

**Assessing and Improving Cervical Cancer Screening Knowledge for Latinx People**

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## Abstract

Hispanic people are known to be especially vulnerable to cancer inequities due to disproportionate poverty rates, uninsured rates, and a high prevalence of modifiable cancer risk factors compared to non-Hispanic groups (Miller et al., 2021). In recent years, cervical cancer screening rates for all ethnic groups have plateaued, which disproportionately affects low-income, low-health literacy, and minoritized racial/ethnic women (Jaqua et al., 2022). Cervical cancer is also diagnosed in advanced stages at higher rates for Black and Latinx<sup>1</sup> women (Jaqua et al., 2022). Studies consistently demonstrate a positive correlation between health literacy and CCS behaviors (Heberer et al., 2016; Johnson et al., 2020; Kim & Han, 2015; Kim & Han, 2019; Tiraki & Yilmaz, 2018). A Doctor of Nursing Practice quality improvement project demonstrated how partnering with a local Pacific Northwest health department and community organization helped increase Latinx women's health literacy on cervical health. Utilizing the Integrated Model of Health Literacy (IMHL) framework and a culturally tailored approach, this project developed and implemented an educational workshop using input from local Latinx women and feedback from a local community partner. Through pre- and post-workshop surveys, data demonstrated that culturally tailored education delivered in an interactive workshop session is an effective group reproductive health education method. Interventions in this project are adaptable to primary care facilities for the purpose of implementing effective cervical health literacy education to Latinx patients in this Pacific Northwest County.

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<sup>1</sup> The terms Hispanic, Latino, Latina, and Latinx are interchangeable and are used to describe individuals who self-identify as being Mexican (61.9%), Puerto Rican (9.7%), Cuban (4.0%), Salvadoran (3.9%), Dominican (3.5%), or other Central, South American, or other Spanish descent (Krogstad et al., 2022). This paper will utilize the term Latinx throughout for consistency and to capture the diverse gender identity within this specific population with cervixes.

## **Assessing and Improving Cervical Cancer Screening Behaviors for Latinx People**

### **Problem Description**

Cervical cancer is the fourth most common cancer in women globally (Center for Disease Control and Prevention [CDC], 2023; World Health Organization [WHO], 2022) and has the fourth highest mortality in female cancer patients (ClinicalKey for Nursing, 2023). The highest incidence of cervical cancer in the U.S. occurs in Latinx women at a rate of 9.3 per 10,000 persons, followed by 8.1 per 10,000 non-Latinx Black women, compared to 7.2 per 10,000 non-Latinx White women (Johnson et al., 2020). Latinx people are known to be especially vulnerable to cancer inequities due to disproportionate poverty rates, uninsured rates, and a high prevalence of modifiable cancer risk factors compared to non-Hispanic groups (Miller et al., 2021). According to the U.S. Census, the Latinx population grew from 50.5 million in 2010 to 62.1 million in 2020, making up 18.7% of the total U.S. population (Jones et al., 2021), and is projected to surpass 10 million in 2025 (US Census Bureau, 2018).

Cervical cancer prevention methods endorsed by the American College of Obstetricians and Gynecologists (2021) include primary prevention with the quadrivalent HPV vaccine and secondary prevention through Cervical Cancer Screening (CCS). Pap screening just once in a lifetime after age 35 can decrease the risk of dying from cervical cancer by 70% (Bedell et al., 2020). After the widespread implementation of Pap screening in the U.S., a 70% reduction in cervical cancer-related deaths occurred by the 1990s (Jaqua et al., 2022). In recent years, CCS rates have plateaued in all ethnic races, disproportionately affecting low-income, low-health literate, and minoritized racial/ethnic identities (Jaqua et al., 2022).

Many barriers influence CCS practices, as evidenced by no sociodemographic group achieving the "Healthy People 2020" target of 93% CCS for women aged 21-65 (Johnson et al.,

2020). In 2021, only 72.4% of women in the U.S. were up to date with CCS (National Cancer Institute, 2023) and only 67.4% of Latinx women received CCS based on screening guidelines (U.S. Department of Human Services, n.d). Cervical cancer is often curable with prompt treatment when diagnosed in early stages (WHO, 2022). Rates of cervical cancer diagnosis at advanced stages are higher in Black and Latinx women (Jaqua et al., 2022), and is associated with higher risks of cancer recurrence and death (ClinicalKey for Nursing, 2023).

### **Available Knowledge**

There are significant knowledge gaps regarding the role of CCS, especially HPV co-testing, on cervical health in women of all groups (Ducray et al., 2021; Johnson et al., 2020; Musa et al., 2017; Thompson et al., 2019). Low health literacy in Latinx women of reproductive age is pervasive as adults identifying as Hispanic have demonstrated the most inadequate health literacy in the U.S., compared to all other groups (Lopez et al., 2022). Studies consistently demonstrate a positive relationship between health literacy and CCS behaviors, specifically Pap testing, which suggests that perhaps health literacy is a better predictor of CCS behaviors than demographics or other factors (Heberer et al., 2016; Johnson et al., 2020; Kim & Han, 2015; Kim & Han, 2019; Tiraki & Yilmaz, 2018). Evidence-based interventions can increase patient rates of CCS (CDC, 2022b), and theory-based educational interventions can increase CCS rates by more than double (Musa et al., 2017). Increasing pap smear and cervical cancer knowledge helps to promote and maintain positive health behaviors along with increase self-efficacy, which also has a positive impact on CCS behaviors (Tiraki & Yilmaz, 2018).

Healthcare professionals can help increase individual's self-efficacy through participation in early diagnosis interventions such as individual and group trainings focused on improving knowledge levels (Tiraki & Yilmaz, 2018). The Community Preventive Service Task Force also

recommends group education along with client-oriented interventions such as the use of small media (e.g., videos, brochures, and newsletters) to improve CCS rates (CDC, 2022b).

Baezconde-Garbanati et al. (2019) found that when participants felt immersed in a storytelling video, *Tamale Lesson*<sup>2</sup> (The University of Southern California, 2015) more participants made appointments for or went in for CCS than when they viewed a fact-based film. Effective small-group education increases participant engagement, knowledge retention, self-directed learning, communication skills, teamwork ability, and peer discussion (van Digglee et al., 2020).

Activities that promote engagement include workshops with a mixture of individual and group activities with brief lectures and break-out groups with 2-4 participants (van Diggele et al., 2020). Health information used in educational interventions must also be culturally and linguistically appropriate for the intended audience to successfully improve CCS behaviors (National Academic Press, 2022).

Working with health systems and community partners to implement interventions can reduce healthcare costs and increase lives saved (CDC, 2022b). Community partners are essential to a health literate system; A partnership between health care providers and community organizations can improve the skills people need to manage their health (U.S. Department of Health and Human Services, 2022).

## **Rationale**

Advancing a person's health literacy will progressively allow for greater autonomy and is part of an individual's development toward improved quality of life (Sørensen et al., 2012).

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<sup>2</sup> *Tamale Lesson* is an 11-minute-long educational film, with a culturally tailored narrative, developed by a multidisciplinary team at the University of Southern California guided by their findings on barriers to cervical cancer screening in Latinas through 12 focus groups (Baezconde-Garbanati et al., 2014).

Improving CCS behavior through culturally sensitive health literacy strategies is guided by the Integrated Model of Health Literacy (IMHL) framework [Appendix A]. IMHL defines health literacy from a public health perspective as: "people's knowledge, motivation, and competencies to access, understand, appraise, and apply health information to make judgments and take decisions in everyday life concerning healthcare, disease prevention, and health promotion to maintain or improve quality of life during the life course" (Sørensen et al., 2012, pg. 3). This model integrates medical and public health views on health literacy, provides a conceptual basis for developing and validating measurement tools, and capturing the different dimensions of health literacy (Sørensen et al., 2012). The IMHL identifies four domains important for making informed health decisions: access, understanding, appraising, and applying health information (Thompson et al., 2019). *Access* refers to the ability to seek, find, and obtain health information; *Understand* refers to the ability to comprehend the health information that is accessed; *Appraise* describes the ability to interpret, filter, judge, and evaluate the health information that has been accessed; and *Apply* refers to the ability to communicate and use the information to decide to maintain and improve health (Sørensen et al., 2012).

### **Specific Aims**

This project aims to increase CCS health literacy by improving the HL domains of access, understand, appraise, and apply in a group of Latinx-identifying Pacific Northwest County residents at risk for cervical cancer through small group education delivered via a culturally tailored workshop.

## **Methods**

### **Context**

The Pacific Northwest County is home to an estimated 795,083 residents, 12.7% identifying as Hispanic or Latino (of any race), 50.3% identifying as female, 9.6% live below the federal poverty level, and 7.2% under the age of 65 are uninsured (U.S. Census Bureau, 2022). The county delivers low-cost health services with the aid of state and federal funding through primary care clinics that deliver services across the lifespan to the county residents (Multnomah County, 2020). Since 2017, Pacific Northwest County federally qualified health centers (FQHC) have seen over a 6% drop in CCS since 2017, with only 64.6% of eligible patients up to date on CCS in 2021 (HRSA, 2021).

This DNP project fulfilled Program Element 46 (PE46)<sup>2</sup> requirements, titled *Community Partnerships and Assurance of Access to Reproductive Health Services* (Oregon Health Authority, n.d.), which provides funding for reproductive health services throughout the state.

