

WHO Elimination Goals: Setting the Scene

VHPB Technical meeting 5-6 April

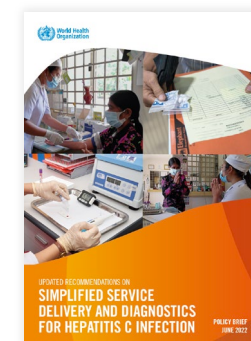
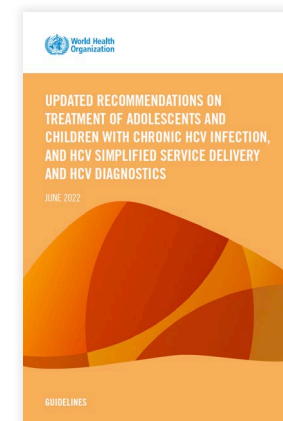
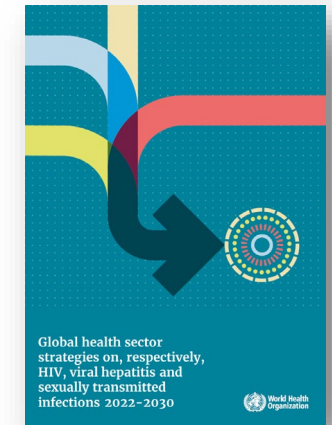
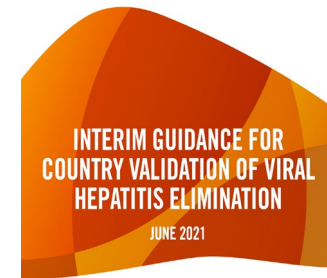
The role of international organisations in the elimination of viral hepatitis in Europe: Achievements, challenges and the way forward



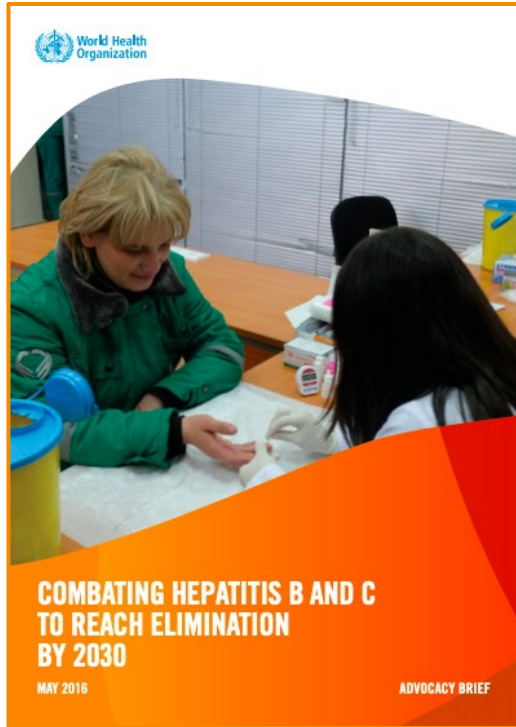
Philippa Easterbrook
Global Hepatitis Programme
Global HIV, Hepatitis and STIs Programmes
World Health Organization HQ

Outline

- **2016 Global hepatitis elimination strategy**
- **Progress on path to elimination**
 - Price reductions, learning from champion countries, good practices in national hepatitis response
 - 2021 Global Progress Report (2019 data) and gaps
- **What will it take to achieve elimination?**
 - New 2021 guidance for countries on validation of elimination of viral hepatitis
 - New 2022 Global health sector strategy for HIV, viral hepatitis and STIs
 - New 2022 WHO HCV guidelines on simplified service delivery and diagnostics



Challenges faced in scale-up of global viral hepatitis response in 2014



Limited community awareness about viral hepatitis

Lack of access to low-cost treatment and diagnostics

Lack of national guidance and policies

No dedicated budget for hepatitis and out-of-pocket payments

Lack of services for hepatitis testing, and complex care pathways

Lack of trained health care and laboratory workers



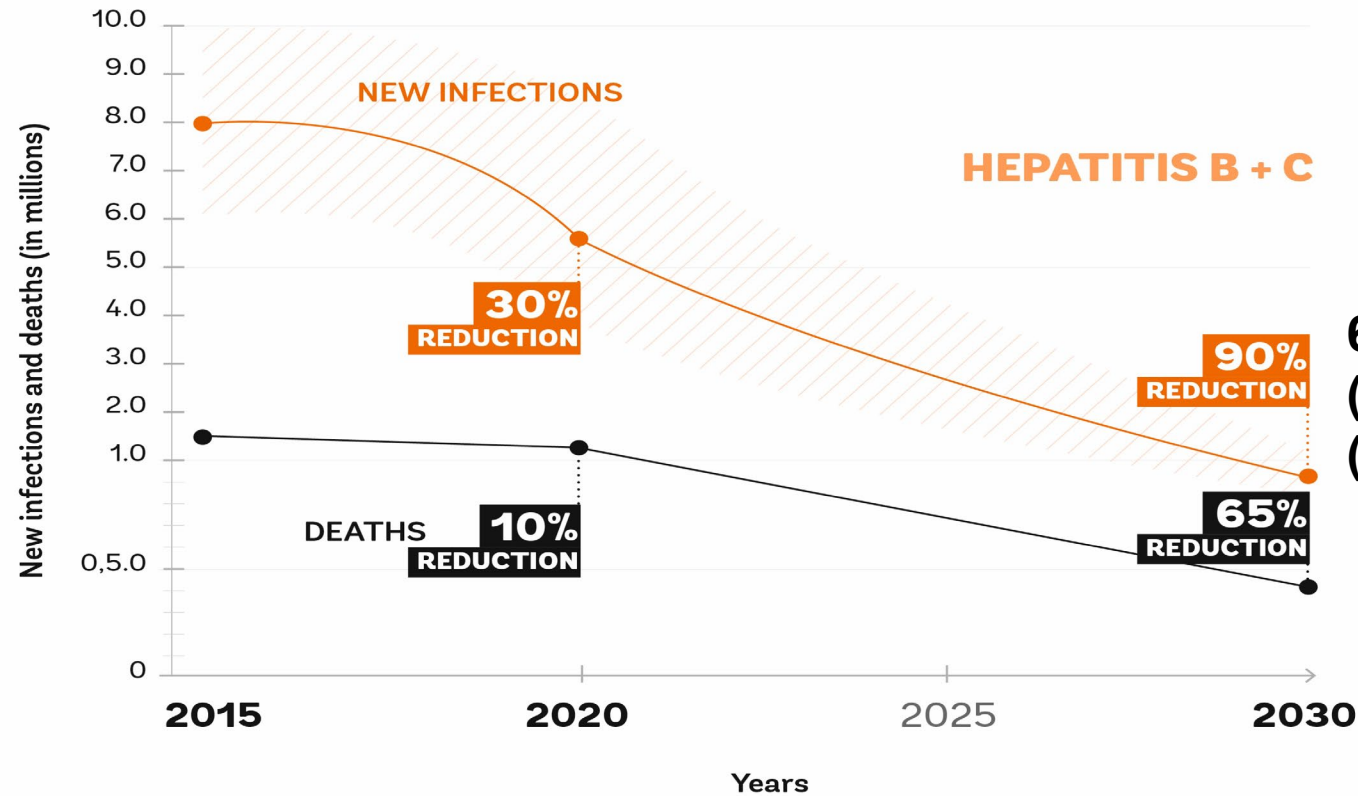
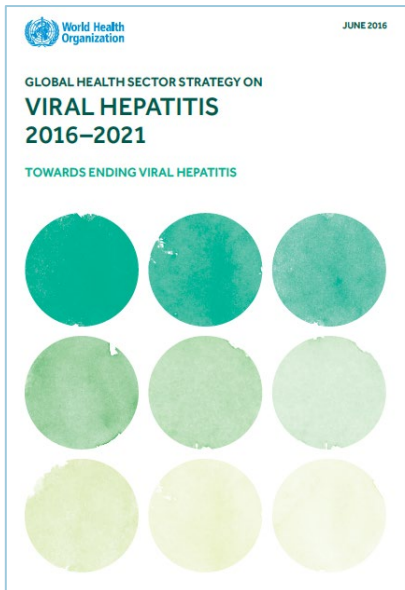
Global Strategy and Targets

2016 – The first Global Hepatitis Strategy and elimination Targets

Developing Global Health Sector Strategies
for HIV, Hepatitis, STIs, 2016-2021



Setting of targets: Elimination of viral hepatitis as major public health threat by 2030. Impact targets

