WHO Strategy and Goals for Viral Hepatitis Elimination
No Disclosures
Outline

1. Global strategy for elimination
   • WHO targets and rationale
2. The global response so far
   • Gaps in achieving the HBV and HCV targets
3. WHO actions to support countries
A death toll we could no longer neglect

Viral hepatitis mortality rates, by virus, 2015 (1.34 million deaths in 2015)

Source: WHO Global Health Estimates
Fraction of hepatocellular carcinoma attributable (AF) to HBV and HCV infections, by WHO region, 2015

Source: WHO Global Health Estimates
Status of hepatitis B

Prevalence
257 million people living with HBV
68% in Africa /Western Pacific

Cumulated incidence of chronic infections in children reduced because of immunization

http://whohbsagdashboard.com/#hbv-country-profiles
Incidence:
1.75 million new infections / year
(Unsafe health care and injection drug use)

Prevalence:
71 million infected, all regions
Global Health Sector Strategies: Roadmap to Elimination

Goal of the global health sector strategy on viral hepatitis 2016-2021:
Eliminate viral hepatitis as a major public health threat by 2030
Opportunities to build on....

A mandate for WHO to articulate the vision and monitor progress (in the context of UHC)

- Unprecedented Momentum; new medicines; new partnerships (UNITAID, MSF, Global Fund, CHAI, World Hepatitis Alliance)
- Leadership from countries (Brazil, Rwanda, Georgia, Mongolia, Egypt, India, Australia)
- The public health infrastructure and model from the HIV response
Strategy and targets lead to national plans, for an effective and coordinated response

- Development of regional and national action plans
- Common targets for countries for joint accountability
- Powerful tool for mobilizing resources and action
Number of countries with a viral hepatitis plan, 2012–2017

A five fold increase in five years

- 17 countries in 2012
- 82 countries in 2017
- First World Hepatitis Summit and Global Strategy were important milestones

- 1st WHO resolution (2010)
- 2nd WHO resolution (2014)
- World Hepatitis Summit (2015)
- Global strategy (2016)
Eliminate viral hepatitis as a major public health threat by 2030, as defined by:

- 6-10 million infections (in 2015) to 900,000 infections (by 2030)
- 1.34 million deaths (in 2015) to under 500,000 deaths (by 2030)
## Eliminating hepatitis by 2030: A package of interventions with high impact

<table>
<thead>
<tr>
<th>Elimination is defined by impact indicators</th>
<th>2030 targets</th>
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<tbody>
<tr>
<td>A. Incidence</td>
<td>-90%</td>
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<td>B. Mortality</td>
<td>-65%</td>
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<tr>
<th>Modelling suggests that taking 5 core interventions to sufficient coverage will achieve impact</th>
<th>2030 targets</th>
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<tr>
<td>1. Three dose hepatitis B vaccine</td>
<td>90%</td>
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<td>2. HBV PMTCT</td>
<td>90%</td>
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<td>3. Blood and injection safety</td>
<td>100 % screened donations</td>
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<td>100% safe injections</td>
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<td>4. Harm reduction</td>
<td>300 injection sets/PWID/year</td>
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<td>5. Testing and treatment</td>
<td>90% diagnosed</td>
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<td>80% eligible treated</td>
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PMTCT: Prevention of mother to child transmission
PWID: Person who injects drugs
Elimination – Modelling assumptions

Elimination as a public health issue requires a strong, innovative strategy which addresses programmatic priorities

Scale-up of prevention now

- Continued immunization and innovation in approaches to eliminate mother to child transmission e.g. in delivery of birth dose and other approaches. *(Critical to reduce HBV incidence)*
- Scale up blood and injection safety and Harm Reduction. *(Critical to reduce HBV & HCV incidence)*

Strengthening treatment access towards universal access by 2030

- Innovations in diagnostics, including point of care testing, new case finding
- Radical reductions in treatment costs
- Innovations in curative HBV treatment over time

Strengthening linkages of hepatitis interventions

- HIV, MCH, NCDs and health systems approaches and significant investment in surveillance to improve estimates and accountability for targets
Global elimination strategy: Where we are 2015 baseline towards 2030 targets

