



<b>Body System:</b> Reproductive-Female		
<b>Session Topic:</b> Human Papillomavirus (HPV) and Cervical Cancer Prevention		
<b>Educational Format</b>		<b>Faculty Expertise Required</b>
<b>REQUIRED</b>	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
<b>OPTIONAL</b>	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
<b>Professional Practice Gap</b>	<b>Learning Objective(s) that will close the gap and meet the need</b>	<b>Outcome Being Measured</b>
<ul style="list-style-type: none"> <li>• HPV vaccination rates continue to be sub-optimal for the prevention of cervical cancer.</li> <li>• Knowledge and performance gaps in using available patient education resources to counsel patients about HPV vaccine safety and efficacy.</li> <li>• Physicians are often non-adherent to cervical cancer screening guidelines.</li> <li>• Poor physician-patient communication contributes to poor guideline adherence.</li> <li>• Practices frequently lack systems strategies (e.g. electronic medical record prompts, clinical information systems, decision support strategies) to foster cervical cancer screening guideline adherence.</li> <li>• Physician frequently are non-adherent to guidelines</li> </ul>	<ol style="list-style-type: none"> <li>1. Apply AAFP and CDC HPV recommended vaccination schedule during routine office visits.</li> <li>2. Advise patients on the safety and efficacy of the HPV vaccine, particularly in adolescents.</li> <li>3. Apply AAFP and USPSTF recommendations screening for cervical cancer during routine office visits.</li> <li>4. Use evidence-based recommendations to evaluate women who have abnormal Pap test results to determine appropriate treatment or referral.</li> </ol>	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



<p>for the follow-up of abnormal Pap and HPV tests.</p> <ul style="list-style-type: none"> <li>• CMS released a recent decision to cover HPV testing with pap smear to screen for cervical cancer</li> <li>• New interim HPV testing for cervical cancer screening interim guidelines</li> </ul>		
<b>ACGME Core Competencies Addressed</b> (select all that apply)		
<input checked="" type="checkbox"/> Medical Knowledge		Patient Care
<input checked="" type="checkbox"/> Interpersonal and Communication Skills		Practice-Based Learning and Improvement
<input type="checkbox"/> Professionalism		Systems-Based Practice
<b>Faculty Instructional Goals</b>		
<p>Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.</p> <ul style="list-style-type: none"> <li>• Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy &amp; reference citations</li> <li>• Facilitate learner engagement during the session</li> <li>• Address related practice barriers to foster optimal patient management</li> <li>• Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the <u>References</u> section below are a good place to start             <ul style="list-style-type: none"> <li>○ Visit <a href="http://www.aafp.org/journals">http://www.aafp.org/journals</a> for additional resources</li> <li>○ Visit <a href="http://familydoctor.org">http://familydoctor.org</a> for patient education and resources</li> </ul> </li> <li>• Provide strategies and resources to provide counseling and patient education resources for female patients to maximize HPV prevention, including HPV vaccination safety and efficacy, emphasizing physician-patient communication to optimize prevention.</li> <li>• Provide recommendations for instituting systems strategies that optimize cervical cancer screening guideline adherence; including but not limited to electronic medical record prompts, clinical information systems, decision support strategies.</li> <li>• Provide recommendations for ordering appropriate laboratory and diagnostic tests to determine a diagnosis of cervical cancer, as indicated by current clinical guidelines.</li> <li>• Provide recommendations for applying AAFP and CDC HPV recommended vaccination schedule during routine office visits.</li> <li>• Provide strategies and resources for advising patients on the safety and efficacy of the HPV vaccine, particularly in adolescents.</li> <li>• Provide an overview of current and new HPV vaccines, including safety, efficacy, and recommendations for use.</li> </ul>		



- Provide recommendations for applying AAFP and USPSTF recommendations screening for cervical cancer during routine office visits.
- Provide evidence-based recommendations for evaluating women who have abnormal Pap test results to determine appropriate treatment or referral, including strategies and resources for effective referral and follow-up management.

