b>7</b>  | Pneumonia                   | 16                  | 11,03%                      |
| <b>8</b>  | Perinatal disease           | 16                  | 13,22%                      |
| <b>9</b>  | Malaria                     | 14                  | 28,57%                      |
| <b>10</b> | Disease of digestive system | 13                  | 5,18%                       |

*Source: UTHK, annual report, 2012-2013*

**Table 30: UTHK: 10 first causes of consultations, 2012-2013**

|           | <b>Denomination</b>                      | <b>Nb of cases</b> | <b>%</b> |
|-----------|--|--------------------|----------|
| <b>1</b>  | Fracture of tibia or perone              | 1033               | 0,92%    |
| <b>2</b>  | Allergic conjonctivitis                  | 962                | 0,85%    |
| <b>3</b>  | Diabete type 2 or non insulino-dependent | 896                | 0,80%    |
| <b>4</b>  | Other fractures                          | 795                | 0,71%    |
| <b>5</b>  | radius or cubitus fracture               | 593                | 0,53%    |
| <b>6</b>  | Hypertension not complited               | 507                | 0,45%    |
| <b>7</b>  | Lack of refraction                       | 500                | 0,44%    |
| <b>7</b>  | High blood Pressure                      | 489                | 0,43%    |
| <b>8</b>  | Goiter                                   | 480                | 0,43%    |
| <b>10</b> | Femoral fracture                         | 480                | 0,43     |

*Source: UTHK, annual report, 2012-2013*

**Table 31: UTHK: 10 first diseases causing long hospitalization, 2012-2013**

|           | <b>Denomination</b>             | <b>Nb of cases</b> | <b>%</b> |
|-----------|---------------------------------|--------------------|----------|
| <b>1</b>  | Femoral fracture                | 3792               | 1.89%    |
| <b>2</b>  | Disease of the digestive system | 3025               | 1.51%    |
| <b>3</b>  | Fracture of tibia or perone     | 2926               | 1.46%    |
| <b>4</b>  | Tuberculosis                    | 2708               | 1.35%    |
| <b>5</b>  | Other fracture                  | 2339               | 1.16%    |
| <b>6</b>  | Pneumonia                       | 2006               | 1.00%    |
| <b>7</b>  | Toxemia pregnancy               | 1872               | 0.93%    |
| <b>8</b>  | Virus infection HIV             | 1667               | 0.83%    |
| <b>9</b>  | Disease of urinary system       | 1634               | 0.81%    |
| <b>10</b> | Burn skin                       | 1547               | 0.77%    |

*Source: UTHK, annual report, 2012-2013*

**Table 32: UTHK: Status of the main hospital indicators, 2007-2013**

| Indicators                | 2007    | 2008    | July 09-<br>June 10 | July10-<br>June11 | July11-<br>June12 | July12-<br>June13 |
|---------------------------|---------|---------|---------------------|-------------------|-------------------|-------------------|
| Number of beds            | 418     | 429     | 421                 | 425               | 448               | 576               |
| Hospitalized              | 9499    | 12667   | 12458               | 10881             | 10746             | 12825             |
| Death                     | 999     | 1108    | 991                 | 1215              | 852               | 917               |
| Average Occupancy Rate    | 87      | 82      | 83%                 | 83%               | 77%               | 72%               |
| Total hospital Days       | 120,972 | 128,201 | 127,555             | 98,621            | 126,408           | 124,957           |
| Daily Nb of admitted Pat. | 325     | 351     | 349                 | 355               | 345               | 341               |
| Mortality rate            | 10.6%   | 8.7%    | 8%                  | 8.1%              | 7.9%              | 7%                |
| Average length of stay    | 12.8    | 10      | 10                  | 13.2              | 12                | 9                 |
| Annual Average turnover   | 24      | 30      | 30                  | 27                | 24                | 28                |

