

HBV Vaccine Shortage: Another Symptom of Chronic Neglect?

Philippa C Matthews¹, Eleanor Barnes¹

¹ Nuffield Department of Medicine,
Peter Medawar Building for Pathogen Research,
University of Oxford, South Parks Road, Oxford OX1 3SY

To The Editor,

Current shortages of hepatitis B virus (HBV) vaccine have created recent media interest, including representation in the BMJ (1). HBV deserves to make headlines; an estimated 250 million individuals are chronically infected and there has been neglect of funding, political advocacy, research and clinical services. International Sustainable Development Goals for viral hepatitis aspire towards 'elimination as a public health threat' by 2030 (2). Vaccination is a crucial component of the multi-pronged effort that will be required to meet these targets.

Routine infant HBV vaccination is commonly provided within multivalent formulations (3) that are not currently subject to shortage. Immunisation is also undertaken using monovalent vaccine, manufactured for the UK market by GlaxoSmithKline (GSK; <https://www.gsk.com/>), in individuals deemed to be at risk of HBV infection, including babies born to HBV-infected mothers, household contacts of individuals with HBV infection, travellers to endemic areas, MSM, injecting drug users, sex workers and healthcare workers (4). GSK has currently assured supplies of the infant formulation, but adult preparations are subject to shortage (<https://www.gsk.co.uk/supply.html>).

In response to shortages, Public Health England has provided national guidelines advocating careful case-by-case risk assessment, emphasizing the need to avoid stock-piling, ensuring prioritization for neonates, and reinforcing

key educational messages (5). In low endemicity settings, such as the UK, this triaged approach means that individuals at high risk should continue to be protected. However, it should be difficult to justify shortages of a robust, safe vaccine that has been successfully manufactured for over two decades, and a robust public, professional and political response is required to represent vulnerable high-risk groups. In the absence of a cure, every new individual case of HBV infection should be regarded as an inexcusable, preventable failure.

GSK should now share more details to explain the current supply issues. Minimising the impact of the current situation, and avoiding future shortages, will rely on a careful assessment of the supply chain from its roots in political will and sustainable funding, through production and distribution, to the end point of clinical use. If future interruptions to vaccine stocks are a concern, we should be investing in improved manufacturing processes and/or engaging with alternative suppliers. Let us use this current interruption in supply to scrutinize practice, to build advocacy, to re-educate ourselves, our patients and the public about this important yet neglected infection, and to ensure we get vaccine supply back on track.

FUNDING:

PCM is funded by the Wellcome Trust and EB by the Medical Research council UK and Oxford NIHR BRC.

REFERENCES:

1. Kmietowicz Z. 2017. Doctors are told to use hepatitis B vaccine sparingly because of global shortage. *BMJ* 358:j3801.
2. Griggs D, Stafford-Smith M, Gaffney O, Rockstrom J, Ohman MC, Shyamsundar P, Steffen W, Glaser G, Kanie N, Noble I. 2013. Policy: Sustainable development goals for people and planet. *Nature* 495:305-307.
3. Torjesen I. 2017. UK adds hepatitis B to infant vaccination schedule. *BMJ* 358:j3357.

4. Immunisation Against Infectious Disease: The Green Book. 2012. The Stationery Office under licence from the Department of Health.
5. Public Health England. Hepatitis B vaccination in adults and children: temporary recommendations from 21 August 2017. PHE gateway number 2017256
<https://www.gov.uk/government/publications/hepatitis-b-vaccine-recommendations-during-supply-constraints>