Prioritising viral hepatitis elimination to prevent liver cancer

Gaps, Successes and Good Practices

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VIRAL HEPATITIS COMSAVAC
Multi-Country Community Screening, Vaccination, and Care

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Main expertise (1-2 lines):

Public health and implementation research, with a focus on viral hepatitis and chronic liver disease. Expertise in implementation of community-based programmes for viral hepatitis prevention, screening and linkage to care.

Introduction: The burden of liver cancer

- Primary liver cancer is the **third most common cause of cancer-related death worldwide**
- Its impact is **expected to rise, resulting in an estimated more than one million deaths** annually in the next decade, with an increase of **more than 55%** of new liver cancer related cases and deaths **by 2040**
- Hepatocellular carcinoma (HCC) is the main histological subtype of primary liver cancer and accounted for 70-80% of global cases between 2018 and 2019

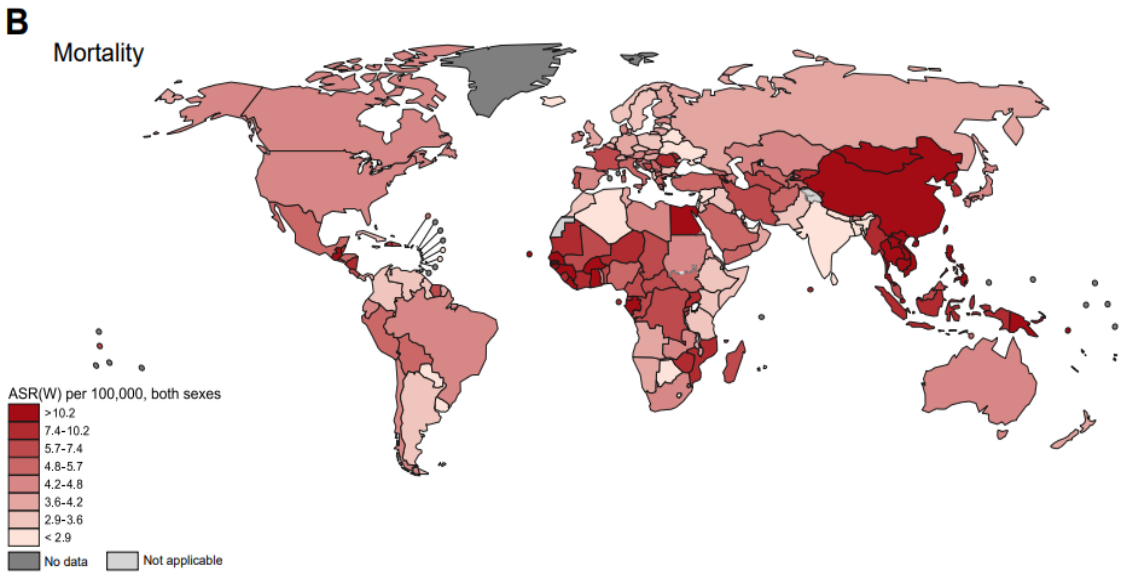


Fig. 1. ASRs for primary liver cancer per 100,000 people in 2020, by country. (A) Age-standardised incidence rate. (B) Age-standardised mortality rate. ASR(W), age-standardised rate. (This figure appears in color on the web.)

Source: Rumgay H et al., 2022.