### Needs Assessment

In 2010 11,818 women in the United States were diagnosed with cervical cancer, and 3,939 women died from cervical cancer; with estimates of 12,360 new cases diagnosed in 2014, and approximately 4,020 deaths.<sup>1,2</sup>

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians report having adequate medical knowledge to perform cervical cancer screenings; however, there are indications that physicians do have knowledge gaps with regard to sexual health counseling, particularly with regard to cultural competencies in counseling parents about HPV vaccinations for the prevention of cervical cancer.<sup>3</sup> More specifically, CME outcomes data from 2012-2014 AAFP Assembly: *Human Papillomavirus, Pap Smears, and Cervical Cancer Screening* sessions suggest that physicians have knowledge and practice gaps with regard to non-adherence to cervical cancer screening clinical guideline recommendations; appropriate follow-up for abnormal Pap smear; being up to date on currently available vaccine options; having standardized vaccination procedure in place; and counseling adolescent patients and parents about HPV vaccination safety and efficacy, especially in terms of cancer prevention.<sup>4-6</sup>

While HPV vaccination plays a significant role in the prevention of cervical cancer, data from a 2013 CDC Morbidity and Mortality Weekly Report, finds that coverage with at least one dose of human papillomavirus, or HPV, vaccine in 2012 was 53.8% and increased by 0.8% percent compared with 2011.<sup>7,8</sup> Only 32 percent of adolescent girls had completed the entire three-dose HPV series. The CDC is urging physicians to make a strong recommendation for the HPV vaccine, which protects against precancerous cervical lesions and genital warts.<sup>9</sup> Family physicians should be aware of recent vaccines approved by the FDA that can prevent against the most common strains of the virus. For example, in 2014 the FDA approved Gardasil 9 for the prevention of certain diseases caused by nine types of Human Papillomavirus (HPV).<sup>10</sup>

There are numerous barriers to achieving optimal vaccination rates, including low patient health literacy and understanding of vaccine safety and efficacy; organizational barriers such as cost, insurance coverage; and operational barriers such as not stocking all recommended vaccinations and lack of standing orders.<sup>11-16</sup> The 2012 AAFP Immunization Survey indicates that the most commonly-cited patient barriers to immunization were safety concerns (58%), personal or religious beliefs (53%) and cost (51%); the most commonly-cited practice-level barriers to immunization were cost (51%), patient acceptance (33%), and supply of vaccine (30%); sixty-five percent of respondents indicated that at least one parent refused vaccinations for their child; fifty-seven percent of respondents indicated participation in the Vaccines for Children program, and among those who did not indicate participation, respondents indicated that it was too



burdensome (36%), difficulties associated with keeping vaccines separated (34%), difficulty of record-keeping (32%), and they don't care for children (28%).<sup>17</sup>

Family physicians should remain up to date on current AAFP immunization schedules, and receive continuing education aimed at helping physicians overcome common barriers to immunization management, including patient education on vaccination safety and efficacy.<sup>18-21</sup>

A review of the literature validates inadequate adherence to cervical cancer screening clinical practice guidelines.<sup>22-26</sup> Physician factors for guideline adherence appear to be related to congruence of guidelines between medical associations, physician perception of the recommending agency, belief in the effectiveness of new screening technologies, proportion of Medicaid patients, number of years since medical school graduation, and patient acceptance of new guideline recommendations.<sup>22,27,28</sup> Physician continuing medical education with recommendations by experts, improved physician-patient communication, patient education about Pap testing, implementation of systems strategies (e.g. electronic medical record prompts, clinical information systems, decision support strategies), and use of invitation letters for testing are shown to increase adherence to cervical cancer screening guidelines.<sup>29-35</sup>

