The hepatitis B Expert Resource Panel (ERP) was created in 2007 to support efforts to reach the hepatitis B control goal in the Western Pacific Region. The ERP advises on hepatitis B control status, supports the verification process and serves on Member State verification panels. Much progress has been made in hepatitis B control in the Region, including the achievement of the 2012 milestone of reducing chronic infection prevalence in children to less than 2%. Additional guidance is needed to sustain these achievements, reach the less than 1% goal and improve performance in priority countries.

The fifth ERP meeting was attended by representatives from six countries in the Western Pacific Region who participated in the 2015 Consultation on Improving and Monitoring Hepatitis B Birth Dose Vaccination. The participants presented their country’s progress in implementing the meeting’s recommendations and discussed their near- and long-term planned hepatitis B (HepB) birth dose (BD) activities. WHO staff from headquarters, Western Pacific Region, South-East Asia Region and European Region presented updates on regional and global activities. An U.S. Centers for Disease Control and Prevention (CDC) presented on HepB impact serosurveys and outside-the-cold-chain (OCC) pilot projects that were implemented in the Region. It was generally recognized that the Western Pacific Region leads the way in responding to HepB elimination goals through the widespread scale-up of HepB immunization, in particular, use of HepB-BD throughout most of the countries and areas in the Region.

Objectives

The Fifth Hepatitis B Immunization Expert Resource Panel Consultation was held in Manila, Philippines from 15 to 17 February 2017. The objectives of the consultation were:

- to review the verification status by country and provide country-specific recommendations, as necessary;
- to review and provide guidance on progress made in national action plans developed during the 2015 Consultation on Improving and Monitoring HepB Birth Dose Vaccination, which involved six priority countries with low BD coverage; and

Conclusions

- The ERP is extremely pleased by the report in the May 2016 Vaccine publication that the 2017 seroprevalence target of 1% among immunized cohorts of children
at least 5 years of age was met and immunization programmes in this region have averted an estimated 7 million deaths and 37.6 million chronic HepB cases among children born between 1990 and 2014.

- The ERP discussed developing post-2017 HepB control targets for the Western Pacific Region, recognizing the disparity between countries and areas that continue to meet new regional targets and those with relatively low HepB-BD and three dose (HepB3) coverage that have not yet met the 2013 or 2017 targets. Of the 36 countries and areas in the Western Pacific Region, 19 countries have serosurvey evidence of having less than 0.5% hepatitis B surface antigen (HBsAg) prevalence among 5-year-olds; two countries are between 0.5% and 1%; five countries are above 1%, with four of these above 2%; and 10 remaining countries do not have serosurvey results. Post-2017 targets tentatively include the following:

  1) all countries and areas in the Western Pacific will reduce HBsAg prevalence to less than 1% among 5-year-old children by 2025; and
  2) countries and areas in the Western Pacific that have reduced HBsAg prevalence to less than 1% among 5-year-old children will aim to further reduce HBsAg seroprevalence to less than 0.5% among 5-year-old children by 2025.

Concerted effort and direct assistance will likely be necessary to assist countries and areas that have not reached the 2013 and/or 2017 prevalence goals. These efforts are ultimately geared towards reaching the GHHSVH goal of eliminating viral hepatitis as a public health threat through the adoption of a global target of 0.1% by 2030.

- The ERP recommends that efforts to eliminate HepB infection should not be conducted in a vertical programme. Linking with other programmes, such as elimination of mother-to-child transmission (EMTCT) efforts for HIV and syphilis, other Expanded Programme on Immunization (EPI) programmes and maternal, newborn and child health (MNCH) programmes among others, could help strengthen health systems. Incorporating key health indicators and metrics could prove beneficial in the regional and global movement towards elimination of HepB as a public health threat by 2030.

**Recommendations for Member States**

1. The ERP reaffirmed the importance of using OCC vaccines in remote and hard-to-reach areas, in regions where inadequate cold chain capacity exists, in countries with a high proportion of home deliveries, and for vaccinating babies born at home, preferably within 24 hours of birth

   - Affirming that countries and areas should dedicate support to improve cold chain capacity, the ERP also endorses the incentive for countries and areas to increase health facility delivery rates, while acknowledging the existence of settings and environments where home births will require OCC vaccines to improve HepB-BD coverage.
2. Discrepancies remain in reaching national 2013 and 2017 vaccination control targets in the Region. The ERP encouraged all countries and areas to continue efforts to improve BD coverage targets in order to eventually reach elimination goals nationally and at the subnational level.

3. The ERP recommended that countries continue to proactively mitigate against negative perceptions of HepB immunization through proactive risk communication planning and health education outreach. The ERP acknowledged the proactive work of Viet Nam in this regard since the previous ERP meeting in Hanoi in January 2016.

