Quantifying the Impact of Achieving the World Health Organization Global Health Sector Strategy Targets for Hepatitis C in the South East Asia Region

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BACKGROUND
The development of direct acting anti-viral (DAA) therapy drastically shifted the treatment paradigm for the Hepatitis C virus (HCV) from disease management to elimination. An understanding of the disease burden is necessary to develop evidence-based public health strategies for elimination of HCV. In 2015, an estimated 10 million people were estimated to be living with HCV in the World Health Organization (WHO) South East Asia Region (SEARO), and HCV was responsible for approximately 408,000 deaths that year, the second highest number of deaths of any WHO region⁷.

OBJECTIVE
We forecast the current and future disease burden of HCV in the SEARO region and developed a strategy to achieve the WHO Global Health Sector Strategy (GHSS) targets for hepatitis C by 2030².

METHODS
Nine SEARO country-specific models were built, and regional averages were applied to country populations when country-specific data were not available. Country estimates were then aggregated into a regional disease burden model. This disease progression model was used to quantify the size of the HCV-infected population by HCV sequelae from 2016 through 2030.

RESULTS

Base Case
- In 2016, there were an estimated 10.3 million viremic infections in the SEARO region, equating to a 0.5% prevalence. Of these, 60% of all infections were found in those born between 1954 and 1984. Less than 10% of all infections have been diagnosed, or approximately 887,000 cases. 1% of the infected population is on treatment (123,000), and of these, 97% have been cured (119,000).
- Given the current standard of care over the next fifteen years, the total HCV-infected population in the SEARO region is expected to decrease by an estimated 1% by 2030, from 10.3 million to 10.2 million infections. Liver related morbidity and mortality is forecast to increase 60-70% over the next fifteen years.

WHO Targets
- To achieve the GHSS targets, a significant increase in total number of patients screened and linked to care is necessary. The number of individuals diagnosed annually would need to increase to 800,000 by 2021 and the number of patients treated annually to 775,000 by 2025.
- Under the WHO Targets scenario, significant decreases in HCV-related disease burden are expected. Viremic infections are forecast to decline by 85% by 2030, from 10.3 million to 1.7 million infections. Decompensated cirrhosis cases, hepatocellular carcinoma cases, and liver-related deaths will decline by 65%-70% by the same year. By achieving the WHO targets, more than 345,000 lives can be saved.

REFERENCES

CONCLUSIONS
Total viremic infections are expected to decrease minimally (by 1%) in the SEARO region over the next two decades. The WHO GHSS targets can be achieved if drastic increases in the number of diagnosed and linked-to-care patients are seen. Targeted screening strategies coupled with increased access to DAA therapy are needed to achieve these targets.

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