Working together to improve health care quality, outcomes, affordability, and equity in Washington State.

Cervical Cancer Screening

2021

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Executive Summary

Deaths from cervical cancer have decreased significantly over the last 40 years due to widespread use of the Papanicolaou (Pap) test to screen for pre-cancer and cancerous cells followed by introduction of the human papillomavirus (HPV) vaccine. Cervical cancer is unique among cancer types in having a readily available type of primary prevention or prevention of disease prior to it occurring. However, cervical cancer remains the second most common cancer type diagnosed among those with cervical tissue between the ages of 15 and 44.

However, gaps in the cervical cancer screening pathway remain with only about half of adolescents being up to date on vaccination, and similar gaps with pap testing. Gaps in HPV vaccination and up-to-date screens, as well as closing the "last mile" of cervical cancer screens through follow-up and colposcopy, can be addressed on an individual and system level to further drive down incidence of cervical cancer and increase overall population health.

This guideline's goal is to decrease the incidence of mortality and morbidity from cervical cancer. Appropriate prevention through HPV vaccination, appropriate screening, and structured follow-up to abnormal results are mechanisms to achieve this goal. The guideline also recognizes that the capacity of a delivery site to conduct population management activities such as follow-up will vary. Treatment and/or management of cervical cancer is out of scope of these recommendations and the focus areas below outline the pathway from HPV vaccination to cervical cancer screen to follow-up to colposcopy.

We include checklists for health care delivery sites, patients and family members, providers, health plans, health care purchasers (e.g., employer purchasers), Washington State Health Care Authority, Washington State Department of Health, and the Washington State Legislature. We outline the pathways and barriers and review the evidence for HPV vaccination, cervical cancer screening, follow-up, trauma-informed care, and measurement.

Bree Collaborative Background

The Dr. Robert Bree Collaborative was established in 2011 by Washington State House Bill 1311 *"…to provide a mechanism through which public and private health care stakeholders can work together to improve quality, health outcomes, and cost effectiveness of care in Washington State."* The Bree Collaborative was named in memory of Dr. Robert Bree, a leader in the imaging field and a key member of previous health care quality improvement collaborative projects.

Members are appointed by the Washington State Governor and include public health care purchasers for Washington State, private health care purchasers (employers and union trusts), health plans, physicians and other health care providers, hospitals, and quality improvement organizations. The Bree Collaborative is charged with identifying health care services annually with substantial variation in practice patterns, high utilization trends in Washington State, or patient safety issues. For each health care service, the Bree Collaborative identifies and recommends best-practice, evidence-based approaches that build upon existing efforts and quality improvement activities to decrease variation. In the bill, the legislature does not authorize agreements among competing health care providers or health carriers as to the price or specific level of reimbursement for health care services. Furthermore, it is not the intent of the legislature to mandate payment or coverage decisions by private health care purchasers or carriers.

See **Appendix A** for a list of current Bree Collaborative members.

Recommendations are sent to the Washington State Health Care Authority for review and approval. The Health Care Authority (HCA) oversees Washington State's largest health care purchasers, Medicaid and the Public Employees Benefits Board Program, as well as other programs. The HCA uses the recommendations to guide state purchasing for these programs. The Bree Collaborative also strives to develop recommendations to improve patient health, health care service quality, and the affordability of health care for the private sector but does not have the authority to mandate implementation of recommendations.

For more information about the Bree Collaborative, please visit: www.breecollaborative.org.

Bree Collaborative members identified cervical cancer screening as a priority improvement area and convened a workgroup to develop evidence-based standards. The workgroup met from January to July 2021.

See **Appendix B** for the workgroup charter and a list of members.

See **Appendix C** for results of the guideline and systematic review search.

Cervical Cancer Screening Background

A person's overall risk of being diagnosed with cancer depends on multiple factors including genetics, population-level exposures (e.g., asbestos, viral), individual risk exposures (e.g., excessive alcohol use), and their exposures to and engagement with cancer prevention and cancer screening. In the United States, a person has an almost 40% risk of developing cancer of any type over their lifetime and women have about an 18% chance of dying from cancer of any type (men are slightly higher at 21%).[1] A person with cervical tissue's lifetime risk of developing cervical cancer is 63 out of 1,000 and a mortality rate of 22 out of 1,000.[1]

The mortality rate from cervical cancer has decreased significantly over the last 40 years due to access to the Papanicolaou (Pap) test to screen for pre-cancer and cancerous cells.[2,3] Introduction of the human papillomavirus (HPV) vaccine has decreased HPV infection and incidence of precancer.[4] However, cervical cancer remains the second most common cancer type for those with cervical tissue who are between the ages of 15 and 44.[5] In 2017, for every 100,000 people with cervical tissue, eight new cases of cervical cancer were diagnosed (for the US population this is just under 13,000 people total) and two died (for the US population this is just over 4,000 people total).[6]

Cervical cancer is unique among cancer types in having a readily available type of primary prevention or prevention of disease prior to it occurring. The HPV vaccine has the potential to protect against an estimated 92% of cancers caused by HPV, is recommended for those under 26, and can be given to those as young as nine.[7] People up to age 45 are encouraged to speak to their provider about the benefits of vaccination.[14] However, only about half of adolescents are up to date on vaccination indicating an opportunity to decrease cervical cancer incidence through HPV vaccination initiatives.[8,9]

These recommendations endorse the US Preventive Services Task Force (USPSTF), American Cancer Society (ACS), American Society for Colposcopy and Cervical Pathology (ASCCP) guidelines for cervical cancer screening and acknowledge that due to increased HPV vaccination, screening frequency and type are changing due to changing population risks. The USPSTF recommends that those with cervical tissue be screened for cervical cancer every three or five years (depending on the modality) between the ages of 21 and 65 with individual factors indicating need for more frequent screening.[10] However, the percent of the population with cervical tissue who are up to date on appropriate screening remains at about 50-66% depending on age group and other risk factors.[5] This rate varies significantly by race and ethnicity, where a person lives, and the person's income and insurance status resulting in disparities in cervical cancer incidence and mortality across population groups due to differential access to cervical cancer screens and appropriate follow-up.[11,12]

The gaps discussed above in HPV vaccination and up-to-date cervical cancer screens, as well as closing the "last mile" of cervical cancer screens through follow-up and colposcopy, can be addressed on an individual and system level to further drive down incidence of cervical cancer and increase overall population health.