**Prevention**
- HBV- Vaccination
- HBV- PMTCT
- Blood safety
- Injection safety
- Harm reduction

**Care and treatment**
- HBV - Diagnosis
- HCV - Diagnosis
- HBV- Treatment
- HCV- Treatment

*Measurement of progress on HBV treatment target currently limited by the absence of data on the proportion of persons eligible and the absence of a functional cure*
The Global Hepatitis Strategy - Five strategic directions

1. Information for focused action
   The "who" and "where"

2. Interventions for impact
   The "what"

3. Delivering for equity
   The "how"

4. Financing for sustainability
   The financing

5. Innovation for acceleration
   The future
Relative progress in ART and DAA scale-up (update)

ART scale up over the last decade

The last decade of scale up:
- Price reductions
- Major investments
- New service models

19.5 million

9.7 million

The next phase:
- Early initiation
- Innovation
- Strategic use

Persons starting curative HCV treatment with DAAs

- 2014: < 200 000
- 2015: 1.1 million
- 2016: 1.7 million
- TOTAL: ~ 3 million

Source: WHO, work conducted by CDA/Polaris
Key lessons learnt from HIV/ART scale-up

I. The “Public health approach”
II. Simplified diagnostics and case management algorithm
III. Strategies to reduce drug costs of medicines, diagnostics and service delivery
IV. Strong focus on key and vulnerable populations («leave no-one behind»)
V. Service delivery: decentralisation and task shifting (delivering at the primary care level)
VI. Building strong community systems and engagement
VII. From externally funded programme transition to domestic funding
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Decay of incidence of chronic HBV infection in children due to immunization

Chronic HBV infection in children under 5 reduced from 4.7% to 1.3%
3-dose hepatitis B vaccine: major progress - 84% coverage

Source: WHO and UNICEF

Source: WHO UNICEF joint reporting form
Hepatitis B birth dose: Major gaps
39% coverage overall, low in Africa
Harm reduction: Still far from 300 needles/syringes per person per year

11.8 million persons who inject drugs worldwide

27 syringe / needle set / PWID / year


Source: United Nations, UNAIDS
Frequency and safety of health care injections reported in Demographic and Health surveys, by WHO region, 2010-2017

New data: 3.9% Unsafe health care injections worldwide in 2010-2017

Source: Hayashi T. et al. WHO rapid review of DHS data, 2010-2017
Cascade of care for HBV infection by WHO region, 2016

- 257 million people living with HBV
- Many infected persons remain undiagnosed
- 4.5 million were on HBV treatment in 2016 (1.7 million in 2015)

*Measurement of progress on HBV treatment target currently limited by the absence of data on the proportion of persons eligible and the absence of a functional cure

Source: WHO on the basis of Center for Disease Analysis / Polaris
Cascade of care for HCV infection by WHO region, 2016

- 71 million persons with chronic HCV
- 1.76 million persons started HCV treatment in 2016 (1.1 million in 2015)
- Total: about 3 million (2017)
- Major gaps in diagnosis

Source: WHO on the basis of Center for Disease Analysis / Polaris
Availability of low-cost, generic HBV medicines

Most persons with HBV infection live in LIC and MIC, that can procure generic medicines

- Quality generic medicines are available for procurement
  - Tenofovir < USD 30 /year
  - Entecavir ~ USD 400 /year
- However, few countries have a hepatitis programme
  - Fragmented procurement leads to high prices

Other countries now able to buy affordable generics in 2018 as the tenofovir patents are due to expire

- Most high income countries
- China and Mexico

Public sector procurement with high volumes can lead to competition and low prices

HIC: High income countries
UMIC: Upper middle income countries
LMIC: Lower middle income countries
LIC: Low income countries
Monitoring price reductions for DAAs

Intensifying competition to reduce prices

Fig. 3.3. Trends in the lowest reported prices for direct-acting antivirals per 28-day supply, 2016–2017

Source: WHO access report, 2017
62% of persons with chronic HCV infection live in countries which could access generic medicines at less than USD 200 / cure

High price remains a barrier in most upper middle income countries, e.g. Brazil, China, Columbia, Mexico, Kazakhstan, and Turkey

Source: WHO access report, 2017
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Key highlights – WHO’s work and focus

Convene
- Global strategy and targets, monitoring progress

Advocate
- World Hepatitis Summit, Regional conferences

Guide
- Normative and policy work

Support
- Policy uptake in countries, implementation

Increase access
- Price reporting, pre-qualification, patent landscape

Position
- Hepatitis response within broader health agenda (Universal Health Coverage)
### WHO response to specific challenges – some examples

