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Background

• 84% of new cervical cancer cases worldwide occur in low- and middle-income countries.1
• Three-visit cancer care paradigm (screening, diagnosis, and treatment) is ineffective in low-resource settings, with high loss-to-follow-up rates at each stage.
• Colposcope: device used to screen for abnormal cells on cervix.
• Pocket Colposcope (Fig. 1): low-cost, accessible, and FDA cleared device that rivals state-of-the-art colposcopes.

Bass Connections Research

• Bass Connections aims to investigate how to reduce the 3 visits cervical cancer care paradigm to a 2-step community care setting, with a focus on implementing the Pocket Colposcope.

• 2016-17: Global Value Chain analysis of the Pocket Colposcope introduction in Peru.2
• Identified key leverage points.
• 2017-18: Assess patient & physician attitudes toward Pocket Colposcope in Peru.
• Conducted patient surveys (Fig. 2), focus group with midwives, & training sessions with physicians.

Patient barriers to cervical screening in a study conducted in Peru (n = 29):
• 39% related to money
• 30.5% related to fear
• 15% related to lack of awareness
• 15% related to access to care

• 2018-19: Conduct analysis of the clinical acceptability, policy implications, & cost-effectiveness of bringing the device to community health providers.
• Conducted focus groups with medical & legal experts, market analysis, interviewed stakeholders in Washington, DC, & developed survey tools.

HOPE Model: The HOPE Program, our community partner, is a peer education program for community health workers (CHWs) to deliver molecular HPV self-testing kits as part of a microfinancing and reproductive health promotion initiative

Implications of COVID-19: Due to the COVID-19 pandemic we had to adjust our research objectives including a transition to literature reviews instead of data collection at clinics for the costing and policy teams.

Research Objectives

2019-20 GOAL: Leverage the costing, policy, and acceptability tools developed by previous teams to assess the feasibility of introducing the Pocket Colposcope as triage for HPV positive women in two different regions in Peru.

1. Clinical Acceptability: Investigate the HOPE HPV and Cervical Cancer Prevention Peer Education Model in Peru in order to implement the Pocket Colposcope in an effective test, screen, and treat triage model.

2. Cost Effectiveness: Conduct a literature review on cervical cancer (CC) screening, HPV vaccination, and CC epidemiology to inform a cost-effectiveness analysis of the Pocket Colposcope in Peru.

3. Policy Framework: Conduct a literature review on the policy landscape in Peru to identify policy barriers and enabling factors to implement a see-and-treat CC paradigm.

Future Directions

Acceptability
• Conduct a parallel survey in Cajamarca, Peru to understand how to implement a complement test, screen, and treatment model with the Pocket Colposcope and a peer-education model in a different cultural environment.

Cost Effectiveness
• Analyze the cost-effectiveness of community health worker (CHW) HPV testing followed by a see-and-treat paradigm with the Pocket Colposcope and telemedicine in Peru.

Policy Framework
• Assess barriers to care in Peru and analyze the current policy framework and its efficacy with regards to the navigation of these barriers.
• Use this resource and this insight to create an updated policy framework for the widespread distribution and effective, equitable, and affordable usage of the Pocket Colposcope.

References


HOPE Peer-Education Model

The objective of this study was to understand the logistics, efficacy and empowerment impact of an HPV and cervical cancer prevention peer-education model in Ventanilla, Peru. The knowledge gained from this study will help GWHT’s goals of providing a model that tests, screens, and treats with the help of the Pocket Colposcope and an effective see-and-treat education model.

Over Spring Break, our team interviewed and surveyed 20 community health workers (CHWs) from the HOPE Program in Ventanilla, Peru. Instruments included surveys based on relational empowerment and financial autonomy of CHWs in the HOPE Program. In addition, we measured current barriers to screening to gain insight into the specific environment of Ventanilla, Peru.

Government Framework

2. Cost Effectiveness:

• Developed by previous teams to assess the feasibility of introducing the Pocket Colposcope into Peru.
• Identified key leverage points.

Community Screening Barriers

-40 to 20
-20 to 0
+0 to 20
+20 to 40
+40 to 60
+60 to 80
+80 to 100

In comparison with a provider-based system, are women more comfortable with self-HPV tests?

Pocket Colposcope (Fig. 1) : low-cost, accessible, and FDA cleared device that rivals state-of-the-art colposcopes.

Fig. 1 Pocket Colposcope

1. Cost-effectiveness:

Methods:

- Analyze the cost-effectiveness of community health worker (CHW) HPV testing followed by a see-and-treat paradigm with the Pocket Colposcope.

- Conduct a paper on the economic evaluation of the Pocket Colposcope in Peru

- Outlining the protocol for the design and scope for cost effectiveness analysis.

Results:

- In general, HPV vaccination has been shown to be the most cost-effective, but there are challenges to scale-up in LMICs. Goldie et al. [2005] showed that for CC screening options in Peru, 3 visit VIA and HPV testing were the most cost-effective.

- Although studies for other Latin American countries have shown that HPV followed by cryotherapy (for HPV+) is cost-effective, there is a shortage of CEA studies on see-and-treat models for Peru.

- Our cost-effectiveness analysis will address gaps in research on community health worker (CHW)-based and see-and-treat interventions for cervical cancer in Peru.

Research Objectives

1. Cost-effectiveness:

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- Conduct a paper on the economic evaluation of the Pocket Colposcope in Peru.

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Acceptability

- Conduct a parallel survey in Cajamarca, Peru to understand how to implement a complement test, screen, and treatment model with the Pocket Colposcope and a peer-education model in a different cultural environment.

Cost Effectiveness

- Analyze the cost-effectiveness of community health worker (CHW) HPV testing followed by a see-and-treat paradigm with the Pocket Colposcope.

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Policy Framework

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- Use this resource and this insight to create an updated policy framework for the widespread distribution and effective, equitable, and affordable usage of the Pocket Colposcope.

- The community-based see-and-treat model.

References