A review of the literature reveals that even for the most common abnormal Pap and HPV test results, physicians often report recommendations that are incongruent with clinical practice guidelines, including adherence to guidelines for newer HPV DNA tests.<sup>36</sup> In a recent decision (July 2015), the Centers for Medicare & Medicaid Services (CMS) has determined that the evidence is sufficient to add Human Papillomavirus (HPV) testing once every five years as an additional preventive service benefit under the Medicare program for asymptomatic beneficiaries aged 30 to 65 years in conjunction with the Pap smear test. CMS will cover screening for cervical cancer with the appropriate U.S. Food and Drug Administration (FDA) approved/cleared laboratory tests, used consistent with FDA approved labeling and in compliance with the Clinical Laboratory Improvement Act (CLIA) regulations.<sup>37</sup>

Physicians may improve the prevention of HPV, and adherence to cervical cancer screening guidelines by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:<sup>38-41</sup>

- Your recommendation is the number one reason why someone will get the HPV vaccine. Research data show that patients who receive a recommendation from their physician are four to five times more likely to receive the HPV vaccine.
- Two vaccines (bivalent/HPV2 and quadrivalent/HPV4) are available to protect against HPV 16 and 18, the types that cause most cervical and other anogenital cancers, as well as some oropharyngeal cancers.
- The Advisory Committee on Immunization Practices (ACIP) recommends routine vaccination of girls age 11 or 12 years with the 3-dose series of either HPV vaccine.
- Limiting the number of lifetime sex partners, delaying the age of first intercourse, and consistently using condoms (which offer only partial protection) reduce the risk of HPV infection.



- Tobacco cessation should be recommended as a strategy for HPV risk reduction, because smoking is associated with increased risk of persistent HPV infection and the development of HPV-related malignancies.
- Vaccination with the quadrivalent HPV vaccine (Gardasil) is 98 percent effective in preventing the development of high-grade precancerous cervical lesions in noninfected women. Vaccination after natural infection is less protective.
- Vaccination with bivalent HPV vaccine (Cervarix) is 98 percent effective in preventing the development of precancerous cervical lesions in noninfected women. Vaccination after natural infection is less protective.
- Recommends screening for cervical cancer in women age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years. (Grade A)
- Recommends against screening for cervical cancer in women younger than age 21 years. (Grade D)
- Recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer. See the Clinical Considerations for discussion of adequacy of prior screening and risk factors. (Grade D)
- Recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and who do not have a history of a high-grade precancerous lesion (cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer. (Grade D)
- Recommends against screening for cervical cancer with HPV testing, alone or in combination with cytology, in women younger than age 30 years. (Grade D)
- Two or more colposcopic-directed cervical biopsies should be performed to increase the sensitivity of colposcopy for identifying high-grade CIN lesions.
- Colposcopic-directed biopsies of acetowhite epithelium should be performed even when the colposcopic impression is squamous metaplasia or low-grade disease.
- Excisional and ablative methods have similar outcomes for eradication of CIN.
- Excisional techniques for treating CIN increase the risk of preterm labor and low birth weight, especially with greater depth of excision.
- Endometrial biopsy can accurately detect carcinoma involving a large portion of the endometrium, but may fail to detect focal lesions and carcinoma involving 50% or less of the endometrial surface area.
- Transvaginal ultrasonography showing endometrial thickness of less than 3 to 4 mm essentially rules out endometrial carcinoma in a postmenopausal woman.
- A focal endometrial lesion found on saline infusion sonohysterography should be evaluated with hysteroscopy.

Additionally, physicians should consider the current American Congress of Obstetricians and Gynecologists (ACOG) cervical cancer screening clinical guidelines, ACOG guidelines for the management of abnormal cervical cancer screening test results and cervical cancer precursors, National Comprehensive Cancer Network (NCCN) Cervical Cancer guidelines, and the updated recommendations from the American Cancer Society (ACS), the American Society for Colposcopy and Cervical Pathology (ASCCP), and the American Society for Clinical Pathology