Recommendation Framework

This guideline's goal is to decrease the incidence of mortality and morbidity from cervical cancer. Appropriate prevention through HPV vaccination, appropriate screening, and structured follow-up to abnormal results are mechanisms to achieve this goal. The guideline also recognizes that the capacity of a delivery site to conduct population management activities such as follow-up will vary. Treatment and/or management of cervical cancer is out of scope of these recommendations and the focus areas below outline the pathway from HPV vaccination to cervical cancer screen to follow-up to colposcopy.

Focus Area	Clinical Steps
HPV Vaccine	• Raise the importance of the HPV vaccine during adolescent visits • Address myths around the HPV vaccine through person-centered education • Frame the HPV vaccine as cancer prevention not STI prevention • Require HPV vaccine for public school enrollment • Track HPV vaccination at a delivery site level by age, race and ethnicity
Cervical Cancer Screen	• Frame as preventative screening for pre-cancerous conditions • Track and clearly communicate the process and frequency for cervical cancer screen (e.g., to follow ACS guidelines, using a 25-30-35 schedule (HPV-alone) or, following USPSTF guidelines, at 21-24-27 (cytology-alone) then every 5 years 30-65 (either HPV-alone or co-test) as a part of routine care • Practice trauma-informed pelvic exams (i.e., includes assessing and accommodating for past trauma) • For those with cervical tissue follow recent USPSTF screening recommendations. Stratify risk and type of test based on age (e.g., 21 to 29 years, 30-65 years, over 65 years) • Discuss the type of screening test being conducted with the patient • When approved by the FDA, available, recommended by national quality organizations, and lab-validated, offer self-swab for HPV-alone • Track outcomes and identify disparities in cancer screening and mortality through a comprehensive cancer screening registry including colon, breast, and cervical cancers. The registry will include at minimum screening, screening outcome, and factors that influence screening and outcome including (at a minimum) race, ethnicity, and insurance status. • Include measurement of cervical cancer screening for all appropriate populations including for Medicaid and uninsured • Prioritize outreach to populations with historical or demonstrated lower screening rates including minoritized individuals, those covered by Medicaid, the underinsured, and the uninsured • Report screening completion by race and ethnicity by site and health plan
Abnormal Result Follow-Up	• Designate a process owner for the site-level cancer screening registry follow-up and outreach (e.g., from care coordinator) • Ensure communication is understandable, person-centered, guideline-consistent, with clear next steps for patients
Colposcopy	• Practice trauma-informed gynecology includes assessing and accommodating for past trauma) • List of colposcopists and warm handoff to referral providers • Waive member cost share for follow-up evaluation on abnormal screening

Stakeholder Checklists

Health Care Delivery Site/Organization

- ☐ Develop site-wide clear policies on trauma-informed, culturally humble care.
    - All staff are trained on trauma-informed interactions corresponding to how they interact with patients.
    - Providers are trained and have electronic guidance on how to have person-centered conversations about:
        - Vaccines and addressing common myths about the HPV vaccine.
        - The process of screening for cervical cancer using a pelvic exam and the difference between pre-cancerous and cancerous cells.
        - How and when to expect results from the cervical cancer screen and how results will be communicated to the patient.
- ☐ Define site's attributable population in order to track patients being up to date on HPV vaccine, cervical cancer screens, and follow-up.
- ☐ Develop onsite cancer screening registry of attributed population that includes:
    - Age
    - HPV vaccination status
    - Sex at birth and current gender (if available)
    - Race
    - Ethnicity
    - Insurance status
    - Age of last cervical cancer screen
    - Age of next cervical cancer screen. Labs at 25, 30, 35, etc are recommended if following the American Cancer Society (ACS), or at 21-24-27-30-35-etc if following the USPSTF guidelines
    - Screening result history
    - Whether results have been communicated to patient
    - Follow-up steps to abnormal results
- ☐ Designate staff person to manage cancer screening registry.
- ☐ Communicate to patients who are overdue for cervical cancer screen electronically or through mail with process of how to make an appointment and what to expect.
- ☐ When a patient makes any appointment:
    - Providers are electronically notified if patient is due for cervical cancer screen
    - Patient is notified prior to appointment that they will be offered a pelvic exam and labs (or self-collection of HPV if that is an option), and what to expect
- ☐ Develop or utilize an existing list of providers who perform colposcopies, internal or external to the organization.
- ☐ Utilize a warm handoff if a patient with an abnormal result is referred to colposcopy
- ☐ Test only in CLIA-regulated lab.
- ☐ Prioritize outreach for HPV vaccine and cervical cancer screen to populations with demonstrated higher mortality and/or incidence rates including:
    - Hispanic
    - Medicaid
    - Underinsured
    - Uninsured

These recommendations are not intended to be used in lieu of advice from your provider(s).

