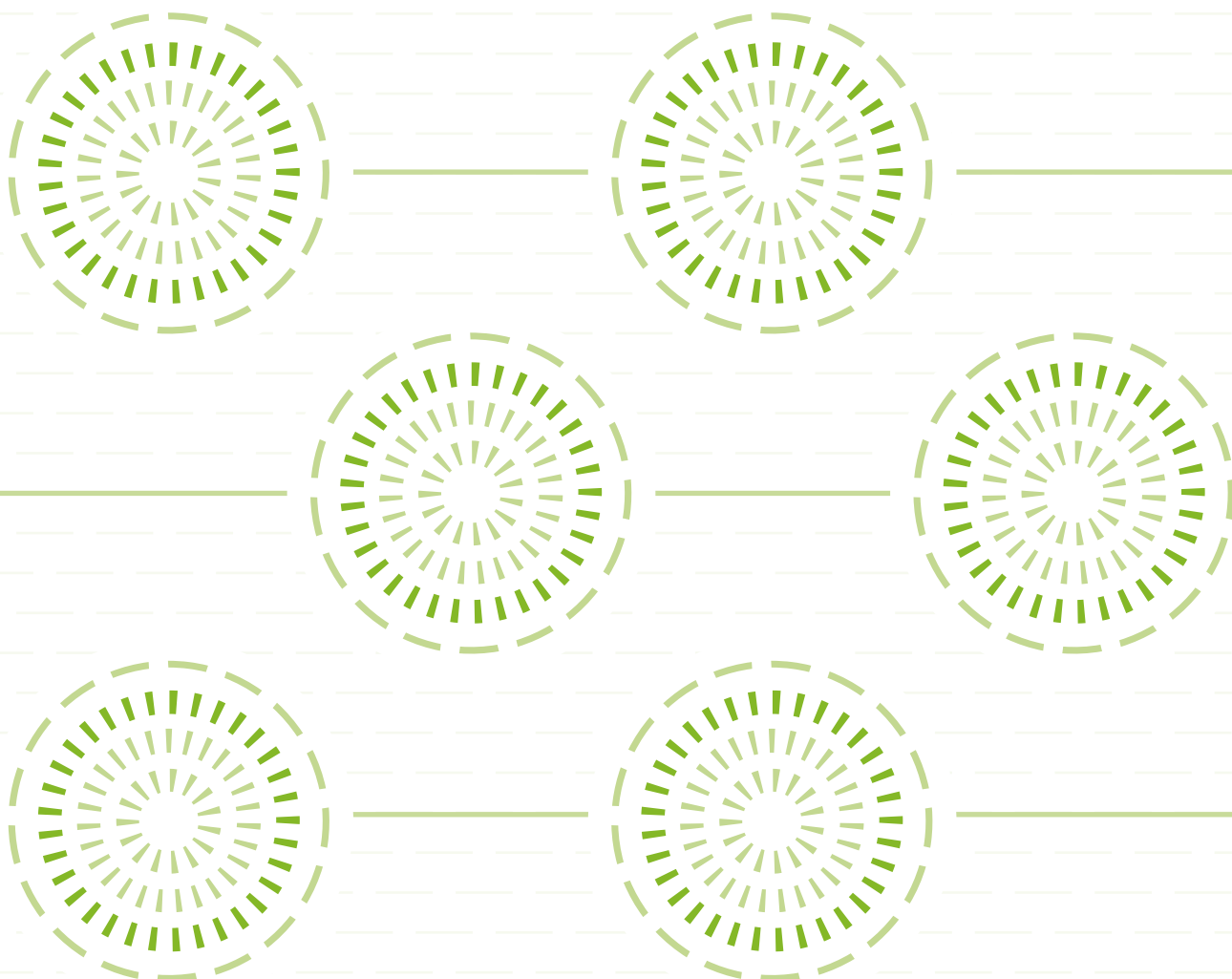


Global hepatitis report 2024

Action for access in low- and middle-income countries

Web Annex. Method for global reporting on disease burden and service coverage data for viral hepatitis B and C



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The Seventy-Fifth World Health Assembly noted with appreciation the global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections 2022–2030 and requested updates on progress against targets in 2024 and 2026. The strategies aim to eliminate viral hepatitis as a public health threat by 2030, defined as a 90% reduction in incidence and a 65% reduction in mortality of viral hepatitis B and C, respectively. To achieve these goals, the global health sector strategies focus on priority indicators, including disease burden, prevention coverage, harm reduction, blood safety, testing and treatment for hepatitis.

To monitor and evaluate progress towards eliminating viral hepatitis as a public health threat, WHO collected data to assess the disease burden and service delivery for viral hepatitis B and C in the 194 Member States. This annex describes the method used for the global, regional and country data on disease burden and service coverage provided in this report.

The data and estimates published in this report were validated with health ministries to assist Member States in developing evidence-informed strategies for eliminating viral hepatitis as a public health threat and tracking country progress towards achieving elimination targets (1).

Key steps involved in data collection and validation

- Countries were provided existing data for key indicators, including from country reports and partners.
- A simple reporting form was provided to all countries in March 2023, online and in electronic form, to update programmatic data and information on country policies.
- WHO regional and country offices supported data validation with health ministries in each country from March to September 2023. In the European Region, data collected by the European Centre for Disease Prevention and Control with WHO were used to align with existing data collection efforts.
- At the request of countries, data were triangulated and validated through a collaborative efforts of technical experts, partners and WHO. These included virtual meetings and in-country missions.
- The final data submitted were validated by WHO regional office and headquarters focal points, and any corrections were provided to countries for additional comment from 30 September to 15 December 2023. Countries could also provide contextual information on the uncertainties in the data and planned improvements. In a few countries, the data were marked as provisional, to be used to inform global and regional estimates and to be updated over the coming year with improved data.

