Report of the First Meeting of the Strategic and Technical Advisory Group (STAG) on Viral Hepatitis in the WHO South-East Asia Region

24 September 2020
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I. Introduction

1.1 Background

The South-East Asia (SEA) Region of the World Health Organization (WHO) has an estimated 39 million (range 29–77 million) people living with chronic hepatitis B, and an estimated 14 million¹ (range 8–18 million) living with hepatitis C. However, there is wide variation between countries in the Region in terms of prevalence of hepatitis B and C.

Mortality due to viral hepatitis is increasing even while deaths due to HIV and TB are on the decline. The main causes of death are consequences of chronic hepatitis B and C infections, such as cirrhosis and liver cancer. Other than the substantial mortality, viral hepatitis also leads to significant morbidity; posing strains on health systems due to prolonged care requirements, of which some are cost-intensive as well, such as managing liver cancer and liver transplantation where it is required.

Following the inclusion of viral hepatitis within the ambit of the Sustainable Development Goals (SDGs), WHO developed a Global Health Sector Strategy (GHSS) for Viral Hepatitis (2016–2021). Based on the Global Strategy, a Regional Action Plan (RAP) for Viral Hepatitis in the SEA Region (2016–2021) was prepared in consultation with Member States and endorsed by the Seventieth session of the WHO Regional Committee for South-East Asia. This provides an actionable framework of priority evidence-based interventions to support national responses for the prevention, control and management of viral hepatitis.

WHO has been offering technical support to Member States in developing fully costed national action plans as well as to update and upscale diagnostic and treatment modalities. Support is also provided on cross-cutting areas, including immunization for hepatitis B, blood safety and injection safety, among others.

¹ Disease burden, sequelae, and cost-effectiveness of HCV treatment in WHO South-East Asia Region countries. New Delhi: World Health Organization Regional Office for South-East Asia (reviewed and agreed by the Strategic and Technical Advisory Group (STAG) on Viral Hepatitis in the WHO South-East Asia Region).
1.2 Strategic and Technical Advisory Group (STAG)

There has been progress on several fronts, such as Member States developing action plans including diagnostic and treatment services for viral hepatitis in public sector healthcare settings; and prevalence of hepatitis B dropping to less than 1% among five-year-old children in many countries. However, several areas require accelerated efforts towards the 2030 elimination targets.

To move further in this direction and step up commitment for viral hepatitis, the WHO Regional Director for South-East Asia constituted a Strategic and Technical Advisory Group (STAG) in May 2020. The overarching objective of the STAG is to provide high-level technical inputs, based on scientific evidence and with a public health approach, in order to enable the Region to reach its target of eliminating viral hepatitis by 2030. As such, the STAG will provide advice to the Regional Director based on independent assessment of the strategic and technical considerations in all aspects of work related to viral hepatitis.

The detailed terms of reference of the STAG are listed below:

- Review technical and strategic aspects of WHO collaboration with, and provide support to, Member States’ efforts in responding to viral hepatitis, including the provision of advice on WHO’s policies, strategies, and technical assistance.

- Support the WHO Regional Office for South-East Asia team with high-level technical advice for adapting and customizing global guidelines and evidence from the rapidly progressing areas of diagnostics and therapeutics, including analysis and advice on cost–effectiveness of interventions.

- Provide oversight to the regional disease burden updating process vis-à-vis the global process, and support the Regional Office’s efforts in demonstrating and advocating the opportunities, particularly in view of recent advances.

- Guide the development and adoption of a regional roadmap, in line with the SDG “Decade of Action”, including by participating in the preparatory technical work, as well as overseeing the subsequent consultative process towards developing a new Regional Action Plan
(2022–2026) on the way to ending viral hepatitis as a public health threat by 2030.

- Review technical support needs and provide recommendations on the establishment of other committees, working groups and other means as required, through which scientific and technical matters are addressed; and to work collaboratively with existing forums such as the South-East Asia Regional Expert Panel for Verification of Hepatitis B Control.

- Any other activities as agreed by the members.