Patients and Family Members

- ☐ Most cervical cancer is caused by certain types of human papilloma**virus**. Other types of this virus can cause genital warts.
- ☐ The 9 valent HPV vaccine protects against genital warts and over 90% of HPV types that cause cervical cancer
    - HPV vaccine recommended for children age 9-12 but should be given up to age 26 if not fully vaccinated earlier
    - If you are between 26-45 you should talk to your provider or care team about whether you should be vaccinated
- ☐ This guideline recommends against ordering HPV tests online due to uncertainty about quality and accuracy.
- ☐ More information from the American Cancer Society here.
- ☐ Basic Information About Cervical Cancer from the Centers for Disease Controland Prevention.
- ☐ Understand your personal risk for cervical cancer including what the cervix is, how pre-cancer and cancer diagnoses are different, and how your age and whether you have had an HPV vaccine contribute to your personal risk.
  "There are many different types of cancer that can happen in humans - it basically means that cells somewhere in the body are growing out of control. "Pre-cancer" is when cells in a part of the body start to show changes that sometimes can *develop* into cancer. In the cervix (a small structure in the far back of the vagina, that connects to the uterus), it usually takes a few years for early "pre-cancer" to turn into actual cancer. There are 2 really good ways to check for pre-cancer that can allow you to actually *prevent* cervical cancer from ever happening: by sending a few cells from the cervix to the lab, and/or checking for the presence of a specific virus that (if it stays in the body for a long time) can cause cancer. With this information, your health care providers can recommend a good plan to keep you safe and healthy.
- ☐ If you are aged 21 to 65, your health care provider will talk to you about which screening tests are appropriate for your age and health history.
- ☐ If you are over 65, talk to your provider about whether you have had adequate prior screening and are not otherwise at high risk for cervical cancer. If you have had appropriate screening, you may not need to continue screening.
- ☐ You might find patient decision aids helpful. The following are available online:
    - Pap test: Should I have colposcopy if my Pap test shows minor cell changes? Healthwise
    - Making Choices: A decision aid for women with a mildly abnormal pap smear. University of Sydney
    - HPV: Should I Get the Vaccine? Healthwise

Providers

- ☐ Understand and follow the USPSTF cervical cancer screening recommendations by age and other risk factors
- ☐ Talk to the person about how often they should be screened for cervical cancer depending on their age and risk category and why screening remains important for both younger people who have had the HPV vaccine and for older people who may have monogamous sexual partner(s).
- ☐ Offer a trauma-informed pelvic exam (includes assessing and accommodating for past trauma)
    - See Responding to childhood trauma: the promise and practice of trauma informed care
    - See American Family Physician's Providing Trauma-Informed Care
- ☐ Allow the person to be in control of whether the exam occurs. Ask about the person's experience with pelvic exams. Language suggestions include:
    - *Have you ever had a pelvic exam before? What has that experience been like for you in the past?*
    - *What parts of the exam can I adjust to make this experience as comfortable for you as possible? For instance, would you prefer to sit up a little so you can see me better, or put your feet flat on the exam table instead of in the holders, or would you like to place the speculum yourself?*
    - *You are in charge here: we can pause whenever you want, or you can change your mind and we'll stop at any point.*
- ☐ Understand and utilize the cancer screening registry available in your practice including how results or information is communicated to the person receiving care.
    - Ensure that results, normal or abnormal, are communicated to the person in a way that they understand and that are clearly actionable.
    - Ensure that the patient knows what kind of communications to expect: who will be contacting them, and how, and how to contact the provider directly with any questions or concerns.
- ☐ Ensure that your referral colposcopists follow ASCCP Colposcopy Standards

Health Plans

- ☐ Collect data on cervical cancer screening by patient race and ethnicity.
- ☐ Consider evaluating cancer screening metrics annually to align with changing evidence.
- ☐ Waive member cost sharing (note this does not apply to monitoring after a diagnosis has been made or to treatment) for:
    - All steps of cervical cancer screening including colposcopy and biopsy after an abnormal pap.
    - All steps of colorectal cancer screening including colonoscopy to evaluate an abnormal colorectal cancer screening test (i.e., sigmoidoscopy, stool, blood, imaging screening test), whether or not polypectomy or biopsy is performed; and screening colonoscopy if a polyp is identified and removed in the procedure.
    - All steps of breast cancer screening to evaluate an abnormal screening mammogram including diagnostic mammography and/or ultrasound, whether or not a breast biopsy is performed.

Health Care Purchasers (e.g., employer purchasers)

- ☐ When designing employee benefits:
    - If using value-based contracts (e.g., Centers of Excellence, Accountable Care Organizations), consider evaluating metrics annually to ensure alignment with national guidelines (e.g., cervical cancer screening through HPV testing).
    - Specify the removal of member cost sharing (note this does not apply to monitoring after a diagnosis has been made or to treatment) for:
        - All steps of cervical cancer screening including colposcopy and biopsy after an abnormal pap.
        - All steps of colorectal cancer screening including colonoscopy to evaluate an abnormal colorectal cancer screening test (i.e., sigmoidoscopy, stool, blood, imaging screening test), whether or not polypectomy or biopsy is performed; and screening colonoscopy if a polyp is identified and removed in the procedure.
        - All steps of breast cancer screening to evaluate an abnormal screening mammogram including diagnostic mammography and/or ultrasound, whether or not a breast biopsy is performed.
- ☐ Consider employee-focused education about relevant cancer screenings aligned with the recommendations from national quality organizations for cancer screening at various sites (e.g., cervical, colorectal, prostate, breast, lung) including information on the difference between pre-cancer and cancer.

