

## What community factors have in impact on cancer screenings and diagnoses and how can we help address those areas?

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### Intro

Cervical cancer cases in the U.S. are estimated to be over 13,000 and colorectal cases around 150,000 this year alone. Being up to date on health screenings can catch problems early before developing into major health issues such as the cancer spreading to other areas of your body. Increased screenings for cervical cancer has lowered the incidence of invasive cancer by 50 according to the American Cancer Society. We want to investigate what factors show a positive connection with cancer screenings and determine what the communities can do to help improve them.

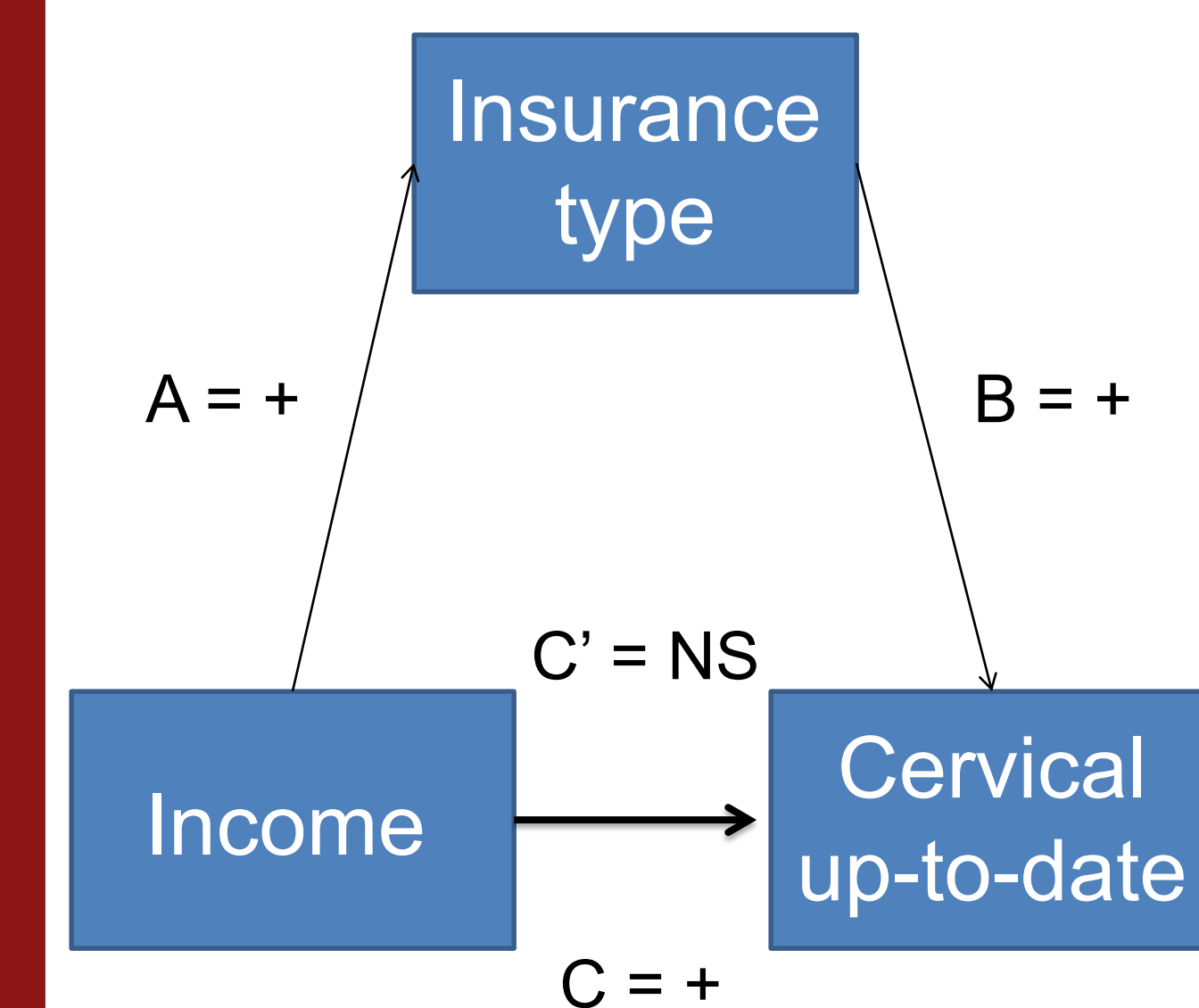
### Methods

Data was collected by a PSU Center research survey. We compiled data from 474 women (ages 45 - 65) for their screening history, income, health care provider, cancer history and more. Chi-squared regression was used to examine the association between screening behaviors and objective and subjective income. Logistic regression was used controlling for age, cancer history and insurance type.

### Results

While objective income ( $\chi^2 = 17.21$ ,  $p < .0001$ ) was stronger than subjective ( $\chi^2 = 6.37$ ,  $p = .0116$ ) both showed a strong association with up to date cervical screenings. Income was only statistically significant in cervical but not in colorectal cancer screenings amongst our subjects. Logistic regression produced an odds ratio of 1.91 and 1.61 for objective and subjective income respectively.

# Establishing connections between cancer screening/diagnoses with objective and subject income and other community factors



### Conclusion

A bivariate relationship was attenuated when insurance type was controlled. This suggests insurance is a mediator between income and up-to-date cervical screenings. Some relationship was found between insurance type and screenings but it was not statistically significant for the screenings we studied. Objective income has been linked to health benefits in many studies, we are finding that subjective income can play a large role in those benefits as well. Communities that focus on members' subjective income can improve long-term benefits for cancer survivorship, morbidity, and mortality through increased screenings.

### Moving Forward

Our lab will be sending out test kits to our survey participants so we can review our survey data with current individual cervical and colorectal cancer results. This information will be used by both individuals and communities to take the necessary steps moving forward to help increase cancer diagnoses survival rates through screening and early detection for for our entire population. Please use the QR code for up-to-date information, formal data analysis, our manuscript and references.