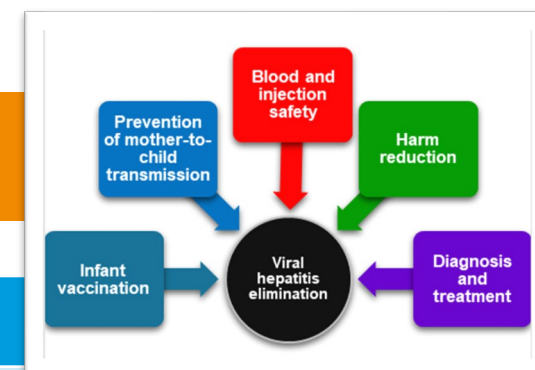







6-10 million infections (in 2015) to 900,000 infections (by 2030)

1.34 million deaths (in 2015) to under 500,000 deaths (by 2030)

Elimination of viral hepatitis as a major public health threat: Programme Targets

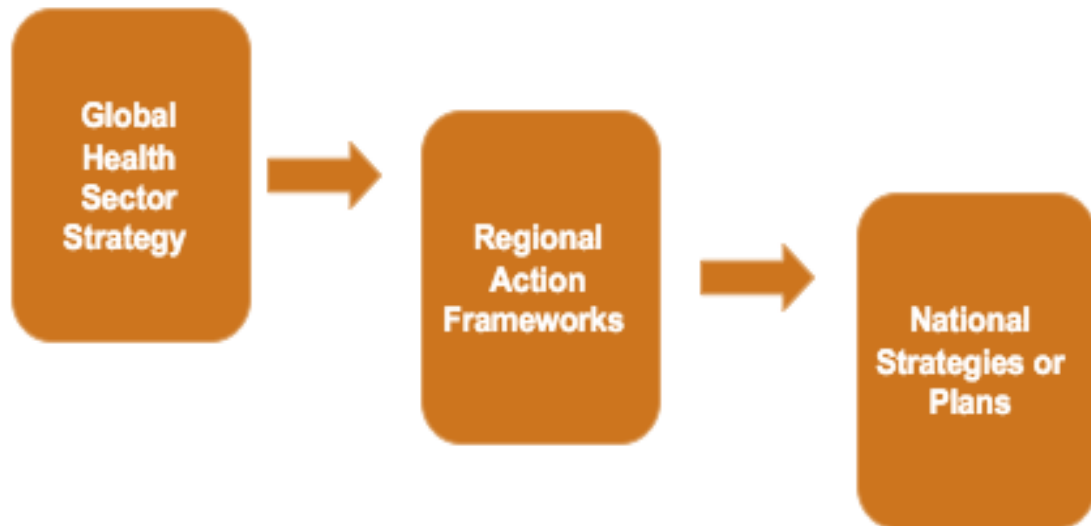
Scale-up of six core interventions with sufficient coverage would lead to elimination
(incidence – 90%, mortality -65%)



	Interventions	Indicator	2015	2020	2030
	3 dose infant HBV vaccine	Coverage	84%	90%	90%
	HBV PMTCT (birth dose<24h)	Coverage	39%	50%	90%
	Blood / injection safety	Screened donations	97%	100%	100%
		Safe injections	95%	100%	100%
	Harm reduction	Sets/PWID/year	27	200	300
	HBV and HCV testing and treatment	% diagnosed	9/20%	30%	90%
		% treated	8/7%	N/A	80%

Why are a Global Strategy and Targets important?

Towards stronger national plans – for an effective and coordinated response



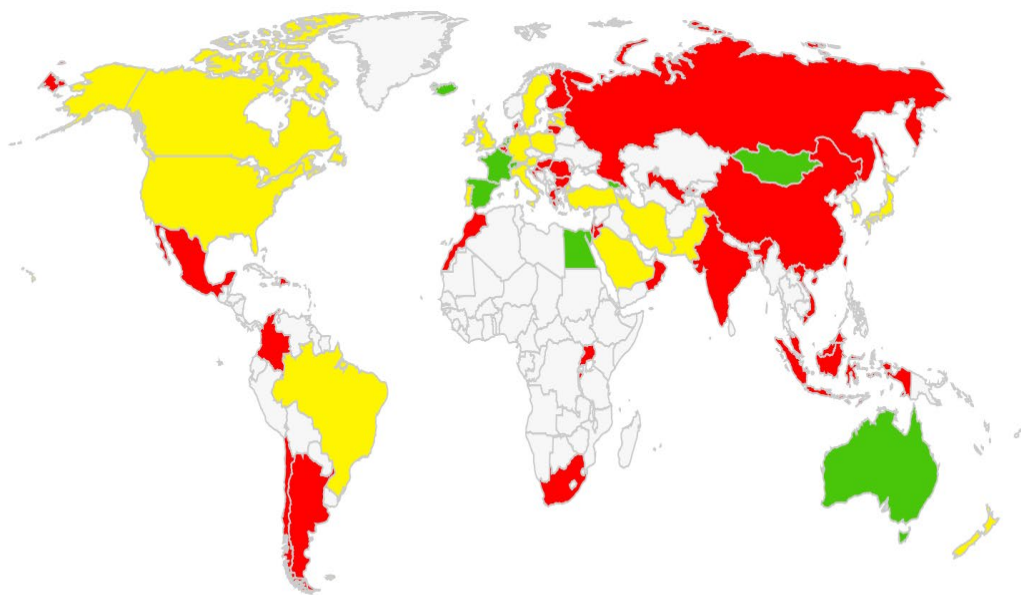
- Promote development of regional and national action plans
- A powerful tool for mobilizing resources and action
- To set common targets for countries – towards joint accountability

Progress on path to elimination (Global Hepatitis Report 2019 and 2020 Access Report and new Global strategy)



Learning from 'Champion' Countries

Over 10 million people treated with DAAs



● On Track ● Working Towards ● Not On Track

Brazil's Fight against Hepatitis C — Universalism, Local Production, and Patents

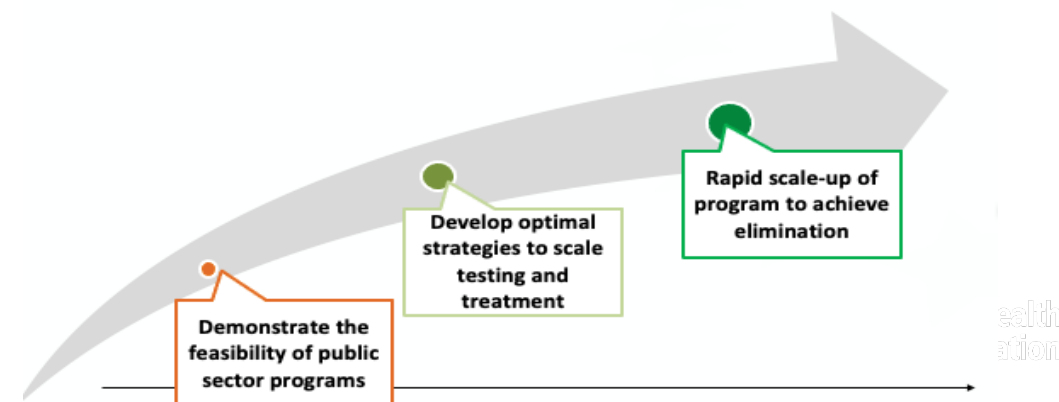
Elize M. da Fonseca, Ph.D., Kenneth Shadlen, Ph.D., and Francisco I. Bastos, M.D., Ph.D.