Source: UTHK, annual report, 2012-2013

**Table 33: UTHK: Annual consultations by Department, 2012-2013**

| N° | Department        | 2007         | 2008         | July 09-<br>June 10 | July 10-<br>June 11 | July 11-<br>June 12 | July 12-<br>June 13 |
|----|-------------------|--------------|--------------|---------------------|---------------------|---------------------|---------------------|
| 1  | Internal Medecine | 14394        | 13084        | 16010               | 14480               | 15107               | 17345               |
| 2  | Pediatric         | 9699         | 6948         | 9395                | 12671               | 12472               | 11935               |
| 3  | Surgery           | 6556         | 7414         | 11624               | 10740               | 10481               | 10741               |
| 4  | G & O             | 6125         | 7936         | 8309                | 9517                | 10304               | 9425                |
| 5  | Emergency         | 13721        | 12547        | 28514               | 27621               | 20816               | 30243               |
| 6  | Stomatology       | 7647         | 7337         | 5963                | 5912                | 6207                | 6241                |
| 7  | Ophtalmology      | 5963         | 7679         | 5790                | 6231                | 5672                | 4614                |
| 8  | ENT               | 9458         | 7577         | 6865                | 5230                | 6885                | 7988                |
| 9  | Dermatology       | 4401         | 3862         | 3679                | 3879                | 3542                | 3460                |
| 10 | Physiotherapy     | 15467        | 14023        | 14231               | 10516               | 9551                | 10876               |
|    | <b>TOTAL</b>      | <b>93431</b> | <b>88407</b> | <b>110380</b>       | <b>07892</b>        | <b>111037</b>       | <b>112868</b>       |

In the year July 2012 - June 2013, accidents and emergencies were the most important causes of consultations in the hospital, followed by internal medicine cases.

## IX.2 University Teaching Hospital of Butare (UTHB)

The University Teaching Hospital of Butare (CHUB) is one of the National Reference Hospitals, with a catchment area of more than 2,811,920 people. The total number of staff is 441 (clinical staff: 82.42%). The hospitalization capacity is 500 beds but only 396 beds are actually operational.

The mission of CHUB is to provide quality health care in accordance with international norms, to develop competencies of health professionals, to contribute to the development of human resources, to conduct high level research, to bring a technical support to the health system, and continue the COHSASA accreditation process.

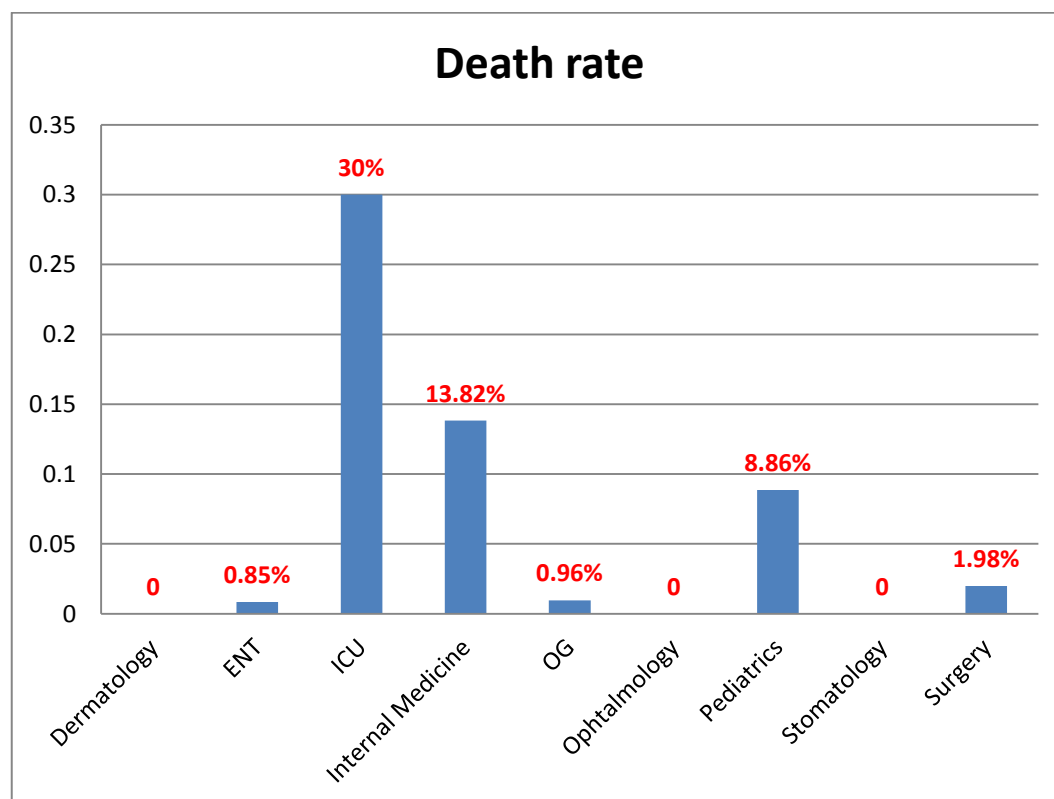
Staff: 40 Specialists, 14 Generalists, 233 Nurses, 74 Midwives, 3 Pharmacists and 77 Administrative staff.

