

Cost Savings of HPV Testing Alone Versus Co-Testing in Cervical Cancer Screening at a Medical Student-Run Free Clinic



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Background

Primary hrHPV DNA testing was endorsed by the U.S. Preventative Services Task Force in 2018 as a grade-A recommendation for cervical cancer screening. Although HPV primary testing is an approved alternative method of cervical cancer screening, its benefits over the use of both cytology and HPV testing (co-testing) are debated. BRIDGE (Building Relationships and Initiatives Dedicated to Gaining Equality) is a student-run free clinic through the USF Morsani College of Medicine, which serves those in Tampa's University Community Area below the poverty line. The primary purpose of this study is to determine the potential cost benefit of HPV primary testing in this population over a retrospective five-year period. Secondary objectives include use of rates of abnormal testing to approximate clinical outcome benefits.

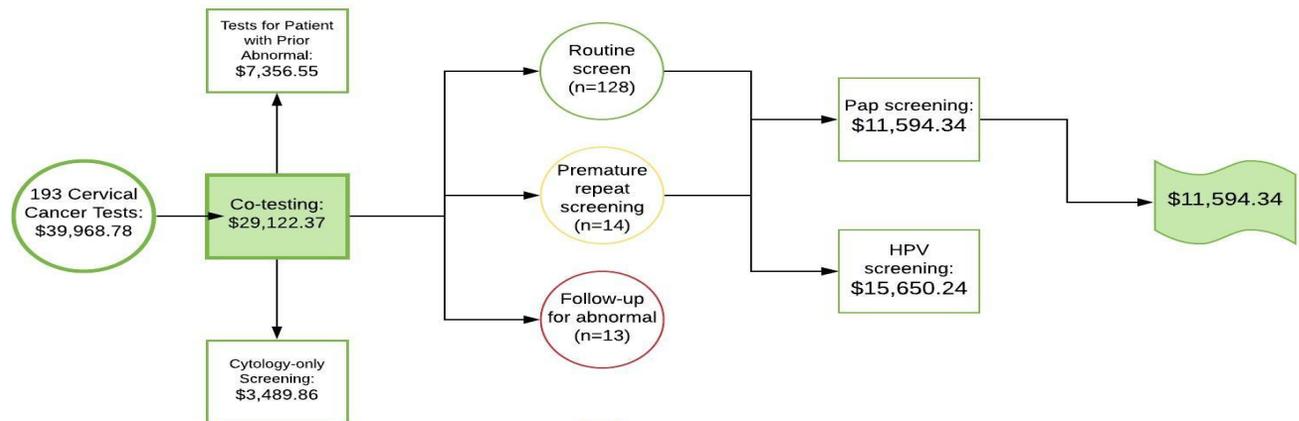
Methods

- Retrospective observational study
- Chart review of women receiving cervical cancer screening at BRIDGE clinic from 2014 to 2018
- Women with no history of no prior abnormal results were included for review
- Exclusions: patients receiving cytology testing only
- Charts were then reviewed for results of patients' co-testing.

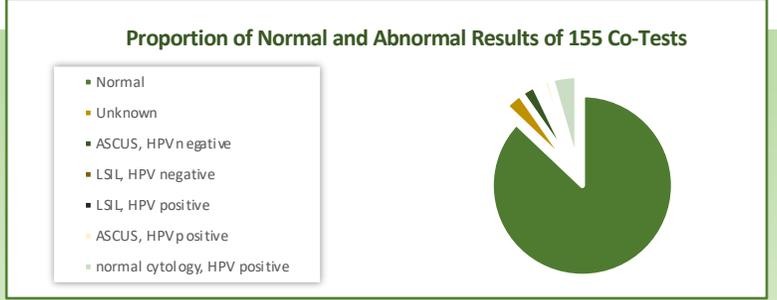
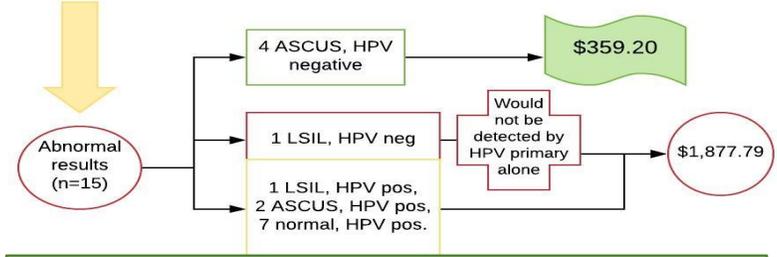
Acknowledgements

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Results



	Patients Screened	Average cost of cytology	Average cost of HPV testing	Total cost
2014	19	\$78.00	\$102.11	\$3,421.97
2015	37	\$77.18	\$110.26	\$7,110.71
2016	38	\$79.91	\$111.45	\$7,271.94
2017	36	\$82.82	\$105.88	\$6,793.13
2018	25	\$82.11	\$105.88	\$4,699.84
				\$29,122.37



Of the 128 patients receiving these tests, the majority were Hispanic (85%), married or with a monogamous partner (57%), multiparous (94%), and nonsmoking (90%), with an average age of 45 at time of testing.

Discussion

To our knowledge, this is the first project examining cost savings via HPV primary testing based on actual expenses of a free clinic for the underserved.

- Variability of our results can be attributed to:
- lost or inadequate samples,
 - premature screening by patient preference,
 - compensation for lack of resources,
 - change in practice trends

Given our limited access to colposcopy, management of 10 of the 15 patients with abnormal results would have been the same—co-testing within a year.

The one patient with LSIL and negative HPV represents a 0.8% risk of missing a precancerous lesion that the clinic would assume by adopting HPV primary testing (one test out of 124).

Using the test's most recent average cost (\$105.88), \$11,594 saved would allow the clinic to perform 110 additional cervical cancer screenings by HPV primary testing, with an additional 3 more probable by eliminating follow-up for AS-CUS, HPV negative results.

Conclusion

Based on these results, the BRIDGE clinic could adopt HPV primary testing and expect significant cost benefit with slightly increased risk of missed detection of a precancerous lesion. This would allow for simplification of the follow-up algorithm and potentially increase patient compliance.