(ASCP) for the early detection of cervical cancer.<sup>42-45</sup> Physicians need continuing medical education that provides guidance for the practical implementation of guideline recommendations.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- AAFP Immunization Schedules<sup>20</sup>
- AAFP Human Papillomavirus Vaccine<sup>39</sup>
- AAFP Cervical Cancer. Clinical Preventive Service Recommendation<sup>41</sup>
- Interventions to increase cervical cancer screening rates<sup>31</sup>
- Human papillomavirus: clinical manifestations and prevention<sup>40</sup>
- ACOG Practice Bulletin Number 131: Screening for cervical cancer<sup>44</sup>
- Gynecologic Procedures: Colposcopy, Treatment of Cervical Intraepithelial Neoplasia, and Endometrial Assessment<sup>38</sup>
- ACS/ASCCP/ASCP guidelines for the early detection of cervical cancer<sup>42</sup>
- Use of primary high-risk human papillomavirus testing for cervical cancer screening: Interim clinical guidance<sup>46</sup>
- ACOG Practice Bulletin No. 140: management of abnormal cervical cancer screening test results and cervical cancer precursors<sup>43</sup>
- NCCN Guidelines: Cervical Cancer<sup>45</sup>
- Management of External Genital Warts<sup>9</sup>
- Engaging Patients in Collaborative Care Plans<sup>47</sup>
- Clinical decision support: using technology to identify patients' unmet needs<sup>48</sup>
- Bridging the physician-counselor divide<sup>49</sup>
- Simple tools to increase patient satisfaction with the referral process<sup>50</sup>
- Vaccine administration: making the process more efficient in your practice<sup>51</sup>
- CDC: Vaccines & Immunizations (patient education)<sup>18</sup>
- FamilyDoctor.org. Human Papillomavirus (HPV) | Overview (patient education)<sup>52</sup>
- FamilyDoctor.org. Cervical Cancer | Overview (patient education)<sup>53</sup>

References

1. Centers for Disease Control and Prevention. Cervical Cancer Statistics. 2010; <http://www.cdc.gov/cancer/cervical/statistics/>. Accessed August, 2014.



2. American Cancer Society. What are the key statistics about cervical cancer? 2014; <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-key-statistics>. Accessed August, 2014.
3. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
4. American Academy of Family Physicians (AAFP). 2012 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2012.
5. American Academy of Family Physicians (AAFP). 2013 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2013.
6. American Academy of Family Physicians (AAFP). AAFP Assembly CME Outcomes Report. Leawood KS: AAFP; 2014.
7. Centers for Disease Control and Prevention. MMWR: Human Papillomavirus Vaccination Coverage Among Adolescent Girls, 2007–2012, and Postlicensure Vaccine Safety Monitoring, 2006–2013 — United States. In: CDC, ed. Vol 62(29)2013:591-595.
8. Jain N, Euler GL, Shefer A, Lu P, Yankey D, Markowitz L. Human papillomavirus (HPV) awareness and vaccination initiation among women in the United States, National Immunization Survey-Adult 2007. *Preventive medicine*. May 2009;48(5):426-431.
9. Karnes JB, Usatine RP. Management of external genital warts. *American family physician*. Sep 1 2014;90(5):312-318.
10. U.S. Food and Drug Administration. FDA approves Gardasil 9 for prevention of certain cancers caused by five additional types of HPV. *FDA News Release* 2014; <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm426485.htm>. Accessed Aug, 2015.
11. Zimmerman RK, Silverman M, Janosky JE, et al. A comprehensive investigation of barriers to adult immunization: a methods paper. *The Journal of family practice*. Aug 2001;50(8):703.
12. Zimmerman RK, Nowalk MP, Tabbarah M, Hart JA, Fox DE, Raymond M. Understanding adult vaccination in urban, lower-socioeconomic settings: influence of physician and prevention systems. *Annals of family medicine*. Nov-Dec 2009;7(6):534-541.
13. Zimmerman RK, Santibanez TA, Fine MJ, et al. Barriers and facilitators of pneumococcal vaccination among the elderly. *Vaccine*. Mar 28 2003;21(13-14):1510-1517.
14. Santibanez TA, Nowalk MP, Zimmerman RK, et al. Knowledge and beliefs about influenza, pneumococcal disease, and immunizations among older people. *J Am Geriatr Soc*. Oct 2002;50(10):1711-1716.
15. Santibanez TA, Zimmerman RK, Nowalk MP, Jewell IK, Bardella IJ. Physician attitudes and beliefs associated with patient pneumococcal polysaccharide vaccination status. *Annals of family medicine*. Jan-Feb 2004;2(1):41-48.
16. Campos-Outcalt D, Jeffcott-Pera M, Carter-Smith P, Schoof BK, Young HF. Vaccines provided by family physicians. *Annals of family medicine*. Nov-Dec 2010;8(6):507-510.
17. American Academy of Family Physicians (AAFP). 2011 AAFP Immunization Survey Summary of Findings. Leawood KS: AAFP; 2012.
18. Centers for Disease Control and Prevention. Vaccines & Immunizations: Patient Education. 2013; <http://www.cdc.gov/vaccines/ed/patient-ed.htm>. Accessed August, 2013.