Introduction: Raising trends in liver cancer

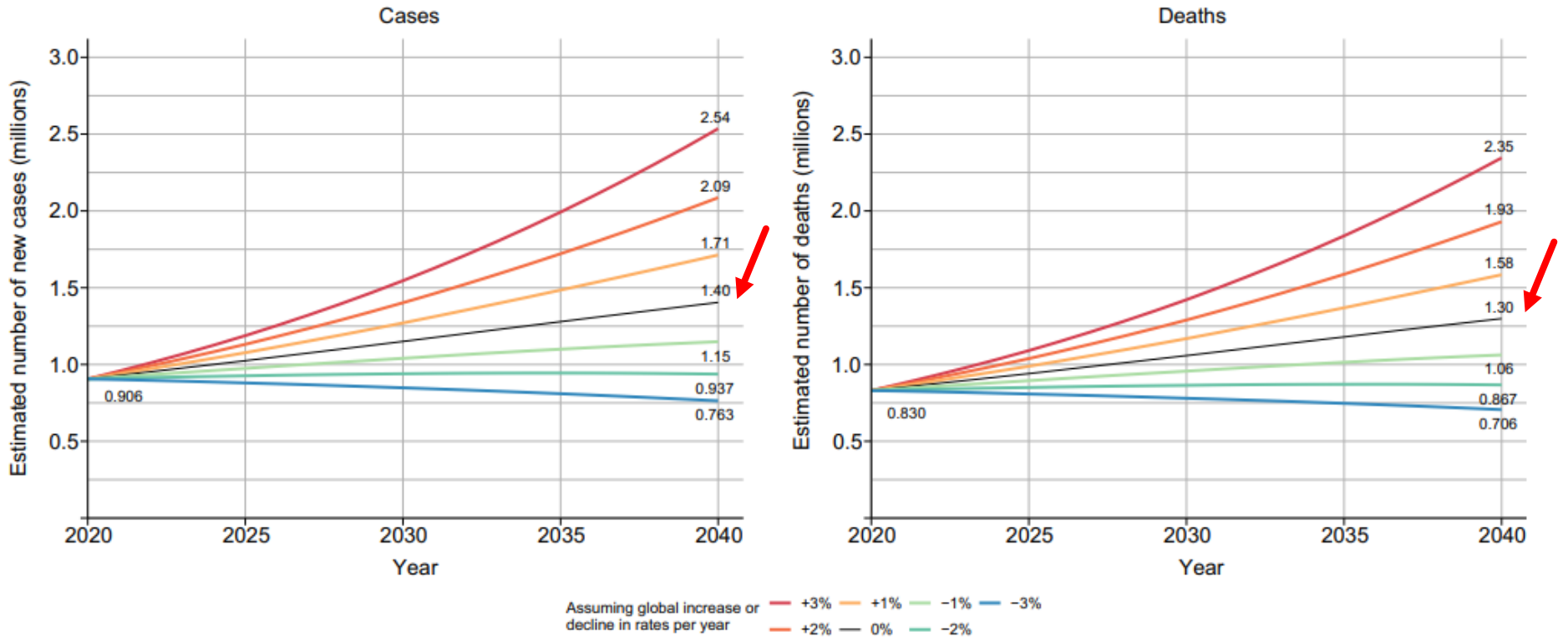
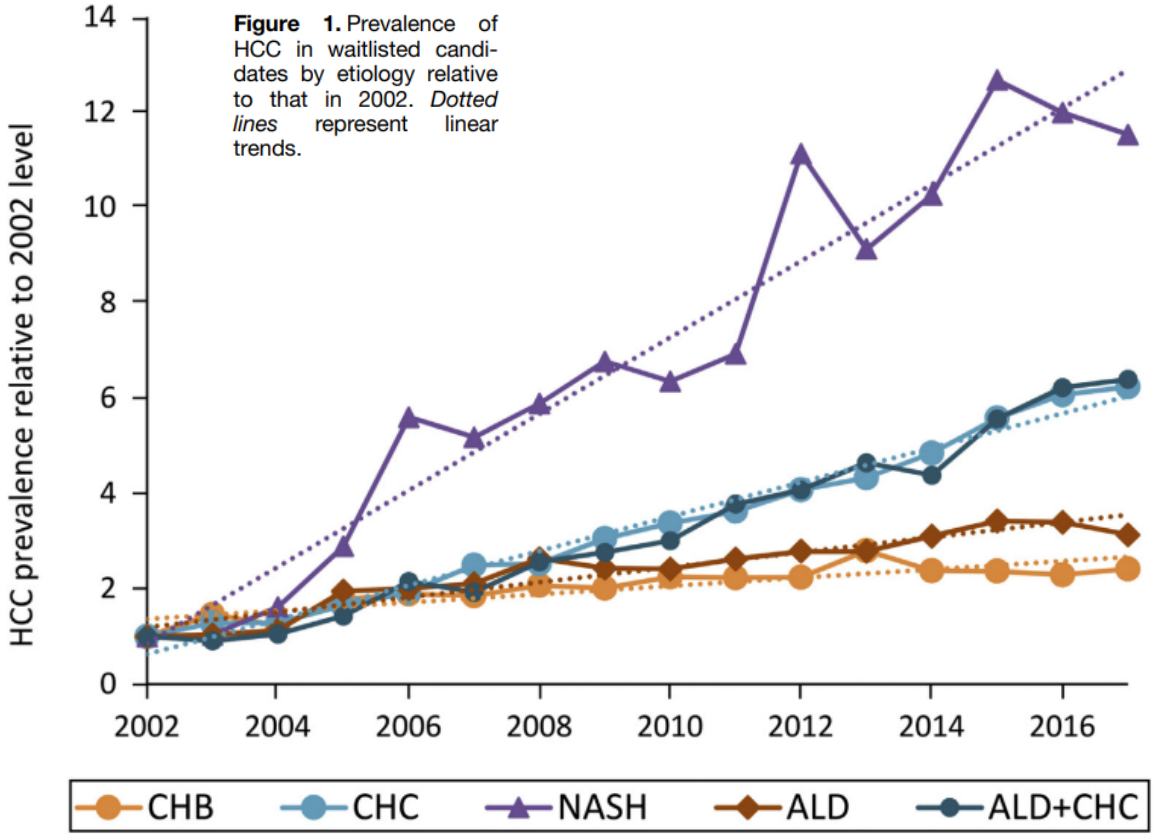