**Table 34: UTHB: Consultations and Hospitalizations, 2012-2013**

|                          | Out Patient Consultation |               |               | Hospitalization capacity (beds) | Hospitalization | Deaths     | Death rate   |
|--------------------------|--------------------------|---------------|---------------|---------------------------------|-----------------|------------|--------------|
|                          | Consultation             | Old cases     | New cases     |                                 |                 |            |              |
| <b>Dermatology</b>       | 6550                     | 4162          | 2388          | 10                              | 10              | 0          | 0            |
| <b>ENT</b>               | 4968                     | 2364          | 2604          | 16                              | 350             | 3          | 0.85%        |
| <b>ICU</b>               | 0                        | 0             | 0             | 3                               | 216             | 65         | 30%          |
| <b>Internal Medicine</b> | 14775                    | 11543         | 3232          | 70                              | 1584            | 219        | 13.82%       |
| <b>OG</b>                | 5722                     | 3708          | 2014          | 45                              | 2172            | 21         | 0.96%        |
| <b>Ophtalmology</b>      | 5269                     | 2810          | 2459          | 6                               | 0               | 0          | 0            |
| <b>Pediatrics</b>        | 7803                     | 2578          | 5225          | 70                              | 1624            | 144        | 8.86%        |
| <b>Stomatology</b>       | 6271                     | 3276          | 2995          | 0                               | 0               | 0          | 0            |
| <b>Surgery</b>           | 4536                     | 1764          | 1806          | 111                             | 1764            | 35         | 1.98%        |
| <b>TOTAL</b>             | <b>51,358</b>            | <b>30,441</b> | <b>20,917</b> | <b>331</b>                      | <b>5956</b>     | <b>452</b> | <b>7.58%</b> |

urce: UTHB, annual report, 2012-2013

Figure 40: UTHB: Death rates in CHUB



Source: UTHB, annual report, 2012-2013

The graph shows high death rate in ICU. It's a small service but it receives many patients in critical conditions, with very high probability to die.

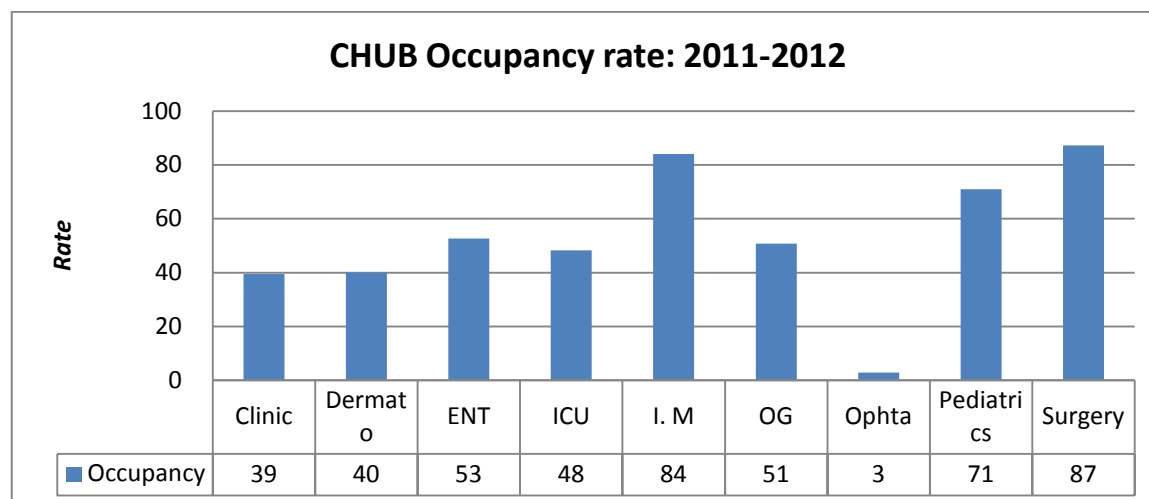
Table 35: UTHB: Evolution of the main hospital indicators, 2005-2012

