LABQUALITY DAYS

HEALTH ECONOMIC IMPACT MODEL OF A DIGITAL HEALTH SOLUTION

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Introduction

Cervical cancer is a significant global health concern, with substantial social and economic costs. The WHO's Cervical Cancer Elimination Initiative aims to eradicate the disease, promoting digital solutions for improved access, efficiency, and adherence to guidelines. (1) Healthcare provider (HCP) adherence to guidelines can improve patient outcomes and reduce the economic burden on healthcare systems. (2) The economic burden is estimated at $682 billion from 2020-2050. (3) A health economic impact model assesses the benefits of a digital health solution. This digital health solution is designed to guide HCPs on local and standardized screening guidelines, offering a customized and centralized view of all patients under care, categorizes patients by next recommended action, and flags actions to prioritize tasks.

Methods

The health and economic impact model focuses on HCP adherence to cervical cancer screening and treatment guidelines and the benefits of implementing the digital health solution. The model considers variables like screening participation, excessive testing and interventions, as economic costs. The model is based on the Catalonia region of Spain but could be adaptable to other healthcare systems. The model provides outputs for three scenarios based on HCP adoption rates and adherence improvements: top-case (best-case), mid-case (average), and low-case (low-level adoption).

Results

The model assesses the impact of implementing the digital health solution in cervical cancer screening for women aged 25-65 in Catalonia. Considering local guidelines and incorporating medical and economic factors, the model calculates an annual cost of 12.641.219 EUR in cervical cancer. Cancer screening constitutes the largest portion of these costs. The health economic impact model projects potential annual savings of 5-20% under various adoption scenarios of the digital health solution, amounting to 1.652.136 EUR in the mid-case scenario. These savings are attributed to reduced cancer treatment costs, decrease of under- and over-screening, and fewer unnecessary colposcopies. The model highlights the potential cost-effective advantages of the digital health solution in cervical cancer screening programs.

Conclusions

Adherence to cervical cancer screening guidelines is vital for a successful program. Improved adherence reduces cancer cases, unnecessary testing, and colposcopies. (1) The health and economic model quantifies potential savings, emphasizing the alignment of strategies with guidelines. HCPs face challenges like guideline awareness, data collection, and patient follow-up. (4) The model shows that patient navigation with a digital health solution leads to financial savings and improved patient outcomes.

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