Fig. 4. Predicted number of new cases and deaths from primary liver cancer assuming seven scenarios of annual change in global rates between 2020 and 2040. (This figure appears in color on the web.)

Source: Rumgay H et al., 2022.

Introduction: Complex interplay of aetiologies

- **HBV and HCV are the most common antecedent risk factors for HCC**, accounting for approximately 70% of all cases globally.
- **HBV and HCV accounted for 41% and 29% of global primary liver cancer deaths**.
- The **burden of other aetiologies is increasing**, with alcohol consumption accounting for 19% of global primary liver cancer deaths.



Source: Younossi Z et al., 2019.

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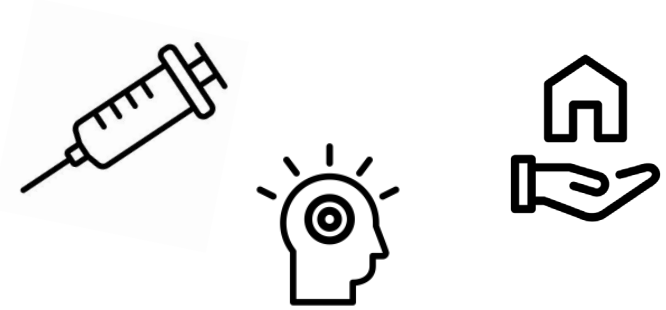
Viral Hepatitis & HCC Prevention Guidelines



- Primary prevention strategies are generally emphasized in both viral hepatitis and liver cancer guidelines.
- **Liver cancer prevention guidelines often emphasize HBV vaccination** but **overlook broader hepatitis prevention actions** mentioned in viral hepatitis guidelines (e.g., harm reduction for PWID)

- **Secondary and tertiary prevention are well covered** in viral hepatitis guidelines.
- Early screening and linkage to care are often missing in liver cancer guidelines, which generally focus on treatment and HCC surveillance..