Controlling hepatitis C in Rwanda: a framework for a national response

Aimable Mbituyumuremyi,^a Jennifer Ilo Van Nui,^b Jeanne Umuhire,^c Jules Mugabo,^d Mutagoma Mwumvaneza,^a Jean Damascene Makuza,^a Justine Umutesi,^a Sabin Nsanzimana^a & Neil Gupta^a

National treatment programme of hepatitis C in Egypt: Hepatitis C virus model of care

W. El-Akel, M. H. El-Sayed, M. El Kassas, M. El-Serafy, M. Khairy, K. Elsaed, K. Kabil, M. Hassany, A. Shawky, A. Yosry, M. K. Shaker, Y. ElShazly, I. Waked, G. Esmat, W. Doss



Australia: universal access to HCV treatment to all persons with chronic HCV infection; prisoners and PWID are priority populations

France, Iceland, Portugal, England and Scotland: universal access to HCV treatment under the national health insurance system

Egypt: National Plan of Action - DAAs less than US\$120 / cure – largest treatment programme to date (2 million people treated with DAAs)

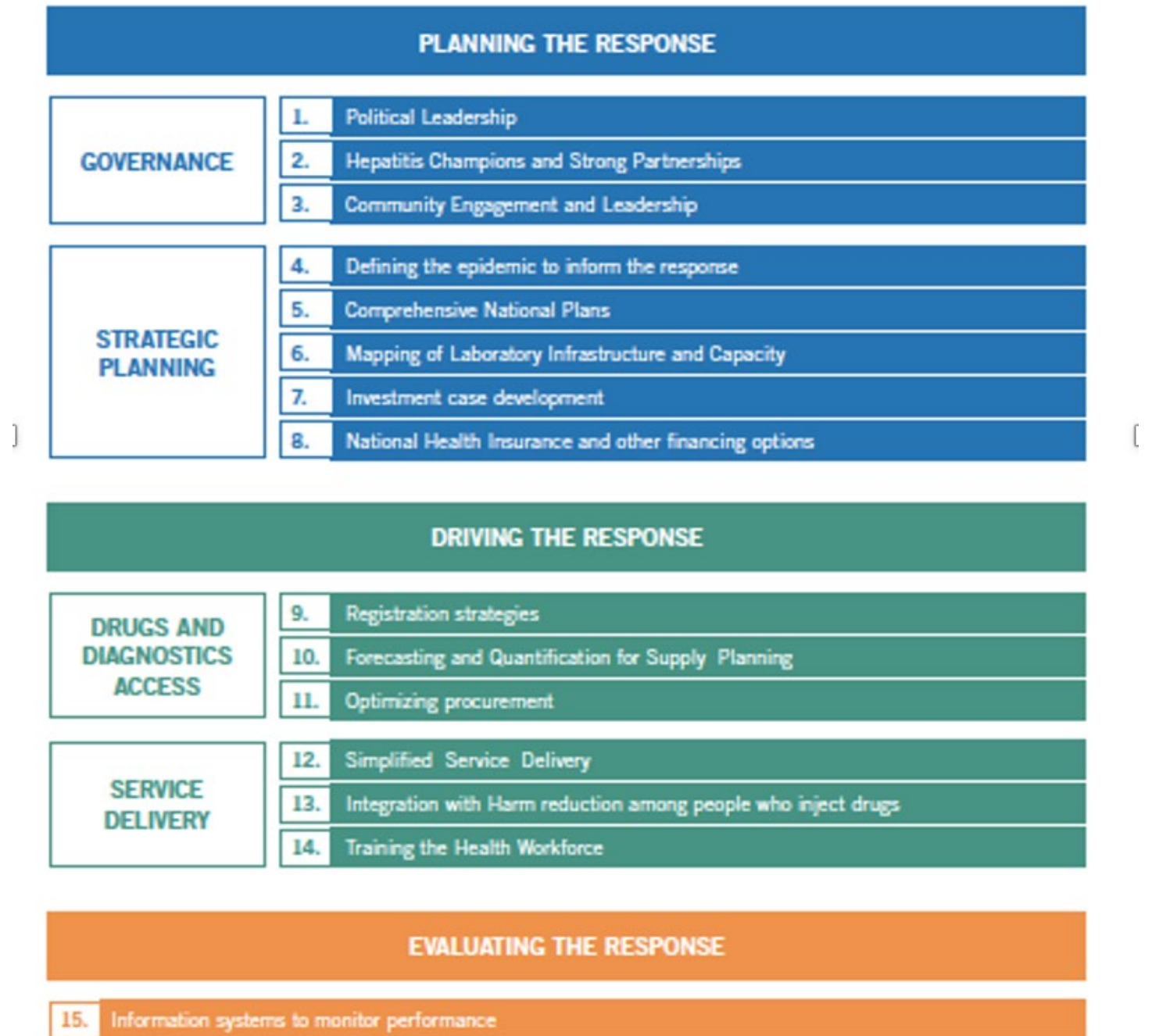
Georgia: hepatitis C elimination programme with plan for >25 000 people treated per year

Mongolia: innovative financing models in public and private sector

More than 100 countries have national hepatitis plans.

**What will it take to
achieve
elimination?**

**WHO 15 Good
Practices and
Lessons Learned
in Hepatitis
Response**



New data on Hepatitis B and C burden, incidence and mortality by WHO region (2021 WHO Global progress report)

Global Burden
Hepatitis B - 296 m
Hepatitis C - 58 m

Viral Hepatitis

New data on incidence, prevalence

- **3.0 million** new HCV & HBV infections
- **1.1 million** HCV & HBV deaths with initial signs of HCV declines (290,000 deaths)
- **Achieved <5 yr HepB** prevalence SDG 2020 targets and GHSS goals

GLOBAL

Hepatitis B

New Infection: **1 500 000**
 [1 100 000–2 600 000]
 Deaths: **820 000**
 [450 000–950 000]

Hepatitis C

New Infection: **1 500 000**
 [1 300 000–1 800 000]
 Deaths: **290 000**
 [230 000–580 000]

REGION OF THE AMERICAS

Hepatitis B

New infections: **10 000**
 [5 100–26 000]
 Deaths: **15 000**
 [8 500–23 000]

Hepatitis C

New infections: **67 000**
 [63 000–73 000]
 Deaths: **31 000**
 [19 000–84 000]

EUROPEAN REGION

Hepatitis B

New infections: **19 000**
 [9 400–38 000]
 Deaths: **43 000**
 [34 000–51 000]

Hepatitis C

New infections: **300 000**
 [240 000–320 000]
 Deaths: **64 000**
 [39 000–72 000]

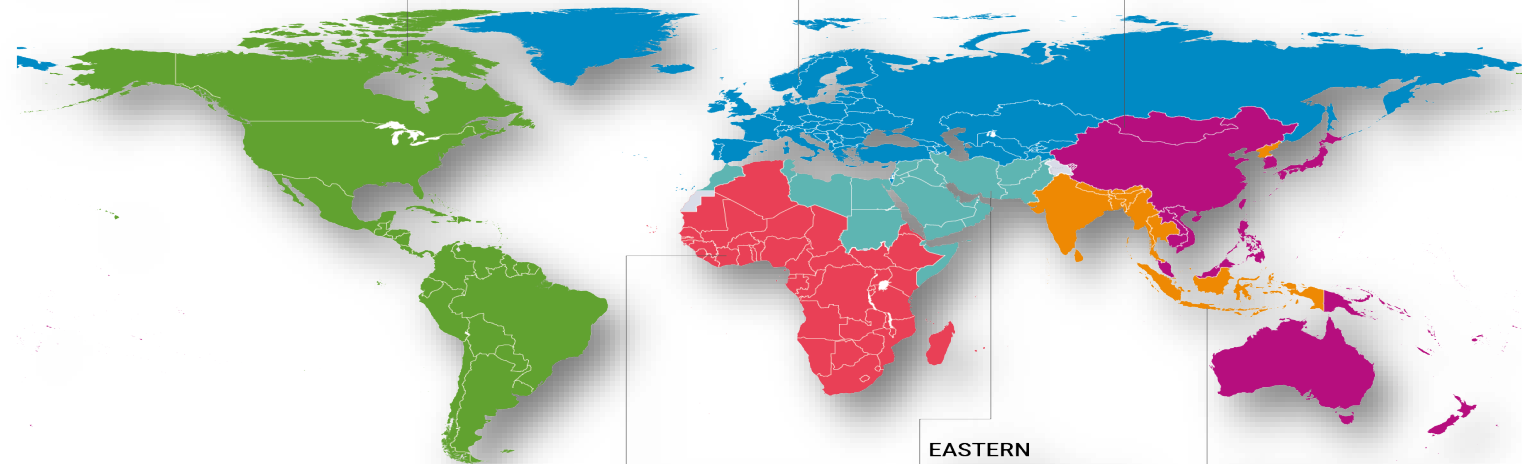
WESTERN PACIFIC REGION

Hepatitis B

New infections: **140 000**
 [96 000–210 000]
 Deaths: **470 000**
 [200 000–490 000]

Hepatitis C

New infections: **230 000**
 [220 000–260 000]
 Deaths: **77 000**
 [77 000–140 000]



WHO REGIONS

- African Region
- Region of the Americas
- South-East Asia Region
- European Region
- Eastern Mediterranean Region
- Western Pacific Region
- Not applicable

AFRICAN REGION

Hepatitis B

New infections: **990 000**
 [660 000–1 600 000]
 Deaths: **80 000**
 [47 000–110 000]

Hepatitis C

New infections: **210 000**
 [150 000–370 000]
 Deaths: **45 000**
 [23 000–72 000]

EASTERN MEDITERRANEAN REGION

Hepatitis B

New infections: **100 000**
 [79 000–140 000]
 Deaths: **33 000**
 [26 000–60 000]

Hepatitis C

New infections: **470 000**
 [240 000–520 000]
 Deaths: **31 000**
 [31 000–74 000]