Washington State Health Care Authority

- ☐ Require Medicaid Managed Care Plans to report on percentage of eligible adults screened for cervical cancer and by race and ethnicity
- ☐ Certify patient decision aids for cancer screening including for cervical cancer

Washington State Department of Health

- ☐ Develop a statewide cancer screening registry for people aged 21-75 or who are otherwise appropriate for receiving breast, cervical, and/or colorectal cancer screening including:
    - Patient identifier
    - Age
    - Sex at birth and current gender (if available)
    - Race
    - Ethnicity
    - Insurance status
    - Modality selected for screening (if relevant)
    - Screening date
    - Screening result
    - Follow-up steps
- ☐ Use data from the registry to compare the rate of cancer screening, stage at diagnosis, and mortality compared across health plans and delivery systems

Washington State Legislature

- ☐ Mandate health plan reporting on available race and ethnicity data for all quality performance metrics.
- ☐ Require HPV vaccination for school enrollment as for other vaccines.
- ☐ Consider regulating patient self-purchased STI testing.
- ☐ Develop and pass legislation to remove barriers for the **Last Mile** of screening (note this does not apply to monitoring after a diagnosis has been made or to treatment) for colorectal, breast, and cervical cancers including requiring health plans to remove member cost share for:
    - All steps of cervical cancer screening including colposcopy and biopsy after an abnormal pap.
    - All steps of colorectal cancer screening including colonoscopy to evaluate an abnormal colorectal cancer screening test (i.e., sigmoidoscopy, stool, blood, imaging screening test), whether or not polypectomy or biopsy is performed; and screening colonoscopy if a polyp is identified and removed in the procedure.
    - All steps of breast cancer screening to evaluate an abnormal screening mammogram including diagnostic mammography and/or ultrasound, whether or not a breast biopsy is performed.

Pathway and Barriers

This pathway is informed by current evidence and this is rapidly changing. The likelihood of cervical cancer incidence and mortality increases when the HPV vaccine is not given, when screening does not occur or does not occur at appropriate intervals, when screening is inaccurate or fails, when follow-up for an abnormal result does not occur, or when treatment fails.[13] Likelihood decreases with provision of the HPV vaccine prior to HPV exposure (prior to initiation of sexual activities), when cervical cancer screening occur at regular intervals and is accurate, when abnormal results are communicated and acted upon, when colposcopy occurs and is effective, and when treatment and/or management of cervical cancer is successful. **Figure 1**, below, outlines this pathway and **table 2**, below, outlines patient, provider, and system-level barriers.

Figure 1: Cervical Cancer Pathway

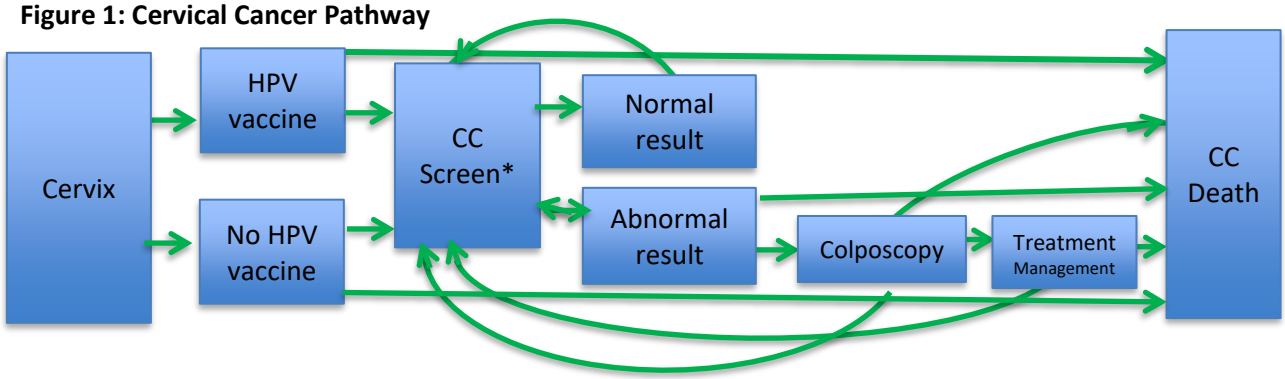

Table 1: Patient, Provider, and System-Level Barriers

Level	HPV Vaccine	CC Screen	Follow-Up	Colposcopy
Patient	• Parental objection or hesitancy • Stigma around sex and sexually transmitted infections (STI)	• No provider • Cost of visit • Time, transportation, childcare etc. • Knowledge of when to come in • Fear of cancer • Fear of pain • Fear/distress and/or discomfort with pelvic exam	• Fear of cancer • Unclear next steps • Unstable contact information	• Missed appointments (fear, avoidance, time, transportation, childcare etc.) • Limited referral colposcopists • Cost of colposcopy or treatment
Provider	• Does not bring up • Stigma around sex and STIs • Incorrect assumptions about risk	• Unknown patient population • Insensitive or painful pelvic exam or procedure	• Incorrect clinical plan (failure to follow ASCCP) • Failure of tracking/care coordination system • Plan not well communicated to patient	• Insensitive or painful pelvic exam or procedure
System	• Tracking HPV vaccinations	• Tracking of population who is up to date on CC screen	• Unreliable interface between lab and providers, provider and care coordinators, provider, and patients • Unstable system for care coordination	• Limited or no local colposcopists accepting under/uninsured patient referrals

Evidence Review

HPV Vaccination

Uptake of the HPV vaccine remains low among adolescents despite being very effective in preventing the vast majority of types of HPV that cause genital warts and cervical cancer and having few side effects. The CDC recommends the HPV vaccine to those who are between the ages of 11 and 12 allowing the vaccine to be first given at age nine with the second dose being given six to 12 months later.[14] The vaccine is recommended for everyone up to age 26 years. Those who are 27 to 45 may also be good candidates for protection from HPV through vaccination depending on individual sexual history. However, as HPV is primarily transmitted through sexual behaviors, stigma around the vaccine on the part of both patients, providers, and parents remains high.[15] Additionally, vaccine uptake in general suffers from persistent, non-scientific concerns about safety that have been consistently disproven through high investments in vaccine surveillance and a large body of literature proving safety.[16,17]