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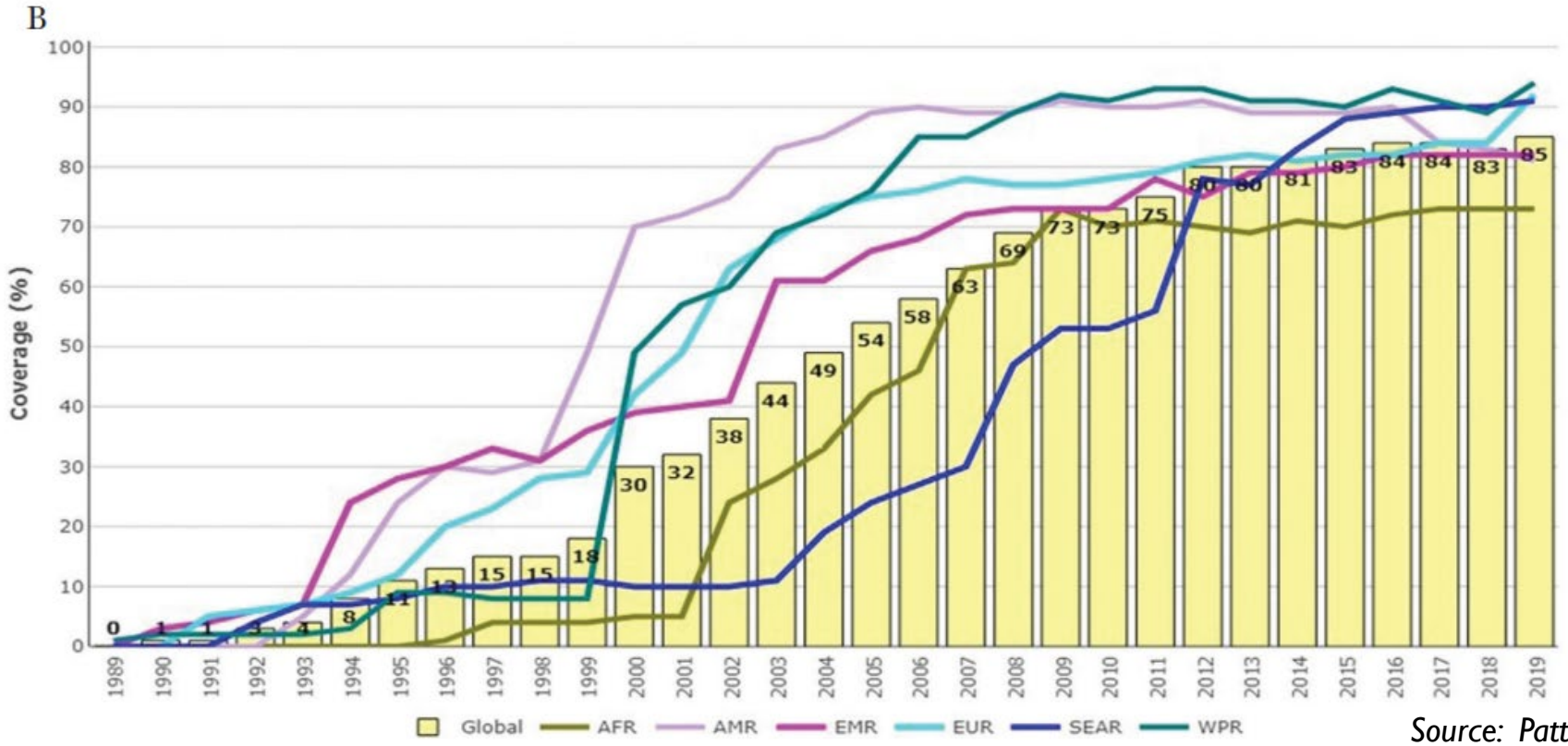
Gaps & Successes in Viral Hepatitis Prevention

SUCCESSES

- Global H
  85% (20

GAPS



Source: Pattyn J et al., 2021.