A list of STAG members is included in Annex 1.
2. Objectives of the meeting

The first meeting of the newly constituted STAG was held virtually on 24 September 2020. The objectives of the meeting were to:

- update STAG members on the progress on the Regional Action Plan for Viral Hepatitis (2016–2021) in South-East Asia;
- seek expert opinion on the regional burden estimates exercise commissioned by the Regional Office on the prevalence of hepatitis C infection, and the number of people requiring treatment;
- discuss the costing required for elimination of hepatitis C in the SEA Region based on these burden estimates;
- discuss the cost–effectiveness of the treatment for hepatitis C;
- plan a roadmap for the elimination of hepatitis C in the SEA Region; and
- discuss key priorities to work towards the elimination of hepatitis B.
3. Agenda, participants and proceedings of the meeting

The meeting was attended by all members of the STAG and few observers who were invited based on their expertise in the specific topics planned for discussion. The agenda of the meeting can be referred to in Annex 2 and the list of participants in Annex 3.

Dr Tjandra Yoga Aditama, Ag. Director, Department of Communicable Diseases (CDS) at the Regional Office, welcomed the members and requested Dr Poonam Khetrapal Singh, WHO Regional Director for South-East Asia, to deliver the opening remarks. Following the opening remarks by the Regional Director, technical discussions in line with the agenda and meeting objectives were undertaken, wherein STAG members offered several recommendations. The meeting proceedings are summarized in this report with 10 key recommendations highlighted.
4. Opening remarks

The Regional Director conveyed her pleasure in welcoming the members and other participants to the inaugural meeting of the STAG, which she had convened to accelerate progress towards achieving the goal of a hepatitis-free South-East Asia Region. The Regional Director noted that hepatitis kills an estimated 410,000 people in the Region every year – around 30% of the global burden, and much more than the burden of HIV, TB or malaria combined. She stressed that bold and decisive actions are required to stay on track to eliminate hepatitis as a public health threat and achieve the Sustainable Development Goal (SDG) 3.3. New diagnostics, drugs and other medical products hold immense potential to dramatically reduce hepatitis morbidity and mortality. The Regional Director observed that when applied in combination with proven strategies such as immunization, and blood and injection safety, there is no limit to what can be achieved.

Commitment to eliminate hepatitis continues to gather pace across the Region, and it is imperative that we harness it, she said. Almost all countries are now implementing national viral hepatitis strategic plans. All countries have at least three doses of hepatitis B vaccine in their national immunization schedule, and eight countries now provide the hepatitis B birth dose. Bangladesh, Bhutan, Nepal and Thailand have achieved the 2020 target for hepatitis B virus (HBV) control through immunization.

Dr Poonam Singh acknowledged that policies which empower key populations to prevent infection, get tested and, where appropriate, seek treatment are showing results. But the Region is yet to achieve its full potential. For example, the cost of direct-acting antiviral drugs, which can cure 85%–95% of chronic infections with hepatitis C virus (HCV), has come down to as low as US$ 40 for a 12-week course. Yet, not all Member States have made the cost reductions that are possible. Point-of-care testing can dramatically increase
the number of people who are aware of their status and who can thereby seek treatment.

The STAG’s inputs are important for developing strategies that will help fast-track the implementation of core interventions. To achieve this, high-quality data and evidence are of paramount importance. In this regard, a series of systematic reviews undertaken by WHO will need to be examined and the country and regional disease burden estimates for hepatitis C, reviewed. In due course, the same should be done for hepatitis B. She added that STAG will also have to assess estimates of the financial resources required to eliminate hepatitis in the Region and identify the funding gaps that must be filled.

The STAG’s conclusions from the above exercises will have to inform the investment cases to be developed subsequently. These investment cases should be integrated into the Region’s overall quest to achieve universal health coverage (UHC), which is one of the eight Flagship Priority Programmes for the Region. The successful completion of these tasks is crucial for preparing the next regional action plan, as the current plan concludes in 2021.

The Regional Director urged STAG members and other participants to make the most of this meeting and thanked them for contributing to the shared mission of achieving a healthier, hepatitis-free South-East Asia Region.
5. Technical sessions

The technical sessions started with the nomination of Dr Shiv Kumar Sarin as Chairperson, and Ms Jennifer Johnston as co-Chairperson of the meeting. Dr Mukta Sharma, Regional Adviser for TB/HEP/HIV/STIs at the Regional Office, explained that there were two key parts to this meeting.

First, to seek the views of the STAG members on three exercises on hepatitis C – regional burden estimates; financial needs estimated for elimination; and cost–effectiveness of treatment – commissioned by the Regional Office. Second, to seek the view of STAG members on the key priorities for ending HBV as a public health threat in the SEA Region, and where the Secretariat should focus on during the next year to move this agenda forward. This was followed by presentations and discussions on each of the agenda items for the views and recommendations of STAG members.