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<th>Strategy elements</th>
<th>Challenges</th>
<th>WHO response and products</th>
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<tr>
<td>1. <em>Information for focused action</em></td>
<td>Need to monitor and document</td>
<td>• Country and Global monitoring towards elimination</td>
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<td>• Global report 2018 (Dec)</td>
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<td>2. <em>Interventions for impact</em></td>
<td>Low testing and treatment coverage; prevention gaps</td>
<td>• New HCV guidelines (June)</td>
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<tr>
<td></td>
<td></td>
<td>• Service delivery models</td>
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<tr>
<td></td>
<td></td>
<td>• Price reduction approaches</td>
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<td>3. <em>Delivering for equity</em></td>
<td>Vulnerable groups with barriers to access</td>
<td>• Service delivery models</td>
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<td></td>
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<td>• Harm reduction promotion (ongoing)</td>
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<td>4. <em>Financing for sustainability</em></td>
<td>Domestic resources needed</td>
<td>• Cost effectiveness calculator (online tool)</td>
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<td>• Price tag estimations</td>
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<tr>
<td>5. <em>Innovation for acceleration</em></td>
<td>Expensive and complex diagnostics</td>
<td>• Introducing innovation in diagnostics (UNITAID)</td>
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1. WHO working towards global reporting

Building data systems at country level
- Capture patients’ data in health care facilities
- Organize data transmission, analysis and use

Use an incremental approach
- Prevention indicators already monitored
- New system only for the cascade of care and treatment

Report back
- Global hepatitis, HIV and STI report in December 2018
2. Updated WHO HCV guidelines (2018) – simplification will be come

• **Simpler criteria** to start HCV treatment for all infected people above 12 years of age (pregnant women excepted)

• **Simpler treatment to cure all subtypes** (pangenotypic)

• **Stream-lined** approach to procurement

• **Decentralized and integrated** service delivery models to reach high coverage
2. Service delivery model for testing and treatment

1. Comprehensive national planning
2. Simple and standardized algorithms
3. Strategies to strengthen linkage
4. Integration of hepatitis testing, care and treatment
5. Decentralized testing and treatment services
6. Community engagement and peer support
7. Procurement / supply management of commodities
8. Data systems for M&E
3. Promotion of harm reduction for Persons who inject drugs (PWID)

WHO defined package of nine interventions

Country support to revise national policies
- Drug control policy, hepatitis policies, behavior

Promoting removal of structural barriers
- Legal Access to OST, NSP, overdose; incarceration, stigma, improving drug users health

Promote scaling up of interventions for PWIDs and prisoners,
4. Economic analyses to inform financing decisions – Cost effectiveness calculator

http://www.hepcccalculator.org/

Hep C Calculator
Global Cost-effectiveness Analysis of Hepatitis C Treatment

- Online cost-effectiveness calculator
  - HCV available, HBV in progress
  - HBV and HCV treatment can be cost saving for the health system of procured rationally
5. UNITAID projects to fast track introduction of innovations - simplifying the diagnostics pathway

- Bringing new, simpler HCV tests to LMIC markets
- Establishing innovative models for screening and treatment in HIV/HCV co-infected patients
- Implementing a cost reduction strategy for diagnosis
- Providing evidence to drive scale-up
- Changing global normative guidelines & national policies to support a global HCV elimination pathway
Universal Health Coverage: Ensuring that hepatitis services (prevention, testing and treatment) are included in broader health agenda

WHO call to action launched at the UNGA 2017

Summary

• An ambitious strategy was endorsed for elimination

• To achieve reductions in incidence (90%) and mortality (65%) major access gaps will need to be addressed
  • Birth dose (in Africa) and harm reduction (globally) remain under-implemented
  • Major testing gap calls for rapid innovations
  • Medicine prices offer opportunities that are not yet fully used

• WHO focuses on delivering for country impact and addressing data, normative and policy needs

• Universal Health Coverage provides an opportunity for HEP scale up
Thank you

WHO GHP
WHO Regional offices
Member States
US CDC
UNITAID
World Hepatitis Alliance
Center for Data Analyses

www.who.int/hepatitis hepatitis@who.int