



<b>Body System: Respiratory</b>		
<b>Session Topic: Allergic Rhinitis</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>• Patients often self-medicate ineffectively.</li> <li>• Because INS have become over the counter medicines, some physician may not be familiar with types and dosing and do not recommend this non-prescription therapy.</li> <li>• Family physicians require knowledge of the most recent guidelines for diagnosis and treatment of allergic rhinitis.</li> <li>• Family physicians need to recognize when patients should be referred to sub-specialists for enhanced testing and/or treatment.</li> <li>• Family physicians may not be aware of the possibility of persistent asymptomatic inflammation, which suggests that patients may need treatment for AR throughout any period of allergen exposure, e.g. on a full-time basis, rather than</li> </ul>	<ol style="list-style-type: none"> <li>1. Identify the signs and symptoms of rhinitis and use appropriate tools to diagnose and differentiate between allergic and non-allergic rhinitis.</li> <li>2. Determine when patients require referral to sub-specialists for enhanced evaluation and/or treatment of rhinitis.</li> <li>3. Prepare treatment plans for rhinitis based on each patient's specific sensitivities and symptoms and the possibility of persistent inflammation and comorbidities, and make adjustments if the patients experiences epistaxis.</li> <li>4. Educate patients regarding appropriate treatment protocol for rhinitis and the responsible use of antibiotics when prescribed as necessary.</li> </ol>	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



<p>just on a symptomatic basis.</p> <ul style="list-style-type: none"> <li>• Family physicians require the knowledge to develop and disseminate materials to educate patients with allergic rhinitis about allergy and other trigger avoidance activities.</li> <li>• Family physicians require knowledge to understand the importance of diagnosing and treating AR to improve asthma control in those patients with asthma who have both asthma and AR.</li> <li>• Family physicians should be familiar with ARIA guidelines.</li> </ul>		
<b>ACGME Core Competencies Addressed</b> (select all that apply)		
X	Medical Knowledge	Patient Care
X	Interpersonal and Communication Skills	Practice-Based Learning and Improvement
	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 recommendations for identifying the signs and symptoms of rhinitis and use appropriate tools to diagnose and differentiate between allergic and non-allergic rhinitis.</li> </ul>		



- Provide recommendations for determining when patients require referral to sub-specialists for enhanced evaluation and/or treatment of rhinitis.
- Provide recommendations regarding treatment plans for rhinitis based on each patient's specific sensitivities and symptoms and the possibility of persistent inflammation and comorbidities, and make adjustments if the patients experiences epistaxis.
- Provide strategies and resources for educating patients regarding appropriate treatment protocol for rhinitis and the responsible use of antibiotics when prescribed as necessary.

\*Note – This will cover supporting patient OTC management to use of newer combined therapies and impact on asthma.

### Needs Assessment

According to the Asthma and Allergy Foundation of America (AAFA), the Centers for Disease Control and Prevention (CDC), and the American Academy of Allergy Asthma & Immunology (AAAAI), Roughly 7.8% of people 18 and over in the U.S. have inhalant allergies; in 2010, white children in the U.S. were more likely to have had hay fever (10%) than black children (7%); worldwide, allergic rhinitis affects between 10% and 30 % of the population; worldwide, sensitization (IgE antibodies) to foreign proteins in the environment is present in up to 40% of the population; in 2012, 7.5% or 17.6 million adults were diagnosed with hay fever in the past 12 months; in 2012, 9.0% or 6.6 million children reported hay fever in the past 12 months; and in 2010, 11.1 million visits to physician offices resulted with a primary diagnosis of allergic rhinitis.<sup>1-3</sup> Additionally, over 80% of patients with asthma have comorbid allergic rhinitis (AR), and failure to address and control AR can hamper the ability to control asthma symptoms and exacerbations.<sup>4,5</sup>

### Practice Gaps

A review of the literature suggests the following gaps in the management of allergic rhinitis:<sup>5-9</sup>

- Intranasal steroid sprays are the preferred treatment; however, a substantial number of affected patients do not receive nasal steroids.
- Approximately two-thirds of adults with nasal allergy symptoms report that they use over-the-counter, nonprescription medicines, and only one-third report that they use an intranasal steroid spray.
- Lack of familiarity and poor patient awareness are key barriers to intranasal steroid spray use.
- Because INS have become over the counter medicines, some physician may not be familiar with types and dosing and do not recommend this non-prescription therapy.
- Since many patients may view this as a “nuisance” disease and self-treat without asking for advice, even when therapy is not working for them.
- Patient dissatisfaction related to side effects among users of these medications leads some of those who are familiar with intranasal steroid sprays to discontinue use after it has been prescribed. Greater familiarity with proper technique of use might prevent some of those side effects.



