Human papillomavirus (HPV) testing using centralized and near-Point of Care testing platforms to screen women for cervical cancer: impact of testing models on patient results return in five sub-Saharan African countries

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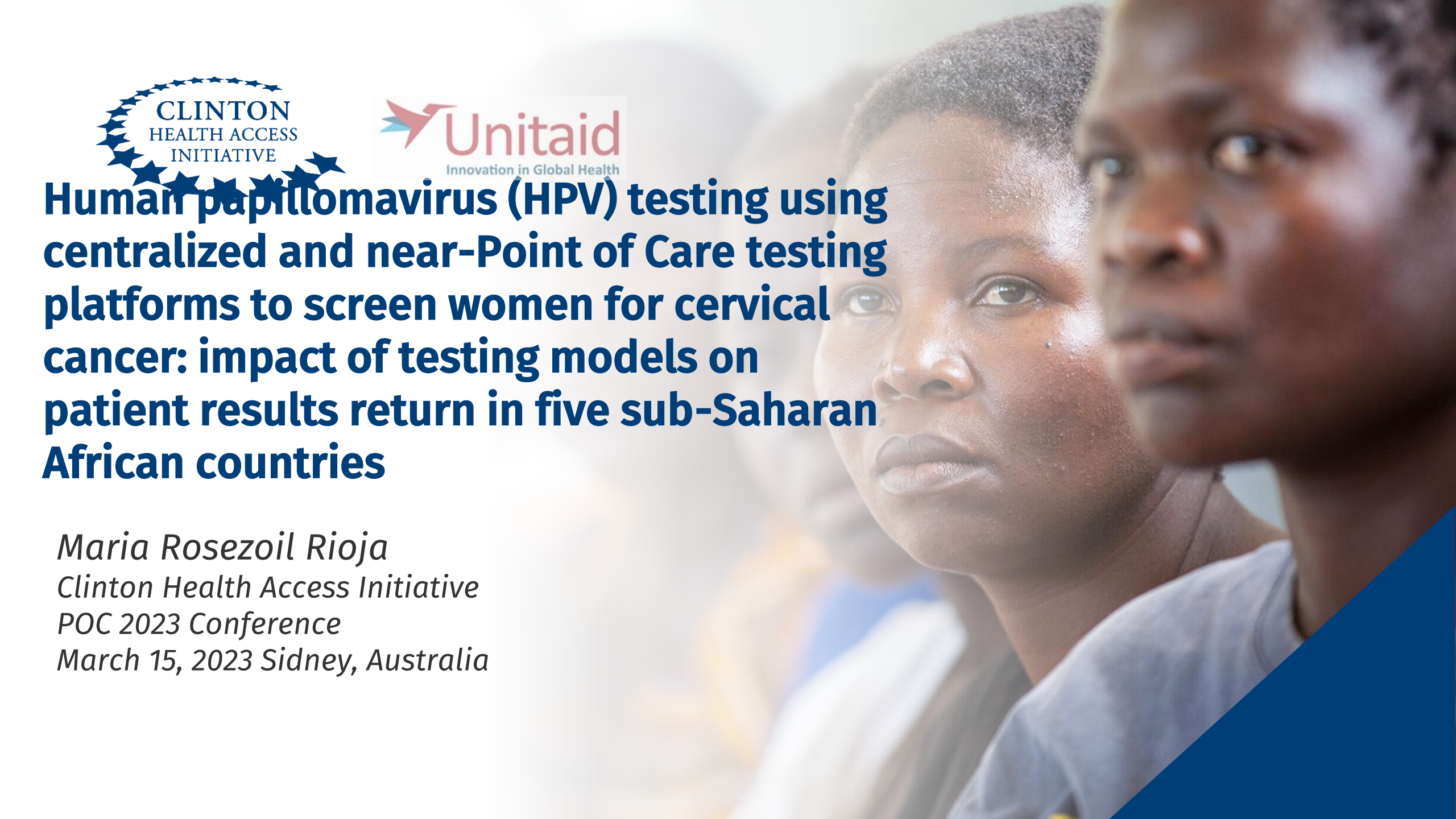


Origins and approach

Project origins

- Coverage of cervical cancer screening in many LMICs is insufficient and primarily conducted through visual inspection of the cervix with acetic acid (VIA), which has suboptimal sensitivity.
- The World Health Organization has recommended HPV* testing as the preferred method for screening.
- Existing centralized and decentralized testing platforms have spare capacity and ability to conduct HPV tests.