| Indicators                           | 2005 | 2006 | 2007 | 2008   | 2009   | 2009-2010 | 2010-2011 | 2011-2012 |
|--------------------------------------|------|------|------|--------|--------|-----------|-----------|-----------|
| Number of beds (ward)                | 417  | 418  | 418  | 418    | 314    | 325       | 341       | 329       |
| Bed occupancy rate (%)               | 69%  | 72%  | 67%  | 65%    | 76.9%  | 72.4%     | 68.6      | 70,7      |
| Total hospitalization (Nb of days)   |      |      |      | 99 401 | 88 147 | 78 788    | 85 349    | 84 865    |
| Mortality rate (%)                   | 3.3% | 3%   | 5.7% | 7.4%   | 8.6%   | 9.12%     | 10.9**    | 10.2      |
| Average duration of admission (days) | 14   | 15   | 17   | 13     | 11     | 11        | 11.8      | 12.1      |

Source: UTHB, annual report, 2012-2013

\*\* More complicated and end stage patients transferred from DHs. Many premature babies, including "grands prématurés" transferred with delays from DHs

Figure 41: UTHB: Bed occupancy rates, 2012-2013



Source: UTHB, annual report, 2011-2012

Considering bed occupancy rates, Surgery comes first with **87%**, due to many surgical operations. Operated patients also require special follow up and they stay several days in the hospital. The second higher occupancy rate is observed in Internal Medicine (**84%**) due to patients with chronic diseases.

Table 36: UTHB: Leading causes of mortality in different services, 2012-2013

| N <sup>o</sup> | Department        | Diagnoses                                    |                                   |
|----------------|-------------------|--|-----------------------------------|
|                |                   | Top 5 causes of morbidity                    | Mortality                         |
| 1              | Pediatrics        | 1. Upper respiratory tract infection         | 1. Congenital heart disease       |
|                |                   | 2. Lower respiratory tract infection         | 2. Malaria                        |
|                |                   | 3. Prematurity                               | 3. Urinal tract infection         |
|                |                   | 4. Neonatal infection                        | 4. Nephropaty                     |
|                |                   | 5. Gastro enteritis                          | 5. HIV                            |
| 2              | Internal Medicine | 1. Gastro duodenal diseases                  | 1. Malaria                        |
|                |                   | 2. Cardiac diseases                          | 2. Tuberculosis                   |
|                |                   | 3. Cancer                                    | 3. Renal failure                  |
|                |                   | 4. Respiratory diseases                      | 4. Diabetes                       |
|                |                   | 5. Liver diseases                            | 5. Hematological diseases         |
| 3              | Surgical Ward     | 1. Closed fractures                          | 1. Physical trauma                |
|                |                   | 2. Open fractures                            | 2. Hernia                         |
|                |                   | 3. Malignant tumors                          | 3. Non malignant tumors           |
|                |                   | 4. Head injuries                             | 4. Intestinal occlusion           |
|                |                   | 5. Bone infections (including osteomyelitis) | 5. Peritonitis (non tuberculosis) |

**Dialysis Unit:**

The Dialysis Unit of the UTHB started in January 2007. From January 2013, Two Nipro machine & 2 Gambro machine broke down. Currently, only 3 machines out of 7 are operational.

**Table 37: UTHB: Origin of Patients under hemodialysis**

| Country            | Nb of patients |
|--------------------|----------------|
| Burundi            | 2              |
| Referral hospitals | 16             |
| District hospitals | 8              |
| Belgium            | 1              |
| <b>Total</b>       | <b>27</b>      |

In 2012-2013, CHUB received 3 patients with acute renal failure, 16 end stage renal failure, and 8 chronic renal failure. The Dialysis Unit faces severe shortage of medical, nurse and paramedical personnel together with insufficient machines. Also, most of patients are at End-Stage Renal Failure and need Renal Replacement Therapy but they can not get it. Another important problem is access hemodialysis due to financial barrier, mainly for adherents to community based health insurance.

