Eliminating Hepatitis C Virus (HCV) in Indonesia


1 Eijkman Institute for Molecular Biology, Jakarta, Indonesia; 2 University of Sydney, Department of Hepatitis & Emerging Infectious Diseases, Sydney, Australia; 3 Division of Hepatobiliary, Department of Internal Medicine, Faculty of Medicine, University of Indonesia, Dr. Cipto Mangunkusumo Hospital, Jakarta, Indonesia; 4 Digestive Disease and GI Oncology Center, Medistra Hospital, Jakarta, Indonesia; 5 Klinik Hati Prof. Ali Sulaiman, Jl. Cilamaya 46, Jakarta, Indonesia; 6 Sub-Directorate for Gastrointestinal Infection, Diarrheal Diseases, and Hepatitis, Directorate of Direct Transmitted Disease Control, Disease Control & Environmental Health, Ministry of Health, Jakarta, Indonesia; 7 Disease Control & Environmental Health, Ministry of Health, Jakarta, Indonesia; 8 Department of Internal Medicine Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia; 9 Center for Disease Analysis, Lafayette, Colorado, USA

BACKGROUND

The Republic of Indonesia is comprised of more than 17,000 islands, which are home to a total of 250 million people. In 2013, the Indonesian National Health Survey (Risksedas) found an anti-HCV prevalence of 1.0%, with a prevalence among children and adolescents (1-14 years of age) of 0.6%. Despite this high prevalence, in 2016, only a small proportion of patients were treated, and treatment was limited to interferon-based regimens. In order to support strategic planning for HCV elimination by 2030, treatment and diagnostic targets are needed.

OBJECTIVE

This study sought to quantify the burden of HCV and identify strategies to eliminate HCV from Indonesia.

RESULTS

Table 1. Scenario inputs, 2015-2030

<table>
<thead>
<tr>
<th></th>
<th>Past efforts 2015</th>
<th>Future efforts required for elimination 2017</th>
<th>2019</th>
<th>2021</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated</td>
<td>230</td>
<td>600</td>
<td>15,000</td>
<td>60,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Newly diagnosed</td>
<td>12,100</td>
<td>18,000</td>
<td>30,000</td>
<td>72,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Fibrosis stage</td>
<td>≥ F0</td>
<td>≥ F2</td>
<td>≥ F1</td>
<td>≥ F0</td>
<td>≥ F0</td>
</tr>
<tr>
<td>New infections</td>
<td>24,100</td>
<td>19,300</td>
<td>14,500</td>
<td>10,100</td>
<td>5,000</td>
</tr>
<tr>
<td>Treated age</td>
<td>15-64</td>
<td>15-64</td>
<td>15-64</td>
<td>15-69</td>
<td>15-69</td>
</tr>
<tr>
<td>SVR</td>
<td>77%</td>
<td>87%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

CONCLUSIONS

Indonesia’s large population and many islands present unique challenges for viral hepatitis elimination. Further complicating these elimination efforts is the relatively small number of hepatologists (approximately 165) available to care for the >20 million HBV and HCV patients.

Despite these limitations, the Indonesian government has expressed a commitment to addressing viral hepatitis. In 2012, a Hepatitis Control Program was officially designated within the Ministry of Health, and in 2015, this was secured by the Ministerial Decree on the National Control of Viral Hepatitis. Beginning in 2017, Government assistance programs provided testing and treatment with direct-acting antiviral therapies for 6,000 patients.

This analysis supports strategic planning by outlining the number of patients to be diagnosed and treated, both annually and cumulatively, in order to achieve elimination.

REFERENCES


Figure 1. HCV Related Morbidity and Mortality in Indonesia, 2016-2030

In the short term (before 2020) enhancing screening and linkage to care will be especially important, in order to ensure there will be enough patients to treat.