SOUTH-EAST ASIA REGION

Hepatitis B

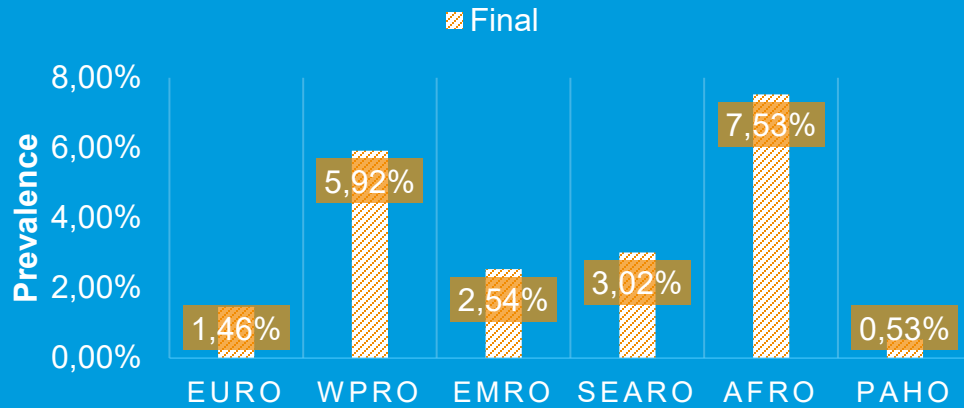
New infections: **260 000**
 [180 000–590 000]
 Deaths: **180 000**
 [140 000–300 000]

Hepatitis C

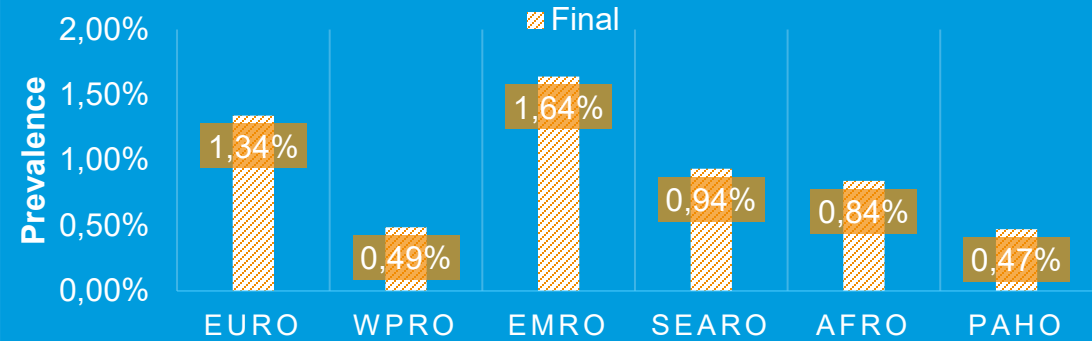
New infections: **230 000**
 [200 000–430 000]
 Deaths: **38 000**
 [37 000–130 000]



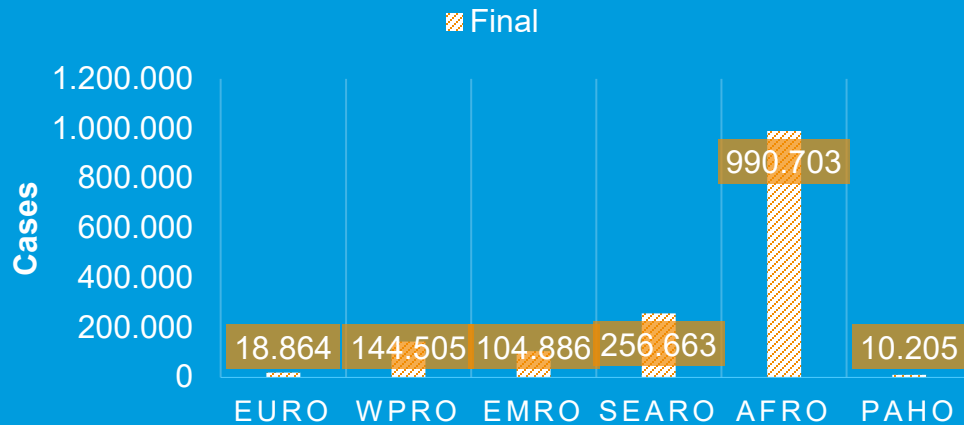
PREVALENCE OF HEPATITIS B INFECTION AMONG THE GENERAL POPULATION



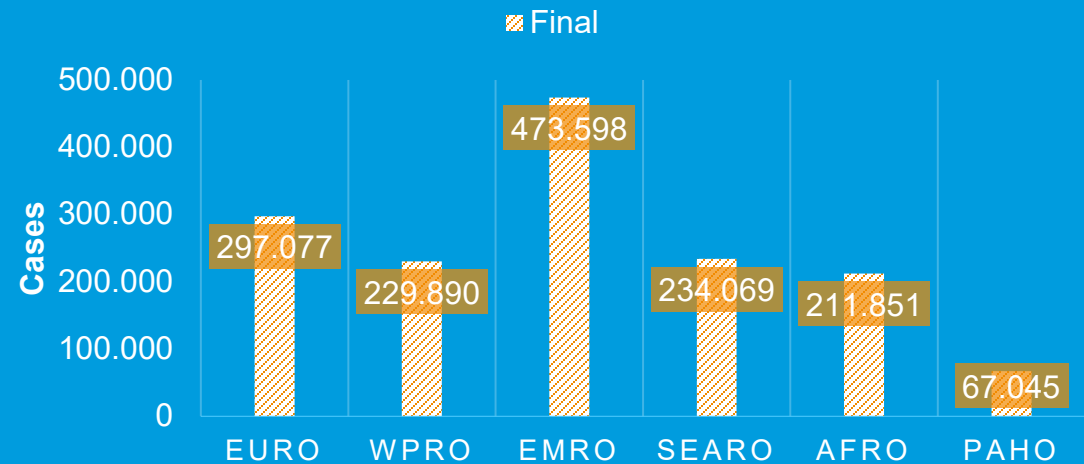
PREVALENCE OF HEPATITIS C INFECTION AMONG THE GENERAL POPULATION AT START OF 2019



