**INTRODUCTION & OBJECTIVE**

- Hepatitis C virus (HCV) is a global public health crisis impacting 73 million infected patients. Egypt presents the highest HCV global prevalence.
- Despite evidence of positive effects of HCV testing/screening, adoption globally remains limited.
- Recently, the Egyptian Ministry of Health implemented three different HCV screening/testing/therapy programs.
- The objective of this health economic evaluation is to estimate the absolute and incremental impact of Egypt’s national HCV screening efforts on direct, indirect, and total healthcare costs.

**METHODS**

- In 2014 (wave 1), major decisions on HCV therapy were enacted, accompanied by a 99% discount for the HCV therapy Sodval.
- In 2016 (wave 2), a first testing program was launched to identify patients for free treatment.
- In 2018 (wave 3), a population-wide screening was conducted using a WHO-qualified test (SD BioLine HCV, Abbott, USA) to identify all Egyptians with HCV.
- Population estimates and HCV testing & therapy rates were determined on the basis of published literature and via expert opinion.
- Using published evidence, the direct costs of the three different HCV programs were evaluated, accompanied by a conservative simulation of related major HCV health consequences (i.e., liver-related deaths/life years lost) and indirect costs.
- Total economic consequences of each HCV program were compared to each other and to baseline from a societal perspective.
- Future costs and health effects were discounted by 3% per year.
- An overview of the key estimates used as the basis of the health economic assessment are presented in Table 1, below.

**RESULTS**

- Total costs (in USD) are based on the assessed direct costs and indirect costs related to HCV. All cost components are presented in Figure 1 below for each HCV screening, testing, & therapy wave. Discounted total costs: $1,096M (baseline); $949M (wave 1); $467M (wave 2); and $404M (wave 3).
- Discounted HCV-related life years lost: 444,427 (baseline); 403,191 (wave 1); 152,017 (wave 2); and 65,921 (wave 3). These are presented together with the underlying number of liver-related deaths/life years lost.
- All cost components are presented in Figure 1 below for each HCV screening, testing, & therapy wave.
- The modeling approach used is this assessment is rated as very conservative, i.e., it likely underestimates the positive health effects and cost consequences of the different screening, testing and therapy waves, given that it takes into account only HCV-related death (and not the costs of ongoing HCV-related health consequences/media resource consumption). This evaluation also uses a conservative approach to estimate the HCV-related deaths/life years lost.
- It is expected that the health economic results presented herein will likely be more pronounced should sophisticated Markov/probabilistic modeling be performed.

**DISCUSSION**

- Country-wide HCV elimination programs can improve health outcomes and reduce economic HCV burden from a societal perspective.
- Use of the WHO-qualified test was the most dominant approach to cost effectiveness. These results provide rationale for worldwide scalability of similar HCV elimination programs.

**CONCLUSION**

- The model used in this analysis is based on the assessed direct and indirect costs related to HCV.
- All cost components are presented in Figure 1 below for each HCV screening, testing, & therapy wave. Discounted total costs: $1,096M (baseline); $949M (wave 1); $467M (wave 2); and $404M (wave 3).
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