Vaccine hesitancy is complex with multiple personal, cultural, and social factors. Literature shows key myths around the HPV vaccine including: that the vaccine is not effective, that Pap tests are enough to prevent cancer and the vaccine is unnecessary, not being safe or having other side effects, not being needed as one's immune system clears the virus, and that age 11-12 is too young.[18] Strategies to address and mitigate vaccine hesitancy should be targeted to individuals and mainly consist of listening, addressing specific points, and education through motivational interviewing techniques.

In addition to patient-specific factors, some providers may be unlikely or resistant to bring up the vaccine with eligible patients or parents. Providers have been shown to be less likely to bring up the HPV vaccine with patients and patient-parent dyads if they "*were uncomfortable discussing sex, perceived parents as hesitant, or believed patients to be low risk*."[19] Pediatric patients are less likely to receive recommendations if they are younger, male, and/or non-white.[19] System-level interventions that clearly show which patients should be offered the vaccine and ability to track and highlight disparities such as by race are needed to mitigate provider-level barriers.

Cervical Cancer Screen and Follow-Up

The United States Preventive Services Task force conducted a review of cervical cancer screening in 2018 including a complete evidence review available here. This guideline does not replicate this evidence review and recommends those interested review the USPSTF literature. Specific recommendations by age are as follows with recommendations for earlier, later, or more frequent screening depending on patient-factors (e.g., HIV infection, a compromised immune system, in utero exposure to diethylstilbestrol, previous treatment of a high-grade precancerous lesion or cervical cancer):[20]

- Under age 21 – No screening
- Ages 21-29 – Screen for cervical cancer every 3 years with cytology alone

- Ages 30-65 – Screen for cervical cancer every 3 years with cytology alone, every 5 years with hrHPV testing alone, or every 5 years with co-testing
- Over age 65 – No screening

Of populations at risk for cervical cancer mortality, those who have never come in for a cervical cancer screen and those who have had an abnormal screen but not follow-up are most at risk for dying of cervical cancer. The pelvic exam is often a contributing factor in lower cervical cancer screening. The pelvic exam can provoke anxiety, distress, fear of cancer, concerns about cleanliness and many other negative emotions for many of those with cervical tissue.[21] Many prefer female clinicians to perform pelvic exams.[22] Barriers to being up-to-date on cervical cancer screening (including following-up on abnormal results that indicate need for colposcopy or the "last mile of screening") tend to be associated with particular population groups and broadly include: [23,24,25]

- Fear of finding cancer;
- Not having clinician recommend screening and therefore not being aware that screening is needed;
- Not trusting clinic staff/providers to respect gender identity/sexual orientation;
- Disabilities which make either comprehension and/or positioning difficult, uncomfortable/painful or embarrassing;
- Feeling uncomfortable with a pelvic exam due to factors such as having male primary care provider, not expecting to have a pelvic exam that day and not being mentally or physically prepared, fear of embarrassment, fear of being judged by the provider, and other reasons;
- Not perceiving an individual risk of cervical cancer;
- The cost of the visit/test;
- Insurance status;
- Low literacy and/or low health literacy in particular; and
- Speaking a language other than that of the provider.

Targeted studies of lower resourced populations, such as those experiencing homelessness, similarly support the above as barriers and additionally show (1) highly prevalent lack of follow-up with results from a screen; (2) individuals not knowing how frequently they should be tested, and (3) individuals not understanding causes of cervical cancer.[26]

Patient-specific factors can be addressed through system- and provider-level interventions. Education, offering a self-swab for HPV (if validated and available), invitation letters with or without a follow-up phone contact, making an appointment for the person (for the initial cervical cancer screen and/or for any follow-up appointments), and sending reminders has been shown to have a significant impact on cervical cancer screening rates.[2728] For those undergoing colposcopy, receiving a leaflet prior to the procedure is associated with lower psychosexual dysfunction but not anxiety levels, while playing music during the procedure did result in lower

anxiety.[29]

Minoritized individuals with cervical tissue may experience additional social and/or cultural barriers to pelvic exams.[26,27] Foreign-born people with cervical tissue are more likely to die than those born in the United States of cervical cancer, indicating a need for more culturally humble patient-provider interactions and patient-system interactions and better access to the health care system generally through comprehensive insurance coverage.[28]

Trauma-Informed Care

For a more complete description and history of trauma-informed care see the 2020 Sexual and Reproductive Health Recommendations.

Abuse, violence, and other forms of trauma are widespread. The landmark 1998 study on adverse childhood experiences (ACEs) shows the high prevalence of ACEs across populations and links these experiences to a lifetime risk of poor health outcomes such as alcoholism, depression, heart disease, cancer, and obesity.[29] While children are highly sensitive to trauma, as seen through these later health impacts, trauma is also impactful for adults. Trauma-informed care is built on understanding a person's individual life experiences (e.g., asking what has happened to you) and the need for a clinical encounter to empower rather than re-traumatize a person.[30] The term was developed to integrate an understanding and strategies to mitigate trauma into delivery of behavioral health care and has since been adapted to physical health services and to delivery of integrated physical and behavioral health services.[31]

Reproductive and sexual health questions and services can feel especially invasive for a person who has experienced trauma. Establishing or reaffirming a person-provider relationship rests on developing interpersonal skills including being non-judgmental, providing reassurance, reaffirming that the person can and should ask questions, and talking about the person's goals of care or treatment.[62] This workgroup does not endorse a single guideline for trauma-informed care as this care philosophy cannot be operationalized through a checklist, although checklists can serve as a starting point.