4. The ERP affirmed the need for countries and areas to develop health-care worker policies for HepB vaccination. The recommendation is in line with the goal put forth in the Regional Action Plan for Viral Hepatitis in the Western Pacific, i.e. a national policy of vaccinating health-care workers against HepB should be established in over 80% of countries by 2017 and in all countries by 2020.

5. The ERP acknowledges the tremendous efforts by high-burden countries to implement national HepB-BD plans developed during the 2015 Consultation on Improving and Monitoring Hepatitis B Birth Dose Vaccination meeting. By countries, the ERP recommends the following actions be taken:

Lao People's Democratic Republic

- The ERP encourages the National Regulatory Authority and Ministry of Health in the Lao People's Democratic Republic to endorse national guidelines including the use of OCC vaccines.
- The ERP commends the Lao People's Democratic Republic on efforts to scale up OCC HepB-BD vaccine, and recommends ongoing reporting on progress and outcomes.
- As previously described, WHO Regional Office for the Western Pacific and headquarters will be assisting the Lao People's Democratic Republic to amend guidelines that contain recommendations for using OCC HepB-BD.
- The ERP recognizes that reaching remote populations is an ongoing challenge in the Lao People's Democratic Republic and commits to working with the country to determine methods to improve HepB-BD coverage in these regions.

Papua New Guinea

- The ERP commends Papua New Guinea on the development of strategies to improve HepB-BD coverage in the country.
- The ERP, WHO Regional Office for the Western Pacific and WHO headquarters will assist in obtaining approvals for using OCC HepB-BD.
- Recognizing the importance of community awareness, the ERP will work with Papua New Guinea to develop effective public awareness campaigns to encourage women to deliver at health facilities and receive timely birth dose.
- The ERP recognizes that reaching remote populations is an ongoing challenge in Papua New Guinea and commits to working with the country to determine methods to improve HepB-BD coverage in these regions.
Viet Nam

- The ERP commends the efforts in Viet Nam to improve HepB-BD coverage.
- The ERP acknowledges the steps that Viet Nam has taken in mitigating against negative publicity about HepB vaccines through programmes such as training of journalists. The ERP suggests that Viet Nam enhance public and health-care worker awareness programmes using a broad range of strategies to provide information about the benefits of the HepB vaccination programme. Materials for improving awareness, how to build resilience, proactive involvement of media, communication with patients, and improving health-care workers’ response to vaccine refusals will be shared from the WHO Regional Office for Europe and the CDC.
- The ERP will work with Viet Nam to integrate the aforementioned activities with MNCH efforts to encourage more facility deliveries.
- The ERP will continue to assist Viet Nam with plans to reach populations in remote areas, including strategies to use OCC HepB-BD.
- The ERP urges Viet Nam to include standing orders to administer HepB-BD and to remove the neonatal screening form 2301/QD-BYT, which erroneously precludes neonates from receiving a HepB-BD by listing false contraindications and forcing a physician to sign this form before HepB-BD can be administered.
- The ERP commends current efforts in Yên Bái province to expand HepB-BD coverage among polyclinics and commune health clinics to other districts and scale up to other provinces with low HepB-BD coverage, prioritizing: 1) polyclinics that have proper cold chain monitoring in place; and 2) commune health clinics with high delivery rates.

Cambodia

- The ERP congratulates Cambodia on successfully increasing their HepB-BD and HepB3 coverage over the past 5 years.
- The ERP will support Cambodia’s planned programmatic activities to sustain successful outcomes, including conducting their first nationally representative HepB serosurvey in 2017.

Philippines

- The ERP acknowledges some of the steps taken by the Philippines to try to improve HepB-BD coverage, including the recent change to use UNICEF to procure HepB3 and thereby avoid HepB3 stock outs that have been a factor in persistently low HepB3 coverage in recent years.
- The ERP recommends the Philippines focus on improving timely birth dose coverage among all health facility births.
The ERP commends and supports the Philippines on the imminent implementation of a HepB seroprevalence survey in children 5 years old and above in late 2017/early 2018.

The ERP recommends the Philippines intensify integrated field monitoring in coordination with the MNCH programme in priority areas.

The ERP will support the Philippines Government to scale up HepB-BD and routine immunization by sharing materials targeting the public and health-care workers on the importance of HepB-BD vaccination in preventing liver cancer and cirrhosis.

Solomon Islands

- The ERP supports Solomon Islands in attempts to scale up OCC HepB-BD in a phased manner.
- The ERP commends efforts to raise awareness and create a demand for immunization by the public.
- The ERP, WHO Regional Office for the Western Pacific and headquarters will assist in the efforts to obtain approvals for using OCC HepB vaccine.
- The ERP recognizes that reaching remote populations is an ongoing access challenge in Solomon Islands and commits to working with the country to determine methods to vaccinate children in these hard-to-reach regions.