5.1 Update on progress of the Regional Action Plan (RAP)

An update on the Regional Action Plan on viral hepatitis was presented by Dr Mukta Sharma. She highlighted the progress made as well as the critical gaps that exist across prevention, testing and treatment of viral hepatitis, with respect to the 2020 and 2030 regional and global targets. The way forward on bridging these gaps during next Regional Action Plan (2022–2026) was also discussed.

In 2016, the Sixty-ninth World Health Assembly endorsed the Global Health Sector Strategy (GHSS) on Viral Hepatitis, which called for the elimination of viral hepatitis as a major public health threat by 2030. “Elimination” is defined as achieving a 90% reduction in new infections and a 65% reduction
in mortality (by 2030). Modelling exercises by WHO had suggested that five core interventions in prevention and treatment, with sufficient coverage, can help reach the above targets for the elimination of viral hepatitis. Global and regional targets including in the Regional Action Plan were accordingly set.

Dr Sharma provided the STAG with an overview of the progress in the SEA Region with respect to the above targets. It was pointed that the progress has been particularly slow in testing and treatment for both HBV and HCV, when compared with prevention interventions. She elaborated on the testing and treatment cascades for HBV as well as HCV.

The key implications from the cascade analyses are that there is a need to i) boost testing coverage and access to treatment; ii) promote strategic procurement to fully utilize the potential of price advantages; and iii) improve reporting systems and overcome data challenges. The progress in other areas such as immunization for HBV need to be complemented with testing and treatment, in order to achieve the 2030 elimination targets for HBV.

On the costing front, it was pointed out that even though tenofovir disoproxil fumarate (TDF) is off-patent in most markets, not all countries have been able to achieve the potential cost reductions. There is need for functional synergies with the procurement for HIV programmes. Furthermore, by enhancing case detection and treatment coverage, a larger number of people can be initiated on treatment, which could provide an additional volume-based price advantage. There is further need for advocacy to highlight the following: i) cure is possible in 85%–95% of those with chronic HCV; ii) cost–effectiveness of early diagnosis and treatment (as opposed to managing sequelae); and iii) rapid reduction in the cost of direct acting antivirals (DAAs) for HCV infection.

Following the care cascades for HBV and HCV, a snapshot of harm reduction in the Region was also provided. The progress on opioid substitution therapy (OST) has not been uniform, and it continues to be unavailable in many settings including with many opioid users. Constraints include: the use of non-evidence-based approaches; exclusive focus on abstinence; lack of effective procurement mechanisms keeping the cost of methadone high; and the like. During the ensuing discussions, the STAG members examined these gaps with a focus on overcoming the challenges. The summary of the suggestions offered are included in the section on key recommendations. Further, a draft report on the regional progress was shared with the STAG members as part of the meeting documentation for their review and inputs.
5.2 HCV disease burden in the SEA Region

Dr Bharat Bhushan Rewari, Scientist for HIV/HEP/STIs at the Regional Office informed about the preliminary results from the regional burden estimates exercise conducted by the Regional Office, for the STAG’s review and advice. This is based on a systematic review for each country after which the results are pooled to arrive at a regional aggregate. Extensive literature search in various electronic databases such as PubMed, Scopus, Embase and Google Scholar, as well as reviews of published studies, government reports, international websites, the Global Burden of Disease (GBD) Study, as well as personal communication with national programme persons and subject experts in Member States were used to identify the available data. The work carried out by the WHO Collaborating Centre on Viral Hepatitis at the Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow, India, was duly acknowledged.

The individual country reports, inclusive of both burden estimates and cost–effectiveness, were shared with all STAG members in advance, and the regional aggregate estimates of prevalence, were presented at this session. These preliminary results showed that the burden of HCV in the Region is approximately 14 million (as opposed to the burden estimate of 10 million based on 2015 data), of which almost 88% are among the general population. (Table 1 and 2).

