



## Opinions

## How far is Mexico from Viral Hepatitis Global Health Sector Strategy 2030 targets



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## ABSTRACT

In 2016 WHO member states endorsed the 69<sup>th</sup> World Health Assembly's Global Health Sector Strategies (GHSS) towards eliminating Hepatitis B (HBV) infections by 2030. Substantial progress has been made in Mexico regarding HBV vaccination, blood safety and health-care setting injection safety but minor progress has been identified regarding timely HBV birth-dose coverage, access to diagnostic testing and treatment. Most importantly, Mexico's lack of a national plan for the fight against viral hepatitis was identified as a major obstacle for the development and implementation of actions and procuring funding. Insight of these deficiencies, we propose six actions that are in line with GHSS strategic directions to better allow Mexico to reach the goal of eliminating viral hepatitis by 2030. 1) the creation of a National Viral Hepatitis Task Group capable of providing direction, recommendations as well as innovative solutions in the fight against viral hepatitis in Mexico; 2) the drafting of a National Plan for viral hepatitis; 3) establishing a national viral hepatitis information database; 4) development of Clinical Practice Guidelines; 5) appeal for governmental responsibility and accountability; 6) promote basic, applied science projects as well as clinical research to determine the viral, epidemiological, genomic, ethnic and cultural peculiarities of viral hepatitis infections in Mexico. These basic actions will better equip Mexico to meet GHSS targets, lead to high-impact health interventions and ultimately enhance the cascade of care, from diagnosis to chronic care. Political commitment is a requirement to the implementation of these actions but civil society involvement is also seen to be crucial.

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In 2016, World Health Organisation (WHO) member states endorsed the 69<sup>th</sup> World Health Assembly's Global Health Sector Strategies (GHSS) to guide actions to be implemented from 2016 to 2021 towards eliminating human immunodeficiency virus (HIV), sexually transmitted diseases and Hepatitis B virus (HBV) infections by 2030. GHSS identifies five core areas for intervention: Enhancing vaccine coverage, prevention of mother-to-child transmission of HBV, improving safety of health care setting injections, blood-product use and surgical interventions, harm reduction for high-risk groups and facilitating access to treatment for people living with HBV and Hepatitis C virus (HCV). The WHO Region of the Americas is on track for both the 2020 and 2030 GHSS targets of decreasing new chronic HBV infections and decreasing

viral hepatitis mortality. Also, substantial progress has been seen in overall HBV vaccination, blood safety and healthcare injection safety<sup>1,2</sup>. However, when analysing Mexico's progress, several areas of opportunity were identified. These include a lack of a national plan describing governmental policies and strategy, failure to document timely birth-dose coverage, absence of harm-reduction programmes for high risk-groups, limited access to treatment and availability of diagnostic testing.

In 2017, 62% of WHO member states (representing 87% of the global viral hepatitis population) referred having developed a national plan against viral hepatitis, 58% of which had also sought dedicated funding for such a plan<sup>1</sup>. The existence of documented national plans has proved critical towards developing and implementing actions against viral hepatitis and procuring funding<sup>3</sup>. At the start of 2020, and at the time of the first proposed GHSS milestone, Mexico remains without a published national plan against viral hepatitis. Although the 2017 Pan American Health Organization (PAHO) survey mentions Mexico as having a structured

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national strategy for viral hepatitis control and prevention, a document supporting this claim has never been produced<sup>4</sup>. In addition, this same PAHO report includes Mexico among 24 of 40 countries lacking a strategic and technical advisory group (STAG). First attempts to develop a Mexican consensus for HBV were published in 2005<sup>5</sup>. In 2019, such a plan was drafted for the management of HCV, albeit only for specific Mexican health institutions, without true national consensus and without formal government backing or funding<sup>6</sup>.

The lack of a such a plan has not only failed to establish national policies and strategies in the fight against viral hepatitis, but also interfered with resource allocation for studies of HBV and HCV epidemiology, clinical investigation as well as basic and applied scientific research. A consequence of not having a national plan is the growing trend among physicians of adopting international Clinical Practice Guidelines (CPG) working under the assumption that these apply equally to Mexico<sup>7,8</sup>. This simplistic approach ignores the genomic, cultural, ethnic and environmental features that distinguish both the Mexican mestizo and Amerindian populations, not to mention country specific viral traits<sup>9,10</sup>. Only by bolstering national (or even regional and local studies) can a proper estimation of viral hepatitis burden be achieved and the consequent epidemiological strategies and CPG be developed and implemented<sup>9</sup>.

With regards to vaccination, Mexico as well as most of Latin America has historically benefited from acknowledging the benefits of national immunization strategies<sup>11,12</sup>. The GHSS target of achieving 90% 3<sup>rd</sup> dose HBV immunization coverage by 2020 is behind schedule on a global scale as only 84% coverage had been reached by 2017. In Mexico, nearly 45% of adolescents and young adults have serological evidence of HBV vaccine-induced immunity (especially among those having 10 - 19 years of age) a reflection of vaccination policies established in 1999<sup>13</sup>. However, no information regarding the implementation of timely HBV birth-dose vaccination exists in Mexico. The great majority of Mexican newborns do not receive their first HBV vaccine dose until one week of age. The 2017 PAHO survey includes Mexico among countries that have adopted HBV birth-dose vaccination programs. However, this report states that Mexico does not share the goal of eliminating mother-to-child-transmission (MTCT) nor provides either routine screening of pregnant women for HBV nor HBV immunoglobulin for high-risk children<sup>4</sup>. Although only a couple of studies have addressed HBV infections in Mexican children (a proxy for MTCT), a single study has highlighted the possibility that horizontal (parent-to-child) transmission may play a greater role than MTCT, at least among Mexican children<sup>14,15</sup>.