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Gaps & Successes in Viral Hepatitis Prevention

SUCCESSES

- Global HBV vaccine coverage rose from 1% (1990) to 85% (2019) among infants.
- Countries such as Taiwan and China have experienced over 70% reduction in HCC incidence and mortality in cohorts post-vaccination.
- Egypt become the first country to achieve WHO validation on the path to HCV elimination, with an 87% and 93% rate of diagnosis and treatment.
- Transition from genotype-specific DAAs to effective and simplified pan-genotypic DAA regimens.

GAPS

- Global HBV birth dose coverage remains low (45%), with deficient coverage in the African region (18%).
- Global coverage of viral hepatitis, diagnosis, and treatment remains low, with an uneven distribution worldwide.
- In 2022, HBV diagnosis rates ranged from 26% in the Western Pacific to <3% in Southeast Asia.
- HCV treatment coverage ranged from 3% in the African region to 35% in the Eastern Mediterranean region.

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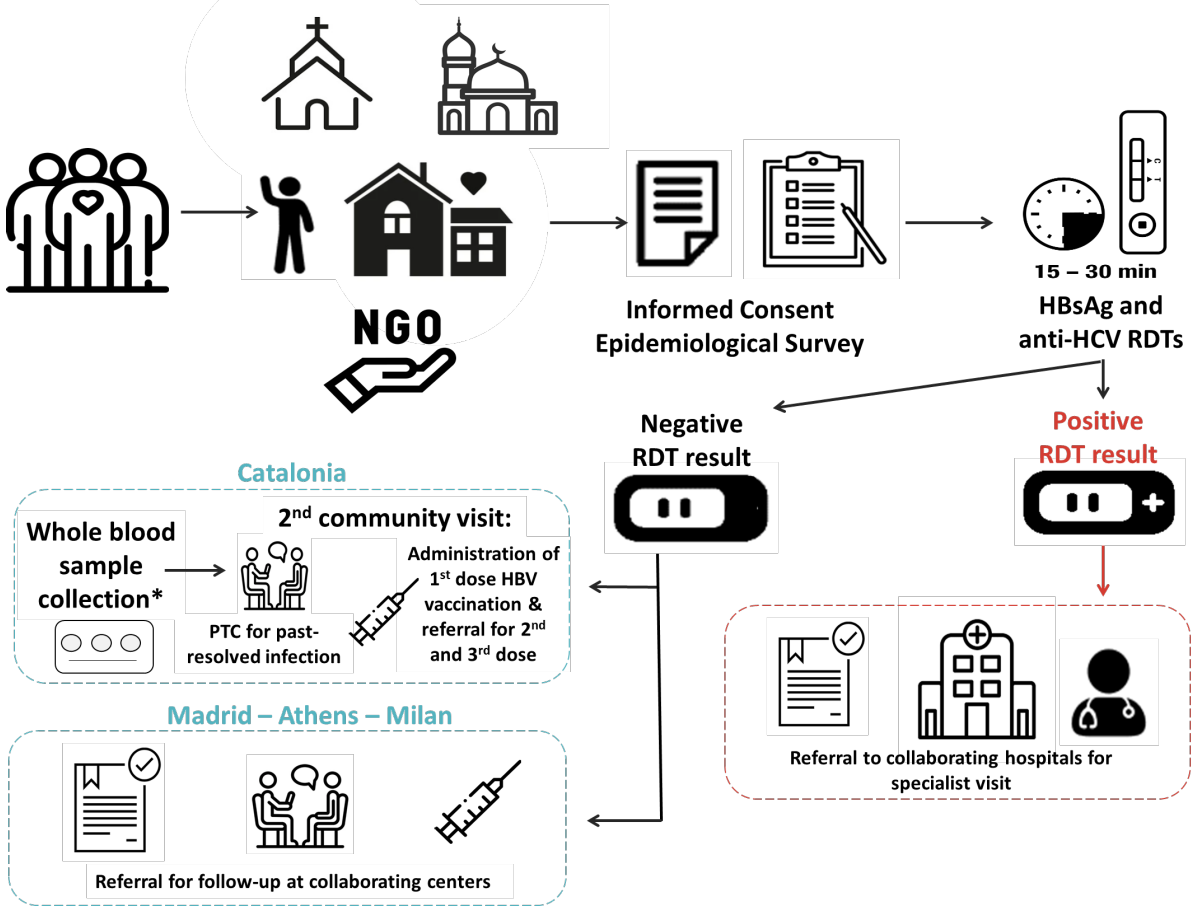
Preventive Hepatology

