HPV Self-Collection Pilot Study

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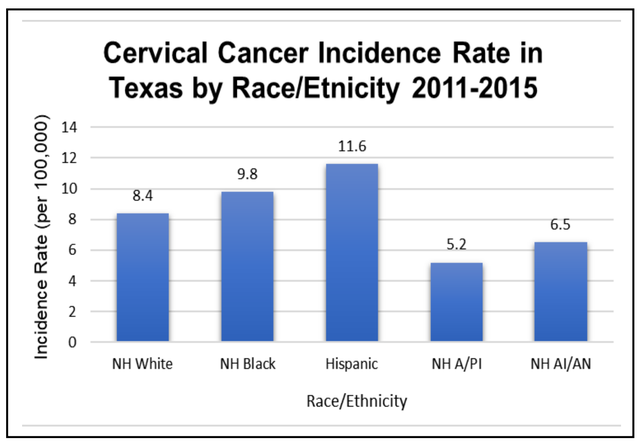
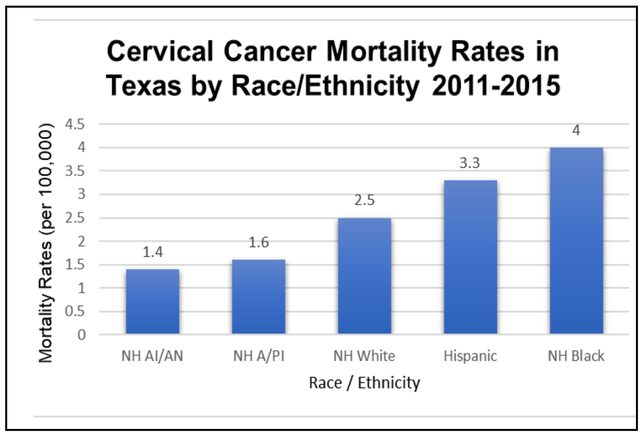
Introduction

Of all humanity's cancer an approximate of 15-20% are caused by viral infections.[2] Human papillomavirus (HPV) is one of the most common pathogens that affects the statistics of cancerous diseases. HPV is a sexually transmissible virus that has caused 99.7% of cervical cancer (CC) cases.[4] This has been proven with traces of HPV DNA found in cervical cancer patients.[3] According to the Centers for Disease Control and Prevention, 90% of HPV disappears on its own without causing any health issues. However, if HPV is left untreated, it can lead to genital warts and other health issues including cancer.

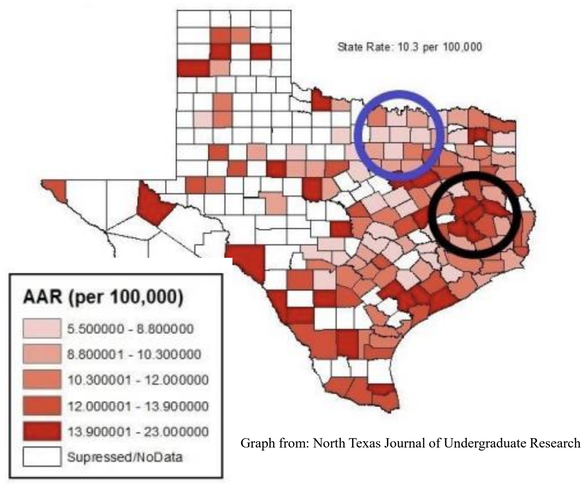
Cervical cancer is one of the leading causes of death among women worldwide.[3] According to the World Health Organization, in 2020, an estimated 604,000 women were diagnosed with cervical cancer worldwide, and about 342,000 women died from this disease. About 90% of the mortality rate occurred in low- and middle-income countries. Texas has the highest mortality rates for cervical cancer in the United States with a significant disparity between Hispanic and African-Americans.[1]





NH = Non-Hispanic; A/PI = Asian/Pacific Islander; AI/AN= American Indian/Alaska Native
Data obtained from The Texas Department of States Health Services

Cervical Cancer Incidence Rate in Texas 1995-2015



Graph from: North Texas Journal of Undergraduate Research

Methods

Recruitment:
A total of 40 participants were recruited from two Houston public housing developments.

Screening:
Screening was done in person and potential participants were given a brief survey to determine their eligibility. Some of the inclusion criteria were: Self-reported as African American or Hispanic women; being between 30-65 years old as this is the recommended age range for HPV testing. Some exclusion criteria were: Self-reported hysterectomy, personal history of cancer or self-reported as pregnant.

Consent:
If the participant was eligible, they were given a consent form to sign stating they were willing to participate in the research.