- People, especially ones living in urban areas, are often undiagnosed and undertreated for allergic rhinitis. Education is needed from both healthcare professionals and families.
- Allergic rhinitis can adversely affect asthma control, yet many people with asthma have not had their allergic rhinitis diagnosed or treated.
- Treatment for AR has expanded with the introduction of effective sub-lingual desensitization treatments beginning in 2014.
- Identification of aero-allergens can be accomplished by use of in vitro testing, e.g. Immunocap which can guide need for de-sensitization therapy and the potential use of sub-lingual immunotherapy.

Physicians should also keep up to date on available over the counter and prescription therapies for treating AR, changes to therapies, or warnings associated with existing therapies. CME and other education can provide recommendations regarding new FDA approved medicines for AR; including safety, efficacy, tolerance, and cost considerations relative to currently available options. Recent examples include, but are not limited to:<sup>10</sup>

- Drugs Approved in 2017
  - Odactra (HDN sublingual immunotherapy tablet); Catalent Pharma Solutions Limited; For the treatment of HDM-induced allergic rhinitis with or without conjunctivitis (AR/C) in adults (ages 18 to 65)
- Drugs Approved in 2014
  - Grastek (Timothy Grass Pollen Allergen Extract); Merck; For the treatment of grass pollen-induced allergic rhinitis, Approved April 2014
  - Oralair (Sweet Vernal, Orchard, Perennial Rye, Timothy and Kentucky Blue Grass Mixed Pollens Allergen Extract); Greer Labs; For the treatment of grass pollen-induced allergic rhinitis with or without conjunctivitis, Approved April 2014
  - Ragwitek (Short Ragweed Pollen Allergen Extract); Merck; For the treatment of short ragweed pollen-induced allergic rhinitis, Approved April 2014
- Drugs Approved in 2012
  - Dymista (azelastine hydrochloride and fluticasone propionate); Meda Pharmaceuticals Inc; For the relief of symptoms of seasonal allergic rhinitis, Approved May 2012
  - Qnasl (beclomethasone dipropionate) nasal aerosol; Teva Pharmaceutical; For the treatment of seasonal and perennial allergic rhinitis, Approved March 2012

To date, there is no evidence showing the superiority of one intranasal corticosteroid over another. However, faculty should review the various age indications from the FDA (e.g. only budesonide (Rhinocort Aqua) has an FDA pregnancy category B safety rating, and only fluticasone furoate (Flonase) and triamcinolone acetonide are available over the counter).<sup>11</sup>

Physicians may improve their care of patients with AR 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>11,12</sup>

- Nasal saline irrigation is beneficial in treating the symptoms of allergic rhinitis and may be used alone or as adjuvant therapy.



- Although dust mite allergies are common, studies have not found any benefit to using mite-proof impermeable mattresses or pillow covers.
- Other interventions that do not have documented effectiveness in the prevention of allergic rhinitis include breastfeeding, delayed exposure to solid foods in infancy or to pets in childhood, and the use of air filtration systems.
- An intranasal corticosteroid alone should be the initial treatment for allergic rhinitis with symptoms affecting quality of life.
- Compared with first-generation antihistamines, second-generation antihistamines have a better adverse effect profile and cause less sedation, with the exception of cetirizine (Zyrtec).
- Because intranasal antihistamines are more expensive, less effective, and have more adverse effects than intranasal corticosteroids, they are not recommended as first-line therapy for allergic rhinitis.
- Immunotherapy should be considered for patients with moderate or severe persistent allergic rhinitis that is not responsive to usual treatments, in patients who cannot tolerate standard therapies or want to avoid long-term medication use, and in patients with allergic asthma.
- Intranasal steroids and second-generation antihistamines (although less effective than intranasal steroids) are strongly recommended for patients whose symptoms interfere with their quality of life.
- Immunoglobulin E–specific skin or blood testing is recommended when treatment has been ineffective, a diagnosis of allergic rhinitis is uncertain, identification of a certain allergen could affect therapy, or to aid in titration of therapy.
- Combination therapies are an option when intranasal steroids alone do not control allergic symptoms.