### **Interventions**

The project consisted of five phases. Phase 1, established a community partnership, identified inclusion criteria for participants, and assessed the reproductive health knowledge needs of the community. A local community organization that promotes and delivers health-related services to Latinx people in this Pacific Northwest County was selected. Inclusion criteria included residents of the Pacific Northwest County who identify as Latinx, between 18 and 65 years of age, with female sex organs. Reproductive health knowledge needs were determined using a voluntary and de-identified health knowledge needs assessment questionnaire delivered by front desk workers at the community organization over two weeks [Appendix D].

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<sup>2</sup> PE-46 assures access to clinical reproductive health services through community partnerships by identifying service gaps and barriers and developing and implementing plans to enhance access, especially for the most marginalized (Oregon Health Authority, 2022).

Phase 2 included creating the workshop's lesson plan, informational brochure, presentation slides, knowledge questionnaires, pre and post surveys, consent script and advertisement fliers. The workshop was designed following available knowledge on effective group education interventions, current information on cervical cancer, results from the health knowledge need questionnaire, and recommended screening practices per ACOG (van Digglee et al., 2020). The knowledge questionnaires [Appendix E], fliers [Appendix F], and supplementary materials [Appendix G, H, I, J] were created in English and translated into Spanish. The pre-, post-surveys, and follow-up intervention mixed methods questionnaire were adapted from the Health Information National Trends Survey™ (HINTS™)<sup>3</sup> on cervical cancer. The questionnaire included 12 questions evaluating cervical cancer literacy and screening behaviors and were used to collect qualitative and quantitative data. Questionnaires were de-identified by excluding sections containing patient identifiers.

Phase 3 consisted of participant recruitment. Participants were notified of the workshop via fliers posted and dispersed in the Pacific Northwest community organization lobby, posted on the organization's social media page, and emailed to community clinic members.

Phase 4 consisted of the implementation of the group education workshop. The session was held at the community organization, located within ½ mile of multiple public transportation locations. Nineteen participants attended the workshop, and 16 met the inclusion criteria. The pre-intervention survey evaluated the domains of *access* and *understanding* from the IMHL

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<sup>3</sup> The National Cancer Institute administers a HINTS™ survey is designed to collect nationally representative data routinely about the American public's use of cancer-related information (National Cancer Institute, n.d.-a). The survey questions are an amalgamation of questions created by members of the HINTS program at the National Cancer Institute, borrowed from existing national-level surveys and smaller surveys related to health (National Cancer Institute, n.d.-b).



framework. After completing the session pre-survey and introduction, all participants joined at a large table for a complimentary meal from a local Mexican restaurant. Next, participants were directed to the presentation area with auditorium style seating (informational brochures were placed on each seat for participants) and attended a screening of *Tamale Lesson* in Spanish. After the film, participants were directed to break out into two groups (the three participants that did not meet inclusion criteria were removed into a third separate group) and discuss fictional patient case studies. Afterward, participants were instructed to return to their seats for a discussion on the case study answers guided by the DNP student. This group case study session helped evaluate the domains of *understanding* and *appraisal* from the IMHL framework.

Closing of the session included a 10-minute PowerPoint presentation highlighting essential information on the cervical cancer informational brochure and a review of local facilities that provide reproductive health screening. Participants were then instructed to complete the post-session survey. At the end of the workshop, participants who met the eligibility criteria received a \$20 gift card as a gesture of gratitude.

Phase 4 was planned to disburse a one-month follow-up survey to assess CCS behavior and knowledge. The follow-up survey was identical to the pre- and post-survey, with one additional question asking if the participant had scheduled or completed a Pap since the workshop. The community organization followed its standard event protocol of collecting participants' email contact information during the community workshop, which was not shared with the DNP student. The community organization was instructed to email participants a link to the survey available on SurveyMonkey. Due to unforeseen circumstances, contact with the community organization was lost, no surveys were sent, so no one-month follow-up data was gathered.

## **Study of the Interventions**

The study of this educational intervention used descriptive analysis of participants' pre- and post-surveys to assess the effectiveness of cervical cancer health literacy group education. The study assessed baseline health literacy related to CCS guidelines, cervical cancer risks, cervical cancer prevention, and knowledge of available reproductive health screening resources. Survey and informational material were offered in English and Spanish.

## **Measures**

The primary outcome measure for this project was the increase in participant knowledge regarding cervical cancer risks and prevention, CCS, and the availability of reproductive health resources. A second outcome measure was participants' attitudes toward provider recommendations for Pap screening. The process measure included tracking the number of participants in attendance for the education session and those who completed all surveys.

## **Analysis**

Qualitative and quantitative data was collected through completed pre-, post surveys. Surveys were de-identified as no identifier information was collected at any point by the student. After all survey responses were entered into an Excel spreadsheet on a password encrypted computer for analysis, the paper copies were shredded and discarded. Due to the low number of participant responses, N=16, no statistical analysis was performed, and observations were made for positive, negative, or neutral shifts in participant responses.

## **Ethical Considerations**

Ethical considerations for this project included voluntary participation consent, the confidentiality of questionnaire responses, the confidentiality of participant identity, safe storage and handling of questionnaire responses, respect for individuals' healthcare choices, and cultural

sensitivity. The consent script [Appendix F] and participation criteria were reviewed prior to the initiation of the workshop, and verbal agreement was required for participation.

In consideration of participants' cultural safety and sensitivity, the workshop was held at the location of the community partner, the workshop session was delivered in Spanish, the catered food was Hispanic cuisine, and print materials were available in English and Spanish. The DNP encouraged participants to limit sharing to the participants personal level of comfort and expressed gratitude when participants elected to share sensitive personal information or stories. Group norms emphasized not interrupting others, limiting sharing to participants comfort levels, and limiting sharing to exclude any self-identifying information to protect participant privacy. In response to the unexpected attendance of men at the workshop, the women's breakout groups were stationed at a distance for privacy and to encourage authentic conversation.

This research proposal was submitted to the OHSU IRB for determination and was deemed not research [Appendix I]. A letter of support was also presented on behalf of the county clinic organization supporting the project [Appendix J].

## **Results**

Twelve Latinx women completed reproductive health knowledge needs survey before the intervention. The top five knowledge topics needs included "What happens if I have an abnormal pap?" (83%), "How often do I need a Pap test?" (75%), "What is Cervical Cancer?" (67%), "Cervical Cancer Screening" (58%) and "Cervical Cancer Prevention" (58%). These responses guided creation of the workshop curriculum and materials. This concluded phase 1 of the project.

Nineteen participants attended the group educational workshop, sixteen participants met inclusion criteria and completed pre and post surveys. Pre- and post- surveys were completed by 100% of participants who met inclusion criteria. Pre-survey results demonstrated that 81% of

participants have had a pap test, two participants never had a pap test (below the age for screening), and one was unsure. Additionally, 81% of participants knew what a pap test was, one did not know what it was, one was unsure if they knew, and one did not answer. A Likert scale was used to assess how likely a participant would get a pap every three years if their healthcare provider recommended it; four selected “very unlikely,” zero selected “unlikely, four selected “neutral,” six selected “likely,” one “very likely” and one did not answer. Knowledge assessment included a question asking if participants knew what HPV is, ten selected “yes,” six selected “no” and zero selected “not sure.” When asked if they think HPV causes cancer, eight selected “yes,” zero selected “no” and eight selected “not sure.” There were eight participants who reported receiving reproductive care from the county clinic, one from Planned Parenthood, two reported they did not access care from anywhere, four selected “other,” two reported receiving care from a local public clinic, and one reported care from the emergency room.

Post-survey results demonstrated improvements in understanding HPV, with 100% of respondents reporting they knew what HPV is after the workshop. Additionally, 100% of respondents said “yes” to the question “Do you think HIV can cause cervical cancer?” There was also a shift in participant attitude toward pap testing, with two selecting “very unlikely,” zero selecting “unlikely, three selecting “neutral,” five selecting “likely,” five “very likely,” and one did not answer.

## **Discussion**

### **Summary**

This DNP project aimed to improve CCS health literacy by improving the health literacy domains of access, understanding, appraisal, and application in a group of Latinx-identifying Pacific Northwest County residents. This project was developed through a Latinx cultural lens

and with culturally tailored educational interventions. The desired results of the intervention were to improve cervical health literacy, expand knowledge to access cervical health screening and improve cervical cancer screening behaviors. This project also highlighted the value of partnering with community-based organizations to reach underserved communities.

### **Interpretation**

Comparing the pre-survey and post-survey results demonstrates that the intervention successfully increased cervical health literacy and improved patients' trust in healthcare providers to follow cervical cancer screening recommendations. Essential aspects of this project that made the workshop successful were delivering the intervention in Spanish, using a culturally tailored narrative film, partnering with a local community organization that had established trust in the community, and providing guided break-out group sessions for natural conversation. The project knowledge assessment surveys and educational materials may be utilized by healthcare providers to implement interventions that improve CCS in the Pacific Northwest County.

