Strategies for Cervical Cancer Screening Outreach in an Underserved Population

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Background

Cervical cancer is the second most prevalent cancer among women worldwide and 13th in the US.1 The depth of disparity is clear, as over 60% of cases are concentrated in underserved, and economically disadvantaged populations.2 Prevention will benefit most from an emphasis on low-resource settings and populations most easily categorized by economic variables, followed by racial and immigration status.3 Outreach campaigns combining phone calling and mailed letters generate the highest returns4 even for those groups at risk of not being screened,5 and the effect of combining methods is additive.6 This study assesses the strategy of an outreach campaign to improve screening via telephone combined with mailed letters in a medically underserved population.

Methods

Electronic Medical Records of all women aged 21-49 seen in an underserved primary care clinic group in the prior 2 years [N = 2338] were reviewed by a Registered Nurse during routine quality assurance processes for compliance with recommended cervical cancer screening. Patients overdue for screening were called by phone. For each call, one of two scenarios occurred: (1) an appointment was made for the patient to be seen for screening; (2) no appointment was made if the patient refused, did not answer, or the phone number was wrong or disconnected. If there was no human contact made by phone, a letter was mailed to the patient. Follow-up chart review 90 days after mailing was used to determine if an appointment was made after the letter, if the letter was returned undeliverable, or if no result was apparent.

Results

Significant differences were found in appointments made based on methods of outreach, outcome of attempt, and payer status:

- A majority of Latino patients (65%) had Private Insurance while African Americans (57%) and Whites (67%) were more likely to have Medicare/Medicaid ($\chi^2 = 161.21, p<.001$).
- Insurance Status was a significant predictor of whether or not a patient made an appointment when controlling for race/ethnicity and employment status ($\beta = -0.202$, $p = 0.008$).
- Latino patients were significantly more likely to be contacted by letter compared to phone ($\chi^2 = 26.67, p<.001$).
- A majority of African Americans (86%) and Whites (88%) were contacted by letter, 100% of Latinos were contacted by letter.
- There were no significant differences among racial groups on whether or not they made an appointment.

Discussion

- While more people overall were reached by letter, and more appointments made, calling resulted in a higher per-contact success rate for appointments made.
- Insurance coverage has a significant impact on appointment scheduling, indicating cost as a barrier to access.
- While there were no racial differences in overall appointment scheduling, letters were more likely to reach Latino patients than phone calls, indicating the importance of letters.
- The largest barrier encountered was that many phone numbers were incorrect or no longer in service, or that letters were returned undeliverable, indicating a wrong address on file.

Conclusion

Our results suggest that as both calling alone and calling followed by mailing contributed to an increase in the scheduling of cervical cancer screening appointments, calling trends toward being more effective per contacted person. However, mailing reaches a broader audience at a lower cost and higher speed. These methods in combination are an effective route to outreach, each having strengths for reaching key subpopulations. To continue to make advances in cervical cancer prevention and treatment, we must make advances in reducing barriers to care access, including effective communication strategies between healthcare providers and hard to reach populations.

References


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