



<b>Body System: Hematologic-Immune</b>		
<b>Session Topic: Adult Immunization Update</b>		
<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>• Knowledge gaps in keeping up to date on current immunization schedules and alerts</li> <li>• Knowledge and performance gaps in utilizing standing orders, standardized protocols to screen for immunizations during patient encounters, and adopting a systematic approach to vaccine administration</li> <li>• Knowledge and performance gaps in using available patient education resources to counsel patients about vaccine safety and efficacy</li> <li>• Knowledge and performance gaps related to having effective and efficient vaccine administration strategies</li> <li>• There are numerous barriers to achieving optimal vaccination rates, including low patient</li> </ul>	<ol style="list-style-type: none"> <li>1. Establish standardized adult immunization status screening during patient encounters.</li> <li>2. Integrate current AAFP/ACIP adult immunization recommendations into current practice.</li> <li>3. Develop standardized processes to address special populations and contraindications.</li> <li>4. Counsel adult patients, using available patient education resources and motivational interviewing about vaccine safety and efficacy.</li> </ol>	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



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			
<b>ACGME Core Competencies Addressed</b> (select all that apply)			
X	Medical Knowledge	X	Patient Care
X	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism	X	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 recommendations to establish standardized adult immunization status screening during patient encounters.</li> <li>• Provide a review of (1-2 yrs) of current AAFP/ACIP adult immunization recommendations, including recommendation for integrating updates into current practice.</li> <li>• Provide recommendations for developing standardized processes to address special populations and contraindications.</li> <li>• Provide strategies and resources for counseling adult patients, using available patient education resources and motivational interviewing about vaccine safety and efficacy.</li> <li>• Provide recommendations regarding guidelines for Medicare reimbursement.</li> <li>• Provide recommendations to maximize office efficiency and guideline adherence to current immunization schedules and recommendations.</li> <li>• Provide an overview of newly available treatments, including efficacy, safety, contraindications, and cost/benefit relative to existing treatments.</li> </ul>			



**Needs Assessment:**

\*Note – the scope of this topic is to include

Immunizations are critical to maintaining health and the prevention of disease for everyone in the U.S. Vaccinations are recommended throughout life to prevent vaccine-preventable diseases and their sequela. Adult vaccination coverage, however, remains low for most routinely recommended vaccines and well below Healthy People 2020 targets.<sup>1</sup> For example, immunization rates for influenza and pneumococcal vaccines among the elderly (especially minority elderly) are below desired levels.<sup>2</sup> Data from the 2011 CDC National Health Interview Survey indicates that only 27.2% of adults 18-49 years had received an influenza vaccination during the past 12 months; and only 42.7% of adults 50-64 years had received an influenza vaccination during the past 12 months.<sup>3</sup> There are more than 49 thousand deaths annually from pneumonia, yet only 62.3% of adults 65 years and over have ever received a pneumococcal vaccination.<sup>4</sup> Vaccination rates for  $\geq 1$  dose of MenACWY,  $\geq 3$  doses of HPV (among females), and  $\geq 2$  doses of varicella vaccine are below the *Health People 2020* targets.<sup>5</sup>

In 2010, primary care physicians provided preventive care during more than 207 million office visits; including more than 22 million influenza vaccinations.<sup>6</sup> Eighty-seven percent of active American Academy of Family Physician (AAFP) members provide immunizations in their practices.<sup>7</sup> However, data from the 2012 AAFP CME Needs Assessment Survey indicates that family physicians have statistically significant and meaningful gaps in knowledge and skill to provide optimal immunization management.<sup>8</sup> More specifically, CME outcomes data from the 2012-2016 AAFP FMX (formerly Assembly) Immunization topic-related sessions, indicate that physician have knowledge and practice gaps regarding immunization alerts; standing protocols to screen for immunizations at every visit; the utilization of EHR reminder systems; being aware of new vaccines; providing adequate patient education regarding vaccine safety and efficacy; remaining up to date on new immunization schedules for various age groups; and effectively utilizing appropriate coding/billing practices for proper reimbursement.<sup>9-12</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>2,13-17</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%); difficulties associated with keeping vaccines separated (34%), difficulty of record-keeping (32%), and they don't care for children (28%).<sup>7</sup> Despite universal childhood vaccine programs in the U.S., recent studies indicate that between 2000 and 2015, nearly 60% of measles cases occurred in people who were not vaccinated against measles.<sup>18</sup> Among those were unvaccinated, 71% refused it for nonmedical reasons. Nonmedical exemptions also were prevalent among unvaccinated cases of pertussis (ranging from 59 to 93 percent in eight outbreaks). These findings confirm that nonmedical exemptions increase the risk of vaccine-preventable illness in the unvaccinated individual and, by reducing overall community immunity, increase the risk of



illness in children too young to be vaccinated, people with medical contraindications to vaccination, and vaccinated people with waning immunity.<sup>19</sup>

Physicians should also be kept up to date on vaccines, changes to therapies, or warnings associated with existing therapies. Provide recommendations regarding new FDA approved vaccines for various conditions; including safety, efficacy, tolerance, and cost considerations relative to currently available options.

