

# Building Resilient Health Systems: Hepatitis B Serology Testing and Vaccination Campaign for Health Workers in The Gambia

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## BACKGROUND:

- Hepatitis B infection is a significant global health threat that contributes to the loss of healthcare workers (HCWs) and puts the health workforce at considerable risk.<sup>1</sup>
- According to the World Health Organization (WHO), viral hepatitis is responsible for approximately 1.34 million deaths annually.<sup>2</sup>
- HCWs have a four-fold increased risk relative to the general population for exposure to HBV from infected patients.<sup>1</sup>
- The number of HBV-positive individuals globally is the highest in the African region, accounting for 68% of the global burden.<sup>3</sup>
- Hepatitis B vaccination for HCWs is a key component of the WHO Hepatitis B Elimination Strategy 2016–2021.

## PURPOSE:

- To fortify fragile health systems in low- and middle-income countries (LMICs), realizing their sustainability is dependent on the safety and resilience of the health workforce.
- To design, promote, and implement a ‘duty of care’, to protect workers against unreasonable risk of harm in a work setting.
- To carry out the guidelines of the 2018 Gambia National Occupational Health and Safety Policy for HCWs.
- To implement a hepatitis B serology testing and vaccine campaign for HCWs.

## OVERVIEW:

### Creating a National Policy

The University of Maryland, Baltimore (UMB) team has worked to establish and cultivate vital relationships in the Ministry of Health (MoH) and at the University of The Gambia School of Medicine and Allied Health Sciences since 2014. Over the years, UMB has provided basic occupational safety and health trainings for HCWs and worked with Gambian colleagues to develop the National Health Worker Safety Policy.

In June 2022, the UMB team conducted a multiday consultation with MoH staff and stakeholders where they reviewed the WHO’s new implementation guide for HCW vaccination and developed standard operating procedures (SOPs) and questionnaires for hepatitis B serology testing and vaccination of Gambian HCWs. The group also drafted a schedule for the HCW serology testing and hepatitis B vaccine pilot.

### Hepatitis B Serology Testing and Vaccination

The first step in the process is inviting HCWs to be screened. All invited HCWs will then be asked to complete a hepatitis B questionnaire. This questionnaire will assess participants’ overall demographics, exposure risks, vaccine history, and knowledge of the disease, thereby providing an opportunity to tailor counseling after results are obtained.

Participants will then be screened for both hepatitis B surface antigen (HBsAg) and hepatitis B surface antibody (HBsAb). If HCWs screen positive for HBsAg, they will be linked to care. If HCWs screen negative to HBsAg, but positive to HBsAb, then no vaccine is needed. Lastly, if HCWs screen negative to HBsAg and HBsAb, they will receive their first dose of HBV vaccine and will be registered for follow-up dose invitations (Figure 3).

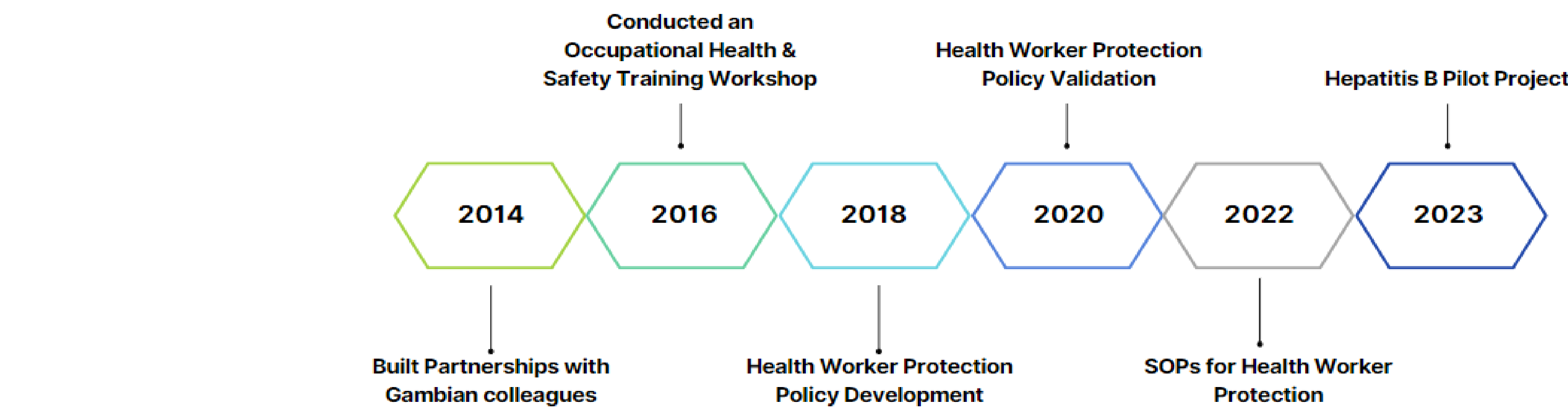


Figure 1. Project timeline and activities.



Figure 2. Dr. McDiarmid, Dr. Gaitens, and Hanna LeBuhn meet with Mr. Ebrima Keita, team lead for Occupational Health, and colleagues at Edward Francis Small Teaching Hospital during an in-person visit in January 2023.

