METHODS AND INDICATORS TO VALIDATE COUNTRY RESPONSES FOR DECREASING INCIDENCE OF HEPATITIS C VIRUS INFECTION TO ELIMINATION LEVELS SET BY THE WORLD HEALTH ORGANIZATION

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Introduction
In early 2020, the World Health Organization (WHO) initiated the development of a global framework to validate elimination of hepatitis C virus (HCV) infection as a public health threat. In the process, our group was commissioned to propose different methods and indicators that can be used by countries to document the target of an 80% reduction in HCV incidence over 2015-2030.

Methods
First, we conducted a literature review to collate different methods for estimating incidence using empirical data sources and their applicability in different contexts. Second, using insights from mathematical modelling work previously conducted by our group in diverse settings and populations, we examined possible alternative indicators that could be used to infer the incidence target reliably.

Results
Our review identified direct (i.e., repeat testing of individuals at risk and tests of recent infection) and indirect (i.e., approaches based on HCV antibody prevalence) methods for monitoring HCV incidence empirically. Some are more feasible in certain countries than in others, depending on the existing data, resources available and populations needing to be monitored. For countries who will find it logistically difficult and expensive to undertake large-scale studies to measure HCV incidence at the national level, our modelling work suggests that two other key indicators, which are more easily measured, could be used as reliable alternatives. These include monitoring trends in chronic HCV prevalence and levels of scale-up of prevention and treatment interventions. Building on these two lines of work, we propose three different approaches by which the HCV incidence target could be validated in different countries, highlighting the resource implications of each and their applicability to the specific populations needing to be monitored, including people who inject drugs.

Conclusion
Our findings present several options that could be used by countries to validate the HCV incidence target set by the WHO.

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