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.<sup>20</sup> Family physicians may consider the following evidence-based recommendations for immunization management:<sup>21,22</sup>

- The quadrivalent human papillomavirus vaccine may be considered in males and females nine to 26 years of age to prevent genital warts and cervical and anal cancers.
- Vaccination against herpes zoster is most effective when given as early as possible after 60 years of age.
- Vaccinating adults against pertussis, especially those in high-risk groups (e.g., health care professionals, persons who have close contact with infants younger than 12 months of age), reduces the risk of disease outbreaks.
- Annual influenza vaccination is recommended for all persons older than six months.
- DTaP, IPV, MMR, Hib, HepB, and varicella vaccine should be given as recommended.
- Pneumococcal vaccine has been shown to significantly decrease the number of cases of invasive pneumococcal disease, as well as increase herd immunity in the population.
- Use of HepB and immune globulin effectively prevents transfer of hepatitis B from mother to infant.
- Rotavirus vaccine has been shown to significantly decrease the severity and number of hospitalizations for acute gastroenteritis in young infants.
- Use of a patient reminder and recall system is helpful in increasing immunization rates in developed countries.
- Vaccines should be administered before planned immunosuppression, with live vaccines given four weeks in advance and inactivated vaccines given two weeks in advance.
- Immunocompetent persons who live with an immunocompromised patient can safely receive inactivated vaccines.
- Varicella and zoster vaccines should not be administered to highly immunocompromised patients.
- Annual vaccination with inactivated influenza vaccine is recommended for immunocompromised patients six months and older, except those who are unlikely to respond.
- Persons 16 to 23 years of age may be vaccinated to provide short-term protection against most strains of meningococcal B disease.
- There is no contraindication to giving the meningococcal B and quadrivalent meningococcal conjugate vaccines on the same day as long as different administration sites are used.
- Unlike the HPV vaccine series, which may be completed with any available vaccine preparation, meningococcal vaccines are not interchangeable.



- Physicians should explain to parents that vaccines—including the measles, mumps, and rubella vaccine—are beneficial, safe, and effective.
- Physicians should reassure parents that there is no evidence that vaccines cause autism or neurologic problems.
- Physicians should inform parents that the risk of intussusception with the rotavirus vaccine is minimal compared with the decrease in morbidity and mortality associated with rotavirus diarrheal disease.
- The tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine should be administered to pregnant women at 27 to 36 weeks' gestation to provide passive immunity for their infants.

Additionally, physicians should be familiar with changes between the 2016 and 2017 adult immunization schedules, including:<sup>23,24</sup>

- Women through 26 years of age and men through 21 years of age (and men 22 through 26 years of age who may receive human papillomavirus vaccine) who initiated the series before 15 years of age and received only one dose, or two doses less than five months apart, are not considered adequately vaccinated and should receive one additional dose.
- Adults with chronic liver disease, including those with hepatitis C infection and adults with liver function enzyme levels that are twice the normal level, are recommended to receive hepatitis B vaccine.
- Adults with human immunodeficiency virus infection should receive a two-dose primary series of serogroup A, C, W, and Y meningococcal conjugate vaccine.

Despite many patient and physician barriers to adult vaccinations, rates can be improved, often with simple interventions such as patient reminders and recalls, standing orders, and patient education. As our health systems become increasingly automated, CDS systems can help make vaccination more efficient and reliable.<sup>25</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>2,13-17</sup> Physicians can often improve immunization rates by simply making the recommendation to their patients.<sup>26</sup> Physicians can minimize costs and maximize reimbursement by systematic comparison pricing, looking for ordering discounts, and using appropriate coding/billing practices.<sup>27</sup>

Family physicians should adopt a systematic approach to vaccine administration that includes educating patients and office staff and using reliable sources of information, standing protocols during patient encounters, and widely accepted practice management resources.<sup>21</sup> Additionally, physicians need to be kept up to date on new recommendations from the CDC's Advisory Committee on Immunization Practices (ACIP), such as the new recommendations for MenB vaccination during its June 24-25 meeting, summarized as:<sup>28</sup>

- (ACIP) adopted a Category B recommendation for use of the two serogroup B meningococcal vaccines in patients ages 16-23 for short-term protection against the disease.
- The ACIP voted to recommend that for patients 65 and older, the interval between administration of 13-valent pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine be one year regardless of which vaccine was given first.



The AAFP joins with other organizations to urge physicians to strongly recommend and administer the second (booster) dose of meningococcal vaccine at age 16.<sup>20</sup>

Advising travelers on vaccine- and medication-preventable diseases is increasingly becoming the responsibility of primary care physicians. The approach to travel health recommendations should be based on an assessment of the risks for travel-related illnesses, the time available before trip departure, and the current epidemiology of preventable diseases. Physicians should take into account the adverse events and contraindications associated with each vaccine and medication.<sup>29</sup>

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

- AAFP Immunization Schedules<sup>20</sup>
- AAFP Medicare Part B Vaccine Coverage<sup>30</sup>
- Update on immunizations in adults<sup>21</sup>
- Improving adult immunization rates: overcoming barriers<sup>25</sup>
- Travel immunizations<sup>29</sup>
- Vaccine administration: making the process more efficient in your practice<sup>31</sup>
- Coding for Vaccine Administration<sup>32</sup>
- ACP Immunization Advisor<sup>33</sup>
- Resolving patients' vaccination uncertainty: going from "no thanks!" to "of course!"<sup>26</sup>
- Engaging Patients in Collaborative Care Plans<sup>34</sup>
- Clinical decision support: using technology to identify patients' unmet needs<sup>35</sup>
- Documenting and coding preventive visits: a physicians' perspective<sup>36</sup>
- Immunizations: how to protect patients and the bottom line<sup>27</sup>
- Encouraging patients to change unhealthy behaviors with motivational interviewing<sup>37</sup>
- CDC Vaccines & Immunizations: Patient Education<sup>38</sup>
- FamilyDoctor.org. Immunization Schedules (patient resource)<sup>39</sup>
- FamilyDoctor.org. Vaccines (many patient resource)<sup>40</sup>
- FamilyDoctor.org. International Travel: Tips for Staying Healthy (patient resource)<sup>41</sup>

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