Table 1. Population subgroups included for segregation of seroprevalence data

<table>
<thead>
<tr>
<th>Risk group</th>
<th>Study population</th>
<th>Estimated weighted pooled seroprevalence (%) of HCV antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td><strong>Low-risk</strong></td>
<td>General population ≥15 years of age</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>People on maintenance haemodialysis (MHD)</td>
<td>26.18</td>
</tr>
<tr>
<td></td>
<td>People living with HIV (PLHIV)</td>
<td>13.67</td>
</tr>
<tr>
<td></td>
<td>People who inject drugs (PWID)</td>
<td>51.44</td>
</tr>
<tr>
<td></td>
<td>Sex workers</td>
<td>2.69</td>
</tr>
<tr>
<td></td>
<td>Men who have sex with men (MSM)</td>
<td>11.43</td>
</tr>
<tr>
<td></td>
<td>Prisoners</td>
<td>8.39</td>
</tr>
</tbody>
</table>
Table 2. Estimated anti-HCV seroprevalence among various population subgroups

<table>
<thead>
<tr>
<th>Risk group</th>
<th>Study population</th>
<th>Estimated burden of HCV infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-risk</td>
<td>General population ≥ 15 years of age</td>
<td>12 580 493 (88.39%)</td>
</tr>
<tr>
<td></td>
<td>People on maintenance haemodialysis (MHD)</td>
<td>206 963</td>
</tr>
<tr>
<td></td>
<td>People living with HIV (PLHIV)</td>
<td>485 250</td>
</tr>
<tr>
<td></td>
<td>People who inject drugs (PWID)</td>
<td>578 647</td>
</tr>
<tr>
<td></td>
<td>Sex workers (SW)</td>
<td>35 385</td>
</tr>
<tr>
<td></td>
<td>Men who have sex with men (MSM)</td>
<td>228 013</td>
</tr>
<tr>
<td></td>
<td>Prisoners</td>
<td>117 749</td>
</tr>
<tr>
<td>High-risk</td>
<td>Total HCV burden in high-risk groups</td>
<td>1 652 007 (11.61%)</td>
</tr>
</tbody>
</table>

Total burden of HCV infection in Member States | 14 232 500 (100%)

Assuming a spontaneous clearance rate of HCV at about 20%, approximately 12 million people would be in need of treatment. A process of review of each of the draft country reports by STAG members has begun, and will be completed soon. The members deliberated on the key aspects of this exercise and agreed on the overall process and methodology adopted for burden estimation. Nevertheless, members offered inputs during the meeting for some countries and some sub-populations. All these inputs, including the written comments shared by the STAG members, will be consolidated and reviewed, and the changes required incorporated in the estimates.

Ending HCV in the SEA Region – what will it cost?

A brief presentation on the costing required for HCV elimination in the Region by 2030 was given by Dr David Tordrup, Health Economist, Triangulate Health Ltd., based on the work commissioned by the Regional Office. Key inputs into this exercise included the disease burden estimates for each country, as well as the costing of commodities used as per UNDP prices for drugs and diagnostics for HCV. Similarly, costs for providing medical consultations as well as overhead programme costs were included.
Costs for three scenarios were projected for the period until 2030 depending on coverage – a flat line scenario (with current pace of progress); a progress scenario (based on current WHO guidance); and an ambitious scenario (to achieve elimination by 2030). Preliminary results from this modelling showed the total projected costs from 2020 to 2030 for HCV management to be US$ 1.1 billion in the flatline scenario, US$ 3.1 billion in the progress scenario, and US$ 18.3 billion in the ambitious scenario.

During the discussions, members drew attention to the relatively high costs for medical consultations used in the model. They suggested that innovative ways be considered for reducing these costs. It was recommended to see if the cost of consultations can be revisited based on alternative scenarios that can achieve the same level of service delivery; for example, if a larger proportion of consultations could be in the form of teleconsultations. Finally, the STAG recommended that the Regional Office must advocate for resource mobilization using the ambitious scenario and aim for elimination.

Cost–effectiveness of HCV treatment – an investment case for the Region

Dr Amit Goel, Additional Professor at the Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow, India (a WHO collaborating centre), presented the cost–effectiveness analysis (CEA) of providing treatment to those infected with HCV. The CEA was done using the “Hep C calculator” (https://www.hepccalculator.org), which is an interactive online tool developed to evaluate the cost–effectiveness of DAA-based HCV treatment. The tool uses a mathematical model of multistage disease progression to simulate the life-course of HCV-infected populations using a previously validated mathematical model. This tool allows users to provide selected input parameters, such as the prices of DAAs and laboratory tests, and the cost of managing various stages of HCV in a country.