### **Limitations**

Limitations of this project include the low number of participants, one participant not answering two survey questions, and failure to complete a 1-month follow-up survey. The low number of participants may be attributed to the limited duration of the workshop advertisement. Due to the small participant size, these study results are not generalizable to the Pacific Northwest Latinx population. Additionally, obtaining 100% survey answer completion may have been achieved had there been volunteers to assist participants with questionnaires to mitigate possible low literacy levels. Finally, follow-up survey emails could have been scheduled to be sent out on the day of the event to ensure the follow-up email would have been sent successfully.

## **Conclusion**

Cervical cancer incidence is 32% higher among Hispanic women in the U.S. than non-Hispanic White women (Miller et al., 2021). CCS rates have plateaued in all patient groups and interventions are needed now if we are to achieve the Health People 2030 goal of 79.2% (U.S. Department of Health and Human Services, n.d). Variations in knowledge, attitudes, beliefs, low educational and health literacy levels, and cultural barriers among Latinx women influence CCS behaviors (Baezconde-Garbanati et al., 2019; Musa et al., 2017). The implementation of educational interventions to increase women's participation in cervical cancer screening programs is supported in the literature, by national organizations, and by this quality improvement project. This projects survey results indicate that culturally tailored interventions addressing health literacy are effective and desired by the Latinx community. Educational workshops may also be maintained by non-clinicians after FNP development and implementation. The involvement of the FNP in efforts to improve patient populations health literacy may help improve patient outcomes, increase patient adherence to regular health screenings, promote provider job satisfaction, and improve provider retention.

## **Other Information**

### **Funding**

This project was funded through a reproductive health program grant provided by the Pacific Northwest County Health Department. Material fees included \$560.00 for food and \$320 for VISA gift cards for \$880 spent on this intervention.

## References

- Baezconde-Garbanati, L., Chatterjee J., Frank, L., Murphy, S., Moran, M., Werth, L., Zhao, N., Amezola de Herrera, P., Mayer, D., Kagan, J., O'Brien, D. (2014). Tamale lesson: A case study of a narrative health communication intervention. *Journal of Communication in Healthcare*, 7:2, 82-92, DOI: 10.1179/1753807614Y.0000000055
- Baezconde-Garbanati, L., Agurto, I., Gravitt, P. E., Luciani, S., Murphy, S., Ochoa, C., Gallegos, K., Barahona, R., & Rodríguez, Y. (2019). Barriers and innovative interventions for early detection of cervical cancer. *Salud Publica de Mexico*, 61(4), 456–460.  
<https://doi.org/10.21149/10425>
- Bedell, S. L., Goldstein, L. S., Goldstein, A. R., & Goldstein, A. T. (2020). Cervical cancer screening: Past, present, and future. *Sexual Medicine Reviews*, 8(1), 28–37.  
<https://doi.org/10.1016/j.sxmr.2019.09.005>
- Center for Disease Control and Prevention. (2022, December 5). *ScreenOutCancer*.  
<https://www.cdc.gov/screenoutcancer/interventions/index.htm>
- Center for Disease Control and Prevention. (2023, February 3). *Prevent cervical cancer*.  
<https://www.cdc.gov/healthequity/features/cervical-cancer/index.html>
- ClinicalKey for Nursing. (2023, April 25). *Cervical cancer*. [https://www-clinicalkey-com.liboff.ohsu.edu/nursing/#!/content/clinical\\_overview/67-s2.0-91e8d37c-752e-4fd4-9e0b-43be3bd57a48](https://www-clinicalkey-com.liboff.ohsu.edu/nursing/#!/content/clinical_overview/67-s2.0-91e8d37c-752e-4fd4-9e0b-43be3bd57a48)
- Ducray, J. F., Kell, C. M., Basdav, J., & Haffejee, F. (2021). Cervical cancer knowledge and screening uptake by marginalized population of women in inner-city Durban, South Africa: Insights into the need for increased health literacy. *Women's Health*, 17, 17455065211047140. <https://doi.org/10.1177/17455065211047141>

- Health Resources & Services Administration. (2021). *Health center program uniform data system (UDS) data overview*. <https://data.hrsa.gov/tools/data-reporting/program-data?type=AWARDEE>
- Heberer, M. A., Komenaka, I. K., Nodora, J. N., Hsu, C.-H., Gandhi, S. G., Welch, L. E., Bouton, M. E., Aristizabal, P., Weiss, B. D., & Martinez, M. E. (2016). Factors associated with cervical cancer screening in a safety net population. *World Journal of Clinical Oncology*, 7(5), 406–413. <https://doi.org/10.5306/wjco.v7.i5.406>
- Hopkins, K. (2023). *Improving access to reproductive health services among Somali refugees*. <https://scholararchive.ohsu.edu/concern/etds/rv042t82t?locale=en>
- Jaqua, E., Nguyen, V., Morton, K., Chin, E., Brougher, A., & Dawes, J. (2022). Improving cervical cancer screening rates at an urban federally qualified health center family medicine residency clinic. *The Permanente Journal*, 26(2), 21–27. <https://doi.org/10.7812/TPP/21.066>
- Johnson, N. L., Head, K. J., Scott, S. F., & Zimet, G. D. (2020). Persistent disparities in cervical cancer screening uptake: Knowledge and sociodemographic determinants of Papanicolaou and human papillomavirus testing among women in the United States. *Public Health Reports*, 135(4), 483–491. <https://doi.org/10.1177/0033354920925094>
- Jones, N., Marks, R., Ramirez, R., & Rios-Vargas, M. (2021, August 21). *2020 Census Illuminates Racial and Ethnic Composition of the Country*. Census.Gov. <https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html>



- Kim, K., & Han, H.-R. (2015). Potential links between health literacy and cervical cancer screening behaviors: A systematic review. *Psycho-Oncology*, *25*(2), 122–130.  
<https://doi.org/10.1002/pon.3883>
- Kim, K., & Han, H. R. (2019). The association between health literacy and breast and cervical cancer screening behaviors: Findings from the behavioral risk factor surveillance system. *Nursing Research*, *68*(3), 177–188.  
<https://doi.org/10.1097/NNR.0000000000000346>
- Krogstad, J. M., Passel, J. S., & Noe-Bustamante, L. (2022, September 23). Key facts about U.S. Latinos for National Hispanic heritage month. *Pew Research Center*.  
<https://www.pewresearch.org/short-reads/2022/09/23/key-facts-about-u-s-latinos-for-national-hispanic-heritage-month/>
- Lopez, C., Kim, B., & Sacks, K. (2022). Health literacy in the United States: Enhancing assessments and reducing disparities. *SSRN Electronic Journal*.  
<https://doi.org/10.2139/ssrn.4182046>
- Miller, K. D., Ortiz, A. P., Pinheiro, P. S., Bandi, P., Minihan, A., Fuchs, H. E., Martinez Tyson, D., Tortolero-Luna, G., Fedewa, S. A., Jemal, A. M., & Siegel, R. L. (2021). Cancer statistics for the US Hispanic/Latino population, 2021. *CA: A Cancer Journal for Clinicians*, *71*(6), 466–487. <https://doi.org/10.3322/caac.21695>
- Multnomah County. (2020, June 12). *Clinic locations & hours*. <https://www.multco.us/primary-care-and-dental/clinic-locations-hours>
- Musa, J., Achenbach, C. J., O'Dwyer, L. C., Evans, C. T., McHugh, M., Hou, L., Simon, M. A., Murphy, R. L., & Jordan, N. (2017). Effect of cervical cancer education and provider

- recommendation for screening on screening rates: A systematic review and meta-analysis. *PLoS ONE*, 12(9), e0183924. <https://doi.org/10.1371/journal.pone.0183924>
- National Academic Press. (2022). *Adoption of health literacy best practices to enhance clinical research and community participation*. <https://doi.org/10.17226/26506>
- National Cancer Institute. (n.d.-a). *Learn more about HINTS*. Retrieved June 3, 2023, from <https://hints.cancer.gov/about-hints/learn-more-about-hints.aspx>
- National Cancer Institute. (n.d.-b). *Frequently asked questions about HINTS*. Retrieved January 6, 2024, from <https://hints.cancer.gov/about-hints/frequently-asked-questions.aspx#accordion-3>
- National Cancer Institute (2023, August). *Cancer trends progress report: Cervical cancer screening*. Retrieved September 4, 2023, from [https://progressreport.cancer.gov/detection/cervical\\_cancer](https://progressreport.cancer.gov/detection/cervical_cancer)
- Oregon Health Authority. (n.d.). *Program element 46*. Retrieved June 1, 2023, from <https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/REPRODUCTIVESEXUALHEALTH/RESOURCES/Pages/Program-Element-46.aspx>
- Oregon Health Authority. (2019). Health screening among Oregon adults by county 2014 – 2017. *Adult Behavior Risk Survey Data BRFSS*. [https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/ADULTBEHAVIORRISK/COUNTY/Documents/1417/ORCountyBRFSS\\_screenings1417.pdf](https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/ADULTBEHAVIORRISK/COUNTY/Documents/1417/ORCountyBRFSS_screenings1417.pdf)
- Oregon Health Authority. (2022). *Program element 46: Reproductive health provider resources: State of Oregon*. <https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/REPRODUCTIVESEXUALHEALTH/RESOURCES/Pages/Program-Element-46.aspx>

- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, *12*, 80. <https://doi.org/10.1186/1471-2458-12-80>
- The American College of Obstetricians and Gynecologists. (2021). *Updated cervical cancer screening guidelines*. <https://www.acog.org/en/clinical/clinical-guidance/practice-advisory/articles/2021/04/updated-cervical-cancer-screening-guidelines>
- The University of Southern California. (2015). *The Tamale Lesson: Narrative Education on Cervical Cancer*. *Vimeo*. Retrieved July 15, 2023, from <https://vimeo.com/125650427>.
- Thompson, E. L., Wheldon, C. W., Vamos, C. A., Griner, S. B., & Daley, E. M. (2019). How is health literacy related to pap testing among U.S. women? *Journal of Cancer Education*, *34*(4), 789–795. <https://doi.org/10.1007/s13187-018-1375-z>
- Tiraki, Z., & Yılmaz, M. (2018). Cervical cancer knowledge, self-efficacy, and health literacy levels of married women. *Journal of Cancer Education*, *33*(6), 1270–1278. <https://doi.org/10.1007/s13187-017-1242-3>
- Translational Advisory Council. (2022). *Most common languages in each county*. <https://www.oregon.gov/languages/Pages/common-language-county.aspx>
- US Census Bureau. (2018, October 9). *Hispanic population to reach 111 million by 2060*. *Census.Gov*. <https://www.census.gov/library/visualizations/2018/comm/hispanic-projected-pop.html>
- U.S. Census Bureau. (2022, July 1). *QuickFacts: Multnomah County, Oregon*. <https://www.census.gov/quickfacts/multnomahcountyoregon>

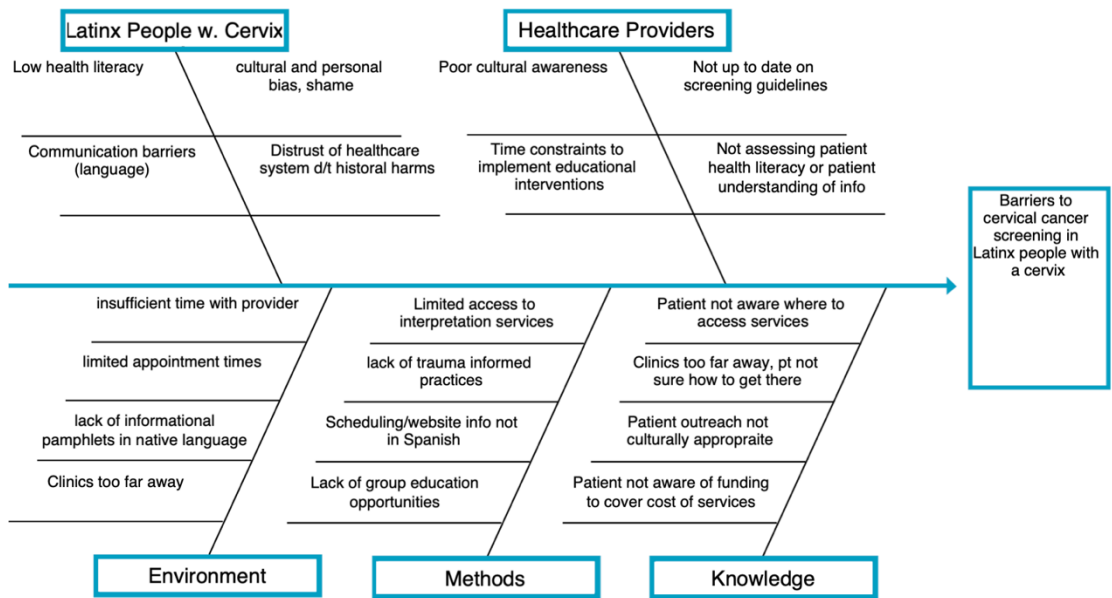
- U.S. Department of Education. (2006, September 6). *The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy*. National Center for Education Statistics; National Center for Education Statistics.  
<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006483>
- U.S. Department of Health and Human Services. (2022, May 3). *Implementation—Health Literate Care Model*. <https://health.gov/our-work/national-health-initiatives/health-literacy/health-literate-care-model/resources-implementation>
- U.S. Department of Health and Human Services. (n.d). *Healthy people 2030: Increase the proportion of females who get screened for cervical cancer C-09*.  
<https://health.gov/healthypeople/objectives-and-data/browse-objectives/cancer/increase-proportion-females-who-get-screened-cervical-cancer-c-09/data?group=Race/Ethnicity&from=2019&to=2021&state=United%20States&populations=#edit-submit>
- van Diggele, C., Burgess, A., & Mellis, C. (2020). Planning, preparing and structuring a small group teaching session. *BMC Medical Education*, 20(2), 462.  
<https://doi.org/10.1186/s12909-020-02281-4>
- World Health Organization. (2022, February 22). *Cervical cancer*. Fact Sheets.  
<https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>

# Appendix A. Cause and Effect Diagram

## Template: Cause and Effect Diagram

**Team:** DNP Student, County Reproductive Health Department, La Ventanilla de Salud  
**Project:** Improving cervical health literacy and access to reproductive health screening services for Latinx people

- 1) Input the effect you'd like to influence.
- 2) Input categories of causes for the effect (or keep the classic five).
- 3) Input causes within each category.



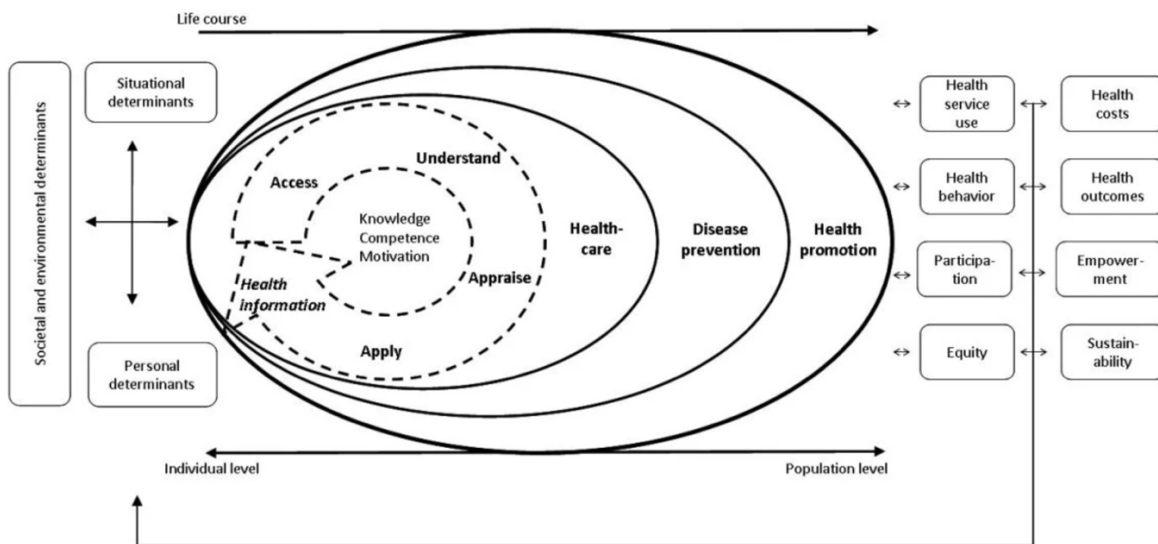
**Appendix B.**  
Project Timeline

Cervical Cancer Group Education Workshop Project Timeline

	Jun	Jul	Aug	Sep	Oct	Nov	Dec-Mar
Create project design and approach (703A)							
Complete IRB determination or approval (703A)							
Finalize project design and materials (703B)							
Schedule catering and secure gift cards and any free supplementary educational materials from the county							
Project Implementation (703B)							
Final data analysis (703B)							
Write sections 13-17 of the final paper (703B)							
Prepare for project dissemination (703B)							

**Appendix C.**  
Figure 1.

Integrated Model of Health Literacy



## Appendix D.

### Select the topics relating to Cervical Health you would most like to learn about Seleccione los temas relacionados con la salud cervical que más le gustaría aprender

\*\*We appreciate you taking this survey. Your participation in this survey will help us understand how to best provide health information about cervical cancer screening. This survey will take you about 5-10 minutes to complete. We are asking participants to take a survey before our educational program to identify topics we should include in the educational workshop. No personal information such as your name, phone number, social security number (SSN), or address will be collected in the survey. The survey is confidential. Participation is completely voluntary, and you may quit the survey at any time. If you have any questions or concerns about this survey, you may contact me at prietoan@ohsu.edu\*\*

\*\*Le agradecemos que va a tomar esta encuesta. Su participación en esta encuesta nos ayudará a comprender cómo proporcionar mejor información de salud sobre la detección del cáncer de cuello uterino. Esta encuesta le llevará unos 5-10 minutos para completar lo. Estamos pidiendo a los participantes que tomen una encuesta antes de nuestro programa educativo para identificar los temas que debemos incluir en el taller educativo. No se recopilará información personal como su nombre, número de teléfono, número de seguro social (SSN) o dirección en la encuesta. La encuesta es confidencial. La participación es completamente voluntaria y puede abandonar la encuesta en cualquier momento. Si tiene alguna pregunta o inquietud sobre esta encuesta, puede ponerse en contacto conmigo en prietoan@ohsu.edu\*\*