Japan

- The ERP commends Japan’s recent introduction of hepatitis B vaccination into their routine immunization programme at 2, 3 and 7–8 months after birth. This inclusion was based on well-researched findings that showed hepatitis B core (HBc) antibody seroprevalence among teenagers was higher than HBsAg prevalence among immunized younger child populations, suggesting that horizontal transmission was a potential source for transmission.
- The ERP recommends continuation and evaluation of the HBsAg screening programme to ensure all pregnant women are screened and all children of HBsAg-positive mothers are given their BD and Hepatitis B immune globulin (HBIG) treatment.
- With an estimated hepatitis B prevalence among children of 0.03% (9 out of 27 240), Japan should consider submitting their application for verification of meeting the regional 2017 target of 1%.

New Zealand

- The ERP recommends New Zealand to implement a universal HepB immunization programme including BD for all infants.
- Given the increasing number of migrant populations and foreign-born women of childbearing age, discussions with New Zealand’s National Immunization Technical Advisory Group (NITAG) and Ministry of Health should be performed to ascertain whether timely birth dose could be universally provided to all newborns.
1. With the Strategic Advisory Group of Experts (SAGE) strongly urging manufacturers of monovalent HepB vaccine to pursue regulatory approval for controlled temperature chain (CTC) as soon as possible, the ERP urges WHO headquarters and UNICEF to do the following:

   - Support countries seeking regulatory approval for using OCC HepB vaccine.
     
     A. The Western Pacific Region has extensive experience in conducting successful OCC pilots in China, Cambodia, the Lao People's Democratic Republic, Papua New Guinea, and Solomon Islands. To date, none of these projects has been scaled up nationally. The ERP recommends that the WHO Regional Office monitor the interest and ability of countries and areas to scale up successful OCC pilots, starting with potential consideration to assisting the Lao People's Democratic Republic. The WHO Regional Office should explore the mechanisms and capacity to obtain OCC regulatory approval in key countries interested in using OCC vaccines. The lessons learnt on OCC scale up barriers and possible solutions should be shared with headquarters and among countries that may have fully functional regulatory bodies.

     B. WHO headquarters should draft reports synthesizing findings and conclusions of available thermostability data for HepB vaccines that could be used outside the cold chain, including suggested peak temperatures and the number of days at maximum temperature. The purpose of these product-specific reports would be to serve as a resource for EPI programmes, regulatory authorities and NITAGs.

     - Perform actions related to manufacturers.

       A. Based on prior experience with UNICEF only procuring vaccines with vaccine vial monitors (VVMs), WHO headquarters and UNICEF should explore the potential for preferential procurement of WHO pre-qualified monovalent HepB vaccines that have been relabelled for CTC use by manufacturers, including vaccines presented in compact pre-filled non-reusable injection devices.

       B. In relation to the ERP’s concern that manufacturers may not be incentivized to take the steps required for CTC pre-qualification, WHO headquarters should communicate with the WHO Regional Office if manufacturers require data or information on programme demand for a pre-qualified CTC product.

       C. WHO headquarters should contact manufacturers of vaccine in compact pre-filled non-reusable injection devices to explore the product availability and cost.

       D. WHO headquarters should investigate opportunities for GAVI to support manufacturers with costs related to CTC pre-qualification and market shaping for affordable CTC vaccines.

2. The ERP encourages the Western Pacific Region to gain experience in using new methods to measure low HbsAg prevalence targets, including: classification serosurveys, which are based on the updated WHO vaccination cluster survey guidelines; a two-step risk assessment and verification serosurvey method that has been used for verification of neonatal tetanus elimination; and HepB serosurveys incorporated into other national coverage surveys such as DHS or MICS or potentially other HIV/AIDS and malaria serosurveys.

3. The ERP affirms the need for WHO to conduct cost-effectiveness analyses and incremental cost-effectiveness ratios to help countries and areas ascertain which potential interventions,
including multiple interventions, are programmatically and financially feasible. In addition to the cost-effective inclusion of HepB-BD, potential intervention options include universal antenatal screening (including HBeAg screening), antiviral therapy (including the threshold to commence treatment) and HBIG treatment and post-vaccination serological testing among children born to HBsAg-positive mothers.

4. The ERP recommends that public awareness campaigns directly linking hepatitis B transmission in infancy to potentially developing liver cancer or cirrhosis later in life may motivate parents to have their infants vaccinated at birth and during routine immunizations. Communication and advocacy activities are needed to draw public attention to HepB and its consequences. WHO could mobilize the resources, by collaborating with nongovernmental organizations and academic institutions, to assist with translating evidence into best practices. Traditional and social media, celebrity engagement and visits by high-ranking officials are all methods to be considered in raising public awareness about HepB vaccination.

5. WHO should regularly disseminate reports reviewing progress towards targets. Countries and areas in the Western Pacific Region should be made aware of their achievements as well as areas for improvement. Annual reports, meetings and teleconferences could be held to share information.