- ✓ Include **primary prevention strategies** of new-onset liver disease
- ✓ Acknowledge **growing burden of liver cancer and HCC**
- ✓ **Effectively address** prevention, diagnosis, and treatment of **viral hepatitis**
- ✓ **Reduce exposure to other risk factors** (e.g., alcohol)

Good practices: The VH-COMSAVAC Project

- Viral hepatitis Community Screening, Vaccination, and Care (VH-COMSAVAC) is an **EU co-funded project**
- **Study design:** Prospective cohort study
- **Study Timeline:** November 2022 – April 2025
- **Location:** Catalonia (Spain), Madrid (Spain), Athens (Greece), and Milan (Italy).
- **Aim:** Scale-up community-based models to increase HBV and HCV testing, HBV vaccination, and linkage-to-care among migrants and refugees living in Europe using simplified diagnostic tools and person-centred referral processes.

Figure 1. The VH-COMSAVAC model of care



The VH-COMSAVAC Project – Results

2,043 people were screened in Greece, Italy, and Spain.

38 years old
(IQR = 29-48)

72%
were **male**

49%
arrived to the EU
<5 years ago

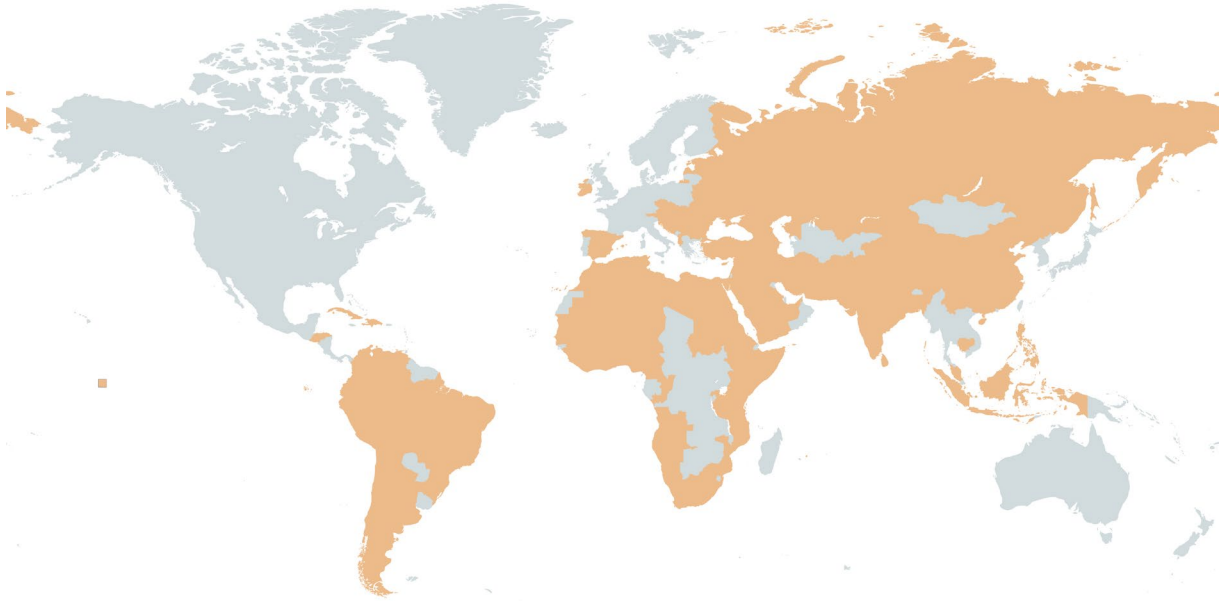
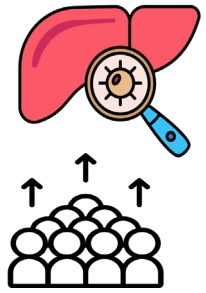


