

Impact of COVID-19 on the prevention, diagnosis and treatment of Hepatitis B

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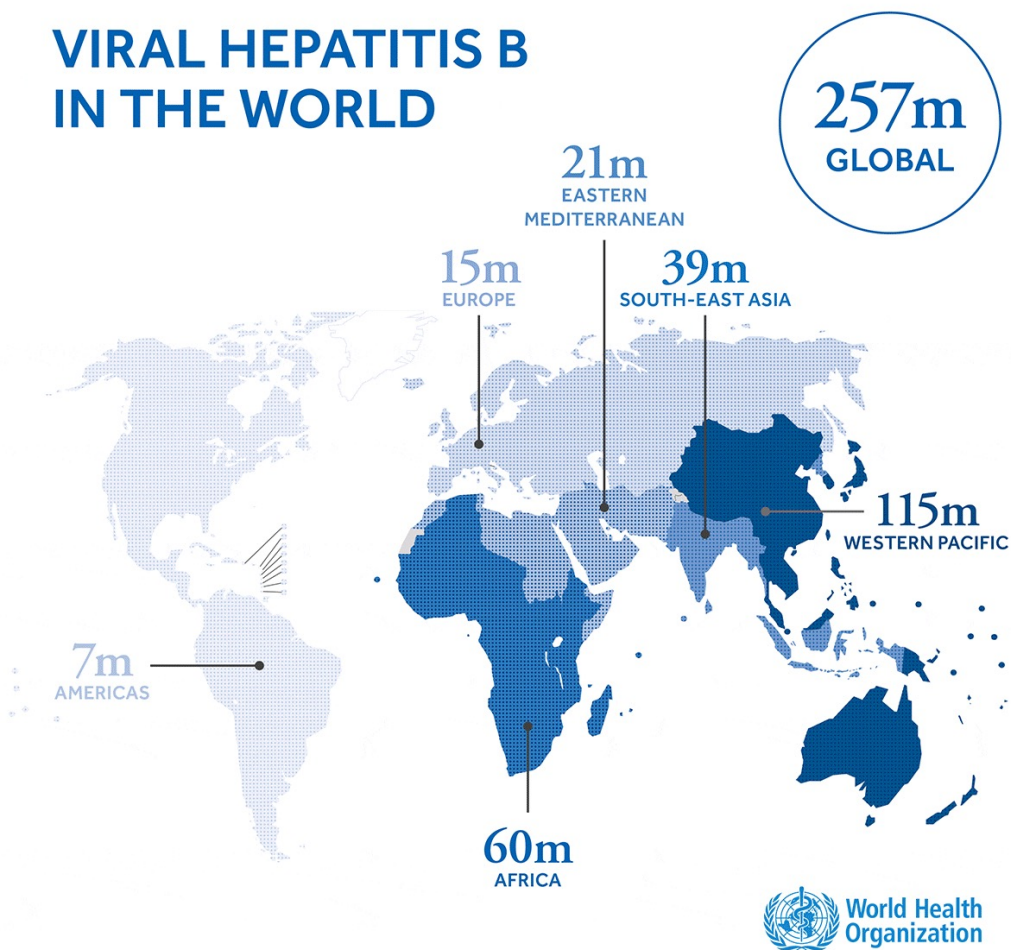


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Context

VIRAL HEPATITIS B IN THE WORLD



SUSTAINABLE DEVELOPMENT GOALS

TARGET 3.3: COMBAT VIRAL HEPATITIS

Combating viral hepatitis goes beyond a health issue. Eliminating viral hepatitis will successfully contribute to achieving many other targets

- 3.1: Reducing maternal mortality
- 3.4: Reducing mortality from non-communicable diseases
- 3.5: Preventing and treating substance use disorders
- 3.8: Achieving universal health coverage
- 3.b: Access to affordable medicines and vaccines
- 3.c: Health financing and health workforce