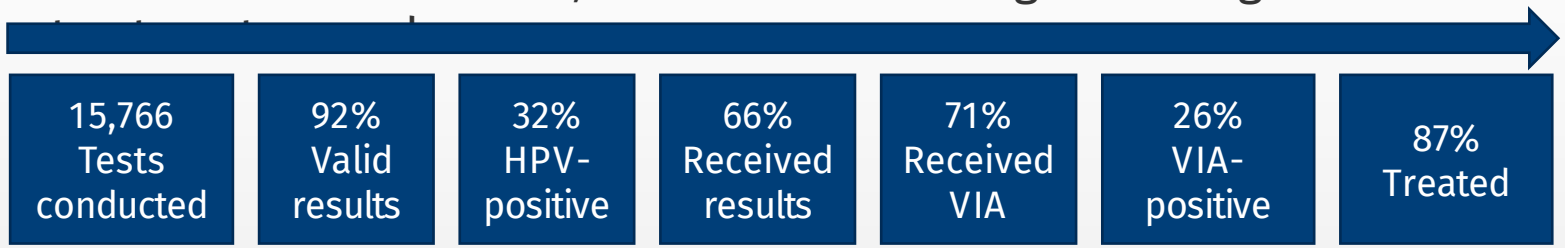
Approach

- Five countries implemented pilot programs of HPV testing primarily among women living with HIV (WLHIV) as a primary cervical cancer screening method between Sep 2019 and Jan 2021.
- The primary objective of the pilots was to determine the acceptability and operational feasibility of integrated HPV detection.
- The pilots introduced integrated HPV testing using existing molecular platforms and compared hub near-Point-of-Care (POC), spoke near-POC, and centralized testing models.

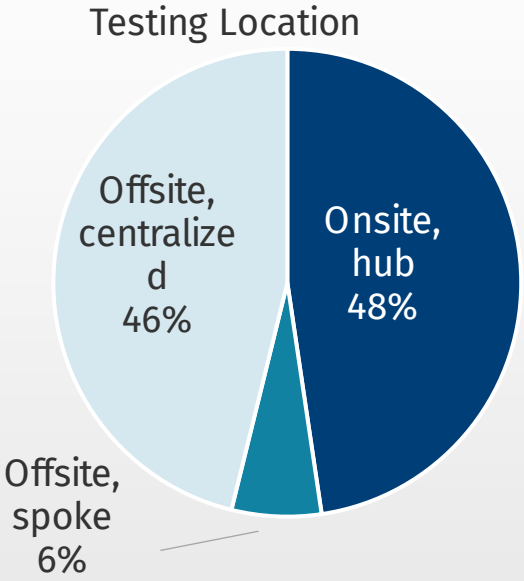
*HPV is the virus that causes most cervical cancer cases

Results

- Across the five countries, we saw the following for testing and



*Some steps may not include all countries due to relevant local policies.



- Turnaround times and patient results receipt, by testing location

	Hub	Spoke	Centralized	p-value
Median turnaround time from sample collection to patient receipt	9 days (IQR: 2-43)	11 days (IQR: 6-38)	56 days (IQR: 39-91)	p<0.001
Same-day results receipt	11%	0%	0%	p=0.091
30 days results receipt	48%	49%	9%	p=0.003
90 days results receipt	64%	59%	49%	p=0.380
180 days results receipt	**72%**	**63%**	**67%**	**p=0.587**

Conclusions

Impact

- All countries were highly affected by COVID restrictions which resulted in lower patient receipt of results; challenges were also seen in linking results between the lab, ART and VIA units.
- Test-triage-treat was very difficult to achieve due to HPV testing not being prioritized on POC devices; however, same-day triage-treat was possible.
- Integration of HPV testing on existing testing platforms systems was feasible and was achieved without additional resources (HR, supply chain, infrastructure, lab support etc.)
- Despite near-POC hub testing getting results back to women quicker, by 180 days there was no significant difference in the proportion of women receiving their results compared to centralized testing.
- With proper systems in place, use of centralized or near-POC HPV testing for cervical cancer screening program as recommended by WHO can be a promising model in Sub-Saharan Africa.

HPV testing is feasible in public sector health facilities.

However, gaps remain in result return and subsequent receipt of VIA, requiring further investment in strong linkage and follow-up systems.

Cervical Cancer Program

Reached **one million women** with lifesaving **screening and treatment services**. In so doing have **averted** more than **3,100 cases** of cervical cancer and **saved more than 2,200 lives.**

For more information, please find the CHAI and Unitaid links to March 7, 2023 press release https://www.clintonhealthaccess.org/news/one-million-women-screened-for-cervical-cancer-in-low-and-middle-income-countries/

https://unitaid.org/news-blog/one-million-women-screened-for-cervical-cancer-in-low-and-middle-income-countries/#en

An HPV paper can be found here https://bmjopen.bmj.com/content/13/1/e065074.full

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