



Hepatitis B Control Through Immunization: A Reference Guide



World Health
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ABBREVIATIONS

AEFI	adverse event following immunization
Anti-HBs	antibodies to hepatitis B surface antigen
Anti-HBc	antibodies to hepatitis B core antigen
CTC	controlled temperature chain
DPT	diphtheria-pertussis-tetanus vaccine
ELISA	enzyme - linked immunosorbent assay
EPI	Expanded Programme on Immunization
ERP	Hepatitis B Expert Resource Panel
HBcAg	hepatitis B core antigen
HBeAg	hepatitis B 'e' antigen
HBIG	hepatitis B immunoglobulin
HBsAg	hepatitis B surface antigen
HBV	hepatitis B virus
HepB	hepatitis B vaccine
Hib	Haemophilus influenzae type B
RED	Reaching Every District
TAG	Technical Advisory Group
UNICEF	United Nations Children's Fund
US CDC	United States Centers for Disease Control and Prevention
VVM	vaccine vial monitor

FOREWORD

Hepatitis B prevention and control is a high priority for me as the World Health Organization Regional Director for the Western Pacific — the Region which has historically had the highest hepatitis B burden.

Hepatitis B infection causes deadly cirrhosis and cancer of the liver. The best protection from this deadly virus is three doses of vaccine in infancy, with the first dose administered within 24 hours of birth. Extremely safe and effective, the vaccine is the best tool we have for protecting children.

Member States have prioritized hepatitis B vaccination. Now millions of infants receive the complete series every year, and hepatitis B infection among infants and children has fallen dramatically, and continues to decline.

Indeed, the success of the Western Pacific Region has been remarkable. Since 2003, 10 million chronic hepatitis B infections have been prevented in the Region, saving an estimated 2.5 million people from hepatitis B-related deaths.

This milestone is the result of national actions to control hepatitis B. By 2012, 30 countries and areas in the Region had reduced prevalence among children to less than 2% — compared to prevalence rates higher than 6% in the pre-vaccine era.

In October 2013, the Regional Committee for the Western Pacific passed a resolution to further reduce hepatitis B — to less than 1% chronic infection prevalence among children by 2017.

This latest goal will save millions more in the Region from the devastating effects of hepatitis B.

To support Member State efforts to reach this goal, I am pleased to introduce *Hepatitis B Control Through Immunization: A Reference Guide*, which provides guidance and targets for hepatitis B control.

The Western Pacific Region was the first to establish a hepatitis B control goal. With close cooperation and strong government leadership, the Region can also become the first to reduce the disease's deadly toll to historic lows.

As always, I welcome the opportunity to work with each Member State towards the achievement of our shared goal.



Shin Young-soo, MD, Ph.D.
Regional Director for the Western Pacific
World Health Organization

SUMMARY

Hepatitis B Control Through Immunization: A Reference Guide is intended to provide a handy compilation of available guidance for hepatitis B vaccination programs in countries and areas of the Western Pacific Region. The Western Pacific Region, despite being home to approximately 28% of the global population, bears a disproportionate burden of hepatitis B virus (HBV)-related mortality and morbidity, accounting for almost half of all chronic hepatitis B infections worldwide.¹ With an estimated 160 million chronic HBV carriers living in the Region, hepatitis B is responsible for nearly 900 deaths per day, a mortality rate comparable to that of tuberculosis.¹ Most countries had a chronic HBV infection rate of more than 10% before the introduction of vaccination.² Of the 325 000 estimated annual deaths caused by HBV infection in the Region, nearly all are consequences of chronic infection, mostly decades after the initial infection at birth or in early childhood. Hepatitis B, therefore, is an important regional public health priority.

Universal childhood immunization with three doses of hepatitis B vaccine in the first year of life has been proven to be the most effective strategy for the prevention and control of hepatitis B. In 2005, the Western Pacific Region achieved the distinction of being the first WHO region to incorporate infant hepatitis B immunization in the national immunization programmes of all its Member States.

In 2003, the fifty-fourth session of the WHO Regional Committee for the Western Pacific set a goal to reduce the prevalence of chronic hepatitis B infection among 5-year-old children to less than 1% (WPR/RC54.R3) in 2005 an interim milestone of reducing chronic HBV infection among children to less than 2% by 2012 was established (WPR/RC64.R5). By 2012, the Region as a whole and 30 countries and areas were estimated to have met the milestone. Striving to build upon these gains, in 2013, the sixty-fourth session of the WHO Regional Committee for the Western Pacific has now resolved to meet the goal of reducing chronic HBV infection to less than 1% among 5-year-old children by 2017 (WPR/RC64.R5). Achievement of this goal will translate to an additional 60 000 hepatitis B-related deaths averted per birth cohort in the Region.

There are five key strategic areas for hepatitis B prevention through vaccination.

1. Vaccination of infants

Universal childhood immunization with three doses of hepatitis B vaccine in the first year of life has been proven to be the most effective strategy for the prevention and control of hepatitis B.

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