1: Ending poverty

6: Managing water and sanitation

10: Reducing inequality in access to services and commodities

16: Promoting inclusive societies that promote non-discrimination

17: Financing and capacity building for implementation

“A goal of eliminating viral hepatitis as a major public health threat by 2030”

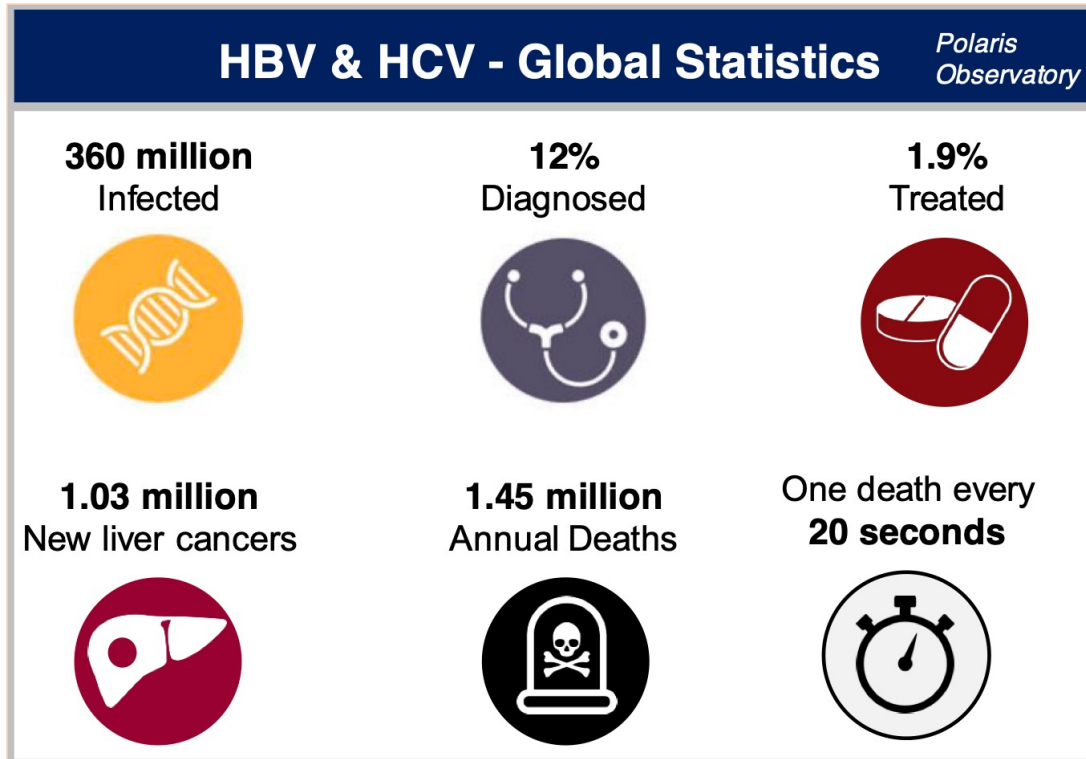
World Health Organization

JUNE 2016

GLOBAL HEALTH SECTOR STRATEGY ON
VIRAL HEPATITIS
2016–2021

TOWARDS ENDING VIRAL HEPATITIS

Challenges



VIEWPOINTS

Hepatitis B virus infection as a neglected tropical disease

O'Hara GA, et al. (2017) PLoS Negl Trop Dis 11(10): e0005842.
<https://doi.org/10.1371/journal.pntd.0005842>