Best Practices in Allergy – Recommendations from the Choosing Wisely® Campaign:

- Do not routinely perform sinonasal imaging in patients with symptoms limited to a primary diagnosis of allergic rhinitis alone. (American Academy of Otolaryngology–Head and Neck Surgery Foundation)

In 2015, the American Academy of Family Physicians (AAFP) endorsed the Allergic Rhinitis clinical guidelines developed by the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNSF).<sup>13</sup> Physicians should also be familiar with the Global Strategy for Asthma Management and Prevention and National Asthma Education and Prevention Program’s Expert Panel Report (EPR-3) guidelines for the diagnosis and management of asthma, as they both recommend an evaluation for comorbid AR in patients with asthma.<sup>4,14</sup> Faculty should be prepared to compare and contrast the AAO-HNSF, EPR-3, and the ARIA<sup>15</sup> guidelines, and provide recommendations for incorporating best practices.

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

- Management of allergic rhinitis in the era of effective over-the-counter treatments<sup>6</sup>
- Treatment of Allergic Rhinitis<sup>11</sup>
- AAFP Allergic Rhinitis - Clinical Practice Guideline<sup>13</sup>
- AAO-HNSF Allergic Rhinitis Clinical Practice Guideline<sup>12</sup>
- Familydoctor.org – Allergic Rhinitis (patient education)<sup>16</sup>

References

1. American Academy of Allergy Asthma & Immunology. Allergy Statistics. 2017; <http://www.aaaai.org/about-aaaai/newsroom/allergy-statistics>. Accessed May, 2017.
2. Asthma and Allergy Foundation of America. Allergy Facts and Figures. 2017; <http://www.aafa.org/page/allergy-facts.aspx>. Accessed May, 2017.
3. Centers for Disease Control and Prevention. Summary Health Statistics Tables for U.S. Adults: National Health Interview Survey 2015. *Allergies and Hay Fever 2015*; <https://www.cdc.gov/nchs/fastats/allergies.htm>. Accessed May, 2017.
4. Egan M, Bunyavanich S. Allergic rhinitis: the “Ghost Diagnosis” in patients with asthma. *Asthma research and practice*. 2015;1:8.
5. Esteban CA, Klein RB, Kopel SJ, et al. Underdiagnosed and Undertreated Allergic Rhinitis in Urban School-Aged Children with Asthma. *Pediatric Allergy, Immunology, and Pulmonology*. 2014;27(2):75-81.
6. Carr WW, Yawn BP. Management of allergic rhinitis in the era of effective over-the-counter treatments. *Postgraduate medicine*. 2017(just-accepted).
7. Fromer LM, Ortiz G, Ryan SF, Stoloff SW. Insights on allergic rhinitis from the patient perspective. *The Journal of family practice*. 2012;61(2 Suppl):S16-22.
8. Carr WW. New therapeutic options for allergic rhinitis: back to the future with intranasal corticosteroid aerosols. *American journal of rhinology & allergy*. 2013;27(4):309-313.
9. Roditi RE, Ishman S, Lee S, Lin S, Shin JJ. Medications for Allergic Rhinitis. *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*. 2017;156(1):70-80.
10. CenterWatch. FDA Approved Drugs by Medical Condition. 2017; <https://www.centerwatch.com/drug-information/fda-approved-drugs/medical-conditions/>. Accessed May, 2017.
11. Sur DK, Plesa ML. Treatment of Allergic Rhinitis. *American family physician*. 2015;92(11):985-992.
12. Seidman MD, Gurgel RK, Lin SY, et al. Clinical Practice Guideline - Allergic Rhinitis. *Otolaryngology-Head and Neck Surgery*. 2015;152(1\_suppl):S1-S43.



13. American Academy of Family Physicians (AAFP). Allergic Rhinitis. *Clinical Practice Guideline* 2015; <http://www.aafp.org/patient-care/clinical-recommendations/all/allergic-rhinitis.html>. Accessed May, 2015.
14. National Asthma E, Prevention P. Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma-Summary Report 2007. *The Journal of allergy and clinical immunology*. 2007;120(5 Suppl):S94-138.
15. Wallace DV, Dykewicz MS, Bernstein DI, et al. The diagnosis and management of rhinitis: an updated practice parameter. *The Journal of allergy and clinical immunology*. 2008;122(2 Suppl):S1-84.
16. FamilyDoctor.org. Allergic Rhinitis. 2015; <https://familydoctor.org/condition/allergic-rhinitis/>. Accessed Aug, 2017.