Giving priority to country data over estimates

The data validation process gave priority to data derived from country data sources, such as from surveillance systems or disease registration systems. The data collection and validation process followed a stepwise algorithm:

- Country data: country-validated data were given priority for developing the cascade of care and disease burden estimates. References were provided when available and information was triangulated when it differed from partner data.
- Country data already validated with WHO regional offices: if the WHO region had completed an exercise with countries to validate viral hepatitis data before this process, these data were directly included.
- Partner data: if there were major gaps in the data, countries were given the option to review and use partner data when these were available. The data collected were compared with historical data and with data from different sources.
- Gaps in reporting: the sources above were given priority to fill gaps in data, and countries were requested to indicate how they could be supported in improving data collection in the coming year. If no data were available from the above sources, a regional average was applied to the country, with priority given to the regional average provided by the WHO regional office. Data from WHO regional offices, validated before this process, were given priority when estimating regional and global figures, both for point estimates and 95% confidence intervals (1,2).
- Comments and support: as data were validated and submitted, countries were also asked to provide comments to explain differences from partner data and to identify requests for support to improve data over the next year. WHO focal points provided clarifications with the support of partners, including the CDA Foundation, Imperial College and Bristol University (2).

Data Collaborative for Hepatitis

WHO established the Data Collaborative for Hepatitis to provide technical advice and partner consensus on estimation models (for example, by the CDA Foundation), with specific workstreams on mortality, hepatitis C incidence, costing and forecasting. The Data Collaborative provided technical input and consensus on:

- global reporting forms and the process of validating global, regional and country data, including clarifications to countries as requested, with the reviewed partner estimates endorsing the CDA Foundation model;
- improving data and alignment among partners on HBV and HCV prevalence and mortality, including the development of confidence ranges for estimates; and
- improving input on HCV incidence among people who inject drugs, which was presented as a box in the report but not used at this stage for global reporting.

Estimates

- Point estimates and uncertainty for estimates were calculated. First, the traditional 95% confidence intervals were calculated using the mean and standard deviation of country point estimates. Second, the aggregated minimums and maximums of all country level estimates (including: all partner-provided data when multiple partners provided data for a common indicator; country-provided data; and region-provided data) were summed at the regional and global levels. The point estimates and confidence intervals for the reported data in each country were initially estimated using Poisson distribution. The estimated values for the corresponding countries were aggregated across different regional levels, so that the upper and lower bounds of the intervals were respectively assembled to ensure that the aggregated confidence interval encompasses a sufficient degree of estimation uncertainty. To include the potential sample bias introduced by countries with large population sizes, a Poisson distribution-based point estimation method was implemented at the scale of millions, accompanied by the calculation of a 95% confidence interval. This approach helped to mitigate the impact of uneven population representation and enhance the scientific rigour of the analysis. The final ranges were reviewed with partners and regions.



- There are limitations to the data and estimates. First, country data were still affected by incompleteness and data quality issues. Data on the cascade of care were incomplete in several countries because these countries did not have data available for all stages of the cascade, or countries reported the data without new information to update or validate the findings. Second, available data did not allow for the assessment of new infections among various age groups to inform epidemiological trends. Third, some differences existed between multiple sources of estimates. Given changes over time in data collection methods and sources, the indicator results were estimated using the best methods available at the time; however, limitations to the methods and sources remain. These issues are being addressed by the partner Data Collaborative to improve each round of reporting. Improved estimates for example of cancer mortality in some regions also makes comparison over time more difficult, as does the need to use models to estimate some key measures, for example hepatitis incidence. Finally, data were collated from different sources, and there is ongoing work to align the approaches.
- WHO worked with partners to prefill the data as much as possible with existing country data.
- WHO shared the preliminary results with regional offices and initiated the validation process. The regional offices coordinated the validation process for their Member States. Focus was on the priority countries with high disease burden in the region and countries with data quality issues, and meetings with these countries were scheduled when needed.
- WHO regional offices provided the data to WHO country offices to validate with each country.
- WHO provided support to regions where required, focusing on priority countries and on the African Region (where validation was implemented by WHO and Member States during the 22nd International Conference on AIDS and STIs in Africa held in December 2023).
- WHO and the CDA Foundation reviewed all the validated data and comments, compared the data with partner data, 2015 baseline data and the latest data released by WHO in 2021 and accommodated any final comments to adjust and finalize the data.

Working closely with regions and countries

In early 2023, WHO defined the scope and indicators for global reporting, and communicated with national focal points for viral hepatitis to request reporting from health ministries. Meetings were held with each region to explain indicator definitions and the reporting process and regular meetings with focal points to discuss any issues encountered during the reporting process.

The reports were returned to WHO by 30 September 2023 and validated from October to December 2023. WHO worked with national focal points and partners to validate and finalize estimates in December 2023. The indicators included incidence, mortality and the cascade of diagnosis and care or cure, and the policy questions included information on national hepatitis plans. The number of indicators and forms were significantly simplified, which improved the response rate in countries.

The process of collecting and analysing the data included the following.

- WHO developed a reporting template for Member States. The template included key indicators, defined and described each indicator, specified the time period to be covered by the data and suggested sources.
- WHO communicated with regional offices and requested input from focal points in each region on the accuracy of indicator definition, period of data collection and procedures for reporting.

References

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