Barriers to elimination

Stigma and discrimination

Silent infection

Poverty

Complacency

High burden in LMIC

Lack of public and media representation

Poor education and knowledge

Lack of investment

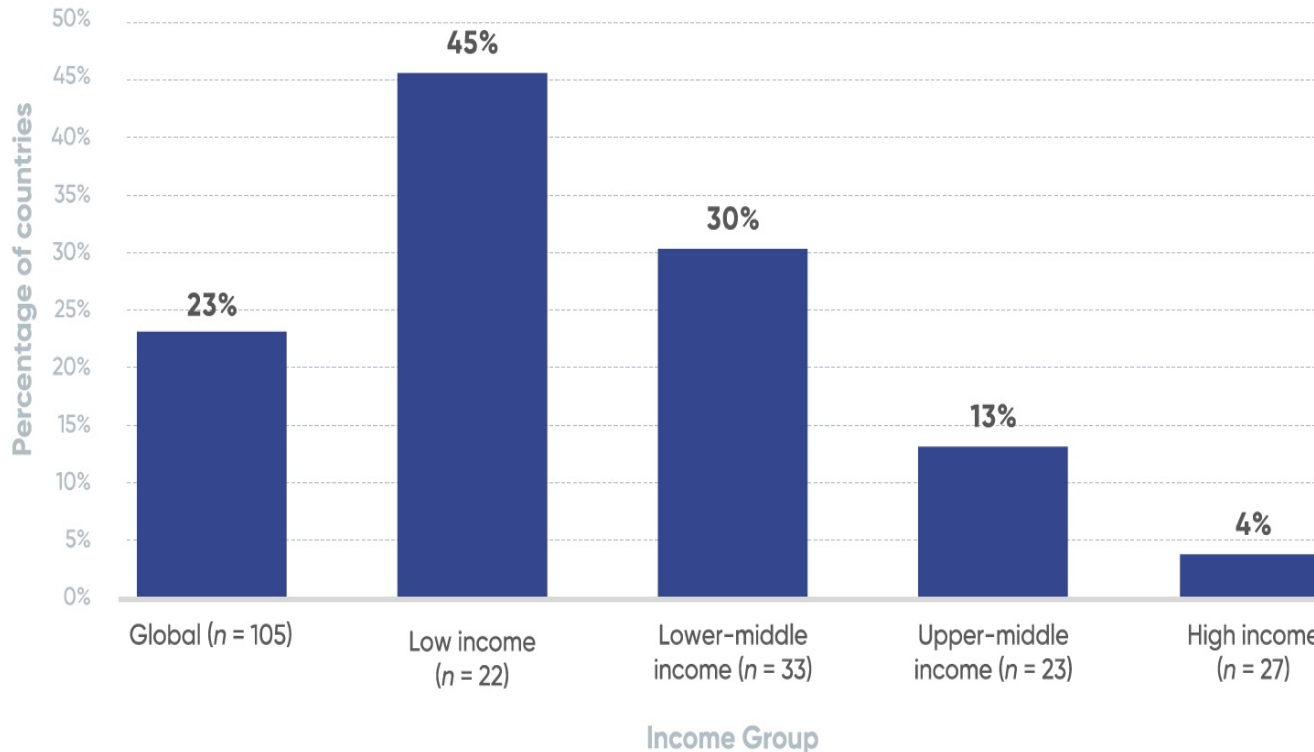
Lack of infrastructure

Poor quality data

Lack of major dedicated funding agencies

Impact of COVID

Percentage of countries reporting at least partial disruption due to COVID-19 in at least 75% of services (n = 105)



- The American Hospital Association estimates a financial impact of \$50.7 billion per month in lost revenue for America's hospitals and healthcare systems.
- Cost to low- and middle-income countries ~ US\$52 billion each four weeks to provide an effective healthcare response to COVID.
- The World Bank projects that global growth is projected to shrink by ~8% with poorer countries feeling most of the impact.
- United Nations estimated cost to the global economy of around 2 trillion dollars in 2020.