Many organizations have developed toolkits to support trauma-informed care. The Centers for Disease Control and Prevention lists six principles to a trauma-informed approach: [32]

- **Safety**: Staff and people receiving care feel physically and psychologically safe
- **Trustworthiness and transparency**
- **Peer support**: Those with lived experience of trauma as allies in recovery or using stories
- **Collaboration and mutuality**: Decision making is shared, power differentials among staff or between providers and people receiving care is reduced
- **Choice**: Empowerment and self-advocacy
- **Cultural, historical and gender issues**: Recognizing and addressing historical trauma, removing provider bias, care that is responsive to cultural background

Moving to a trauma-informed approach in a clinical setting starts with being trauma-aware, as the Substance Abuse and Mental Health Services Association (SAMHSA) does through their four Rs:[33]

- **Realization** that anyone may have experienced trauma and their behavior can be understood as a coping strategy to address past trauma
- **Recognize** the signs of trauma
- **Respond** to the above through using a universal precautions approach (e.g., all people are approached as though they have experienced trauma)
- **Resist Re-traumatization** by seeking to not create toxic or stressful environments

Measurement

There is an evolution in evidence-based guidelines based on increased HPV vaccination rates. The current metric, available here, from the National Committee for Quality Assurance (NCAQ) does not account for the change in practice based on these changing guidelines. This metric also does not account for follow-up on abnormal screens and therefore cannot speak to the entire cervical cancer screening pathway (i.e., the last mile). The workgroup recommends adopting new guideline-based metrics as they are standardized.

The metric "Assesses women who were screened for cervical cancer using any of the following criteria:

- Women 21–64 years of age who had cervical cytology performed within the last 3 years.
- Women 30–64 years of age who had cervical high-risk human papillomavirus (hrHPV) testing performed within the last 5 years.
- Women 30–64 years of age who had cervical cytology/high-risk human papillomavirus (hrHPV) cotesting within the last 5 years.

Appendix A: Bree Collaborative Members

Member	Title	Organization
Susie Dade, MS	Patient Advocate	
David Dugdale, MD, MS	Medical Director, Value Based Care	University of Washington Medicine
Gary Franklin, MD, MPH	Medical Director	Washington State Department of Labor and Industries
Stuart Freed, MD	Chief Medical Officer	Confluence Health
Mark Haugen, MD	Family Medicine	Walla Walla Clinic
Darcy Jaffe, MN, ARNP, NE-BC, FACHE	Senior Vice President, Safety & Quality	Washington State Hospital Association
Karen Johnson, PhD	Director, Performance Improvement & Innovation	Washington Health Alliance
Norifumi Kamo, MD, MPP	Internal Medicine	Virginia Mason Franciscan Health
Dan Kent, MD	Chief Medical Officer, Community Plan	UnitedHealthcare
Wm. Richard Ludwig, MD	Chief Medical Officer, Accountable Care Organization	Providence Health and Services
Greg Marchand	Director, Benefits & Policy and Strategy	The Boeing Company
Kimberly Moore, MD	Associate Chief Medical Officer	Franciscan Health System
Carl Olden, MD	Family Physician	Pacific Crest Family Medicine, Yakima
Drew Oliveira, MD	Executive Medical Director	Regence BlueShield
Mary Kay O'Neill, MD, MBA	Partner	Mercer
Kevin Pieper, MD	Chief Medical Officer	Kadlac Medical Center
Susanne Quistgaard, MD	Medical Director, Provider Strategies	Premera Blue Cross
John Robinson, MD, SM	Chief Medical Officer	First Choice Health
Jeanne Rupert, DO, PhD	Provider	The Everett Clinic
Angela Sparks, MD	Medical Director Clinical Knowledge Development & Support	Kaiser Permanente Washington
Hugh Straley, MD (Chair)	Retired	Medical Director, Group Health Cooperative; President, Group Health Physicians
Shawn West, MD	Medical Director	Embright, LLC
Laura Kate Zaichkin, MPH	Director of Health Plan Performance and Strategy	SEIU 775 Benefits Group
Judy Zerzan, MD, MPH	Chief Medical Officer	Washington State Health Care Authority

Appendix B: Cervical Cancer Screening Charter and Roster

Problem Statement

While deaths from cervical cancer have decreased significantly since the introduction of the Pap test in the middle of the last century, percent of people with up to date screening remain at about 50-66% depending on age group.[1,2] The US Preventive Services Task Force recommends that those with cervical tissue be screened for cervical cancer every three or five years (depending on the modality) between the ages of 21 and 65.[3] Appropriate, up to date, screening rates also vary based on race, region, and income resulting in disparities in incidence and mortality.[4]

Aim

To increase the appropriate cervical cancer screening process in Washington State to decrease incidence of and mortality from cervical cancer.

Purpose

To propose evidence-based recommendations to the full Bree Collaborative on:

- Mechanisms to increase appropriate use of screening including work-up after a positive screen (e.g., last mile of screening)
- Appropriate education and engagement of consumers based on individual risk factors and experience (e.g., those who were assigned female at birth and have transitioned to gender queer or male, age, HPV vaccination status, past trauma especially of a sexual nature)
- Appropriate cervical cancer screening modalities
- Addressing disparities in screening, follow-up, and outcomes (e.g., geographic, by race, by payer)

Duties & Functions

The workgroup will:

- Research evidence-based and expert-opinion informed guidelines and best practices (emerging and established).
- Consult relevant professional associations and other stakeholder organizations and subject matter experts for feedback, as appropriate.
- Meet for approximately ten-twelve months, as needed.
- Provide updates at Bree Collaborative meetings.
- Post draft report(s) on the Bree Collaborative website for public comment prior to sending report to the Bree Collaborative for approval and adoption.
- Present findings and recommendations in a report.