The results from the analysis showed that DAA-based HCV treatment is not only cost effective but also cost-saving in the SEA Region (Table 3).
Countries may choose either of the two readily available pan-genotypic treatment options – sofosbuvir/daclatasvir and sofosbuvir/velpatasvir. The efficacies of these drug combinations are comparable. The choice of treatment regimens in Member States would hence be guided by the availability and cost of these drugs. It was emphasized that successful HCV treatment will obviate the risk of progression to cirrhosis, hepatocellular carcinoma and liver-related deaths in the SEA Region.

On finalization of the CEA analysis, members suggested its review in terms of possible limitations in the current draft and to consider modification of the model based on a more contextually relevant pattern of movement from the stages of fibrosis observed in the Region. Another suggestion was to consider how much the CEA will vary if programme and infrastructure costs are also added to the model. Overall, members agreed to the findings that HCV treatment is cost effective and cost-saving using either of the two drug combinations. As such, they emphasized the need to urgently scale up treatment in countries of the Region.

Key priorities for hepatitis C in the Region

Based on the three presentations and discussions on HCV burden estimates, the regional costing for elimination, and the cost–effectiveness analysis, the
STAG members felt that the following important actions are needed for the elimination of HCV in the Region.

- **Raise awareness, address stigma:**
  - Scale up awareness and public information on HCV towards demand creation, including through greater use of social media and appropriate public service announcements.
  - Promote community-based and health education approaches to overcome barriers to testing and treatment, such as stigma and discrimination.
  - Institute measures to overcome stigma by ensuring anonymity and improve testing coverage.

- **Increase access to testing and linkage to treatment:**
  - Work towards simplified, integrated and decentralized service delivery overall – including diagnosis and treatment simplification.
  - Further strengthen the harm reduction approach and utilize those platforms and networks for scaling up testing and treatment.
  - Learning from the experience in countries such as Australia, Canada, etc., adopt approaches such as the “Recall method”, encouraging testing among those who underwent transfusions and invasive procedures in health-care settings, particularly during the period when infection prevention and control policies were not well implemented.
  - Improve linkage to care in all settings where HCV testing is done (e.g. screening in blood banks).
  - Leverage multi-disease testing platforms for scaling up testing coverage (e.g. GeneXpert).
  - Explore a potentially increased role for WHO-prequalified HCV core antigen testing as opposed to the current emphasis on RNA testing.
  - Within national programmes, explore micro-elimination opportunities among higher-risk populations.

- **Enhance efforts in capacity-building, health systems strengthening, and financing:**
  - Further strengthen the programmatic components, for example, HCV surveillance system, infection prevention and control activities
in health-care facilities, and blood screening facilities, along with setting up of testing and treatment facilities.

- Emphasize national investments in the scaling up through innovative and catalytic financing.
- Ensure greater attention to prevention in health-care settings by strengthening universal safety measures and blood safety.
- Provide guidance to countries on including HCV medicines in essential medicine lists (EML).

**Key priorities for hepatitis B in the Region**

On behalf of the STAG members, Mr Giten Khwairakpam, Program Manager of TREAT Asia/amfAR – The Foundation for AIDS Research, initiated discussions on this topic by presenting an overview of the HBV situation in the Region. By outlining key issues that need to be discussed as the way forward towards HBV elimination, he reiterated that these issues have not received as much attention as they have in the case of HCV. The Chairperson facilitated subsequent discussions, the key points of which are summarized below:

- **Bring hepatitis B into focus:**
  - Accelerate efforts for the elimination of HBV since it is already the year 2020 in the context of the 2015–2030 SDG Framework.
  - Clearly define goals and timelines for developing the roadmap as well as intermediate milestones to elimination.
  - Review prevalence estimates, mortality and sequelae data for HBV more closely and advocate for prioritized interventions.
  - Advocate with national governments highlighting cost–effectiveness analyses and convince them about the benefits of early diagnosis and treatment rather than treating chronic sequelae alone.

- **Raise awareness and address stigma:**
  - Advocate for government-led mass media and public education campaigns, since other approaches may have limited reach.
  - Involve community-based organizations (CBOs) and nongovernmental organizations (NGOs) as much as possible (bottom-up approach).
Engage local stakeholders, including civil society, medical associations, clinical care providers, researchers and policy-makers to help implement HBV control plans.

Increase access to testing and linkage to treatment:

- Prevention of mother-to-child transmission (PMTCT) programme may be a good approach and starting point, wherein screening of family members of those found positive is recommended. Using PMTCT as an opportunity for family screening, the approach of “testing with a view to treat” needs to be strengthened, including assisted partner notification of those who are found positive.