Kaye et al., 2020. **Economic impact of COVID-19 pandemic on healthcare facilities and systems: International perspectives** [10.1016/j.bpa.2020.11.009](https://doi.org/10.1016/j.bpa.2020.11.009)

Agenda:

1. Disrupted vaccination campaigns
2. Altered transmission dynamics
3. Decreased diagnostic capacity
4. Reduced access to treatment
5. Health inequalities
6. Recommendations

Disrupted vaccination campaigns

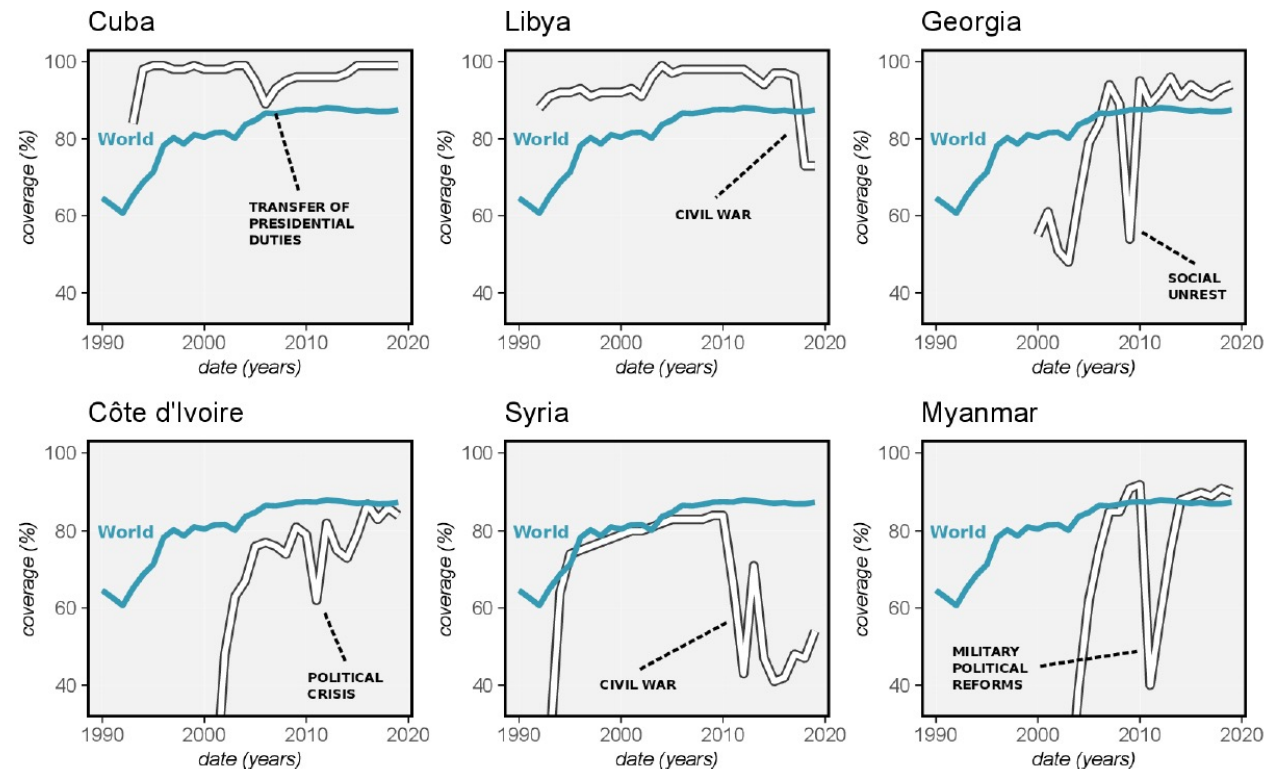
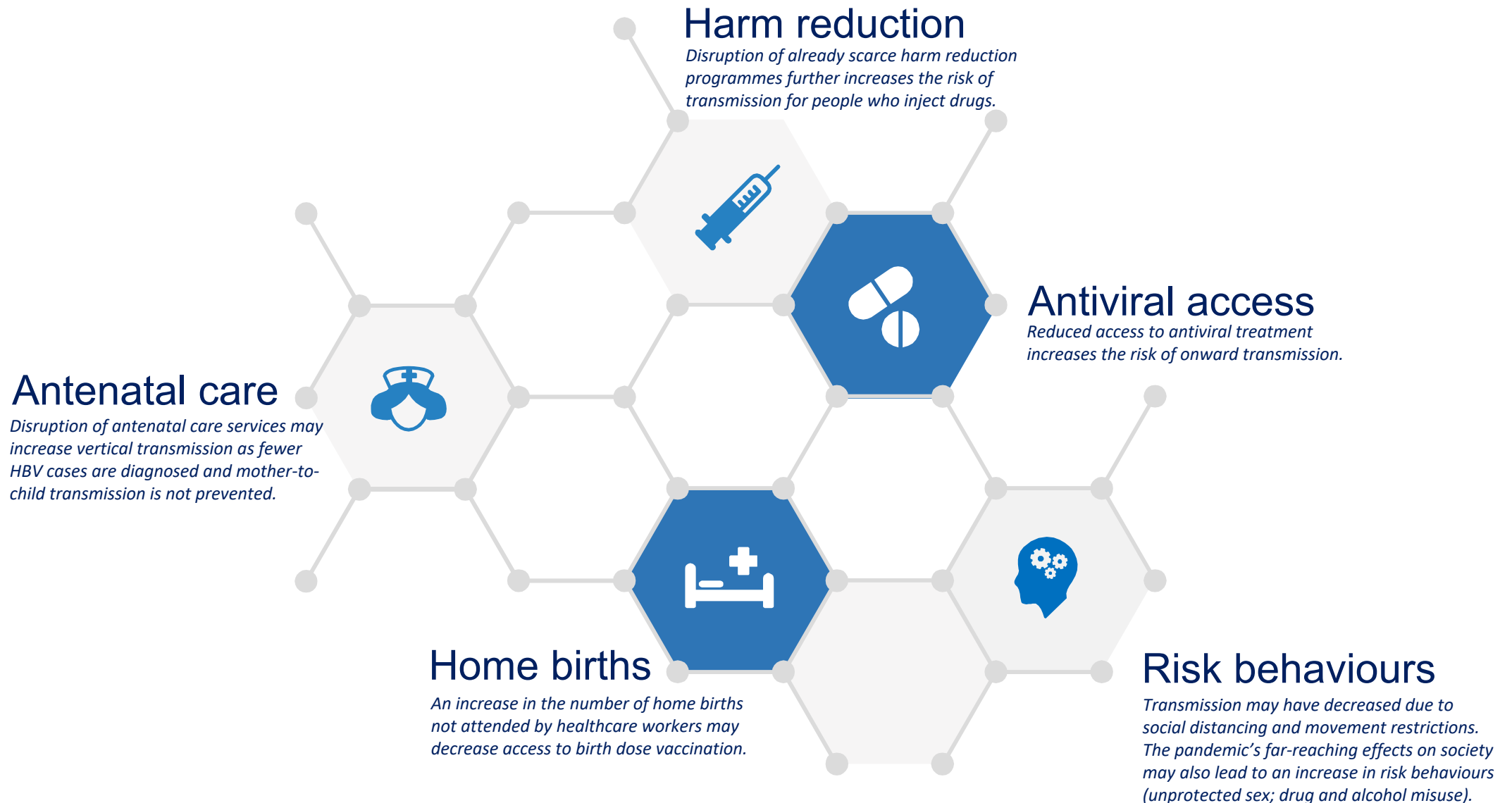
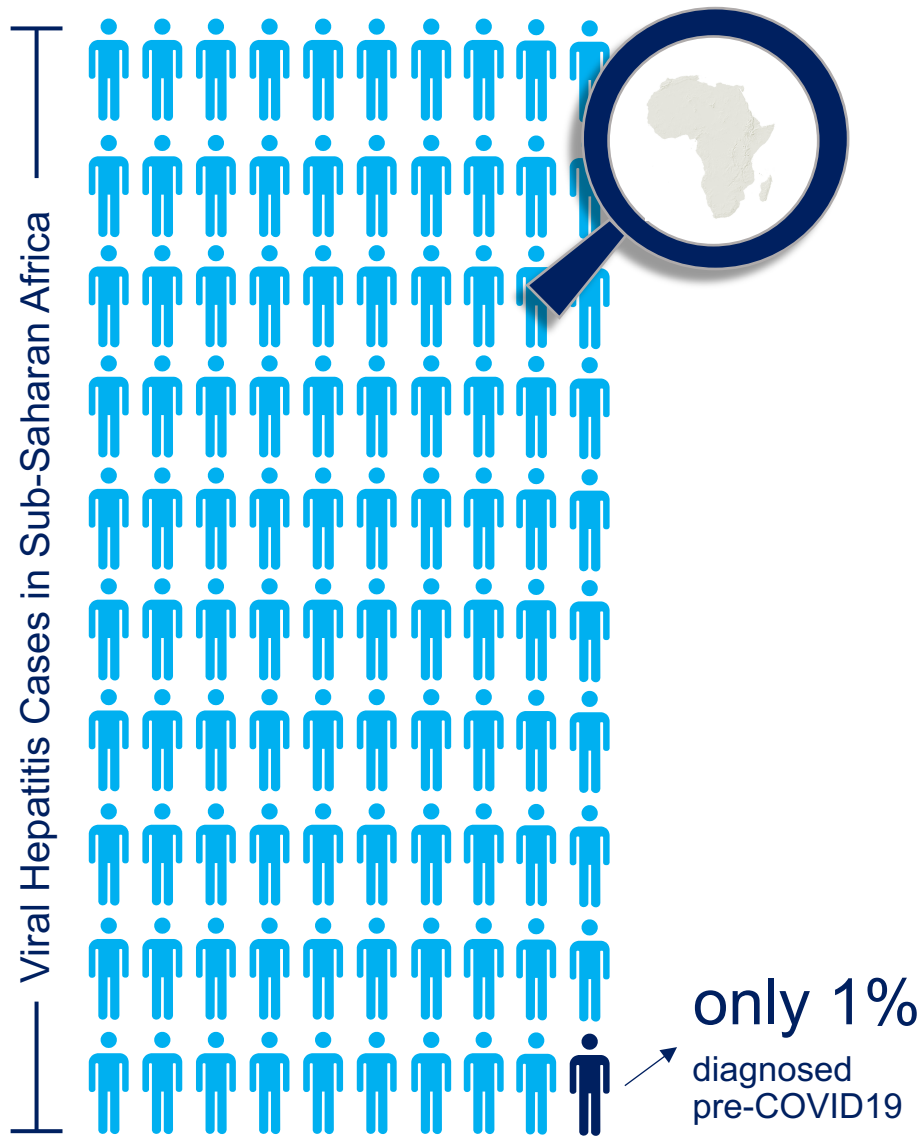


