HIGH-RESOLUTION ANOSCOPY (HRA) IN ANAL HPV-RELATED CHANGES: OPTIMIZING TRAINING AND CARE

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BACKGROUND AND AIMS

HRA allows for earlier detection of HSIL in at-risk populations, leading to a decreased disease burden and earlier treatment. This results in reduced mortality, an improved quality of life and reduced long-term healthcare costs. However, enhanced screening can lead to increased short-term healthcare costs due to more patients with known disease. Balancing early detection with resource management is crucial. An estimate of the effects of proposed guideline changes would facilitate the choice of the optimal overall approach. Ideally, modifications for specific populations and healthcare settings could also be evaluated. Monte Carlo simulations could provide such an estimate.

METHODS

We simulated an untreated population under a set of assumptions about the natural disease progression of anal carcinoma. After 50 cycles of an initial screening and treatment strategy, we increased the sensitivity in detecting LSIL and HSIL lesions for another 50 cycles. The simulation was repeated 20 times.

RESULTS

We have shown that the introduction of a more sensitive screening method leads to a decreased incidence of active disease in the population. At the same time, a more sensitive screening strategy leads to an increase in known disease and therefore more required patient encounters. This is consistent with previous experience with cancer screening.

CONCLUSION

We have shown that Monte Carlo simulations can be used to estimate the required healthcare capacity given the underlying population and screening strategy. They can also be used to assess various policies within specific populations and settings, allowing for more precisely tailored screening strategies at the regional and national levels.