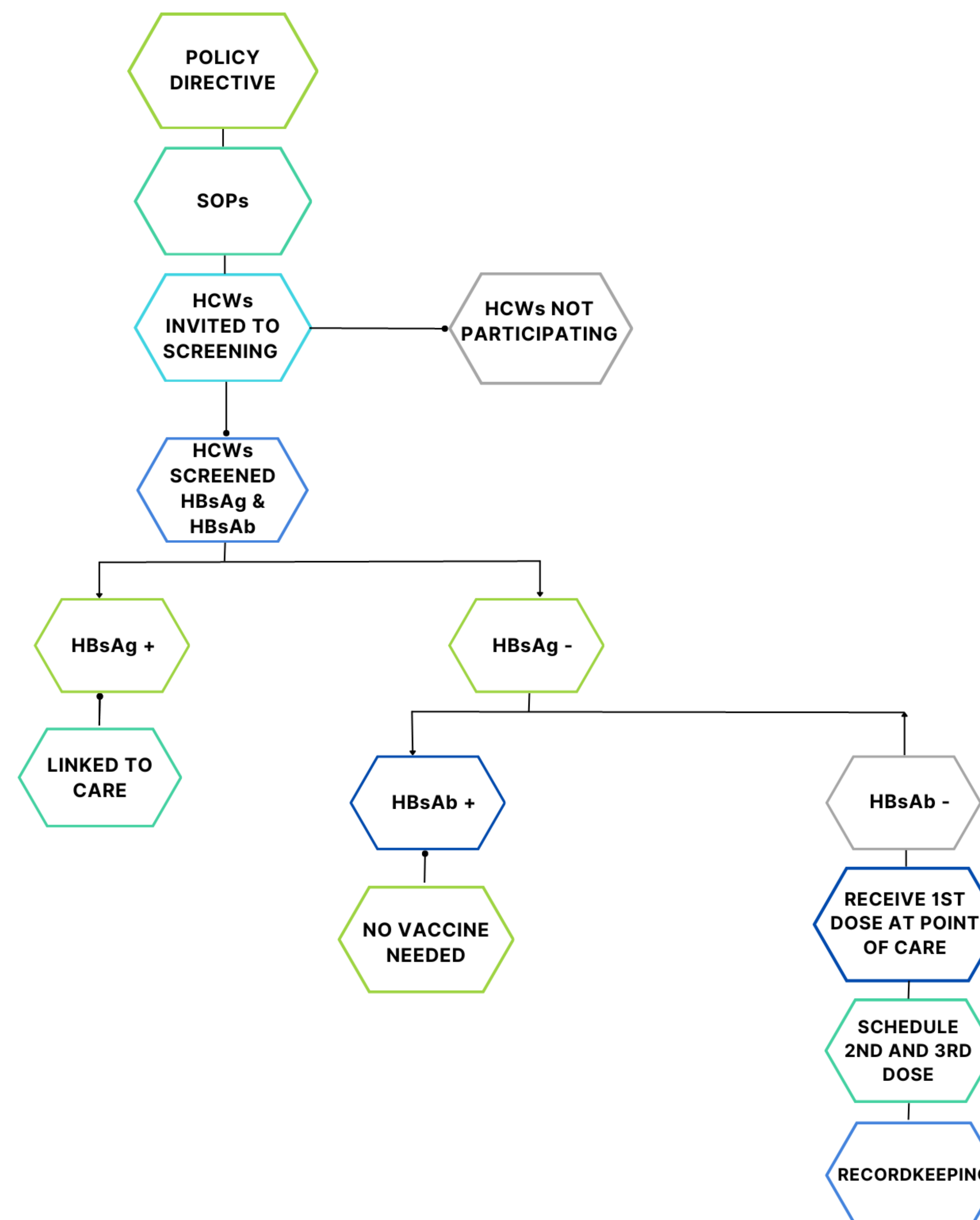


Figure 3. Process flow for HCW Serology Testing & Hepatitis B Campaign.

## DISCUSSION:

Despite challenges, it is still clear that immunizing the health workforce and providing vaccines for preventable diseases in LMICs is both an attainable goal and a cost-effective investment. Such investments in the health workforce are a pre-requisite for building stable health systems and critical to meeting the UN Sustainable Development Goals (SDGs). These actions bolster the stability and resilience of emerging health systems and directly impact the achievement of SDG targets.

## KEY TAKEAWAYS:

- The loss of HCWs during both the Ebola crisis in West Africa and the COVID-19 pandemic has demonstrated how indispensable HCWs are to a functioning and resilient health system.
- Hepatitis B remains a serious threat among high-risk individuals in LMICs such as HCWs.
- Competing health priorities in-country may serve as serious barriers to hepatitis B vaccine introduction.
- Engaging key stakeholders, building trust, and fostering relationships is critical to project implementation.
- There is great need to integrate HCW vaccination into existing occupational health and safety policies.

## Management of Hepatitis B FAQ

Below are examples of frequently asked questions regarding the testing and management of hepatitis B virus (HBV).

- 1. Is Hepatitis B preventable?**  
Yes. CDC recommends that all health care workers should get appropriate vaccines to reduce the chance that you will get or spread HBV.
- 2. If I find out that I'm positive, does that mean I can't work?**  
No. HBV infection status alone does not require any halting of work or supervised learning experiences.
- 3. If I test positive, what are the next steps?**  
It is estimated that about 10% of health care workers will test positive and need to be linked to care. If you test positive for Hepatitis B, then your care will be managed by the liver clinic at the Edward Francis Small Teaching Hospital.
- 4. Will my information be kept private?**  
First off, you will need to provide informed consent. Secondly, your name will not be used. Instead, test results will be recorded by a PID number which will be used for identification. Only study personnel will have access to PID numbers.

For more information on the care pathway, scan the QR code below.



Figure 4. Hepatitis B FAQ for HCWs

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