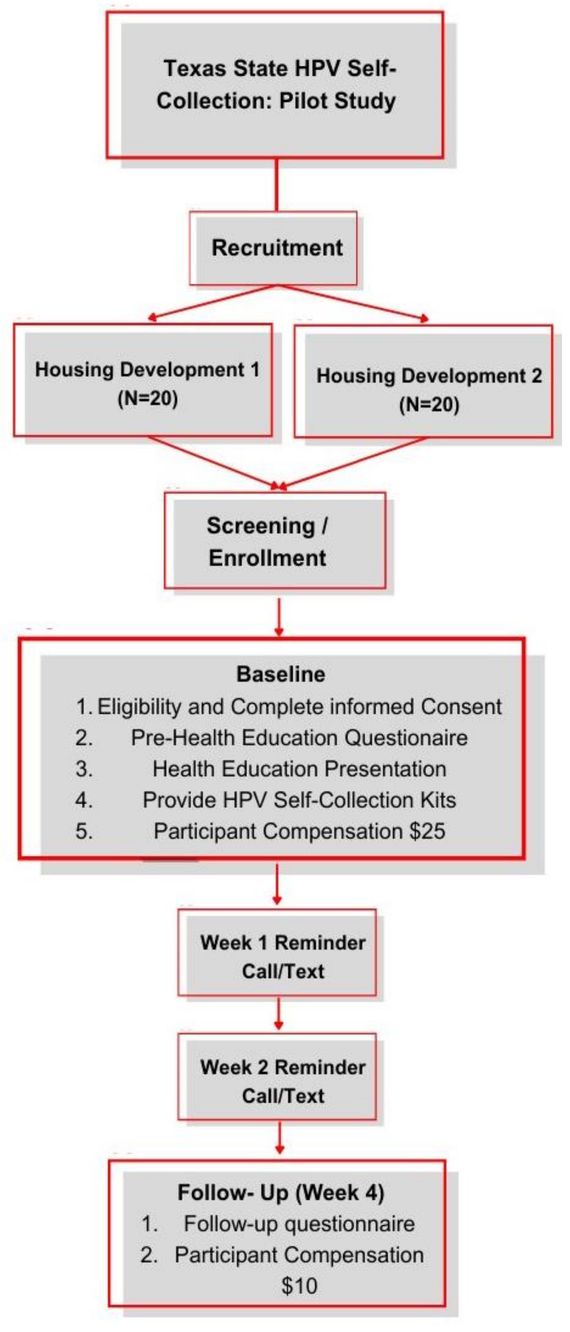
Pre-Health education:
Participants were given a questionnaire consisting of various questions regarding their socio-economic and demographic characteristics along with the prior knowledge they have about cervical cancer.

Health education:
Upon finishing the pre-health questionnaire, the participant received a detailed presentation describing human papillomavirus, cervical cancer, and methods of prevention and screening for this disease.

Post-health questionnaire:
A similar questionnaire from the pre-health education was provided to evaluate how much knowledge the participant retained from the audiovisual presentation.

Human papillomavirus self-collection:
Participants were given an HPV self-collection kit and explained the process of taking the sample and sending the sample to the laboratory to be evaluated.

Follow up:
Participants completed a follow-up questionnaire 4 weeks after the screening to answer if they completed the process and how they felt about it. The women who wanted to disclaim and expressed concern because of positive results in the test were directed to the nearest community clinic and/or federally qualified health clinic for appropriate follow-up procedures.



Results

As of July 26, 2023, we have enrolled our target of 40 women. I expect to see significant compliance over the next 3 weeks and by the end of August 2023, I expect to see a 50% of participants that received the HPV self-collecting kit to complete the study. Below there is a table with the preliminary unpublished results for the pilot study.

Number of Women…	African-American Women	Hispanic Women
Contacted	68	47
Eligible to participate	24	16
Accepted to participate	24	16
Received HPV self-collecting kits	24	16
Completed and mailed the kits	10	6
Performed the test correctly	10	5

Conclusions

Even though cases of cervical cancer have diminished over the years, cervical cancer is still one of the leading causes of death among women worldwide. This is why scientist are working non-stop to find the most effective preventive techniques to implement and reduce the mortality rate caused by this disease. By doing regular screenings, the cervical cancer mortality rate could be diminished drastically. Participants in the study reported a more pleasant experience doing the test in their home, expressing feelings of comfort with a faster, less invasive and more cost-effective way to screen for cervical cancer. In the future the study may be conducted with a broader selection of women and other diverse locations around Houston, Texas.

Acknowledgment

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References

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