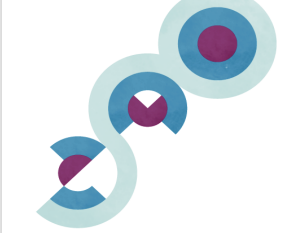
HEPATITIS B INCIDENCE



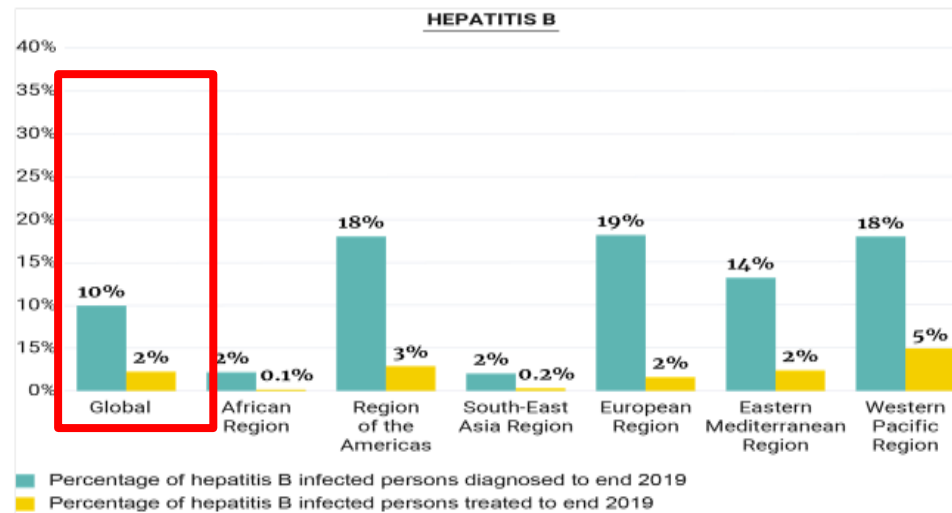
HEPATITIS C INCIDENCE



Cascade of care - major gaps in path towards public health elimination

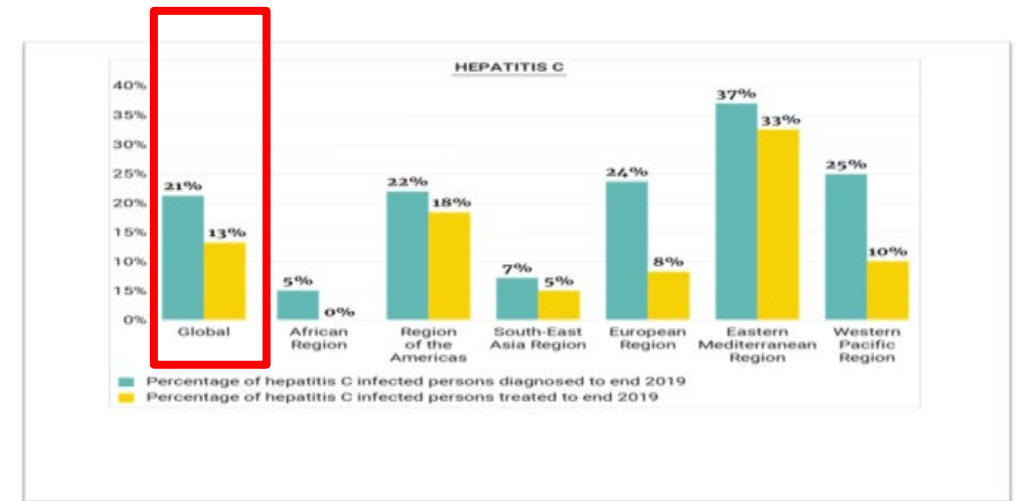


10% of estimated 296 million people with chronic HBV infection were diagnosed in 2019 with variation by regions



Data shows major gaps in path towards universal health access and public health elimination

21% of estimated 58 million people with chronic HCV infection were diagnosed in 2019 with variation by regions



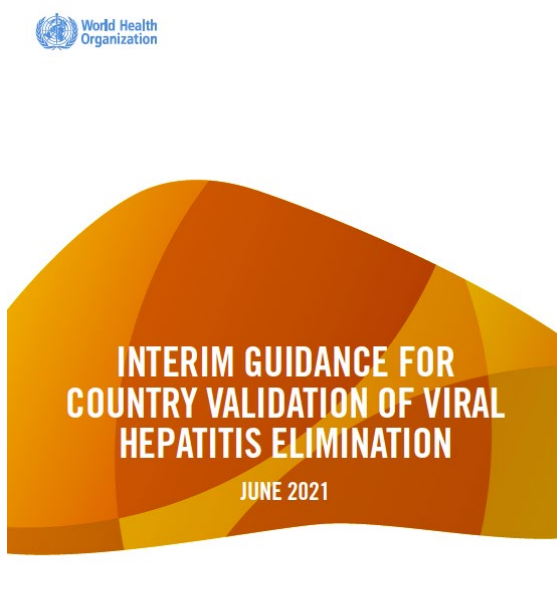
Data shows major gaps in path towards universal health access and public health elimination



What will it take to achieve elimination?

New guidance for country validation of
viral hepatitis elimination

2021 Elimination Guidance for country validation of viral hepatitis elimination



A global framework (elimination criteria and validation process) for country validation of elimination of hepatitis B and C as a public health problem

Methodology: Two 2020 global consultation meetings attended by >50 experts and Ministry of Health representatives from 15 countries. Supported by assessment of country preparedness + measurement options, community consultation, and modelling work.

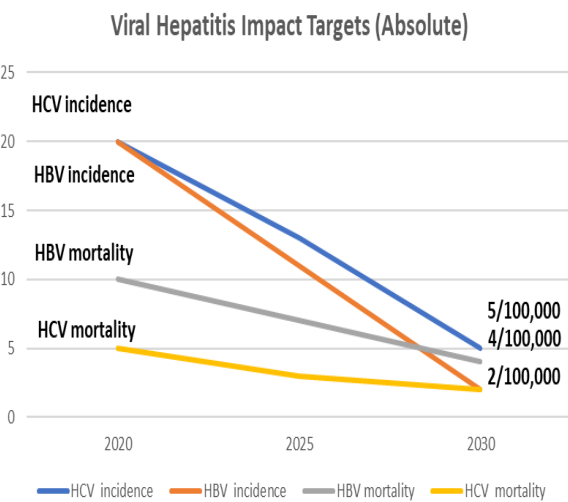
Guiding principles:

- Process is **country-led**
- **Motivate countries** to accelerate action on hepatitis elimination
- Place hepatitis elimination efforts within a **public health response**
- Provide guidance that can be **applied to different country contexts**, regardless of differences in epidemic profile or affected populations
- **Promotes human rights and equity in access**

TABLE 2.2 Options for validation of elimination of viral hepatitis B and C as a public health problem

Option	Options for validation of elimination	Impact indicators	Programme indicators
Option A	HBV EMTCT (as part of triple elimination of HIV, syphilis and HBV, or HIV/HBV) ^a	Annual HBV incidence ^b and MTCT rate ^c (additional target) in countries with targeted timely HepB-birth dose (BD)	HBV birth dose and infant vaccination coverage for newborns and infants HBV antenatal testing and antiviral prophylaxis coverage
Option B	HCV as a public health problem	Annual HCV incidence and HCV mortality	Coverage of prevention, testing and treatment
Option C	HBV as a public health problem (including HBV EMTCT)	Annual HBV incidence (and MTCT rate) and HBV mortality	Coverage of prevention, testing and treatment
Option D	Elimination of both HBV and HCV as a public health problem (including HBV EMTCT)	A, B and C above	A, B and C above

A global framework (elimination criteria and validation process) for country validation of elimination of hep B/C as a public health problem



■ **ABSOLUTE targets:**

(i) Enables direct comparison across countries of progress towards elimination
(ii) Avoids needs to establish baseline incidence or mortality

- Incidence should be in populations representative of the general or PWID population
- Programme coverage needs to be achieved and maintained for at least 2 years

Elimination targets

2030 GHSS relative reduction reference targets (compared to 2015)

HBV- and HCV-specific absolute prevalence, incidence and mortality targets

Programmatic targets^d

Elimination of chronic HBV infection as a public health problem

Incidence
95% reduction

Mortality
65% reduction

HBV EMTCT
≤0.1% HBsAg prevalence in ≤5 year olds^{a,b}
Additional target: ≤2% MTCT rate (where use of targeted HepB-BD)^c

Countries with universal HBV vaccine birth dose (BD)
≥90% HepB3 vaccine coverage
≥90% HepB timely hepatitis B BD (HepB-BD) coverage^e

Countries with targeted HBV vaccine birth dose (BD)
≥90% HepB3 vaccine coverage
≥90% coverage of those infants at risk with targeted HepB-BD
≥90% coverage of maternal antenatal HBsAg testing
≥90% coverage with antivirals for those eligible^f

Annual mortality^g (HBV)
≤4/100 000

Testing and treatment
≥90% of people with HBV diagnosed
≥80% of people diagnosed with HBV and eligible for treatment are treated^h

Prevention
≥90% HepB3 vaccine coverage
≥90% HepB-BD coverage

Elimination of chronic HCV infection as a public health problem

Incidence
80% reduction

Mortality
65% reduction

Annual incidence (HCV)
≤5/100 000
≤2/100 (PWID)

Testing and treatment
≥90% of people with HCV diagnosed
≥80% of people diagnosed with HCV are treated^g

Prevention
0% unsafe injections
100% blood safety
300 needles/syringes/PWID/year

Country Preparedness for Validation of Elimination

Key Insights from 28 priority countries and 7 pilot countries (2022)

Country	HCV Prevalence Estimate	Annual HCV Incident Cases	HBV Prevalence Estimate	Annual HBV Incident Cases	5-Year-Old HBV Prevalence	Liver Cancer Registry	Portion of Liver Cancers Attributed to HCC	Fraction of HCC Attributed to HCV & HBV	Liver Transplant Registry	Attributed Fraction of Liver Transplants	Cirrhosis Registry	Attributed Fraction of Cirrhosis Cases	HCV Related Deaths	HBV Related Deaths
Brazil														
Burkina Faso														
Cambodia														
Cameroon														
China														
Colombia														
Egypt														
Ethiopia														
Georgia														
India														
Indonesia														
Kyrgyzstan														
Mongolia														
Morocco														
Myanmar														
Nepal														
Nigeria														
Pakistan														
Peru														
Philippines														
Russia														
South Africa														
Tanzania														
Thailand														
Ukraine														
Uzbekistan														
Vietnam														