- Explore newer opportunities in the context of COVID-19 as several rapid changes are occurring in how countries deal with communicable diseases (e.g. testing infrastructure for RT-PCR at the grassroot level has expanded rapidly and can be harnessed for viral hepatitis; similarly, the increased awareness about infectious diseases may present with an opportunity).

- Initiate preliminary deliberations to explore the possibility of a “Treat All” approach or a prioritized approach for HBV. It is recommended to undertake a separate meeting to discuss the rationale and feasibility of this approach.

Strengthen prevention approaches:

- Ensure greater attention to prevention in health-care settings by strengthening universal safety measures and blood safety.

- Focus on increasing birth dose coverage in countries lagging or not implementing it. Sustain and accelerate vaccination, including through catch-up campaigns and intensified approaches among higher-risk groups, even while innovating for expansion of testing and treatment.

- It is recommended that health care organizations promote vaccination of all healthcare workers and ensure protective levels of hepatitis B surface antibody.

Enhance efforts in capacity-building, health systems strengthening, and financing:

- Invest in capacity-building and infrastructure for testing and treatment at decentralized levels. Towards this, WHO collaborating
Strategic and Technical Advisory Group (STAG) on Viral Hepatitis in the WHO South-East Asia Region

Centres could support in preparing operational guidance and providing training for human resource development.

- Explore multiple options and pathways to further reduce costs of diagnostics and treatment.
- Ensure adequate commitment, including human resources and financing, for addressing challenges identified in achieving the elimination of HBV. It was also suggested to have dedicated staffing for hepatitis at the Regional Office.

Strengthen data systems for hepatitis:

- Address data challenges and improve reporting systems. Explore possibilities of notification of viral hepatitis at the country level and of setting up national registries.
- Coordinate the collection of HBV and HCV seroprevalence data and integrate the measurements of HBV and HCV infection being done for other purposes into serological surveys (“piggyback” approach), as appropriate.
- Collate viral hepatitis-related data that are already available, including information regarding blood donations/transfusions and seroprevalence in specific populations (prisoners, PWID, pregnant women, etc).
- Initiate steps to bridge the gaps between public and private sectors through engagement with NGOs, community groups, and liver foundations. Capture data from the private sector in order to better strategize response in that segment, given the high share of patients seeking care from private providers in many countries of the Region.
6. Key recommendations by STAG

1. The Strategic and Technical Advisory Group agreed in principle to the methodology adopted and recommended the sharing of new HCV burden estimates with respective countries. It was also advised to review more closely those estimates where wide variation is observed in a specific country and/or a specific sub-population.

2. It was recommended that the Regional Office enhance its engagement with Member States to address data challenges and improve reporting systems. These could range from exploring possibilities of notification of viral hepatitis at the country level and setting up of national registries; integrating HBV and HCV into other serological surveys, as appropriate; coordinating the collection of seroprevalence data; and adopting measures to capture private sector data.

3. Support Member States to adopt and scale up differentiated testing approaches, in order to urgently improve testing coverage, including the following: as part of micro-elimination efforts where specific sub-populations based on a risk factor, and/or higher geographical prevalence for HCV, are prioritized for testing and treatment; recall method and transfusion receipts for enhancing testing among those at higher risk of hospital-acquired infection and through blood transfusion respectively; PMTCT pathway for HBV; and family/partner screening for those testing positive. Fear of stigma as well as lack of awareness are major barriers in this regard that need to be addressed through system-wide strategies.

4. Offer operational guidance to Member States for integrating hepatitis control with the broader health systems as well as vertical programmes such as HIV, towards scaling up of diagnostic and treatment facilities. Depending on the specific country context, these can imply integrated use of point-of-care multidisease diagnostic facilities; leveraging service delivery channels such as maternal and child health for offering PMTCT of HBV; and harm reduction services for offering HCV testing and linkage to treatment. These approaches could also result in optimal utilization of human resources.

5. Support Member States to leverage the benefits of cost reduction in DAAs through in-country registration; use of pooled procurement mechanisms; and inclusion of these drugs in the national essential medicines lists (EML).
6. Ensure greater attention by Member States towards the prevention of viral hepatitis: This must encompass a) prevention in health-care settings through the strengthening of universal safety measures, including injection safety, and blood safety; b) improving coverage of hepatitis B vaccine birth dose, as well as, of vaccination among sub-populations at a higher risk of infection; and c) strengthening harm reduction services including OST for persons who inject drugs (PWID).