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[1] https://www.cdc.gov/cancer/cervical/statistics/index.htm

[2] MacLaughlin K, Jacobson R, Breitkopf C, et al. Trends over time in Pap and Pap—HPV cotesting for cervical cancer screening [published online January 7, 2019]. J Womens Health.

[3] https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/cervical-cancer-screening

[4] Pratte MA, Griffin A, Ogazi C, et al. Racial/Ethnic Disparities in Cervical Cancer Screening Services Among Contractors of the Connecticut Breast and Cervical Cancer Early Detection Program. Health Equity. 2018;2(1):30-36. Published 2018 Apr 1.

- Recommend data-driven and practical implementation strategies including metrics or a process for measurement.
- Create and oversee subsequent subgroups to help carry out the work, as needed.
- Revise this charter as necessary based on scope of work.

Structure

The workgroup will consist of individuals confirmed by Bree Collaborative members or appointed by the chair of the Bree Collaborative or the workgroup chair. The chair of the workgroup will be appointed by the chair of the Bree Collaborative. The Bree Collaborative director and program assistant will staff and provide management and support services for the workgroup.

Less than the full workgroup may convene to: gather and discuss information; conduct research; analyze relevant issues and facts; or draft recommendations for the deliberation of the full workgroup. A quorum shall be a simple majority and shall be required to accept and approve recommendations to send to the Bree Collaborative.

Meetings

The workgroup will hold meetings as necessary. The director will conduct meetings along with the chair, arrange for the recording of each meeting, and distribute meeting agendas and other materials prior to each meeting. Additional workgroup members may be added at the discretion of the workgroup chair.

Name	Title	Organization
Chair: Laura Kate Zaichkin, MPH	Director of Health Plan Performance and Strategy	SEIU 775 Benefits Group
Virginia Arnold, DNP ARNP	Provider	Neighborcare Health at Pike Place Market
Diana Buist, PhD, MPH	Senior Investigator and Director of Research and Strategic Partnerships	Kaiser Permanente Washington Health Research Institute
LuAnn Chen, MD, MHA, FAAFP	Senior Medical Director	Community Health Plan of Washington
Colleen Haller, MPH	Manager, Care Improvement & Clinical Integration	Community Health Plan of Washington
Beth Kruse, CNM	Midwife	Public Health Seattle King County
Jordann Loehr, MD	Obstetrics and Gynecology	Toppenish Medical-Dental Clinic
Constance Mao, MD	Associate Professor Emeritus, Obstetrics and Gynecology	University of Washington School of Medicine
Sophia Shaddy, MD, Sandra White, MD	Pathologist	CellNetix Pathology

Appendix C: Guideline and Systematic Review Search Results

	Year	*Title*	*Summary or Findings*
AHRQ: Research Findings and Reports	2019	Achieving Health Equity in Preventive Services	No eligible studies evaluated effects of provider-specific barriers; 18 studies of population barriers provided low or insufficient evidence regarding insurance coverage, access, age, rural location, low income, language, low health literacy, country of origin, and attitudes. In 12 studies of clinician interventions, screening was higher for colorectal cancer with patient navigation, risk assessment and counseling, educational materials, and decision aids; breast and cervical cancer with reminders involving lay health workers; and cervical cancer with outreach and health education. Clinician-delivered interventions were effective for smoking cessation and weight loss. In 11 studies of health information technologies, automated reminders and electronic decision aids increased colorectal cancer screening, and web- or telephone-based self-monitoring improved weight loss, but other technologies were not effective. In 88 studies of health system interventions, evidence was strongest for patient navigation to increase screening for colorectal (risk ratio [RR] 1.64; 95% confidence interval [CI] 1.42 to 1.92; 22 trials), breast (RR 1.50; 95% CI 1.22 to 1.91; 10 trials), and cervical cancer (RR 1.11; 95% CI 1.05 to 1.19). Screening was also higher for colorectal cancer with telephone calls, prompts, other outreach methods, screening checklists, provider training, and community engagement; breast cancer with lay health workers, patient education, screening checklists, and community engagement; cervical cancer with telephone calls, prompts, and community engagement; and lung cancer with patient navigation. Trials of smoking cessation and obesity education and counseling had mixed results. In populations adversely affected by disparities, evidence is strongest for patient navigation to increase colorectal, breast, and cervical cancer screening; telephone calls and prompts to increase colorectal cancer screening; and reminders including lay health workers encouraging breast cancer screening. Evidence is low or insufficient to determine effects of barriers or effectiveness of other interventions because of lack of studies and methodological limitations of existing studies.
	2016	Improving Cultural Competence to Reduce Health Disparities	None of the included studies measured the effect of cultural competence interventions on health care disparities. Most of the training interventions measured changes in professional attitudes toward the population of interest but did not measure the downstream effect of changing provider beliefs on the care delivered to patients. Interventions that altered existing protocols, empowered patients to interact with the formal health care system or prompted provider behavior at the point of care were more likely to measure patient-centered outcomes. The medium or high risk of bias of the included studies, the heterogeneity of populations, and the lack of measurement consensus prohibited pooling estimates or commenting about efficacy in a meaningful or responsible way. The term "cultural competence" is not well defined for the LGBT and disability populations and is often conflated with patient-centered or individualized care. There are many gaps in the literature; many large subpopulations are not represented.
	2018	US Preventive Services Task Force Cervical Cancer	In most trials and in a large U.S.-based observational study, women younger than age 30 to 35 years had higher rates of hrHPV positivity and CIN3+, accompanied by higher rates of colposcopy. No completed studies compared different screening intervals. All of the RCTs on hrHPV screening were conducted in countries with organized screening programs, which are not available to most women in the United States. Rigorous comparative research is needed in