* Blank cells – no data

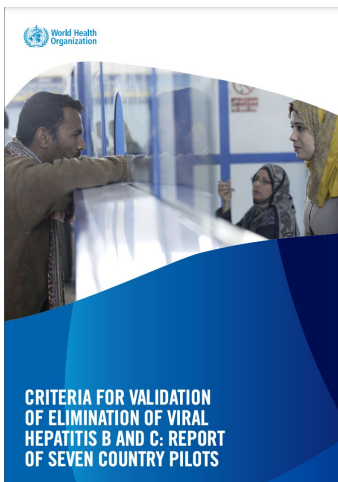
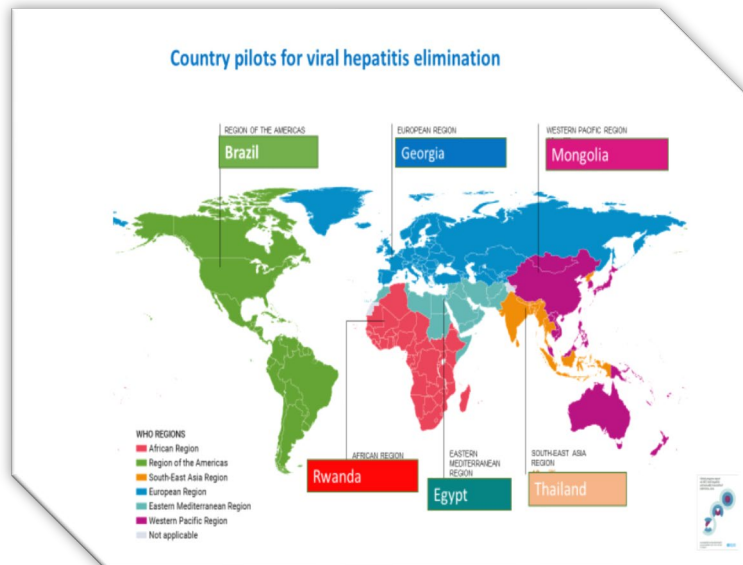
- Assessed 28 countries across 5 WHO regions – AFRO (7), EMRO (3), EURO (5), PAHO (3), SEARO (5) and WPRO (5)

Most commonly available data:

- 11 of 28 countries had high-quality HCV prevalence estimate
- 12 of 28 countries had high-quality HBV prevalence estimates

Least commonly available data:

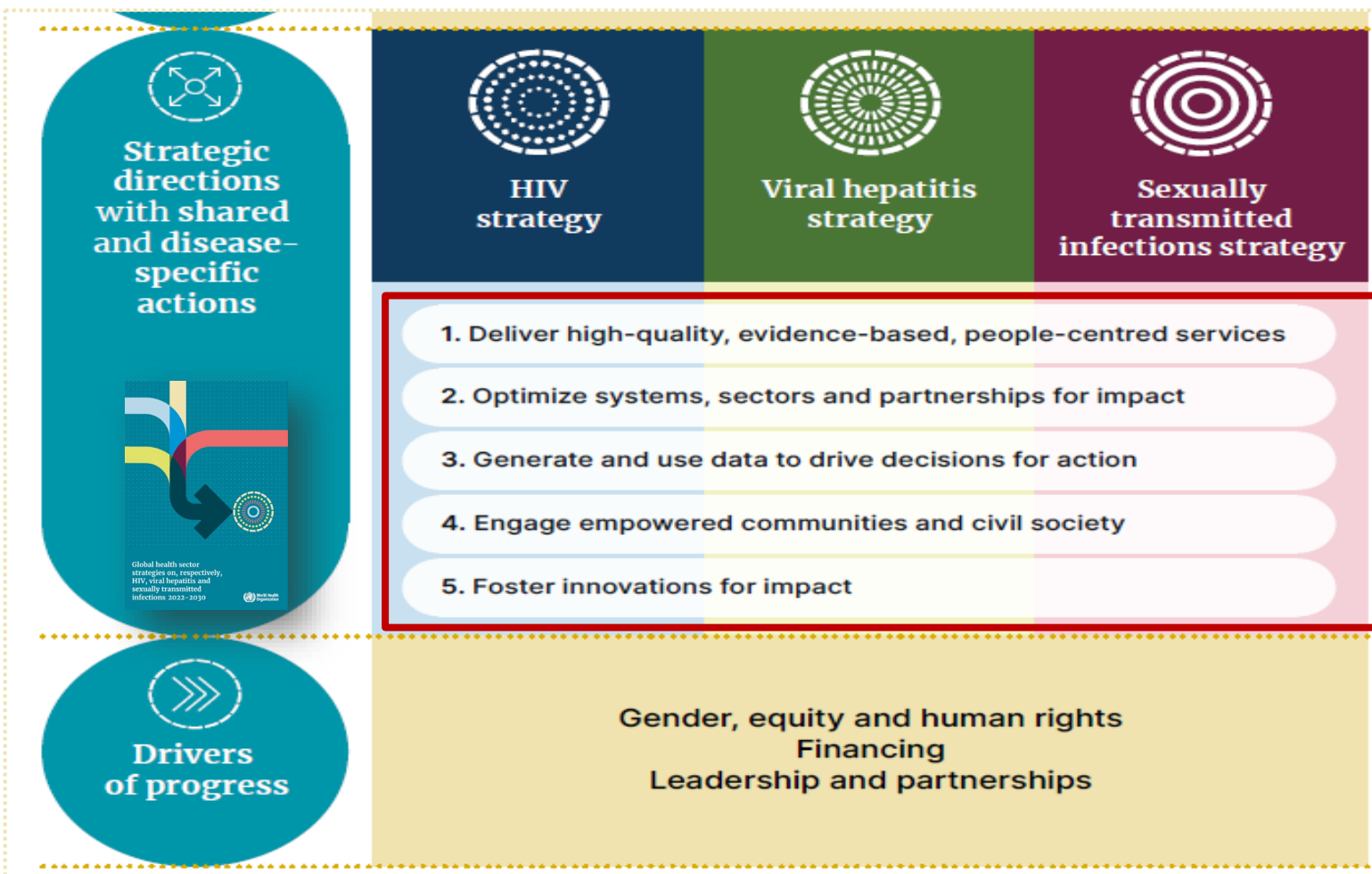
- HCV/HBV related deaths** - many countries have a death registry, but few collect systematic data on deaths caused by viral hepatitis B/C
- Incidence of HCV and HBV** - many countries have registries for acute hepatitis, but number of reported cases is a fraction of all cases
- Cirrhosis and HCC** - number and fraction attributed to hepatitis B/C
- Lack of quality data will make it difficult to track the progress of countries toward elimination targets



Closing the gap to 2030 hepatitis elimination

New linked GHSS for HIV, VH, STI (2022-2030)

Five new strategic direction to achieve global impact in hepatitis elimination and promote person centered care and integration



National planning efforts are guided by the global shifts of GHSS 2022-2030:

- Putting people at the centre
- **Simplified and decentralized service as well as integrated service delivery**
- Addressing unique priorities for each disease area
- Taking a shared approach towards strengthening health and community systems
- Responding to a swiftly changing health and development context
- Eliminating stigma, discrimination and other structural barriers

Promoting the use of National strategic plans as the basis for a country-led national response including by multilateral and bilateral donor and development agencies, civil society and other stakeholders

Key shifts required to end the AIDS by 2030



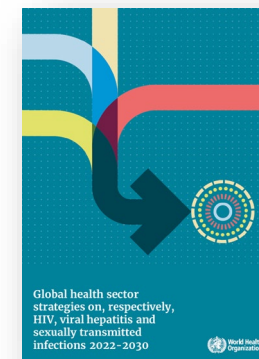
- Renew the **focus on primary prevention** including through primary health care
- Address the **major causes of HIV related deaths**, including tuberculosis, cryptococcal meningitis, and severe bacterial infections
- **Close gaps in service access for children** and adolescents
- Leveraging **antiretrovirals for prevention**
- Address the barriers faced by **key populations**
- Apply differentiated approaches to service delivery to meet the specific needs of populations and settings
- **Leverage innovations**, including new treatment regimens, new prevention approaches, support vaccine and effective cure agendas, supported by research that includes the needs of resource-limited settings

Key shifts required to end the epidemic of viral hepatitis by 2030



- **Greater public awareness** of the importance of viral hepatitis B and C prevention, testing and treatment
- **Strengthened community and civil society engagement**
- Scale-up of **universal access to hepatitis B birth dose vaccine** and improved services for prevention of vertical transmission
- Continuous investment in primary prevention
- **Greatly increased access to hepatitis B and C virus testing and treatment**
- **Simplified and decentralized service as well as integrated service delivery**
- Development of curative drug regimens for hepatitis B virus
- **Increased visibility and financial resources allocated**

Key Shifts from the GHSS – Areas for prioritization in 2023



Key shifts required to end STIs as a public health threat by 2030



- Increased **visibility and partner engagement** at all levels
- Vastly scale up **primary prevention**
- Increase **integration** of sexually transmitted infection services with **primary health care**, sexual and reproductive health, and HIV services for access to care
- Increase accessibility of **people-centred services** through public and private sectors
- **Close gaps in international and national funding**
- Facilitate adoption of **point-of-care diagnostics and other new cost-effective technologies**
- Invest in and facilitate research

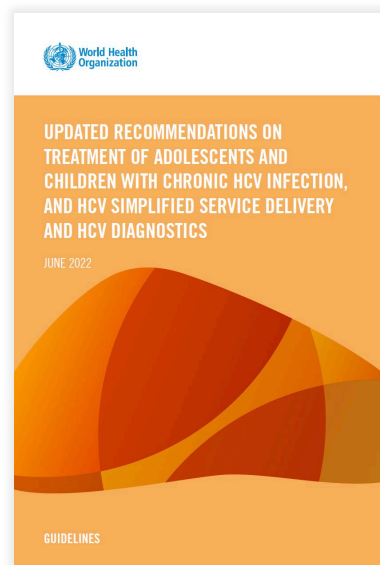
What will it take to achieve elimination?