Figure 2. Participants' countries of birth across all study sites

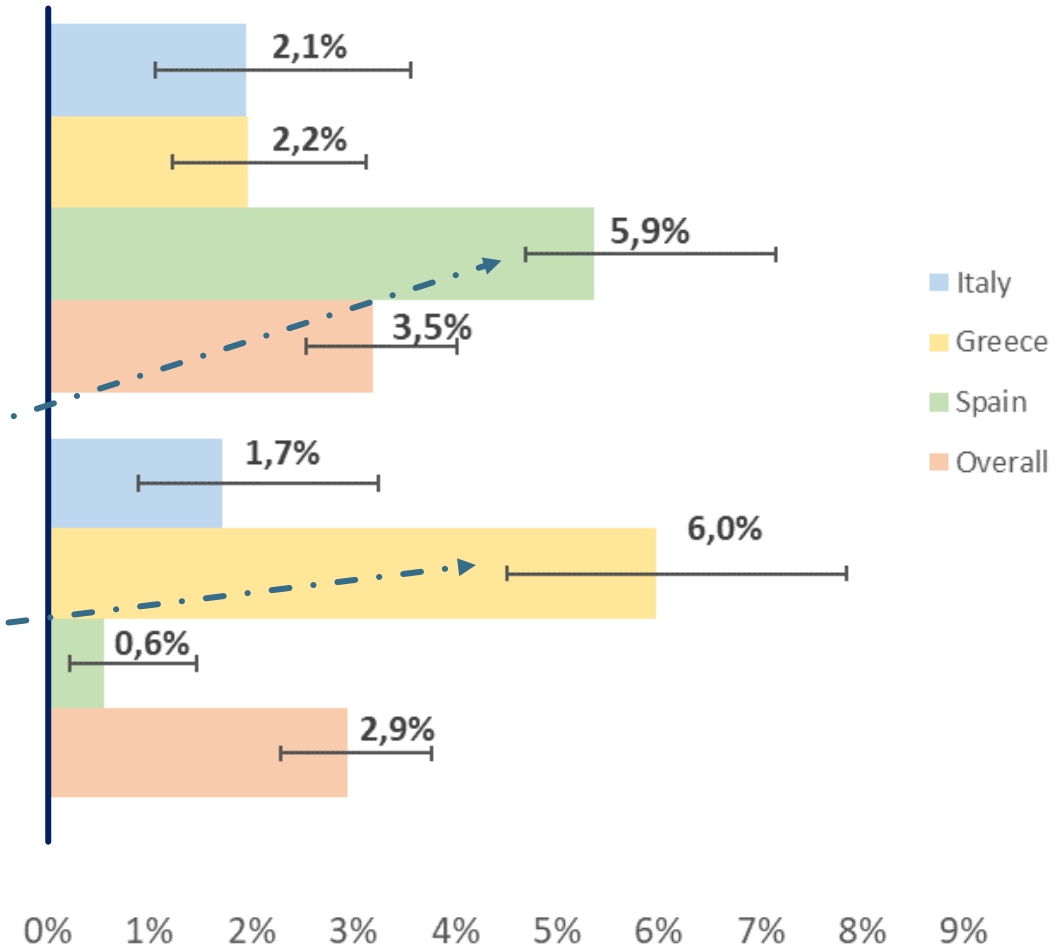
The VH-COMSAVAC Project – Results



- **Overall HBsAg+ prevalence:** **3.53%** (95% CI: 2.80%-4.44%)
- **Overall anti-HCV+ prevalence:** **2.94%** (95% CI: 2.29%-3.77%)

- **Spain reported the highest HBsAg+ prevalence of 5.92%**
- **Anti-HCV+ prevalence was highest in Greece with 5.96%**

Figure 3. Overall and country-specific HBsAg+ and anti-HCV+ prevalence and 95% CI.



