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#### **Cervical Cancer Screening Workgroup** Updated: April 20, 2021

#### Background

A person's overall risk of being diagnosed with cancer depends on multiple factors including genetics, population-level exposures (e.g., asbestos), individual risk exposures (e.g., excessive alcohol use), and their exposures to and engagement with cancer prevention and cancer screening. 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%).<sup>1</sup> A person with cervical tissue has a lifetime risk for developing cervical cancer of 63 out of 1,000 and mortality rate of 22 out of 1,000.<sup>1</sup>

The mortality rate from cervical cancer has decreased significantly over the last 40 years since the introduction of the Papanicolaou (pap) test to screen for pre-cancer and cancerous cells.<sup>2,3</sup> Introduction of the human papillomavirus (HPV) vaccine has further decreased cervical cancer incidence as the majority of cervical cancer is caused by the virus.<sup>4</sup> However, cervical cancer remains the second most common cancer type for those with cervical tissue who are between the ages of 15 and 44.<sup>5</sup> 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).<sup>6</sup>

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 protects 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.<sup>7</sup> People up to age 45 are encouraged to speak to their provider about the benefits of vaccination.<sup>14</sup> However, only about half of adolescents are up to date on vaccination indicating an opportunity to decrease cervical cancer incidence through HPV vaccination initiatives.<sup>8</sup>

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 with individual factors indicating need for more frequent screening.<sup>9</sup> 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.<sup>10</sup> 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.<sup>11,12</sup>

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 and mortality and morbidity from cervical cancer. Appropriate prevention through HPV vaccination, and appropriate screening and structured follow-up to any abnormal results are mechanisms to achieve this goal. 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	<ul> <li>Raise the importance of the HPV vaccine during adolescent visits</li> <li>Address myths around the HPV vaccine through person-centered education</li> <li>Frame the HPV vaccine as cancer prevention not STI prevention</li> <li>Require HPV vaccine for public school enrollment</li> <li>Track HPV vaccination at a site level by age, race and ethnicity</li> </ul>
Cervical Cancer Screen	<ul> <li>Frame as preventative screening for pre-cancerous conditions</li> <li>Track and clearly communicate the process and frequency for cervical cancer screen (e.g., using a 20-25-30 schedule) as a part of routine care</li> <li>Practice trauma-informed pelvic exams (i.e., assuming the person has experienced sexual trauma)</li> <li>For those with cervical tissue follow recent <u>USPSTF recommendations</u>. Stratify risk and type of test based on age (e.g., under 21, 21 to 29 years, 30-65 years, over 65 years) and whether the person has had a hysterectomy</li> <li>Discuss the type of screening test being conducted with the patient</li> <li>If available, offer self-swab</li> <li>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 race, ethnicity, and insurance status.</li> <li>Include measurement of cervical cancer screening for all appropriate populations including for Medicaid</li> <li>Prioritize outreach to populations with historical or demonstrated lower screening rates including minoritized individuals, those covered by Medicaid, the underinsured, and the uninsured</li> <li>Report screening completion by race and ethnicity by site and health plan</li> </ul>
Abnormal Result Follow-Up	<ul> <li>Designate a process owner for the site-level cancer screening registry follow-up and outreach (not pathology)</li> <li>Ensure that language is understandable and actionable for patients</li> </ul>
Colposcopy	<ul> <li>Practice trauma-informed gynecology (i.e., assuming the person has experienced sexual trauma)</li> <li>List of colposcopists for warm handoff</li> <li>Waive member cost share for follow-up evaluation on abnormal screening</li> </ul>

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#### **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 personcentered 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-cancer and cancerous cells.
    - How and when to expect results from the cervical cancer screen and how results are 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:
  - o Age
  - HPV vaccination status
  - Sex at birth and gender (if available)
  - o Race
  - o Ethnicity
  - o Insurance status
  - o Age of last cervical cancer screen
  - Age of next cervical cancer screen. Exams at 25, 30, 35, etc are recommended due to ease of patient communication and recall
  - o Screening results
  - 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 an 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 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 cytology
- □ Prioritize outreach to populations for HPV vaccine and for cervical cancer screen with historical or demonstrated higher mortality and/or incidence rates including:
  - o Hispanic
  - $\circ$  Medicaid
  - $\circ$  Underinsured
  - o Uninsured

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#### These recommendations not intended to be used in lieu of medical advice.

