Costs of alternative screening and diagnostic pathways for hepatitis C for achieving elimination in the country of Georgia

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Background: Georgia's hepatitis C (HCV) elimination program treated 76,000 people between 2015 and 2021. Loss-to-follow-up can occur along the care cascade. We evaluate the cost of alternative pathways and how linkage-to-care and cost per treatment changed over time.

Methods: We calculated the costs (2022€) of the following care pathways in Georgia over 2018-2021: (1) Centralized or (2) Decentralized diagnostic testing for patients screened in hospitals; (3) Decentralized testing in primary care; (4) Point-of-care testing at harm reduction providers; (5) Testing at specialized HCV treatment sites. Patient-level treatment costs were calculated, including the economic cost of donated drugs. We estimated the total cost per patient treated accounting for screening yield and linkage-to-treatment.

Results: In 2018, costs per treated patient were similar across pathways, ranging from €3,286 in harm reduction to €3,972 in centralized hospital (~90% drug costs), decreasing by 3-16% in 2019. These costs decreased 4-8 times over 2019-2020 because donated drug costs reduced through access to generic drugs and pan-genotypic regimens, with non-drug costs staying similar. By 2022, the cost per patient treated excluding (including) donated drug costs was €1,244 (€1,459) in the centralized hospital model, €507 (€722) decentralized, €289 (€504) primary care, €118 (€334) harm reduction, and €107 (€322) HCV site. In 2022, all cost components were similar across sites, with high cost in the centralized hospital model reflecting low screening prevalence (1%) and low linkage to diagnostic testing (45%) and pre-treatment evaluation (42%) compared to decentralized (1.7%,66%,55%), primary care (0.6%,52%,67%), harm reduction (20%,83%,67%), and HCV sites (6%,87%,84%). Linkage to diagnostic testing decreased over time in primary health care and both hospital-based models.

Conclusion: Despite reductions in the linkage from testing to treatment, the cost of treatment decreased substantially across all pathways over time due to reductions in drug costs and simplification of evaluations required before and during treatment.

Disclosure of Interest Statement: This study was funded by Gilead Sciences through an investigator-sponsored research grant to PV and JGW. The funder played no role in the study design, collection, management, analysis, or interpretation of data, in the writing of the report, or in the decision to publish.