Cervical Cancer Screening Detección de cáncer cervical	Cervical Cancer Prevention Prevención del cáncer cervical	HPV Vaccine Vacuna contra el VPH
What is Cervical Cancer? ¿lo que es el cáncer cervical?	What is a Pap test? ¿Qué es una prueba de Papanicolaou?	What is a cervix? ¿Qué es un cuello uterino o cervix?
What happens if I have an abnormal result on my Pap? ¿Qué sucede si tengo un resultado anormal en mi Papanicolaou?	When should I start getting Pap testing? ¿Cuándo debo comenzar a hacerme la prueba de Papanicolaou?	How often do I need to do a Pap test? ¿Con qué frecuencia necesito hacerme una prueba de Papanicolaou?
Something else: Otra cosa:		



## Appendix E.

Figure 2a. Pre and Post Intervention Survey English and Spanish

\*\*We appreciate you taking this survey. Your participation in this survey will help us understand how to best provide health information about cervical cancer screening. This survey will take you about 5-10 minutes to complete. We are asking participants to take a survey before our educational program to identify topics we should include in the educational workshop. No personal information such as your name, phone number, social security number (SSN), or address will be collected in the survey. The survey is confidential. Participation is completely voluntary, and you may quit the survey at any time. If you have any questions or concerns about this survey, you may contact me at [prietoan@ohsu.edu](mailto:prietoan@ohsu.edu)\*\*

Question 1	Have you ever had a Pap smear or Pap test?	Yes No Not Sure
Question 2	Do you know what a Pap test is?	Yes No Not Sure
Question 3	When was your last pap test?	Approximate date or year _____ Not Sure
Question 4	When do you expect to have your next Pap test?	Next year In two years In three years Not Sure
Question 5	What is the main reason for a Pap test?	Cancer screening HPV Screening Both cancer and HPV Not sure
Question 6	What is your age group	18-20 21-29 30-65
Question 7	How often do you think a woman your age should have a Pap smear?	Not yet Every year Every 3 years Every 5 years Not sure
Question 8	How likely would you get a Pap smears every three years if your health care provider recommended it?	1 – Very unlikely 2 – Unlikely 3 – Neutral 4 – Likely 5- Very Likely
Question 9	Do you know what is HPV? HPV stands for Human Papillomavirus. It is not HIV, HSV, or herpes.	Yes No Not Sure
Question 10	Do you think HPV can cause cervical cancer?	Yes No Not Sure
Question 11	Where do you go for reproductive health services right now?	County Clinic Private Clinic

		Planned Parenthood No Where Yet Other: _____
Question 12	What other reproductive health topics do you want to learn more about in the future?	Mammogram Breast Cancer HPV Vaccine HIV STDs in General Birth Control Pre-natal care Post-natal care Other: _____

**SPANISH**

\*\*Le agradecemos que va a tomar esta encuesta. Su participación en esta encuesta nos ayudará a comprender cómo proporcionar mejor información de salud sobre la detección del cáncer de cuello uterino. Esta encuesta le llevará unos 5-10 minutos para completar lo. Estamos pidiendo a los participantes que tomen una encuesta antes de nuestro programa educativo para identificar los temas que debemos incluir en el taller educativo. No se recopilará información personal como su nombre, número de teléfono, número de seguro social (SSN) o dirección en la encuesta. La encuesta es confidencial. La participación es completamente voluntaria y puede abandonar la encuesta en cualquier momento. Si tiene alguna pregunta o inquietud sobre esta encuesta, puede ponerse en contacto conmigo en prietoan@ohsu.edu

Pregunta 1	¿Alguna vez te has hecho una prueba de Papanicolaou o una prueba de Pap?	Si      No      No Se
Pregunta 2	¿Sabes qué es una prueba de Papanicolaou?	Si      No      No Se
Pregunta 3	¿Cuándo fue tu última prueba de Papanicolaou?	Fecha or año aproximado _____ No Se
Pregunta 4	¿Cuándo espera hacerse su próxima prueba de Papanicolaou?	el próximo año En dos años En tres años No Se
Pregunta 5	¿Cuál es la razón principal para una prueba de Papanicolaou?	Detección de cancer Detección de VPH Detección de cancer y VPH No Se
Pregunta 6	¿Cuál es su grupo de edad?	18-20

		21-29 30-65
Pregunta 7	¿Con qué frecuencia crees que una mujer de tu edad debería hacerse una prueba de Papanicolaou?	Todavía no cada año cada 3 años cada 5 años No Se
Pregunta 8	¿Qué tan probable es que te consigas una prueba de Papanicolaou cada tres años si tu proveedor te lo recomienda?	1 – muy poco improbable 2 – improbable 3 – Neutral 4 – Probable 5- Muy probable
Pregunta 9	¿Sabes qué es el VPH? HPV significa Virus del Papiloma Humano. No es VIH, VHS o herpes.	Si No No Se
Pregunta 10	¿Crees que el VPH puede causar cáncer cervical?	Si No No Se
Pregunta 11	¿A dónde va para obtener servicios de salud reproductiva en este momento?	County Clinic Clínica privada Planned Parenthood No voy a ningún lugar Otro: _____
Pregunta 12	¿Sobre qué otros temas de salud reproductiva desea aprender más en el futuro?	mamografía cáncer mamario vacuna de VPH VIH ETS en general Anticonceptivos atención prenatal atención postnatal Otro: _____

**Figure 2b. 1 month post intervention follow-up survey**

**English**

Question 1	Have you ever had a Pap smear or Pap test?	Yes	No	Not Sure
Question 2	Do you know what a Pap test is?	Yes	No	Not Sure

Question 3	When was your last Pap test?	Approximate date or year _____ I have an appointment Not Sure
Question 4	When do you expect to have your next Pap test?	Next year In two years In three years Not Sure
Question 5	What is the main reason for a Pap test?	Cancer screening HPV Screening Both cancer and HPV Not sure
Question 6	What is your age group	18-20 21-29 30-65
Question 7	How often do you think a woman your age should have a Pap smear?	Not yet Every year Every 3 years Every 5 years Not sure
Question 8	How likely would you get a Pap smears every three years if your health care provider recommended it?	1 – Very unlikely 2 – Unlikely 3 – Neutral 4 – Likely 5- Very Likely
Question 9	Do you know what is HPV? HPV stands for Human Papillomavirus. It is not HIV, HSV, or herpes.	Yes No Not Sure
Question 10	Do you think HPV can cause cervical cancer?	Yes No Not Sure
Question 11	Where do you go for reproductive health services right now?	County Clinic Private Clinic Planned Parenthood No Where Other: _____

### Spanish

Pregunta 1	¿Alguna vez te has hecho una prueba de Papanicolaou o una prueba de Pap?	Si No No Se
------------	--	-------------

Pregunta 2	¿Sabes qué es una prueba de Papanicolaou?	Si      No      No Se
Pregunta 3	¿Cuándo fue tu última prueba de Papanicolaou?	Fecha or año aproximado _____  Tengo una cita  No Se
Pregunta 4	¿Cuándo espera hacerse su próxima prueba de Papanicolaou?	el próximo año En dos años En tres años No Se
Pregunta 5	¿Cuál es la razón principal para una prueba de Papanicolaou?	Detección de cancer Detección de VPH Detección de cancer y VPH No Se
Pregunta 6	¿Cuál es su grupo de edad?	18-20 21-29 30-65
Pregunta 7	¿Con qué frecuencia crees que una mujer de tu edad debería hacerse una prueba de Papanicolaou?	Todavía no cada año cada 3 años cada 5 años No Se
Pregunta 8	¿Qué tan probable es que te consigas una prueba de Papanicolaou cada tres años si tu proveedor te lo recomienda?	1 – muy poco improbable 2 – improbable 3 – Neutral 4 – Probable 5- Muy probable
Pregunta 9	¿Sabes qué es el VPH? HPV significa Virus del Papiloma Humano. No es VIH, VHS o herpes.	Si      No      No Se
Pregunta 10	¿Crees que el VPH puede causar cáncer cervical?	Si      No      No Se
Pregunta 11	¿A dónde va para obtener servicios de salud reproductiva en este momento?	County Clinic Clínica privada Planned Parenthood No voy a nignun lugar Otro: _____

Adapted From the Health Information National Trends Survey™ (HINTS™) on cervical cancer.

Appendix F.

# APRENDEMOS JUNTAS



**EVENTO DE ATENCIÓN  
MÉDICA GRATIS PARA LAS  
MUJERES DE 18 - 65 AÑOS**

**Sábado 9 de Septiembre**

**12:00 pm - 1:00 pm**

**Consulado de México en**

**Portland**

## EL EVENTO INCLUYE

- UNA PRESENTACIÓN SOBRE EL CÁNCER CERVICAL
- INFORMACIÓN SOBRE LA PRUEBA DE PAPANICOLAOU
- CUESTIONARIO VOLUNTARIO DE SALUD
- TARJETA DE REGALO Y ALMUERZO COMPARTIDO
- ESPACIO LIMITADO A 40 PARTICIPANTES
- PARA MÁS INFORMACIÓN, LLAME A 503-330-9423 (EXT 353)



## Appendix G.

### Case Study:

Marisol is a mother with 3 children, and she is 30 years old. She has never completed a Pap.

