"A goal of eliminating viral hepatitis as a major public health threat by 2030"
Challenges

HBV & HCV - Global Statistics

360 million Infected
12% Diagnosed
1.9% Treated

1.03 million New liver cancers
1.45 million Annual Deaths
One death every 20 seconds

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

https://doi.org/10.1371/journal.pntd.0005842
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.

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

Harm reduction
Disruption of already scarce harm reduction programmes further increases the risk of transmission for people who inject drugs.

Antenatal care
Disruption of antenatal care services may increase vertical transmission as fewer HBV cases are diagnosed and mother-to-child transmission is not prevented.

Antiviral access
Reduced access to antiviral treatment increases the risk of onward transmission.

Home births
An increase in the number of home births not attended by healthcare workers may decrease access to birth dose vaccination.

Risk behaviours
Transmission may have decreased due to social distancing and movement restrictions. The pandemic’s far-reaching effects on society may also lead to an increase in risk behaviours (unprotected sex; drug and alcohol misuse).
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

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<th>Vaccination</th>
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<tr>
<td>• Interruption of routine immunisation programmes</td>
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<td>• More home births affecting delivery of birth doses</td>
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<td>• Disruption of global vaccine supply chains</td>
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<td>• Vaccine hesitancy</td>
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<th>Transmission</th>
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<td>• Social distancing and movement restrictions decreasing opportunities for</td>
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<td>transmission</td>
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<td>• Disruption of antenatal care leading to increased vertical transmission</td>
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<td>• Increase in risk behaviours and disruption of harm reduction programmes</td>
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<td>• 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</td>
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<td>• Disruption of global diagnostics supply chain</td>
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<td>• Decreased access to treatment due to diversion of resources, movement restrictions and fear of health facilities</td>
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<td>• Disruption of global antivirals supply chain</td>
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<td>• Potential for reactivation following treatment for COVID-19</td>
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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.