#### **Patients and Family Members**

- □ The majority of cervical cancer is caused by the human papillomavirus. This virus also can cause genital warts. The HPV vaccine protects against more than 90% of HPV types.
  - The HPV vaccine is recommended for everyone under 26 and can be given to children starting at age nine.
  - If you are between 26-45 you should talk to your provider or care team about whether you should be vaccinated as the vaccine only prevents HPV if someone has not already been exposed to HPV.
- □ Understand your personal risk for cervical cancer including what the cervix is and how pre-cancer and cancer diagnoses are different. "Cervical cancer starts in the cells lining the cervix -- the lower part of the uterus (womb). The cervix connects the body of the uterus (the upper part where a fetus grows) to the vagina (birth canal). Cancer starts when cells in the body begin to grow out of control."
  - More information from the American Cancer Society here
  - <u>Basic Information About Cervical Cancer</u> from the Centers for Disease Control and Prevention
- □ If you are aged 21 to 65, you should be screened for cervical cancer using a test that is appropriate for your age.
- □ 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
  - <u>HPV: Should I Get the Vaccine?</u> Healthwise

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#### Providers

- Understand and follow the USPSTF cervical cancer screening recommendations by age and risk category
- □ Talk to the person about how often they should be screened for cervical cancer depending on their age and why screening remains important for 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 (assuming trauma has occurred).
  - See <u>Responding to childhood trauma: the promise and practice of trauma</u> informed care
  - See American Family Physician's Providing Trauma-Informed Care
- □ Allow the person to be in control of whether the exam occurs. Language suggestions include:
  - Have you had any painful pelvic exams in the past?
  - You can change your mind at any point. You can stop or pause 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.
- □ Follow <u>ASCCP Colposcopy Standards</u>

#### **Health Plans**

- □ Collect data on cervical cancer screening by patient race and ethnicity
- □ Waive member cost share for follow-up to an abnormal screen

#### **Employers**

- When designing employee benefits through value-based contracts (e.g., Centers of Excellence, Accountable Care Organizations), consider cervical cancer screening as a reporting and/or gain-sharing metric.
- □ Consider employee-focused education about relevant cancer screenings aligned with the USPSTF recommendations for cancer screening (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

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#### 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:
  - o Patient identifier
  - o Age
  - Sex at birth and gender (if available)
  - o Race
  - o Ethnicity
  - o 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

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#### **Pathway and Barriers**

Likelihood 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.<sup>13</sup> Likelihood decreases with provision of the HPV vaccine prior to HPV exposure (prior to initiation of sexual activities), when cervical cancer screening occur at regulars 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.



Level	HPV Vaccine	CC Screen	Follow-Up	Colposcopy
Patient	<ul> <li>Cost &gt; 45 yrs</li> <li>Parental objection or hesitancy</li> <li>Stigma around sex and sexually transmitted infections (STI)</li> </ul>	<ul> <li>No provider</li> <li>Cost of visit</li> <li>Knowledge of when to come in</li> <li>Fear of cancer</li> <li>Fear of pain</li> <li>Fear/distress and/or discomfort with pelvic exam</li> </ul>	<ul> <li>Fear of cancer</li> <li>Unclear next steps</li> </ul>	<ul> <li>No-show from fear/discomfort/pain</li> <li>Cost of colposcopy or treatment</li> </ul>
Provider	<ul> <li>Does not bring up</li> <li>Stigma around sex and STIs</li> </ul>	<ul> <li>Unknown patient population</li> <li>Non-patient- centered pelvic exam</li> </ul>	<ul> <li>Result not understood by provider and ignored</li> <li>Next steps not provided</li> </ul>	<ul> <li>Non-patient-centered pelvic exam</li> </ul>
System	• Tracking up to date HPV vaccinations	<ul> <li>Tracking of population who is up to date on CC screen</li> </ul>	<ul> <li>Pathology to provider communication</li> <li>Clinic to patient communication</li> </ul>	<ul> <li>No colposcopist for referral</li> </ul>