			U.S. screening settings to examine longer screening intervals, long-term outcomes, and to identify effective strategies for outreach and screening of poorly screened and unscreened women. The higher sensitivity of hrHPV testing in a single round may have potential to improve outcomes in this high-risk population.
Cochrane Collection	2011	Interventions targeted at women to encourage the uptake of cervical screening	Thirty‐eight trials met our inclusion criteria. These trials assessed the effectiveness of invitational and educational interventions, counselling, risk factor assessment and procedural interventions. Heterogeneity between trials limited statistical pooling of data. Overall, however, invitations appear to be effective methods of increasing uptake. In addition, there is limited evidence to support the use of educational materials. Secondary outcomes including cost data were incompletely documented so evidence was limited. Most trials were at moderate risk of bias. Informed uptake of cervical screening was not reported in any trials.
	2016	Interventions to encourage uptake of cancer screening for people with severe mental illness	A comprehensive search showed that currently there is no RCT evidence for any method of encouraging cancer screening uptake in people with SMI. No specific approach can therefore be recommended. High-quality, large-scale RCTs are needed urgently to help address the disparity between people with SMI and others in cancer screening uptake.
	2017	Cytology versus HPV testing for cervical cancer screening in the general population	Whilst HPV tests are less likely to miss cases of CIN 2+ and CIN 3+, these tests do lead to more unnecessary referrals. However, a negative HPV test is more reassuring than a negative cytological test, as the cytological test has a greater chance of being falsely negative, which could lead to delays in receiving the appropriate treatment. Evidence from prospective longitudinal studies is needed to establish the relative clinical implications of these tests.
	2013	Personalised risk communication for informed decision making about taking screening tests	There is strong evidence from three trials that personalised risk estimates incorporated within communication interventions for screening programmes enhance informed choices. However the evidence for increasing the uptake of such screening tests with similar interventions is weak, and it is not clear if this increase is associated with informed choices. Studies included a diverse range of screening programmes. Therefore, data from this review do not allow us to draw conclusions about the best interventions to deliver personalised risk communication for enhancing informed decisions. The results are dominated by findings from the topic area of mammography and colorectal cancer. Caution is therefore required in generalising from these results, and particularly for clinical topics other than mammography and colorectal cancer screening.
	2011	Interventions for reducing	Anxiety appears to be reduced by playing music during colposcopy. Although information leaflets did not reduce anxiety levels, they did increase knowledge levels and are therefore useful in obtaining clinical consent to the

		anxiety in women undergoing colposcopy	colposcopic procedure. Leaflets also contributed to improved patient quality of life by reducing psychosexual dysfunction.
	2017	Decision aids for people facing health treatment or screening decisions	Compared to usual care across a wide variety of decision contexts, people exposed to decision aids feel more knowledgeable, better informed, and clearer about their values, and they probably have a more active role in decision making and more accurate risk perceptions. There is growing evidence that decision aids may improve values-congruent choices. There are no adverse effects on health outcomes or satisfaction. New for this updated is evidence indicating improved knowledge and accurate risk perceptions when decision aids are used either within or in preparation for the consultation. Further research is needed on the effects on adherence with the chosen option, cost-effectiveness, and use with lower literacy populations.
Veterans Administration Evidence-based Synthesis Program	2014	The Effects of Shared Decision Making on Cancer Screening	The ideal SDM intervention would enhance Decision Quality (i.e., increase knowledge and values clarity) and Impact (i.e., increase satisfaction, reduce decision conflict, and have minimal impact on service utilization). The desired impact on Decision Action depends on the screening decision. For decisions about how to screen (such as colorectal cancer screening), the ideal SDM intervention would exert the desired effects on Decision Quality and Impact without reducing measures of Decision Action such as screening intention and behavior. For decisions about whether to screen (such as breast, cervical, and prostate cancer in some age groups and risk categories), the goal is to facilitate personalized decision making based on values and preferences. Hence, there are no desired effects on Decision Action per se in this context.
	2013	Screening Pelvic Examinations in Asymptomatic Average Risk Adult Women	This systematic review was undertaken to evaluate the benefits and harms of the routine screening pelvic examination in asymptomatic, average risk, non-pregnant, adult women. For cervical cancer and sexually transmitted infection (i.e., Chlamydia and gonorrhea) screening and for initiation of hormonal contraception we summarize the results of recent reviews and guidelines from major US health organizations. For all other indications, we performed and report results from a comprehensive search of the medical literature.
	2019	Evidence Brief: Accuracy of Self-report for Cervical and Breast Cancer Screening	Unscreened women tend to over-report having had a mammogram or pap test, but screened more accurately report their screening. 48% to 61% of unscreened patients according to their medical record accurately reported no screening (39% to 52% over-reported screening). 96% of screened patients according to their medical record accurately reported their screening. We have moderate confidence in these findings, as there are a large number of mostly fair-quality studies directly assessing the accuracy of self-report compared to medical records. Future research should focus on assessing the impact of accepting self-report on clinical and system-level outcomes.

Health Technology Assessment Program	N/A
Centers for Disease Control and Prevention	Cervical Cancer www.cdc.gov/cancer/cervical/index.htm
Institute for Clinical and Economic Review	N/A

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