Figure 1 Hepatitis B vaccination coverage annotated to show correlation with societal disruption. Panels show the temporal correlation of drops in vaccination coverage with national crises (white line), such as the transfer of presidential duties in Cuba (2006–2008), the civil war in Libya (2014–present), a period of social unrest in Georgia (2009), a recent Ivorian political crisis (2010–2011), the civil war in Syria (2011–present) and the period of military-enforced political reforms in Myanmar (2011–2015). Data source: WHO/UNICEF (apps.who.int/immunization_monitoring/globalsummary).

Altered transmission dynamics

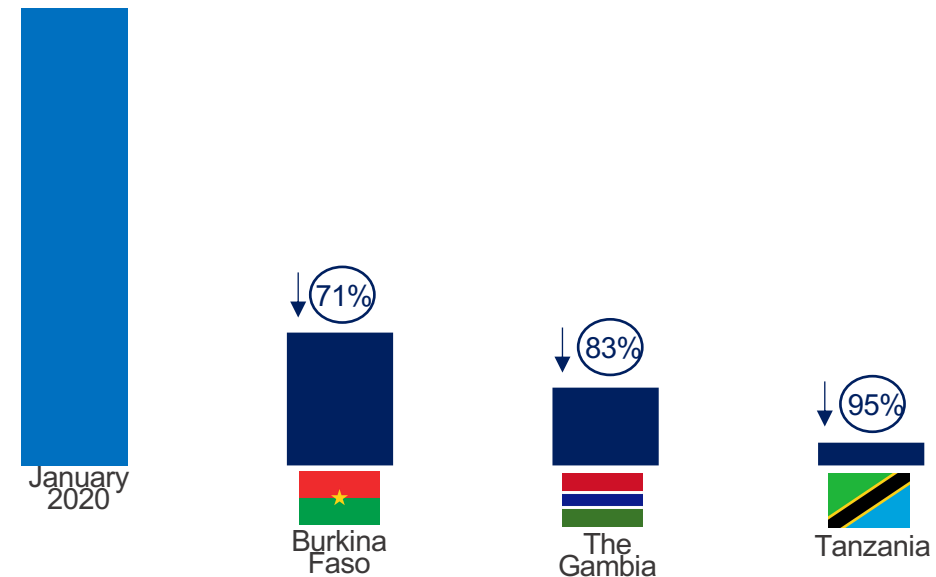


Decreased diagnostic capacity



- Missed diagnosis prevents entry into care
- Long-term effect on transmission dynamics
- Diversion of funding, infrastructure & human resources
- Disrupted diagnostics supply chains
- Movement restrictions and fear of healthcare facilities

New patients reviewed in viral hepatitis clinics
April 2020 compared to January 2020



Reduced access to treatment

Patient factors:

- ◆ Fear of health facilities
- ◆ Stay-at-home orders
- ◆ Insufficient financial resources to purchase medicines out-of-pocket

Health system factors:

- ◆ Redeployment of health workers
- ◆ Closure of health facilities
- ◆ Supply chain disruptions
- ◆ Impracticality of telemedicine

Example:

Aghemo et al. 2020: *at the height of Italy's first wave...*



1 in 4 hepatology wards converted

23% of HBV drug treatments postponed

only 18% continuity of care for hepatocellular carcinoma

only 32% continuity of care for decompensated cirrhosis

Health inequalities



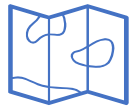
Economic recession and poverty



Unemployment and loss of health insurance



Co-morbid non-communicable diseases



Rural, indigenous and minority ethnic communities



Women and girls

Summary

Overarching: Funding | Advocacy | Research | Health Education | Community Engagement

Vaccination

- Interruption of routine immunisation programmes
- More home births affecting delivery of birth doses
- Disruption of global vaccine supply chains
- Vaccine hesitancy

Transmission

- Social distancing and movement restrictions decreasing opportunities for transmission
- Disruption of antenatal care leading to increased vertical transmission
- Increase in risk behaviours and disruption of harm reduction programmes

Diagnosis

- Decrease in diagnosed and notified cases due to impaired access to diagnostic services, including due to diversion of resources, movement restrictions and fear of health facilities
- Disruption of global diagnostics supply chain

Treatment

- Decreased access to treatment due to diversion of resources, movement restrictions and fear of health facilities
- Disruption of global antivirals supply chain
- Potential for reactivation following treatment for COVID-19

Recommendations (1/2)

Data collection: to identify gaps in provision of clinical and public health services, with special focus on high risk groups (e.g. those with established liver disease, antenatal women, men who have sex with men, people who inject drugs).

Service provision: to improve infrastructure for telemedicine, supported by electronic patient records, and to provide COVID-safe facilities for staff, patients and the public.

Political buy-in: to develop national strategies that incorporate goals for HBV interventions incorporating prevention, diagnosis and treatment.

Financial schemes: to support individuals making out-of-pocket contributions to diagnosis, monitoring and treatment.

Recommendations (2/2)

Catch-up vaccination: to invest in catch-up vaccination campaigns in infants and other high-risk groups, according to local population epidemiology.

Public health interventions: to undertake audit of existing interventions, support distribution of drugs/vaccines/laboratory consumables and invest in harm reduction services (e.g. alcohol and drug services, mental health).

Education and public health messaging: to reinforce benefits of care seeking, treatment and vaccination.

Advocacy: to support recuperation of charitable work, advocacy groups and education.