19. Ackerman LK. Update on immunizations in children and adolescents. *American family physician*. Jun 1 2008;77(11):1561-1568.
20. American Academy of Family Physicians (AAFP). 2015 AAFP Immunization Schedules. 2015; <http://www.aafp.org/patient-care/immunizations/schedules.html>. Accessed Feb, 2015.
21. Rockwell P, Centers for Disease Control. Advisory Committee on Immunization P. What's new in childhood vaccines. *American family physician*. Feb 1 2014;89(3):153-158.
22. Han PK, Klabunde CN, Breen N, et al. Multiple clinical practice guidelines for breast and cervical cancer screening: perceptions of US primary care physicians. *Medical care*. Feb 2011;49(2):139-148.
23. Hirth JM, Tan A, Wilkinson GS, Berenson AB. Compliance with cervical cancer screening and human papillomavirus testing guidelines among insured young women. *American journal of obstetrics and gynecology*. Sep 2013;209(3):200 e201-207.
24. Corbelli J, Borrero S, Bonnema R, et al. Differences among primary care physicians' adherence to 2009 ACOG guidelines for cervical cancer screening. *Journal of women's health (2002)*. May 2014;23(5):397-403.
25. King NR, Kasper KM, Daggy JK, Tucker Edmonds B. Current practice patterns in cervical cancer screening in Indiana. *American journal of obstetrics and gynecology*. Mar 2014;210(3):265 e261-268.
26. Verrilli L, Winer RL, Mao C. Adherence to cervical cancer screening guidelines by gynecologists in the Pacific Northwest. *Journal of lower genital tract disease*. Jul 2014;18(3):228-234.
27. Meissner HI, Tiro JA, Yabroff KR, Haggstrom DA, Coughlin SS. Too much of a good thing? Physician practices and patient willingness for less frequent pap test screening intervals. *Medical care*. Mar 2010;48(3):249-259.
28. Wong C, Berkowitz Z, Saraiya M, Wideroff L, Benard VB. US physicians' intentions regarding impact of human papillomavirus vaccine on cervical cancer screening. *Sexual health*. Sep 2010;7(3):338-345.
29. Nguyen GT, Klusaritz HA, Cronholm PF. Achieving sustainable increases in childhood immunization rates. *Family practice management*. Jul-Aug 2014;21(4):13-17.
30. Yabroff KR, Zapka J, Klabunde CN, et al. Systems strategies to support cancer screening in U.S. primary care practice. *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology*. Dec 2011;20(12):2471-2479.
31. Hitzeman N, Xavier EM. Interventions to increase cervical cancer screening rates. *American family physician*. Mar 1 2012;85(5):443-445.
32. Hawkins NA, Benard VB, Greek A, Roland KB, Manninen D, Saraiya M. Patient knowledge and beliefs as barriers to extending cervical cancer screening intervals in Federally Qualified Health Centers. *Preventive medicine*. Nov 2013;57(5):641-645.
33. Villani J, Mortensen K. Patient-provider communication and timely receipt of preventive services. *Preventive medicine*. Nov 2013;57(5):658-663.
34. White P, Kenton K. Use of electronic medical record-based tools to improve compliance with cervical cancer screening guidelines: effect of an educational intervention on physicians' practice patterns. *Journal of lower genital tract disease*. Apr 2013;17(2):175-181.



