Hepatitis B vaccines

Conclusions and proposed recommendations for SAGE?

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1. Does the emerging evidence suggest the need to adjust current HBV recommendations?

	Current recommendation	New recommendation
Need and time of administration of first dose.	Birth dose < 24 hours.	Available evidence does not support changes in the current recommendation.

	Current recommendation	New recommendation
Number of doses.	(i) 3 doses schedule: 1st dose as monovalent at birth and 2nd and 3rd (monovalent or combined with other ags) at same time as DTP1 and DTP3. (ii) 4 doses schedule: 1st dose as monovalent at birth followed by 3 doses (monovalent or combined with other ags) given with other routine infant vaccines.	Available evidence does not support changes in the current recommendation.

	Current recommendation	New recommendation
Interval between doses	Birth dose should be followed by 2 or 3 doses with a minimum interval of 4 weeks.	Available evidence does not support changes in the current recommendation.

	Current recommendation	New recommendation
HIV infected population (any age)	Should be vaccinated as early as possible with a standard schedule.	Available evidence does not support changes in the current recommendation. No clinical evidence on the benefits of an additional dose or higher dosage.

	Current recommendation	New recommendation
Low birth weight infants	Preterm infants should be vaccinated at birth and subsequently enter the national hepatitis B vaccination schedule. However, if an infant's birth weight is <2000 g, the vaccine dose given at birth should not be counted towards the primary series and 3 additional doses should be given according to the national vaccination schedule.	Available evidence does not support changes in the current recommendation.

	Current recommendation	New recommendation
Health care workers	Possible additional target groups for catch-up vaccination include people with risk factors for acquiring HBV infection (…) as well as HCWs and others who may be exposed to blood and blood products through their work.	Available evidence does not support changes in the current recommendation

	Current recommendation	New recommendation
Catch up vaccination	In low and intermediate endemic countries, catch up vaccination may contribute to decrease the burden of HBV infection. For older children and adults, the primary series of 3 doses with appropriate intervals applies.	2 or 3 doses could be used for older children, adolescents and adults.

	Current recommendation	New recommendation
Booster dose	No evidence to support the need for booster dose.	Available evidence does not support changes in the current recommendation. No evidence that a booster dose increase clinical protection against HBsAg carriage.

2. What is the impact of HBV vaccination programme on HBV epidemiology?

Current statement	New statement
Universal immunization beginning at birth and other successful hepatitis B vaccination strategies have resulted in a dramatic reduction of HBV transmission in many countries with historically high endemicity. This will gradually result in a reduction of HBV-related chronic hepatitis, liver cirrhosis and HCC, which have caused major concerns for public health and the economy in these areas.	There is emerging available evidence that demonstrates the impact of hepatitis B. This evidence should be made available to countries.

3. Does the available evidence support flexibility in the requirement for cold chain storage of Hepatitis B monovalent vaccines in order to expand the delivery of the birth dose?

Current statement	New statement
Ensuring that all infants receive a dose of hepatitis B vaccine within 24 hours of birth requires implementation of specific programmatic measures. Increasing the number of infants born in facilities or attended by trained health staff would improve birth dose coverage. (…) Expanding vaccine management systems and innovative outreach to provide vaccine for home births will ensure that hepatitis vaccine is available in settings where births take place.	Since an important proportion of deliveries at home or limited cold chain in peripheral health facilities may hamper access to the birth dose, a review of published data and manufacturers' data assessed the thermostability of Hepatitis B monovalent vaccine. Existing data indicates that most hepatitis B vaccines are heat stable and have been found to maintain immunogenicity after exposure to temperatures of up to +45°C for one week and temperatures up to +37°C and +41°C for several weeks.

Current statement	New statement
Efforts to develop new heat-stable and freeze-stable hepatitis B vaccine will aid these attempts. In addition, health promotion efforts aimed at parents and training aimed at providers are needed to increase awareness about the importance of administering hepatitis B vaccine within 24 hours of birth.	Field experience suggest there maybe programmatic advantages in keeping hepatitis B vaccine in ambient temperatures at service delivery points, especially as a strategy for reaching home births. Several countries are already using the vaccine OCC, though except for Indonesia, only on a pilot basis.

On HepB vaccine thermostability

Given the available evidence, SAGE should recommend that manufacturers seek regulatory license for CTC use without further delays.

In the interim to immediately expand the access to the birth dose in settings with high proportions of non-institutional deliveries, SAGE should consider a temporary off-label recommendation for storage of the vaccine out of the cold chain at delivery points for up to 5 days at 40°-45°C

Thank you