Scaling-up of HCV testing to reach elimination goal in Rwanda

Dr Janvier Serumondo & Dr Jean Damascene Makuza
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Rwanda epi status at beginning of program

Geographic Variation in Proportion of Anti-HCV+: 2017

- Overall Average Prevalence: 4%
- Higher anti-HCV positivity observed in southern and eastern districts

Source: Data from 2017 screening campaign among prisoners, PLHIV and General population (>45)
History of HCV management in Rwanda

- **2011-2014**
  - National Policy adopted
  - NOP developed
  - First patient’s treated with SOF/Ribavirin
  - Hepatitis Unit and TWG created
  - HCV Guidelines developed
  - Testing initiated in 2 HFs

- **2016-2017**
  - Screening of PLHIV, prisoners and 45+, Tutsi’s genocide survivors
  - ELISA in 13 sites
  - SOF/LDV

- **2018-2020**
  - Launch of HCV elimination
  - Price negotiation, reduction
  - Massive screening ~ 4,000,000
  - RDTs introduced
  - 38,980 patients treated

- **2021-2024**
  - 5 years elimination plan: 2019-2024
  - Initial screening targets: 4M → 7M people now.
  - 90% of those infected have to know their status
  - 80% of positive people have to be treated
  - Reduce prevalence from 4% to 1.2%
  - Reduce incidence and mortality as per the WHO strategy
Mass screening campaigns have been a key strategy to conduct an aggressive case finding in Rwanda.

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<th>Targeted risk based screening</th>
<th>Mass screening campaigns</th>
<th>Routine screening services</th>
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<td>Mass Screening at Muhanga, Southern Province</td>
<td>Screening at the health center, Kigali</td>
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2017 – 2018:
- PLHIV, Prisoners, Age 45+, survivors of the genocide against Tutsi

2018 – 2019:
- Focus on identifying cases in the general population

2020 onwards:
- Focus on a decentralized approach with task-shifting of HCV service delivery to the lowest level health facilities.

4 million people screened
High risk groups

- HIV / HCV infection
- People aged 45 years +
- Inmates of prisons
- Health care workers
- FSWs, MSM and (PWD)
- Birth before 1985

Weak Immunity
Exposed to high risk traditional practices
High risk behaviors
Exposure to fluids
High risk behaviors
Prior to screening blood products
**HCV-Screening, Diagnosis and Treatment Algorithm**

**HCV Antibody test (RDT or ELISA test)**

Positive (compatible with HCV infection)

- **HCV RNA or HCV cAg**
  - **Target Detected**
    - **Signs of cirrhosis OR APRI>2.0**
    - **No signs of Cirrhosis AND APRI<2.0**
    - **Consider for HCV Therapy**
    - **Routine HCV Care & Therapy**
    - **HCV RNA 12 weeks after Treatment (SVR12)**
      - **Target Detected**
        - Refer to specialist for consideration of second-line Therapy
      - **Target Not Detected**
        - Refer to specialist for consideration of second-line Therapy

Negative (not compatible with HCV infection)

**Target Not Detected**

- **Resolved HCV, Counsel about Status and Prevention**
  - *Refer to specialist in complicated cases such as decompensated cirrhosis, children and co-infection of HCV&HBV*
  - **When APRI>2:** consider additional interventions such as endoscopy, HCC screening, liver ultrasound or refer to a specialist
Cascade of care inputs

**Antibody testing:**
- SD Bioline RDTs used in all 509 HCs and 48 hospitals, no equipment needed
- TAT = 20 minutes max

**PCR testing:**
- PCR samples are venous whole blood samples collected directly after a positive rapid test!
- They are shipped to 15 PCR testing hubs for analysis
- Roche/Abbott platforms—almost same price
- Real-time quantitative PCR, with batch of 24 samples
- TAT = 1-2 weeks
- Patients informed via electronic system, results sent to HFs and hard copies transported by cars to sites.
- Integration of sms and emails in DHIS2 for patients

**Integration of care**
- Integrated at program level and clinical level
- Hepatitis, STIs and HIV care integrated (eg. systematic screening of pregnant women)

**Trained HR:**
- Doctors: 225 (5 per hospital)
- Nurses: 1210 (2 per HC)
- Lab techs: 2 per HC
- Pharmacists: 1 per hospital
- Data managers: 1 per hospital

**Health Facilities**
- 48 public hospitals
- 509 Health Centers

**M & E**
- HMIS
- DHIS2
Rwanda HCV cascade of care

- Rwanda population: 12,952,218
- Target pop aged 15 years+: 7,157,116
- Screened people: 4,165,729
- HCV Ab positive: 84,007
- HCV VL positive: 41,620
- Initiated on treatment: 38,980

December 4th, 2020
Decentralization of HCV services

Packages of services

i. Screening
ii. Confirmation
iii. Treatment initiation
iv. Counselling
v. Referral

i. Community Sensitization

- 8 RHs
- 4 PHs
- 36 DHs
- 509 HCs
- 471 HPs
- 45,516 CHWs
Hepatitis test-treat and Cure

Cost per person ~ 90 USD - 100 USD

• Screening test : 0.75 USD = 750 Frw
• Viral Load test : 10.36 USD (10,000 Frw)
• Treatment cost (12 weeks): 60 USD (60,000 Frw)
• Final VL test : 10.36 USD (10,000 Frw)
• Clinical cost : 10 USD (10,000 Frw)

=> Testing and Treatment given free of charge to patients during HCV elimination phase. Patients pay only for consultation and other biological exams.
=> Health insurances covering testing and being negotiated to also cover treatment after elimination phase.

Funding
- GF-HIV funds as they are integrated, and savings from other activities
- Relatively reduced budget due to negotiated and reduced prices
Rwanda: Distribution of HCVAb per District before HCV elimination and currently

Before HCV elimination

Currently: July 2019-June 2020

- HCV Ab proportion currently reducing and dropped from 4.1% to 1.8% (screened people are different before and after)
- Target to reach all the high risk zones and reduce the prevalence to 1.2% and less

Source: Rwanda HIV Annual and Viral Hepatitis Annual report 2019-2020
• Approved National Guidelines in place
• Rapid tests and Viral load testing in place
• Ongoing HCV elimination plan:
  • > 1200 HCPs trained on HCV management,
  • Doctors and Nurses treating HCV,
  • Services decentralized at HC level,
  • 4 million people screened to date,
  • 38,980 people treated,
• Current prevalence of HCVAb around 1.8% from > 4% in 2017.
Key Enablers

1. High level leadership support
2. Decentralization of services & Task shifting
3. Results based planning
4. Financing: Price reduction negotiation, domestic and external financing, PPP
5. Partnership
Challenges

• Funding: Insufficient budget from usual funders, use of savings from other activities
• Cost of testing and treatment still high compared to other diseases
• Reluctance of health insurances to insure treatment as it is still expensive
• M&E still complicated
• Slow-down of HCV screening, testing and treatment activities due to Covid-19 safety measures and overload of HCV viral load testing platforms used also for covid-19 testing
Next steps for HCV testing scale-up

→ Continuous expansion of testing using RDTs for universal coverage

→ Introduction of HCV self tests to optimize the accessibility to HCV testing.

→ Expand VL tests from 15 sites to all hospitals or health centers either using the existing Gene-Xpert machines or by introducing point of care machines.

→ Continuous negotiations for testing and treatment price reduction

→ Continuous negotiations with health insurances for a full coverage of hepatitis testing and treatment services (facilitated by the reduction of prices)

→ Strengthen M&E program using an electronic system for hepatitis data management

→ Achieve HCV elimination
Thanks