35. Shirts BH, Jackson BR. Informatics methods for laboratory evaluation of HPV ordering patterns with an example from a nationwide sample in the United States, 2003-2009. *Journal of pathology informatics*. 2010;1:26.
36. Berkowitz Z, Saraiya M, Benard V, Yabroff KR. Common abnormal results of pap and human papillomavirus cotesting: what physicians are recommending for management. *Obstet Gynecol*. Dec 2010;116(6):1332-1340.
37. CMS to Cover HPV Testing With Pap Smear to Screen for Cervical Cancer. *AAFP News*. 2015. <http://www.aafp.org/news/health-of-the-public/20150711CMS-HPVdecision.html>. Accessed Aug 2015.
38. Apgar BS, Kaufman A, Bettcher C, Parker-Featherstone E. Gynecologic Procedures: Colposcopy, Treatment of Cervical Intraepithelial Neoplasia, and Endometrial Assessment. *American family physician*. 2013;87(12):836-843.
39. American Academy of Family Physicians (AAFP). Human Papillomavirus Vaccine 2014; <http://www.aafp.org/patient-care/immunizations/disease-population/hpv.html>. Accessed June, 2014.
40. Juckett G, Hartman-Adams H. Human papillomavirus: clinical manifestations and prevention. *American family physician*. Nov 15 2010;82(10):1209-1213.
41. American Academy of Family Physicians (AAFP). Cervical Cancer. *Clinical Preventive Service Recommendation 2012*; <http://www.aafp.org/patient-care/clinical-recommendations/all/cervical-cancer.html>. Accessed August, 2014.
42. Fontaine PL, Saslow D, King VJ. ACS/ASCCP/ASCP guidelines for the early detection of cervical cancer. *American family physician*. Sep 15 2012;86(6):501, 506-507.
43. American College of Obstetricians Gynecologists (ACOG). Practice Bulletin No. 140: management of abnormal cervical cancer screening test results and cervical cancer precursors. *Obstet Gynecol*. Dec 2013;122(6):1338-1367.
44. Committee on Practice B-G. ACOG Practice Bulletin Number 131: Screening for cervical cancer. *Obstet Gynecol*. Nov 2012;120(5):1222-1238.
45. National Comprehensive Cancer Network (NCCN). NCCN Guidelines. [http://www.nccn.org/professionals/physician\\_gls/f\\_guidelines.asp](http://www.nccn.org/professionals/physician_gls/f_guidelines.asp). Accessed July, 2014.
46. Huh WK, Ault KA, Chelmow D, et al. Use of primary high-risk human papillomavirus testing for cervical cancer screening: interim clinical guidance. *Gynecologic oncology*. Feb 2015;136(2):178-182.
47. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management*. 2013;20(3):35-39.
48. McLeod W, Eidus R, Stewart EE. Clinical decision support: using technology to identify patients' unmet needs. *Family practice management*. Mar-Apr 2012;19(2):22-28.
49. McBride JL. Bridging the physician-counselor divide. *Family practice management*. Jan-Feb 2012;19(1):36.
50. Jarve RK, Dool DW. Simple tools to increase patient satisfaction with the referral process. *Family practice management*. Nov-Dec 2011;18(6):9-14.
51. Hainer BL. Vaccine administration: making the process more efficient in your practice. *Family practice management*. Mar 2007;14(3):48-53.
52. FamilyDoctor.org. Human Papillomavirus (HPV) | Overview. 1999; <http://familydoctor.org/familydoctor/en/diseases-conditions/human-papillomavirus-hpv.html>. Accessed August, 2013.



53. FamilyDoctor.org. Cervical Cancer | Overview. 2000;  
<http://familydoctor.org/familydoctor/en/diseases-conditions/cervical-cancer.html>.  
Accessed August, 2013.