Need for radical simplification of care pathways to achieve elimination

New 2022 WHO Guidance on HCV simplified service delivery, HCV diagnostics and treatment of adolescents and children



NEW



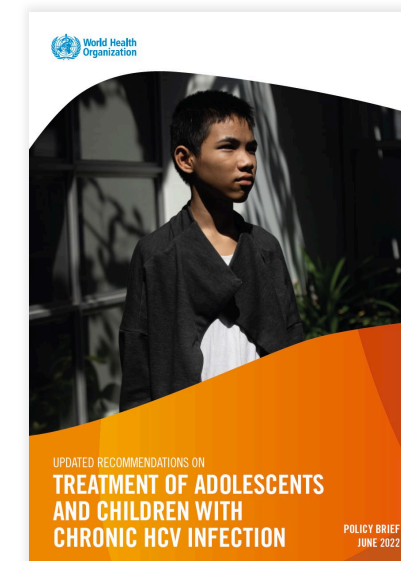
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NEW



<https://www.who.int/publications/i/item/9789240052710>

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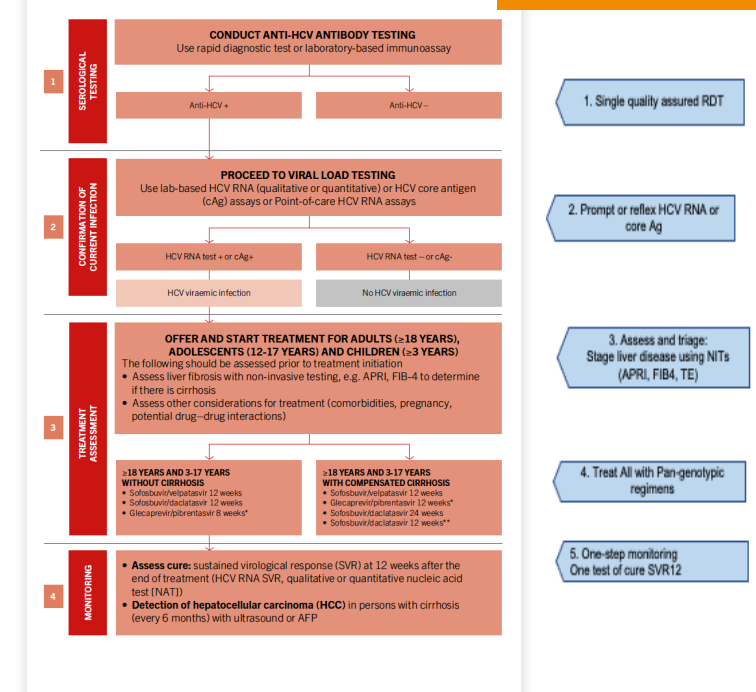
Continued Evolution of WHO HCV Guidelines Towards simplified Treatments + Simplified HCV Service Delivery

Topic	2014	2016	2018	2022
Who to treat?			Treat All	Treat All
Genotyping	Yes	Yes	No	No
Regimens	PEG-IFN+RBV	DAA preferred	Pan-genotypic DAAs	Pan-genotypic DAAs
	8 options <ul style="list-style-type: none"> PEGIFN+RBV SOF+RBV SIMP or TELAP or BOCEP /PEGIFN+RBV 	6 options DAAs preferred by GT or cirrhosis	3 options SOF/DAC SOF/VEL G/P PEGIFN phase out	3 options SOF/DAC SOF/VEL G/P Paeds formulations
	SIMPLER TREATMENTS			
Age group	Adults ≥18yrs	Adults ≥ 18yrs	Adults ≥18yrs and adolescents ≥12 yrs	Adults, adolescents and children ≥3 yrs
	TREATMENT OF CHILDREN AND ADOLESCENTS			
Service Delivery			8 Good Practice Principles for Simplified Service	Decentralization Integration Task-shifting
	SIMPLIFIED SERVICE DELIVERY			
HCV NAT diagnosis		Laboratory-based NAT	Core Ag	-HCV Self-testing (2021) -POC NAT assay -Reflex NAT testing (lab or clinic-based)
	DIAGNOSTIC INNOVATIONS			



CHAPTER 6. SIMPLIFIED SERVICE DELIVERY FOR A PUBLIC HEALTH APPROACH TO TESTING, CARE AND TREATMENT FOR HCV INFECTION

FIGURE 1. Summary algorithm on HCV testing and treatment



sofosbuvir/daclatasvir: SOF/DAC
 sofosbuvir/velpatasvir: SOF/VEL
 glecaprevir/pibrentesvir: G/P

2022 recommendations



Decentralization, Integration and Task-shifting *Moving treatment and care out of speciality clinics*

Decentralization:

We recommend delivery of HCV **testing** and **treatment** at peripheral health or community-based facilities, and ideally at the same site, to increase access to diagnosis, care and treatment.

These **facilities** may include **primary care, harm reduction sites, prisons and HIV/ART clinics as well as community-based organizations** and outreach services.

Integration:

We recommend integration of HCV **testing** and **treatment** with existing care services at peripheral health facilities.

These **services** may include **primary care, harm reduction** (needle and syringe programme (NSP)/opioid agonist maintenance therapy (OAMT) sites), **prison and HIV/ART services**.

Strong recommendation/ moderate certainty of evidence (PWID/prisoner) low (general population, PLHIV)

Task-sharing: We recommend delivery of HCV **testing, care and treatment** by trained **non-specialist doctors and nurses** to expand access to diagnosis, care and treatment.

Strong recommendation/ moderate certainty of evidence

RATIONALE for Recommendations on Decentralization, Integration and Task-sharing

Evidence review

- 142 studies from 33 countries (14%) LMICs) compared full decentralization/integration vs. partial decentralization or none, and task-sharing to non-specialists.
- Increased uptake of HCV viral load testing, linkage to care and treatment among people who inject drugs and prisoners for full decentralization/integration.
- Comparable SVR12 cure rates between specialists and non-specialists across all populations and in all settings

Acceptability by end-users

- Three related surveys and a series of in-depth interviews showed strong support for fully decentralized and integrated HCV services offering testing and treatment at same community site and near to people's homes rather than in hospitals.
- Importance of a non-judgmental/non-stigmatizing approach among health care providers highlighted, especially among PWID and PLHIV.



Decentralisation, integration, and task-shifting in hepatitis C virus infection testing and treatment: a global systematic review and meta-analysis

Eno Onu, Andrew Tackley, Rohan Shirai, Steve Kanters, Philippe Easterbrook

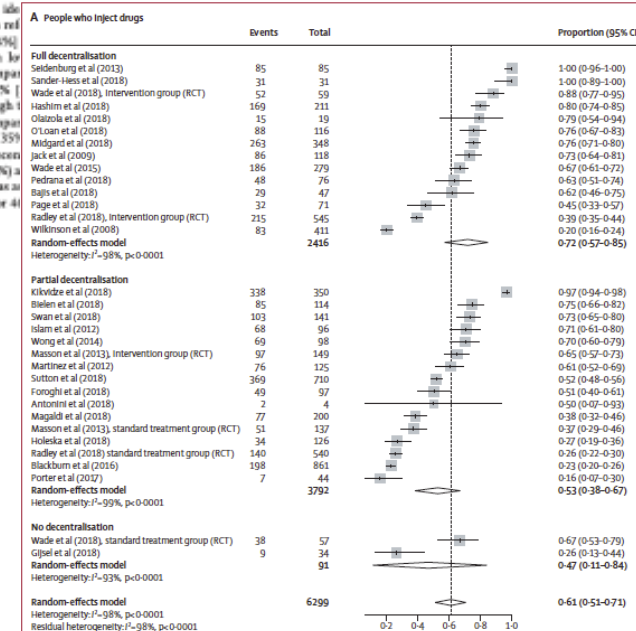
Summary

Background Increasing access to hepatitis C virus (HCV) care and treatment will require simplified service delivery models. We aimed to evaluate the effects of decentralization and integration of testing, care, and treatment with harm-reduction and other services, and task-shifting to non-specialists on outcomes across the HCV care continuum.

