



Abbreviated name	Hepatitis B surface antigen prevalence
Indicator name	Prevalence of hepatitis B surface antigen
Domain	Health status
Subdomain	Infectious disease
Associated terms	Morbidity
Definition	Prevalence of hepatitis B surface antigen (HBsAg)-positive, adjusted for sampling design.
Numerator	Number of survey participants with HBsAg positive test, adjusted for sampling design.
Denominator	Number in survey with HBsAg result.
Disaggregation/ additional dimension	Dependent on sampling methodology Place of residence, exposure to hepatitis B virus (HBV) birth dose (official records), exposure to HBV B3
Method of measurement	<p>The serosurvey sample should be drawn from the specific geographic region to be verified. For example if the purpose is to estimate national childhood HBV transmission (including mother-to-child transmission) then the sampling should be geographically representative of the population. Convenience sampling is not appropriate. The sample size should be adequate to show with 95% confidence HBsAg prevalence of less than 1% with a precision of $\pm 0.5\%$.</p> <p>The target age is 5-years-old. Sampling 4–6 year olds may be appropriate.</p> <p>The serosurvey is cross sectional and therefore a point estimate time. The shorter time periods of data collection are therefore preferred.</p> <p>Data on HBV birth dose exposure and B3 completion should be drawn from official records. Where these are not available testing for HBsAb may be considered for the serosurvey. This is less preferable as it is more costly, but can also be done in addition.</p> <p>Specimen collection and transportation should be appropriate to minimize bias though specimen degradation in rural and remote areas.</p> <p>Where possible, it is advantageous to collect blood specimens for ELISA laboratory testing because the accuracy (sensitivity and specificity) is higher than for rapid tests. However in some locations only rapid tests will be available hence test selection is resource dependent. This should be considered in designing overall study methodology.</p> <p>When an appropriate sampling strategy and size are used and quality testing assays and laboratory procedures are employed, the HBsAg prevalence in the serosurvey should be representative of the incidence of childhood HBV transmission in the specific geographic region (or country) in this age group.</p>
Method of estimation	HBsAg is the most important input into estimation of Hepatitis B incidence which is defined as number of new hepatitis B infections per 100 000 population in a given year. Statistical modelling is used to make such estimates.
Measurement frequency	Intermittent, dependent on population seroprevalence and infant HBV vaccination coverage
Monitoring and evaluation framework	Outcome
Preferred data sources	Serosurvey
Other possible data sources	Routinely collected HBV vaccine administrative coverage data including the percentage of newborn infants given the first dose within 24 hours of birth (HepB0%) and the percentage of infants having received three doses of hepatitis B vaccine (HepB3 %)
Further information and related links	<p>Documenting the Impact of Hepatitis B Immunization: best practices for conducting a serosurvey. Geneva: World Health Organization; 2011 (http://whqlibdoc.who.int/hq/2011/WHO_IVB_11.08_eng.pdf, accessed 28 May 2015).</p> <p>Hepatitis B Control Through Immunization: a Reference Guide. Regional Office for the Western Pacific: World Health Organization; 2014 (http://iris.wpro.who.int/bitstream/10665.1/10820/3/9789290616696_eng.pdf, accessed 28 May 2015).</p> <p>Sample design and procedures for Hepatitis B immunization surveys: A companion to the WHO cluster survey reference manual. Geneva: World Health Organization; 2012 (http://whqlibdoc.who.int/hq/2011/WHO_IVB_11.12_eng.pdf, accessed 28 May 2015).</p>