### **IX.3 National Referral Laboratory (RBC/IHDPC/NRL)**

#### **Introduction**

The National Reference Laboratory (NRL) was established in July 2003 with the main roles to:

- (a) Provide training and technical support to laboratory personnel.
- (b) Establish quality assurance for laboratory network in the country;
- (c) Perform specialized tests for the diagnosis, prevention and surveillance of infectious diseases;
- (d) Participate in the epidemiological surveillance;
- (e) Carrying out research and
- (f) Develop a national medical laboratory system.

#### **Programmatic achievements**

Ensure laboratory quality services, 5 district hospital lab are being renovated, 199 lab technologists were trained and 23 district hospitals laboratories were mentored by NRL mentor teams.

RBC/ NRL rolled out the integrated sample transportation system and currently 38 District Hospitals and their Health Centers are covered.

To reduce overload work at NRL, the process for HIV QC decentralization started in KMH, CHUB, Gihundwe, Ruhengeri, and Rwamagana. ELISA machines are being installed while staff is being trained.

Biochemistry specialized tests (protein electrophoresis, electrolytes, blood gas testing) were performed at NRL, CHUK and CHUB

The NRL participated in External International Quality assurance and has tested PT samples from abroad (international labs) of Hematology samples, Biochemistry samples and CD4 samples.



## IX.4 Research

### Research conducted in CHUB

#### a) Collaborative research

1. Collaborative research has been carried out in the service of Physiology through partnership between NUR/Faculty of Medicine, Cornell University, the University of Oklahoma, supported by HarvestPlus, an international nutrition research program. It is an efficacy study on iron absorption from biofortified beans. Co-Principal Investigator: Prof. Dr Jean Bosco Gahutu
2. A Collaborative research through partnership between CHUB and the Institute of Tropical Medicine Berlin, Germany: study on Preventive chemotherapy against soil-transmitted helminths: effectiveness, child health, re-infection, and genetic polymorphisms. Principal Investigator: Dr Frank Mockenhaupt; Co-Principal Investigator: Prof. Dr Jean Bosco Gahutu. Analysis of results is going on

#### b) Research for students' Dissertations.

NUR students from the Faculty of Medicine and from the Faculty of Sciences have conducted their researches in the different departments and have been supervised by the HoD or Doctors of CHUB.

#### c) International Publications

1. **Gahutu JB.** Clinical chemistry reference intervals in a Rwanda population. *British Journal of Medicine and Medical Research* 2013; **3**(3):532-542.
2. **Gahutu JB.** Thyroid hormone profile in Rwandan students. *British Biotechnology Journal* 2013; **3**(3):286-292.
3. **Gahutu JB.** Haematological values at moderate altitude in a low-income population. *International Blood Research & Reviews* 2013; **1**(1):22-28.
4. Demeler J, Ramünke S, Wolken S, Ianiello D, Rinaldi L, **Gahutu JB**, Cringoli G, von Samson-Himmelstjerna G, Krücken J. Discrimination of gastrointestinal nematode eggs from crude fecal egg preparations by inhibitor-resistant conventional and real-time PCR. *PLoS ONE* 2013;**8**(4): e61285. doi:10.1371/journal.pone.0061285.

#### International Conference Communications:

1. **Gahutu JB.** Haematological adaptation to moderate altitude in the Southern Province of Rwanda. *Communication presented at the 5th International Scientific Research Conference NUR, 5<sup>th</sup>-7<sup>th</sup> December 2012.*
2. **Gahutu JB.** Standard operating procedures: a key to good laboratory practices. *Oral Communication presented at the 4<sup>th</sup> East African Health and Scientific Conference, Kigali, 27<sup>th</sup>-29<sup>th</sup> March 2013.*
3. **Gahutu JB.** Modular curriculum in Medical Education. *Poster presented at the 4<sup>th</sup> East African Health and Scientific Conference, Kigali, 27<sup>th</sup>-29<sup>th</sup> March 2013*