The VH-COMSAVAC Project – Main Facilitators

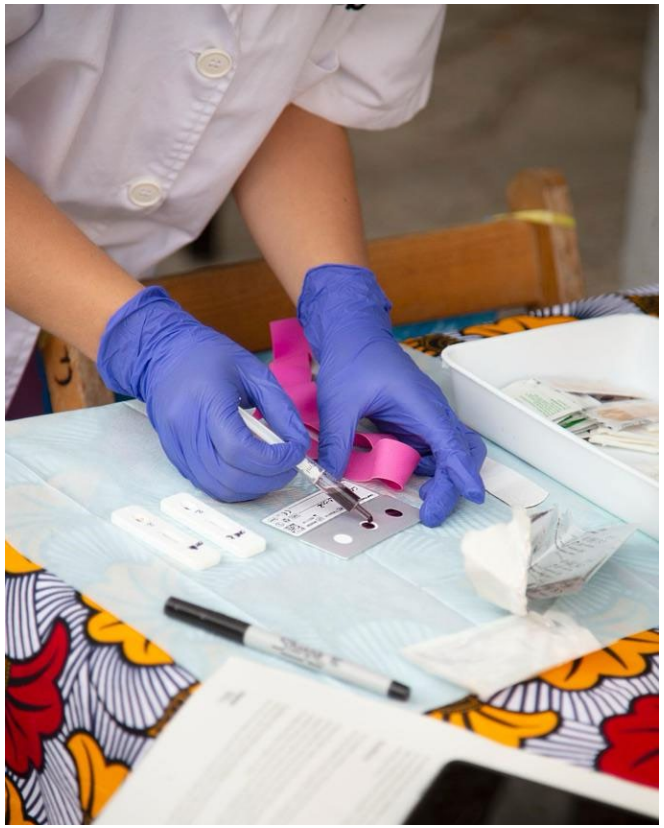


Photo by Candelaria Nazar

- Screening in community-based decentralized spaces
- Community health workers and intercultural mediators
- Tailored educational material and + sessions
- Simplified diagnostic tools
- Expedited referral pathways

The VH-COMSAVAC Project – Main Barriers

No legal access to public healthcare services

A residence permit and other documentation is required to have access to the public health systems in **Italy** and **Greece**

Delayed access to healthcare

Recently arrived migrants in **Madrid** require three months proof of residence to access the public health system

Loss to follow-up

Loss to follow-up after referral to specialist care in **Catalonia** potentially due to onward migration, linguistic barriers, or structural barriers

Photo: Grand Prize winner of the 2024 Elimination in Action Photo Contest from the Coalition for Global Hepatitis Elimination (CGHE). ***Jan Pilarcik***

Take away messages

- **Guidelines exist, but gaps in implementation persist.**
  Viral hepatitis guidelines promote comprehensive prevention and care cascades, yet gaps remain in real-world implementation due to lack of decentralized care, limited financing, and insufficient prioritization.
- **Decentralized models can reduce inequities in viral hepatitis prevention and care**
  The VH-COMSAVAC project is an example of decentralized provision of care successfully enhancing diagnosis of HBV and HCV among at-risk underserved groups, essential for equitable cancer prevention.
- **A 'preventive hepatology' approach is needed to mitigate the raising burden of HCC**
  Preventing HCC requires integrating viral hepatitis prevention and care strategies with strategies to manage other risk factors (e.g., metabolic risk factors and alcohol consumption), coupled with HCC monitoring strategies.

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THANK YOU FOR YOUR ATTENTION

ON BEHALF OF CO-AUTHORS AND THE ENTIRE VH-COMSAVAC CONSORTIUM_

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