Marisol es una mama, tiene 3 hijos, y tiene 30 años de edad. Nunca se ha hecho una prueba de Papanicolau.

Questions:

Preguntas:

Does Marisol need a Pap?

¿Necesita Marisol una prueba de Papanicolau?

Answer: Yes

Respuesta: Si

If Marisol completes a pap today and her results are negative, when should she repeat her pap test?

Si Marisol se hace una prueba de Papanicolau hoy, y sus resultados son negativos, ¿cuando debe repetir la prueba de Papanicolau?

Answer: In 5 years

Respuesta: En 5 años

The daughter of Marisol is named Tanya, she is 20 years old, does Marisol need a pap?

La hija de Marisol se llama Tanya y tiene 20 años de edad, ¿Necesita Marisol una prueba de Papanicolau?

Answer: No

Respuesta: No

## Appendix H.

Figure 1. Informational Brochure English

### Where you can go to get a pap test



- Multnomah County Health  
503-988-5558



- Planned Parenthood  
888-875-7820



- OHSU  
503-418-4500



- Yakima Valley Health Clinic  
(503) 772-4335



- Wallace  
503-489-1760

### How can I address the anxiety of medical exams?

- Ask your provider to show you the instruments they will use or to verbalize the process step by step for you
- Relax your muscles: Concentrate on relaxing your muscles and keeping them relaxed
- If you need to pause during the exam ask your medical provider for a break
- If you would like a chaperone during an exam ask for one
- Take deep breaths: Count to four with each breath and repeat
- Count: Count to 10 slowly and quietly
- Visualize: Close your eyes and imagine a place that brings your joy or calm
- You can chat with someone in the room to help keep you distracted



### The Cervix

- The cervix is the lowest and most narrow part of the uterus
- The cervix is also known as "la matriz".



### Uterine Cancer

- Cervical cancer originates at the cervix
- Almost all of the cancers of the cervix are caused by the human papilloma virus, it is a very common virus that can be transmitted from person to person through sexual intercourse

### How to prevent and detect cervical cancer

- Not smoking
- Using condoms during sex
- If you are 26 years old or younger, get the HPV vaccine if you have not yet had the vaccine
- Complete an pap test with HPV screening

*There is a test to screen for cervical cancer that can identify cancer in the earliest stages when treatment is the most effective*

- The HPV vaccine helps to prevent the majority of cervical cancers and other types of cancers
- The HPV vaccine is recommended for pre-teens from 11 to 12 years of age, but they can be administered as young as 9 years of age

### The Pap Tests

- The pap test looks for pre-cancers, which are changes in the cells in the cervix that can develop into cancer if they are not adequately treated
- The HPV test looks for the HPV virus that can cause cellular changes in the cervix

	Pap	Pap + VPH
< 21	NO	NO
21 - 29	SI	NO
30 - 65	SI	SI
> 65	NO	NO

Citations  
Biblioteca Nacional de Medicina  
Centers for Disease Control and Prevention CDC



Figure 2. Informational Brochure Spanish

### Dónde puede hacerse una prueba de Papanicolaou



- Multnomah County Health  
503-988-5558



- Planned Parenthood  
888-875-7820



- OHSU  
503-418-4500



- Yakima Valley Health Clinic  
(503) 772-4335



- Wallace  
503-489-1760

### ¿Cómo puedo afrontar la ansiedad por los exámenes médicos?

- Pregunte que tu proveedor médico que te muestra los instrumentos o que te dice paso a paso lo que están haciendo
- Relaja los músculos: Concéntrese en lograr que sus músculos se relajen y estén sueltos
- Si necesitas una pausa durante el examen pregunte por una pausa
- Si quieres un acompañante durante el examen pide uno
- Respira profundamente: Cuente hasta cuatro con cada respiración, y luego repita
- Contar: Cuente hasta 10 en forma lenta y silenciosa
- Visualizar: Cierre los ojos y piense en una imagen o lugar que le cause felicidad
- Conversar: Hable con alguien en el cuarto, esto puede ayudar a distraerle

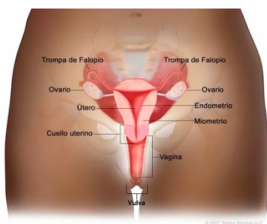
## SALUD DE CUELLO UTERINO

2023



### El cuello uterino

- El cuello uterino es la parte más baja y estrecha del órgano
- El útero también se conoce como la matriz.



### El cáncer de cuello uterino

- El cáncer de cuello uterino se origina en el cuello del útero
- Casi todos los cánceres de cuello uterino son causados por el virus del papiloma humano (VPH), un virus común que se puede transmitir de persona a persona durante las relaciones sexuales

### Cómo prevenir y detectar el cáncer de cuello uterino

- No fumar
- Usar preservativos durante el sexo
- Si tiene 26 años o menos, vacúnese contra el VPH si aún no se ha vacunado
- Hacerse prueba de Papanicoláu y la prueba del VPH

*El cáncer de cuello uterino tiene prueba de detección que puede identificar este cáncer en su etapa inicial, cuando tratamiento puede ser más efectivo*

- La vacuna contra el virus del papiloma humano (VPH) ayuda a prevenir la mayoría de los cánceres de cuello uterino y varios otros tipos de cáncer
- La vacunación contra el VPH se recomienda para los preadolescentes de 11 a 12 años de edad, pero puede comenzar desde los 9 años

### Las pruebas de Papanicoláu

- La prueba de Papanicoláu busca precánceres, que son cambios en las células del cuello uterino que podrían convertirse en cáncer si no se tratan en forma adecuada
- La prueba del VPH busca el virus del papiloma humano que puede causar cambios celulares en el cuello uterino

	Pap	Pap + VPH
< 21	NO	NO
21 - 29	SI	NO
30 - 65	SI	SI
> 65	NO	NO

Citas  
Biblioteca Nacional de Medicina  
Centros para el Control y la Prevención de Enfermedades (CDC)

# Appendix I.

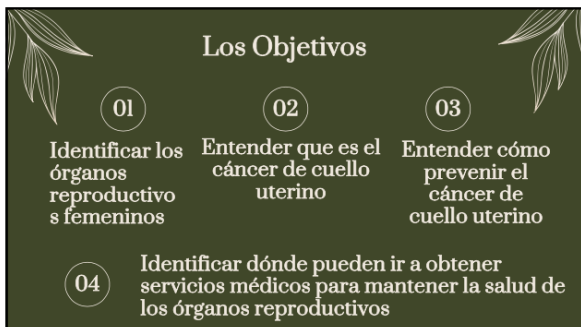
## Presentation Slides



1



2



3



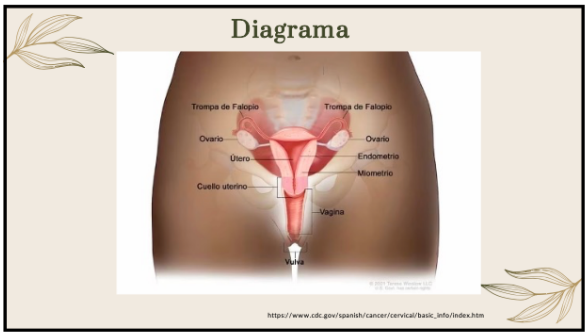
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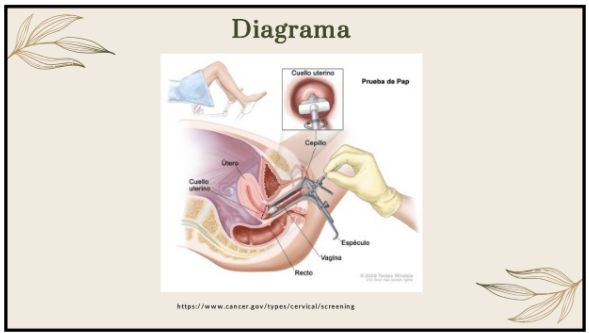
5



6



7



8

### Las Pruebas de Papanicoláu

La prueba de Papanicoláu (o citología vaginal) busca precánceres

La prueba del VPH busca el virus del papiloma humano que puede causar este tipo de cambios celulares en el cuello uterino

(Center for Disease Control, 2023a)

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### El Cáncer de Cuello Uterino

Cuello uterino normal	Células cervicales normales
Displasia cervical	Células cervicales cancerosas o pre-cancerosas

[https://medlineplus.gov/spanish/ncic/top\\_images/1200.htm](https://medlineplus.gov/spanish/ncic/top_images/1200.htm)

ADAM

10

### El Virus del papiloma humano

HPV 16, HPV 18, HPV 31, HPV 45

<https://www.cdc.gov/images/HPV-infection.jpg>

11

### La Vacuna Contra el VPH

<https://pharmaceutical-journal.com/wp-content/uploads/2022/03/17/day-of-HPV-vaccination-how-much-is-it-worth-it-16-18-2022-03-17>

Se recomienda de 11 a 12 años de edad, pero puede comenzar desde los 9 años

También se recomienda para todas las personas hasta los 26 años

No hay recomendaciones sobre la vacunación contra el VPH para personas mayores de 26 años

(Center for Disease Control, 2023b)

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## Appendix J.