**Researches Conducted in CHUK**

| <b>N0</b> | <b>Title of research</b>   | <b>Author</b>   | <b>Actual situation</b> |
|-----------|--|---|-------------------------|
| 1         | Malaria prevalence, spatial clustering and risk factors in a low endemic area of Easter  | Dr Rulisa   | published               |
| 2         | Barriers and solutions for timely initiation of antenatal care in Kigali, Rwanda: Health facility professionals' perspective.                                      | Dr Rulisa   | published               |
| 3         | Emergency obstetrics knowledge and practical skills retention among medical students in Rwanda following a short training course.                                  | Dr Rulisa   | published               |
| 4         | Prevalence and predictors of giving birth in health facilities in Bugesera District, Rwanda.   | Dr Rulisa   | published               |
| 5         | Population pharmacokinetics of artemether, dihydroartemisinin and lumefantrine in pregnant women treated for uncomplicated plasmodium falciparum malaria in Rwanda | Dr Rulisa   | completed               |
| 6         | Relationship between cervical dilatation at admission of low risk term pregnant women on labour and mode of delivery. A study at BUTH                              | Dr Muhire Mathias   | completed               |
| 7         | The outcome of early oral feeding after caesarean delivery or uncomplicated gynecological abdominal surgery  | Dr Uwiragiye Norbert  | completed               |
| 8         | The approach of unmet obstetric needs for major obstetrics interventions in Kigali   | Dr Hakizimana Sadoscar  | completed               |
| 9         | Standard antibiotic use versus prophylactic antibiotics to prevent infectious morbidity in cesarean sections in CHUK   |   | completed               |
| 10        | Prevalence of endometriosis among infertile women in Rwanda as assessed by laparoscopy   | Dr Gakindi Leonard  | completed               |
| 11        | Impact of new vaccine introduction on health systems   | Dr Rulisa   | completed               |
| 12        | Rwanda Injury Registry Project   | Byiringiro J.C with collaboration of the University of Virginia |                         |
| 13        | Injury Mortality project   | Byiringiro J.C and Virginia University                          |                         |
| 14        | Head injury project  | Byiringiro J.C and Duke University                              |                         |

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|----|--|--|--|
| 15 | Understanding Prehospital Trauma and Emergency Care in Rwanda Project through the Collaboration with SAMU and Harvard University | Byiringiro J.C, with SAMU and Harvard University |  |
| 16 | Geospatial Analysis of Trauma Referrals in a Low-Resource Setting: Implications for Health System Strengthening                  | Byiringiro J.C,<br>Kyamanywa P,<br>Ntakiyiruta G |  |
| 17 | Profile and Economic Impact of Motorcycle Injuries Treated at a University Referral Hospital in Kigali, Rwanda                   | Ingabire A.J.C,<br>Byiringiro J.C                |  |
| 18 | Can focused trauma education initiatives reduce mortality or improve resource utilization in a low-resource setting?             | Byiringiro J.C,<br>Ntakiyiruta G,                |  |

## IX. PRIORITIES 2013-2014

In the fiscal year 2013-2014, the Ministry of Health, RBC and its Partners will continue to implement the HSSP III through its operational plan, with focus on the health sector priorities : Maternal and Child Health, Family planning, prevention, treatment and control of Communicable and non Communicable diseases, Human resources for health, availability of drugs and other consumables, geographical and financial accessibility.

Apart routine activities of the prevention, treatment and control of disease, the main expected outputs put in the MoH Performance Contract 2013-2014 are:

| Outcomes   | Outputs  | Activities   |
|--|--|--|
| 1 Reduced maternal and child mortality                                     | IMCI improved in District with high mortality rate.  | Train health care providers per health facility on ICATT   |
|  | Neonatal resuscitation and care improved in District with high mortality rate.               | Train health care providers per health facility on HBB   |
|  | Nutritional status of children Under five year assessed                                      | Conduct a campaign for screening of children under five, 1000 days campaign  |
|  | Use of maternal health services increased  | Training of Community Health Workers   |
| 2 Married women using modern contraceptive methods increased               | Increased accessibility and use to all family planning services                              | Train 8 remaining districts in Community Based Provision   |
| 3 Burden of communicable and non-communicable diseases reduced             | Medical checkup of NCDs promoted in health facilities  | Issue ministerial instruction and guidelines to health facilities on systematic checkup of NCDs                            |
|  | Deaths due to malaria reduced in the general population                                      | Organize supportive supervisions<br>Procure antimalaria drugs  |
| 4 Ensure quality and availability of human resources for health            | Physicians and nurses are increased and deployed   | Enrolment of students<br>Deployment of graduates   |
| 5 Ensure universal availability and accessibility of drugs and consumables | The use of LMIS is scaled up in Health facilities  | Revise essential medicine list<br>Disseminate standard treatment guidelines<br>Ensure stockouts maintained at less than 5% |
| 6 Financial and geographical accessibility to health services improved     | % of population registered with CBHI increased.  | Payment of premiums for indigents<br>Media campaigns<br>Work with Districts (Ibimina)                                      |
|  | National and District pooling are able to pay 100% of approved hospital bills within 30 days | Establish regular reporting system<br>Organize a training of CBHI Invoices Auditors at sections                            |