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#### **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.<sup>14</sup> 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.<sup>15</sup> 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.<sup>16,17</sup>

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 smears 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.<sup>18</sup> 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."<sup>19</sup> Pediatric patients are less likely to receive recommendations if they are younger, male, and/or non-white.<sup>19</sup> 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 <u>here</u>. 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):<sup>20</sup>

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

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- 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 not ever come in for a cervical cancer screen and those who have had an abnormal screen but have 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.<sup>21</sup> Not surprisingly, many prefer female clinicians to perform pelvic exams.<sup>22</sup> 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: <sup>23,24,25</sup>

- Fear of finding cancer;
- Not having clinician recommend screening and therefore not being aware that screening is needed;
- Feeling uncomfortable with a pelvic exam due to factors such as having a male primary care provider, not expecting to have a pelvic exam that day and not being mentally prepared, being uncomfortable with one's personal hygiene and not wanting to be embarrassed, fear of being judged by the provider, and other reasons;
- Not perceiving having an individual risk of cervical cancer;
- The cost of the screen;
- 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 who are homeless, similarly support the above as barriers and additionally show (1) high prevalence of lack of follow-up with results from a screen; (2) individuals not knowing how frequently they should be tested, and (3) individuals not understanding the causes of cervical cancer.<sup>26</sup>

Patient-specific factors can be addressed through system- and provider-level interventions. Education, offering a self-swab for HPV, 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.<sup>2728</sup> 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.<sup>29</sup>

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Minoritized individuals with cervical tissue may experience additional social and/or cultural barriers to pelvic exams.<sup>30,31</sup> 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.<sup>32</sup>

#### Measurement

The National Committee for Quality Assurance (NCAQ) includes a metric measuring cervical cancer screening available <u>here</u>. This metric, however, does not account for follow-up on abnormal screens and therefore cannot speak to the entire cervical cancer screening pathway. 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.

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## 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 [Cl] 1.42 to 1.92; 22 trials), breast (RR 1.50; 95% Cl 1.22 to 1.91; 10 trials), and cervical cancer (RR 1.11; 95% Cl 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
	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	<u>US Preventive</u> <u>Services Task</u> <u>Force Cervical</u> <u>Cancer</u>	In most trials and in a large U.Sbased 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

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			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

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		<u>anxiety in</u> 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	<u>The Effects of</u> <u>Shared</u> <u>Decision</u> <u>Making on</u> <u>Cancer</u> <u>Screening</u>	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.
	<u>2013</u>	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.
	<u>2019</u>	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.

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

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<sup>4</sup> <u>https://www.cdc.gov/hpv/parents/about-hpv.html</u>

<sup>5</sup> <u>https://www.cdc.gov/cancer/cervical/statistics/index.htm</u>

<sup>6</sup> <u>https://gis.cdc.gov/Cancer/USCS/DataViz.html</u>

<sup>7</sup> https://www.cdc.gov/media/releases/2019/p0822-cancer-prevented-vaccine.html

<sup>8</sup> Hirth J. Disparities in HPV vaccination rates and HPV prevalence in the United States: a review of the literature. *Hum Vaccin Immunother*. 2019;15(1):146-155.

<sup>9</sup> Screening for Cervical Cancer: Recommendation Statement. Am Fam Physician. 2019 Feb 15;99(4):Online. PMID: 30763053.

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<sup>14</sup> <u>https://www.cdc.gov/hpv/parents/vaccine.html</u>

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