Consent Script: Cervical Cancer Screening Group Education Workshop

### STATEMENT OF CONSENT FOR PARTICIPATION IN THE GROUP EDUCATION WORKSHOP

**Purpose:** This project aims to improve understanding of the education session topic and awareness of available reproductive health services in the local Multnomah County area.

**Education Session:** This session will consist of one 60-minute education workshop for interested Latina/Latinx/Hispanic women. The participants will receive a \$25-dollar Visa gift card. The education session will be led by an Oregon Health and Science University Family Nurse Practitioner, Doctor of Nursing Practice Student, and supported by La Ventanilla de Salud partner. The education session is evidence-based and aims to be culturally appropriate. The session and informational materials will be in both English and Spanish.

**Evaluation:** You will be asked to complete a pre-and post-survey at the end of the education session. Pre- and post-education surveys will help us determine if education sessions help increase awareness of the specific topic and available reproductive health services within the community. We will also provide long-term follow-up surveys available at La Ventanilla de Salud in September 2023. The long-term surveys will help us learn how you used the information at the education session. A sign-in sheet will be necessary to account for gift card distribution; however, the sign-in sheet will be separate from the education session, the included session surveys, and all La Ventanilla de Salud resources.

**Risks:** Participation is entirely voluntary; if you choose not to participate in the education session or the surveys, it will not affect any County or La Ventanilla de Salud services you receive. You do not have to answer any questions or comment on anything that makes you uncomfortable. Please only share information you are comfortable with others hearing. All participants must agree to respect the privacy and confidentiality of others in the group. No personal information will be collected as part of the education session. The education session facilitators and interpreter must respect the confidentiality and privacy of all participants.

**Benefits:** Participating in this education session and the surveys will assist the County Health Department and the reproductive health program, PE 46, titled Community Partnerships and Assurance of Access to Reproductive Health Services, determine how well education sessions increase health literacy and awareness of available reproductive health services.

The goal is to help improve health literacy and access to reproductive health care for vulnerable communities.

**Incentives:** Catered food will be provided from Tamale Boy at education workshop to show our appreciation for your participation. Participants to complete the pre- and post-surveys will receive a \$20-dollar Visa gift card at the end of the workshop.

**Reminder:** Your participation is entirely voluntary, and you may leave anytime for any reason. If you have any questions about your participation in this education session and the evaluation, please feel free to ask them now or at any time during the session. By participating in today's education session, you are agreeing to participate and respect the privacy of all individuals taking part in today's education session.

Consent Script: Cervical Cancer Screening Group Education Workshop in Spanish

## **DECLARACIÓN DE CONSENTIMIENTO PARA PARTICIPAR EN EL TALLER DE EDUCACIÓN GRUPAL**

**Propósito:** Este proyecto tiene un objetivo a mejorar la comprensión del tema de la sesión de educación y el conocimiento de los servicios de salud reproductiva disponibles en el área local del condado de Multnomah.

**Sesión de Educación:** Esta sesión consistirá en un taller de educación de 60 minutos para mujeres latinas interesadas en estos temas. Los participantes recibirán una tarjeta de regalo de 25 dólares. La sesión de educación será dirigida por un estudiante de Doctor en Práctica de Enfermería de la Universidad de Salud y Ciencias de Oregon, y es apoyada por La Ventanilla de Salud. La sesión de educación está basada en la evidencia y tiene como objetivo ser culturalmente apropiado. La sesión y los materiales informativos serán en Español.

**Evaluación:** Se le pedirá que complete una encuesta en el comienzo y al final de la sesión de educación. Las encuestas nos ayudarán a determinar si las sesiones de educación ayudan a aumentar la conciencia sobre el tema específico y los servicios de salud reproductiva disponibles dentro de la comunidad. También proporcionaremos encuestas de seguimiento en octubre de 2023, los enviaremos en el correo electrónico. Las encuestas a largo plazo nos ayudarán a aprender cómo utilizó la información en la sesión de educación.

Una hoja de registro será necesaria para dar cuenta de la distribución de de las tarjetas regalos y la comida; sin embargo, la hoja de registro será separada de la sesión de educación, las encuestas de sesión incluidas, y todos los recursos de La Ventanilla de Salud.

**Riesgos:** La participación es totalmente voluntaria; si usted decide no participar en la sesión de educación o en las encuestas, no afectará ningún servicio del Condado o La Ventanilla de Salud que reciba. No tienes que responder a ninguna pregunta o comentar nada que te haga sentir incómodo. Por favor, solo comparte información que se sienta cómodo con otros escuchando. Todos los participantes deben estar de acuerdo en respetar la privacidad y confidencialidad de los demás en el grupo. No se recopilará información personal como parte de la sesión de educación. Los facilitadores de la sesión de educación y el intérprete deben respetar la confidencialidad de todos los participantes

**Beneficios:** Participar en esta sesión de educación y las encuestas ayudará al Departamento de Salud del Condado Multnomah y al programa de salud reproductiva, PE 46, titulado

Asociaciones Comunitarias y Garantía de Acceso a Servicios de Salud Reproductiva, a determinar qué tan bien las sesiones de educación aumentan la alfabetización en salud y la concientización sobre los servicios de salud reproductiva disponibles. El objetivo es ayudar a mejorar la alfabetización en salud y el acceso a la atención de la salud reproductiva para las comunidades vulnerables.

**Incentivos:** La comida servida será proporcionada por Tamale Boy en el taller de educación para mostrar nuestro agradecimiento por su participación. Los participantes que completen las encuestas previas y posteriores recibirán una tarjeta de regalo Visa de 20 dólares al final del evento.

**Recordatorio:** Su participación es totalmente voluntaria, y puede irse en cualquier momento por cualquier motivo. Si usted tiene alguna pregunta acerca de su participación en esta sesión de educación y la evaluación, por favor siéntase libre de preguntarlas ahora o en cualquier momento durante la sesión. Al participar en la sesión de educación de hoy, usted acepta participar y respetar la privacidad de todas las personas que participan en la sesión de educación de hoy.

## Appendix K.



# IRB MEMO

Research Integrity Office

3181 SW Sam Jackson Park Road - L106RI  
Portland, OR 97239-3098  
(503)494-7887 irb@ohsu.edu

## NOT HUMAN RESEARCH

August 23, 2023

Dear Investigator:

On 8/23/2023, the IRB reviewed the following submission:

Title of Study:	Improving Cervical Cancer Screening Behaviors Among LatinX people a Quality Improvement Project
Investigator:	<a href="#">Jacqueline Webb</a>
IRB ID:	STUDY00026189
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the [HIPAA and Research website](#) and the [Information Privacy and Security website](#) for more information.

Sincerely,

The OHSU IRB Office



## Appendix L.

### Letter of Support from Clinical Agency

Date: *June 10, 2023*

Dear *Anna Prieto-Toxtli*,

This letter confirms that I, *Charlene Maxwell*, allow *Anna Prieto-Toxtli* (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project will take place from approximately *July 2023* to *December 2023*.

This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison:

- **Project Site(s):** Multnomah County Health Department and Ventanilla de Salud 1305 SW 12<sup>th</sup> Ave Portland, OR, 97201
- **Project Plan:**
  - **Identified Clinical Problem:**

Cervical cancer is the fourth most common cancer in women globally (CDC, 2023) and has the fourth highest mortality in female cancer patients (WHO, 2022). The highest incidence of cervical cancer is in Hispanic women at a rate of 9.3 per 10,000 persons compared to all other groups (Jaqua et al., 2022). Cervical cancer disproportionately affects low-income, low-health literacy and racial/ethnic minority women and in recent years cervical cancer screening rates have plateaued (Jaqua et al., 2022). Cervical cancer diagnosis rates at advanced stages are higher for Black and Hispanic women (Jaqua et al., 2022, and diagnosis at later stages is associated with higher risk of cancer recurrence and death (ClinicalKey, 2023).

No socio demographic group has achieved the “*Healthy People 2020*” target of 93% cervical cancer screening goal for women ages 21 – 65 (Johnson et al., 2020). Multnomah county clinics served approximately 52,000 patients in 2021; of that population 38.4 identify as Hispanic or Latino and 67.73% between the ages of 15 and 64 identify as female (HRSA, 2021). Collectively, the Multnomah County clinics performed cervical cancer screening for 64.62% of eligible patients in 2021 (HRSA, 2021). The highest rate of cervical cancer screening was 70.55% in 2017 and this rate has steadily declined over the years until the small increase seen in 2021. Multnomah county is home to an estimated 795,083 residents, with 12.7 identifying as Hispanic or Latino, and 50.3% identifying as female (U.S. Census Bureau, 2022).
  - **Rationale:**