7. Economic analysis undertaken by the Regional Office has shown that HCV testing and treatment is not only cost-effective but cost-saving as well. Hence, the Regional Office must advocate for resource mobilization using the fully-funded ambitious scenario that aims for elimination, as projected in the costing exercise. Before finalizing the cost estimation at national levels, Member States can review the current assumptions and explore ways to further reduce consultation costs, which form a major component of total costs. Advocacy must aim to leverage domestic resources under the umbrella of UHC and tap into the countries’ social security and insurance programmes.

8. The STAG recommended that collaborators should review and revise the hepatitis C calculator used for cost–effectiveness analysis in view of the changes over the years in different aspects of the assumptions that went into the model.

9. Support Member States to undertake disease burden estimations, and review mortality and sequelae data for HBV, to accelerate efforts towards HBV elimination. Using PMTCT as an opportunity, strengthen the “testing with a view to treat” approach, including assisted partner notification of those who are found positive. Similarly, the STAG recommended that WHO review the effectiveness and feasibility of a “Treat All” policy for HBV.

10. It was recommended that the Regional Office undertake high-level advocacy with Member States at the level of ministers of health to ensure the required commitment towards elimination of viral hepatitis. This is required in critical areas of viral hepatitis including in collating better data and providing more accurate burden estimates, highlighting the importance of the removal of any associated stigma, as well as ensuring the necessary investments.

The meeting was adjourned following the presentation of a summary of the proceedings and key recommendations. A vote of thanks was presented by the officials from the Regional Office. The Chairpersons thanked the participants for their valuable contributions.
Annexure 1: List of STAG members

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**Annexure 2: Agenda of the first meeting of STAG**

*First Meeting of the Strategic and Technical Advisory Group (STAG) on Viral Hepatitis in the WHO South-East Asia Region*

<table>
<thead>
<tr>
<th>Time (IST)</th>
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<th>Speaker / Facilitator</th>
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<tr>
<td><strong>Opening session</strong></td>
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<tr>
<td>1330</td>
<td>Opening remarks</td>
<td>Dr Poonam Khetrapal Singh, Regional Director, WHO SEA Region</td>
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<tr>
<td>1335</td>
<td>Introduction of STAG members, nomination of Chair and co-Chair</td>
<td>Dr Tjandra Yoga Aditama, Ag. Director, Department of Communicable Diseases, WHO SEARO</td>
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<td></td>
<td>Objectives of the Meeting</td>
<td>Dr Mukta Sharma, Regional Adviser, WHO SEARO</td>
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<td><strong>Technical sessions Facilitated by Chair and co-Chair</strong></td>
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<tr>
<td>1345</td>
<td>Update on SEA Regional Action Plan – Where are we today?</td>
<td>Dr Mukta Sharma, Regional Adviser, WHO SEARO</td>
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<tr>
<td>1355</td>
<td>HCV burden estimates in the SEA Region</td>
<td>Dr B.B. Rewari, Scientist, WHO SEARO</td>
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<tr>
<td>1405</td>
<td>Discussion on HCV burden estimates</td>
<td>STAG members</td>
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<td>1445</td>
<td>Ending HCV in the SEA Region – What will it cost?</td>
<td>Dr David Tordrup, Triangulate Health, United Kingdom</td>
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<tr>
<td>1455</td>
<td>Cost–effectiveness of HCV treatment – An investment case for the SEA Region</td>
<td>Dr Amit Goel, Additional Professor, SGPGI, Lucknow, India</td>
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<tr>
<td>1505</td>
<td>Discussion on moving towards elimination – What are key priorities for HCV?</td>
<td>STAG members</td>
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<td>1540</td>
<td>Key priorities for hepatitis B in the SEA Region</td>
<td>Mr Giten Khwairakpam, Programme Manager, TREAT Asia/amfAR</td>
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<tr>
<td>1545</td>
<td>Discussion on roadmap towards elimination of hepatitis B in the SEA Region</td>
<td>STAG members</td>
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<tr>
<td>1620</td>
<td>Summary of key recommendations from STAG</td>
<td>Dr Mukta Sharma, Regional Adviser, WHO SEARO</td>
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</table>
Annexure 3: List of Participants

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Report of the First Meeting of the Strategic and Technical Advisory Group (STAG) on Viral Hepatitis in the WHO South-East Asia Region

24 September 2020