|   |  |  |
|---|--|--|
|   |  | and District<br>Payment of referral hospitals<br>Medical bills by National<br>pooling risk   |
|   | Nyabikenke District Hospital is partially constructed                                    | Regular monitoring of construction activities  |
|   | Byumba hospital is partially reconstructed phase I                                       | Recruitment of construction and supervision companies<br>Conduct regular monitoring of construction activities   |
|   | Rutare HC is partially rehabilitated/upgraded  | Conduct regular monitoring of construction activities  |
|   | Nyagatare hospital is partially rehabilitated (Maternity block is partially constructed) | Recruitment of supervision and construction companies<br>Conduct regular monitoring of construction activities   |
|   | Construction of Ruhengeri Hospital started   | Detailed architectural and technical plans<br>Tender document development  |
|   | Kibuye Hospital phase I is equipped  | Supply the equipments<br>Equipments installation   |
|   | Kirehe hospital phase III is equipped  | Supply the equipments<br>Equipments installation   |
|   | 18 Health Centers and one modern Health Center(Mbogo) are equipped                       | Supply the equipments<br>Equipments installation   |
|   | Architectural, technical design and tender document                                      | Detailed architectural and technical plans<br>Tender document development  |
| 7 The quality of health care services delivered in health facilities improved | Accreditation baseline assessment is conducted for continuous quality improvement        | Conduct accreditation baseline assessment and progress follow up in District hospitals<br>Conduct external evaluation for accreditation in CHUK and CHUB |
|   | Capacity in terms of customer care strengthened in District hospitals                    | To train 2 staff from each DHs in charge of customer care service  |
|   | Body hygiene for Rwandans improved   | Organize a campaign on body hygiene<br>Review ministerial instruction on the use of AKANOZASUKU  |
|   |  |  |

## **CONCLUSION**

In the fiscal year 2012-2013, the preparation of HSSP-III continued and its implementation started while the Sector participated in the development of EDPRS 2. The list of policies has been revised and reduced, as well as the HSWG to make it better functional.

High impact interventions continued to be implemented to improve the very important progress already observed. During this fiscal year, the MDG 4 target has already been achieved. The combined Measles-Rubella vaccine was introduced, while the plan to eliminate Malnutrition was revised and implemented under the supervision of MINALOC, with roles and responsibilities better defined.

The Kinihira and Bushenge district hospitals were operationalized in their new buildings, several other health facilities extended or renovated while 12 Health Centers were equipped. Several other projects are ongoing to improve the quality of services and to address the problem of geographical accessibility

In terms of financial accessibility, and with the very important involvement of Local Government and of the population, implementation of the new CBHI policy continued. However, the overall CBHI adherence was reduced, and the causes of the low performance are being identified to define new strategies. Meanwhile, no important unpaid arrears were observed.

The implementation Human Resource Development Strategic Plan is ongoing. Currently, more than 200 doctors are pursuing clinical specialization programs through the MoU between MoH and 23 US Universities to train much more specialized doctors and Nurses in-country. In the FY 2012-2013, some 92 US specialists participated in the different training programs.

In 2012-2013, the quality of care retained specific attention with the operationalization of customer care, and accreditation program started in 15 district hospitals, while standards, protocols and norms have been operationalized in all District Hospitals. Facilitation for UTHB and RMH is in process and accreditation is ongoing in UTHK and KFH.

In order to improve the monitoring of the health sector activities, different systems have been created or improved through e-Health program.

All activities have been implemented with the support and the active participation of all stakeholders, especially Development Partners, the Local Government and the population. The FY 2012-2013 coincided with the finalization of HSSP III and of the EDPRS II.

Health Sector actions will continue to focus on MCH, prevention, treatment and control of disease, improved coordination, human resource development, evidence based planning and decision making, strengthened health system, customer care and improved quality of service.

**END OF THE REPORT**