Many barriers influence cervical cancer screening practices. In Latin America and the U.S., contributors to cervical cancer-related inequities include low education levels, low health literacy levels, and personal and cultural barriers (Baezconde-Garbanati et al., 2019; Musa et al., 2017). Low health literacy in Latinx women of reproductive age is pervasive as adults identifying as Hispanic have demonstrated the most inadequate health literacy compared to all other groups (Lopez et al., 2022). Several studies have identified health literacy level as a critical predictor of CCS behaviors in women. Theory-based educational interventions can increase cervical cancer screening rates by more than double (Musa et al., 2017), and evidenced-based interventions for cancer screening can increase the number of people screened (CDC, 2022b). Culturally tailored interventions are key to a successful intervention, Baezconde-Garbanati et al. (2019) found that when participants felt immersed in a storytelling film, *Tamale Lesson*, with a culturally appropriate narrative, a higher percentage of participants made an appointment for, or went in for, cervical cancer screening than when they viewed a fact-based film. Advancing a person's health literacy will progressively allow for greater autonomy and is part of an individual's development toward improved quality of life (Sørensen et al., 2012). Improving CCS behavior through culturally sensitive and focused cervical cancer group information disbursement through a workshop in partnership with a community organization will be guided by the Integrated Model of Health Literacy (IMHL) framework. This model integrates medical and public health views on health literacy and provides a conceptual basis for developing and validating measurement tools, capturing the different dimensions of health literacy within healthcare (Sørensen et al., 2012).

o **Specific Aims:**

This project aims to increase CCS health literacy by improving the HL domains of access, understanding, appraise, and application in a group of Latinx-identifying Pacific NW County residents at risk for cervical cancer through small group education delivered via a culturally tailored workshop led by a DNP student in partnership with the Multnomah County Community Health Center leadership and a local community organization in Fall of 2023.

o **Methods/Interventions/Measures:**

This project will be executed in 5 phases

1. Establishing partnership with a community organization. Identifying inclusion criteria.
2. Creating the workshop lesson plan, supplementary materials (PowerPoint presentation, pamphlets), questionnaires, and advertisement fliers.
3. Outreach to participants via flier disbursement at the community organization
4. Project implementation via 60-minute workshop in both English and Spanish
  - a. Consent process
  - b. Introduction
  - c. Pre-survey
  - d. Meal break (catered)
  - e. Workshop presentation – power point, screening of *TamaleLesson* (an 11-minute story-telling film developed by University of Southern California), break out group case study and large group case study chat.
  - f. Disbursement of \$25 gift cards and informational pamphlets to participants
5. Follow-up survey 1 month after intervention

Data will be de-identified, questionnaires will not collect patient identifiers such as name, DOB, address, etc.

Questionnaire data will be a mix of qualitative and quantitative data. Student will work with a statistical analyst through OHSU to process the data and present findings in visual format (pie charts, bar graph, line graphs etc.) This research findings and data will be presented to the Multnomah County staff and findings will be deidentified for presentation to the OHSU faculty and staff to meet the DNP program requirements of student.

o **Data Management:**

Questionnaire data will be entered into an Excel spreadsheet on the DNP students computer, which is password protected. All data collected will be de-identified from the start as no identifying data will be collected at the intervention.

o **Site(s) Support:**

La Ventanilla de Salud will provide a room for use for the workshop event and has authorized the student to complete the workshop project at the location listed above.

Multnomah County staff volunteers and OHSU student volunteers will be available to identify participants who might qualify for inclusion criteria the day of the event to ensure no participants under 18 enter the workshop space. They will also assist in distributing the questionnaires, serving complimentary meals, distributing the gift cards, and cleaning up the space at the end of the workshop. Only authorized Multnomah County staff will have access to reviewing the questionnaire responses.

o **Other:**

Funding for participant gift cards \$25 for approximately 40 participants, totaling approximately \$1,000. Funding for a catered meal, totaling \$600.

During the project implementation and evaluation, [Anna Prieto-Toxtli](#) will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact [Anna Prieto-Toxtli](#) and [Jackie Webb](#), DNP (student's DNP Project Chairperson).

Regards,

Charlene Maxwell NP, DNP, Medical Director, Multnomah County Community Health Centers  
619 NW 6th Ave  
Portland Oregon 97202  
971-337-6563  
charlene.maxwell@multco.us

Charlene Maxwell /s/

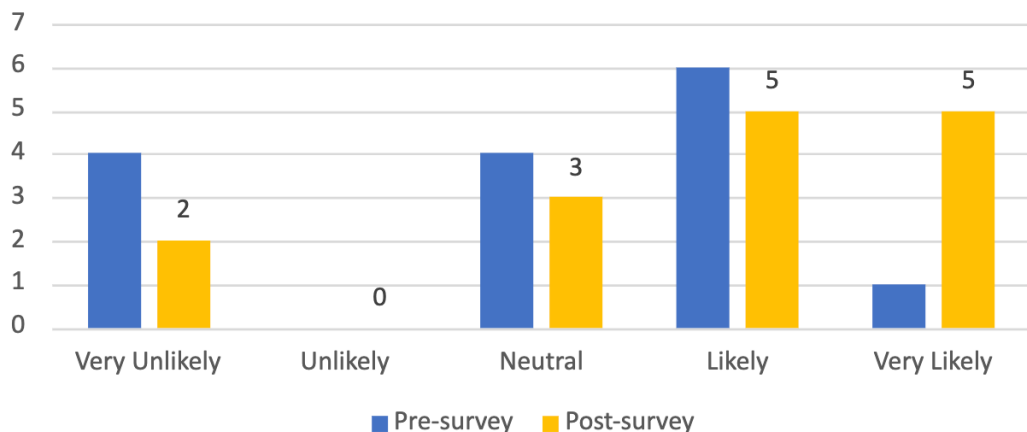
Date Signed 6/11/2023

## References:

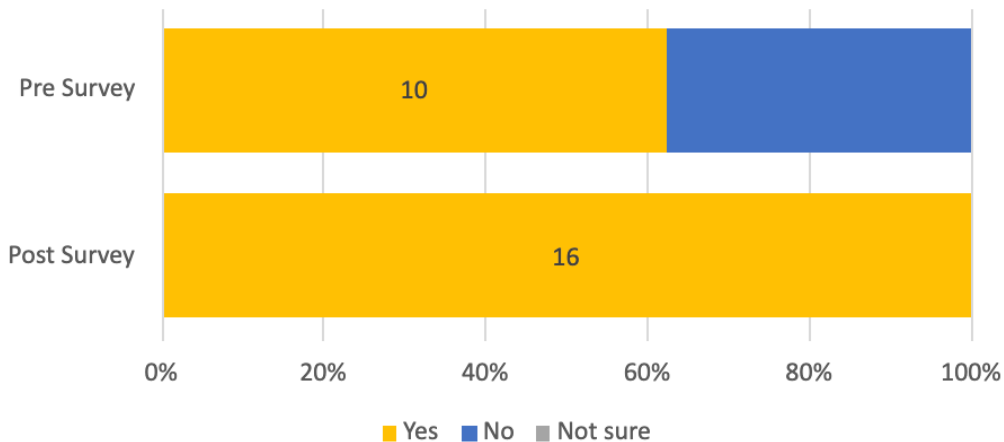
- Baezconde-Garbanati, L., Agurto, I., Gravitt, P. E., Luciani, S., Murphy, S., Ochoa, C., Gallegos, K., Barahona, R., & Rodríguez, Y. (2019). Barriers and innovative interventions for early detection of cervical cancer. *Salud Publica de Mexico*, 61(4), 456–460. <https://doi.org/10.21149/10425>
- Center for Disease Control and Prevention. (2022, December 5). *ScreenOutCancer*. <https://www.cdc.gov/screenoutcancer/interventions/index.htm>
- Center for Disease Control and Prevention. (2023, February 3). *Prevent Cervical Cancer*. <https://www.cdc.gov/healthequity/features/cervical-cancer/index.html>
- ClinicalKey. (2023, April 25). *Cervical Cancer*. [https://www-clinicalkey-com.liboff.ohsu.edu/nursing/#!/content/clinical\\_overview/67-s2.0-91e8d37c-752e-4fd4-9e0b-43be3bd57a48](https://www-clinicalkey-com.liboff.ohsu.edu/nursing/#!/content/clinical_overview/67-s2.0-91e8d37c-752e-4fd4-9e0b-43be3bd57a48)
- Health Resources & Services Administration. (2021). *Health center program uniform data system (UDS) data overview*. <https://data.hrsa.gov/tools/data-reporting/program-data?type=AWARDEE>
- Jaqua, E., Nguyen, V., Morton, K., Chin, E., Brougher, A., & Dawes, J. (2022). Improving Cervical Cancer Screening Rates at an Urban Federally Qualified Health Center Family Medicine Residency Clinic. *The Permanente Journal*, 26(2), 21–27. <https://doi.org/10.7812/TPP/21.066>
- Musa, J., Achenbach, C. J., O'Dwyer, L. C., Evans, C. T., McHugh, M., Hou, L., Simon, M. A., Murphy, R. L., & Jordan, N. (2017). Effect of cervical cancer education and provider recommendation for screening on screening rates: A systematic review and meta-analysis. *PLoS ONE*, 12(9), e0183924. <https://doi.org/10.1371/journal.pone.0183924>
- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12, 80. <https://doi.org/10.1186/1471-2458-12-80>
- U.S. Census Bureau. (2022, July 1). *QuickFacts: Multnomah County, Oregon*. <https://www.census.gov/quickfacts/multnomahcountyoregon>
- World Health Organization. (2022, February 22). *Cervical cancer*. Fact Sheets. <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>

**Appendix M.**

**How likely would you get a Pap smear every three years if your health care provider recommended it?**



**Do you know what HPV is? HPV stands for Human Papillomavirus. It is not HIV, HSV, or herpes.**



## Do you think HPV can cause cervical cancer?