Injection device re-use transmission of viral hepatitis has largely been considered to be a problem limited to the WHO Africa region. Nevertheless, the high prevalence of people who inject drugs (PWID) in the Americas has changed this concept. Recent estimations for the Latin America region suggest that 51,000 (2.8%) and 1'128,000 (61.9%) PWID are infected with HBV or HCV, respectively<sup>16</sup>. Data on the frequency of HBV among PWID in Mexico is scarce while the incidence of HCV infections among Mexican PWID has been shown to vary between 44% and 96%<sup>10,17</sup>. As of 2017, worldwide actions towards providing PWID with safe injection alternatives reached 33 syringes per person per year, making the GHSS target of 200 syringes per user per year by 2020 and of 300 syringes per person per year by 2030 very unlikely to be met. In Mexico, the official posture derived from the ongoing war on drugs and, most importantly, the criminalization of syringe possession has had far-reaching health consequences that have encouraged viral hepatitis transmission among PWID's<sup>18,19</sup>. In 2013, one of Mexico's most important harm-reduction programmes for needle and syringe provision and exchange was abruptly cancelled after Global Fund patronage ended<sup>20</sup>.

With regards to access to treatment for people living with viral hepatitis, a great lesson is to be learned from the global fight against HIV/AIDS. Current universal access to HIV anti-retroviral drug therapy is considered one of the greatest global health achievements, when the cost of treatments only 25 years ago was prohibitively expensive and restricted to some first-world countries. The fundamental precept securing this success was that no single human being must be denied treatment as a consequence of their social, political, economic and geographic status<sup>21</sup>. There are currently two approved treatments for chronic HBV infection, nucleos(t)ide reverse transcriptase inhibitors (NRTIs) and interferon alpha (IFNA). In 2014, direct acting antivirals (DAA) were made available for the treatment of HCV. By 2017 nearly 40% of people living with HCV (5 million worldwide) were receiving DAA's. Unfortunately, such a trend has not been observed for people living with HBV as only <2% (4.5 million worldwide) are on treatment<sup>22,23</sup>. Although Mexico has long been regarded as having a low prevalence of HBV and HCV infections, the recent description of higher prevalence among native Amerindian groups, low income households along with changing patterns of both intravenous drug abuse and migrations are likely to increase these estimations<sup>24,25</sup>.

In 2011, estimations of Mexicans living with HBV fluctuated from 3 to 8 million (adjusting for ethnicity and income) of which between 300,000 and 1 million required treatment. This same report estimated that between 400,000 and 1.4 million Mexican individuals were infected with HCV, of which 200,000 to 700,000 required treatment<sup>26</sup>. The lack of true data on the number of people living with viral hepatitis in Mexico and of those requiring treatment undermines any assessment of Mexico's performance on this goal. Interestingly, the 2019 announcement made by the Mexican Health Secretary regarding the recent purchase of 13,500 HCV treatments is projected to provide DAA's to between 1.9 and 6.7% of people living with HCV that are actually eligible for such treatment<sup>27</sup>. Unfortunately, WHO does not request member states to disclose information on patients requiring treatment for viral hepatitis, treatment availability nor national goals regarding access to treatment. As noted previously, access to treatment necessarily involves a simultaneous escalation of diagnostic testing<sup>2</sup>.

While the number of individuals living with viral hepatitis worldwide who were aware of their status rose from 10% (9% for HBV and 20% for HCV) in 2016 to 19% in 2017, the goal of reaching 30% target by 2020 and 90% by 2030 remains distant. An estimated 107 million HBV-infected and 15 million HCV-infected persons would need to be identified by 2020 to reach this goal globally<sup>2</sup>. According to the PAHO 2017 survey, Mexico does not provide rapid testing for either HBV or HCV nor does it possess a national guidance plan for HBV and HCV testing<sup>4</sup>. While concerted efforts have been made to provide HBV and HCV diagnostic testing for certain high-risk groups (sex workers, PWID's and convicts), only recently has the transmission of viral hepatitis been found to be particularly high among Mexican and other Latin American amerindians<sup>9,25</sup>. We fail to share the optimism expressed by other colleagues of the field regarding Mexico's progress in the global fight against viral hepatitis<sup>28</sup>. In sight of these shortcomings, we propose six actions in line with GHSS strategic directions to better allow Mexico to reach the goal of eliminating viral hepatitis by 2030. The proposed actions include: 1) the creation of a Mexican STAG, a truly inclusive National Viral Hepatitis Task Group capable of providing direction, recommendations as well as innovative solutions in the fight against viral hepatitis in Mexico; 2) the drafting of a National Plan for viral hepatitis which is inclusive of not only government officials but medical experts, the basic and applied research community, as well as the civil society; 3) development of a reliable and comprehensive information system to understand viral hepatitis epidemiology and to focus interventions; 4) development of tailor-made Clinical Practice Guidelines

for both HBV and HCV; 5) enforcing governmental responsibility and accountability regarding vaccination coverage (especially of timely HBV birth-dose), expanded testing for HBV and HCV, enhancing access to treatment and reinforcing preventative strategies for high-risk groups such as PWID's; 6) promote basic and applied science projects as well as clinical research to determine the viral, epidemiological, genomic, ethnic and cultural peculiarities of viral hepatitis infections in Mexico. In particular, a concerted national biomarker survey is warranted given the geographical, ethnic and socio-economic diversity seen throughout Mexico.

We believe that these basic actions will better equip Mexico to meet GHSS targets, lead to high-impact health interventions and ultimately enhance the cascade of care, from diagnosis to chronic care. Political commitment is a prerequisite to the implementation of these actions but civil society involvement is also crucial.

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