Methods For this systematic review and meta-analysis, we searched PubMed, Embase, WHO Global Index Medicus, and conference abstracts for studies published between Jan 1, 2008, and Feb 20, 2018, that evaluated uptake of HCV testing, linkage to care, treatment, cure assessment, and sustained virological response at 12 weeks (SVR12) in people who inject drugs, people in prisons, people living with HIV, and the general population. Randomised controlled trials, non-randomised studies, and observational studies were eligible for inclusion. Studies with a sample size of ten or less for the largest denominator were excluded. Studies were categorised according to the level of decentralisation: full (testing and treatment at same site), partial (testing at decentralised site and referral elsewhere for treatment), or none. Task-shifting was categorised as treatment by specialists or non-specialists. Data on outcomes across the HCV care continuum (linkage to care, treatment uptake, and SVR12) were pooled using random-effects meta-analysis.

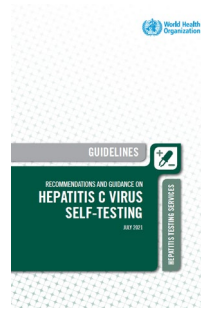
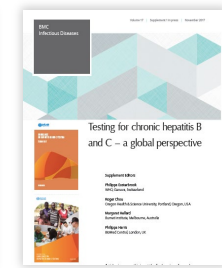
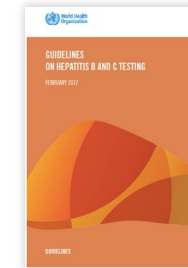
Findings

Our search identified 34 countries (28 [84%] (239/446 [49%] from full decentralisation compared 57–85 [50%] [29–71], although decentralisation compared 66% [55–77] vs none 35% full versus partial decentralisation were high (a98%) a to a non-specialist was a critical risk of bias for 4



Evolution in Hepatitis C testing and diagnostic recommendations

Topic	Recommendation in 2017 testing recommendation
Who to test?	<ul style="list-style-type: none"> • Focused testing for most affected populations*, those with a clinical suspicion of chronic viral hepatitis, family members/children, and sexual partners (HBV), healthcare workers. • General population testing: In settings with $\geq 2\%$ or $\geq 5\%$ (intermediate/high) HBsAg or HCV Ab prevalence.
How to test?	<ul style="list-style-type: none"> • A single serological assay (EIA or RDT) that meets minimum performance standards with prompt NAT testing + linkage to care
Confirmation of HCV viraemia	<ul style="list-style-type: none"> • Lab-based Nucleic acid testing (NAT) (quantitative or qualitative RNA) or core HCV antigen assay, with comparable clinical sensitivity
Promoting uptake and linkage	<ul style="list-style-type: none"> • Use of DBS specimens for virology \pm serology • On-site or immediate RDT testing + same day results • Trained peer and lay health workers • Clinician reminders to prompt provider initiated, facility-based testing • Testing as part of integrated services at a single facility



2021 and 2022 Updates

How to test - serologic

- 2021 HCV self-testing guideline



Use of POC HCV RNA NAT

- For detection of viraemia
- For test of cure



Linkage to care

- Dried blood spots (HCV serology and virology) manufacturers protocols
- Reflex viral load



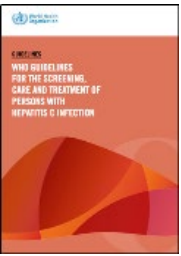
The need for simplification in care pathway to achieve elimination – 8 Good practice principles

1. **Simple and standardised algorithms** for testing, care and treatment
2. **Case-Finding plan: Who to test and where to test?**
3. **Strengthening the linkage** from testing to care.
4. **Moving treatment out of speciality clinics – Decentralized** testing and treatment
5. **Integration** of hepatitis testing, care and treatment with other services, and integrated multi-disease diagnostic platforms.
6. **Task-shifting to non-specialist health workers** to support decentralized care.
7. **Engagement with community.**
8. **Efficient procurement + supply management** of quality medicines/diagnostics

Differentiated care needs and approaches for viral hepatitis

Who? HCV-infected persons category	What? Care needs	Where? Site	By whom? Caregiver
Clinically well and stable	Standard care package: counselling, adherence support, treatment initiation and monitoring	Facility-based, including primary care or community-based settings, and mobile/outreach	Physician or nurse
Advanced liver disease or serious comorbidities, hepatocellular cancer (HCC), previous treatment failure	Requiring more intensive clinical support and follow up: management of liver-related complications (e.g. variceal bleed, ascites, encephalopathy, HCC treatment)	Facility-based – hospital	Physician
Mental health issues, people who inject drugs or engage in alcohol misuse, adolescents, migrants	Requiring more intensive psychosocial/ mental health support, or intercultural and language support	Can be facility-based or community-based, harm reduction site	Physician and counsellor/peer support

Different approaches to implement simplified Hepatitis service delivery models to achieve elimination

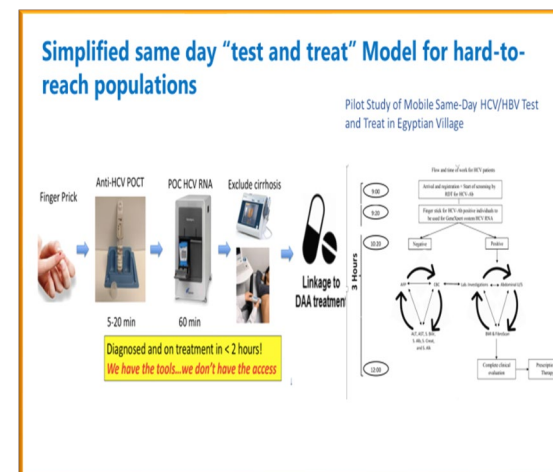
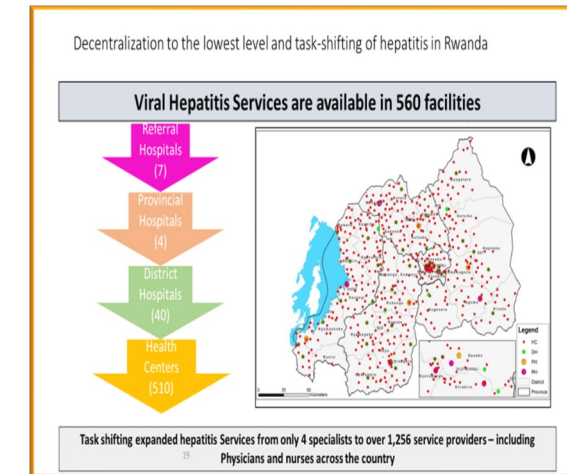
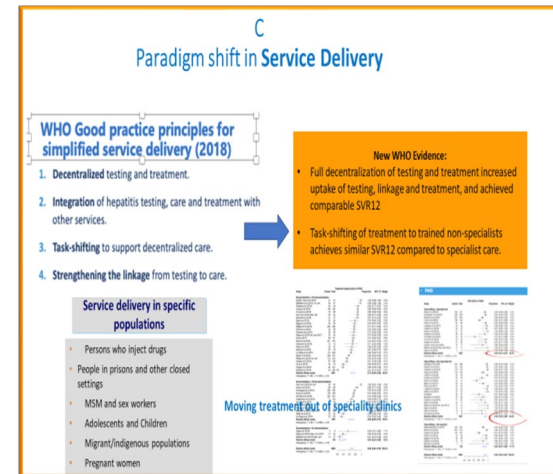


Decentralization and Integration

- **Adaptation of service delivery recommendations for different contexts and countries and for specific populations.**
- **Implementation alongside other existing good practice principles of simplified service delivery:-** standardized algorithms, **differentiated care strategy**, community engagement and peer support, more efficient procurement, supply management and data systems, strengthening linkage and referral systems.
- **Planning and coordination needed for effective delivery of integrated care** – establishing integrated data systems and cross-training of health care providers.

Next steps – Closing the gap to hepatitis elimination 2030

- Paradigm shift in service delivery
- Case-finding strategy is key
- Feasible opportunities for integration (diagnostic and clinical services, procurements, financing)
- Diagnostic innovations and opportunities
- Increasing financing and resource mobilizing
- Major improvements needed in viral hepatitis data– country reporting, accuracy of estimates and cascade



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