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Managing and Treating Allergic Rhinitis in the Primary Care Setting

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Managing and Treating Allergic Rhinitis in the Primary Care Setting

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Community Health Improvement Project
Family Medicine Rotation
July 2014
Project Mentor: Whitney Calkins, MD

Slide 2: The Problem

- Problem Identification
 - Screening and appropriate treatment of allergic rhinitis in the primary care setting is a challenge for providers due to time constraints
 - Providers in the practice desired more information about where in the community to refer patients with persistent allergic rhinitis and what information or test results they should send those specialists
- Description of Need
 - Allergic rhinitis is often under diagnosed and poorly managed in the primary care setting and can severely affect patient quality of life (Source: Meltzer, E. O. *Clin Ther* **29**, 1428–1440 (2007))

Slide 3: Cost

- Public Health Cost
 - The medical cost of allergic rhinitis has been estimated at \$3.4 billion, half of which is through prescription medication (Meltzer and Bukstein, 2011)
 - Learning problems in children (Meltzer, 2007)
 - Decreased school and work productivity
 - 3.4 million missed work days in US per year (Meltzer, 1990)
 - 2 million missed school days in US per year (Meltzer, 1990)
 - Poor sleep and quality of life in adults and children (Meltzer, 2007)
 - Treating allergic rhinitis in patients with asthma results in significantly fewer hospitalizations and ER visits (Crystal-Peters, 2002)
- Unique cost considerations in host community
 - Patients with allergies to grass, weed, and tree pollens are most symptomatic during this time of the year in Vermont

Slide 4A: Community Perspective

Interview 1: *Name Withheld*, MD, PhD of Timber Lane Allergy and Asthma Associates

- Pollen counts are on the practice's Facebook page and are updated daily. On days with high pollen counts, patients are more likely to come in with physical symptoms
- On physical exam, the following observations should be documented:
 - Nasal exam: pale swollen nasal mucosa (in contrast, patients with an infection will have red irritated mucosa)
 - Face: allergic shiners (less sensitive for AR), Nasal crease, Allergic salute
 - Eyes: intercanthal itchiness, chemosis (indicates severe pollen allergy)
- Trends to look for: Patients that come in every May with a cold that has lasted several weeks
- When to refer:
 - Patients with persistent symptoms despite over the counter therapy
 - Patients with penicillin allergy. Often this allergy is misdiagnosed and confirmation with allergy testing can prevent complicated hospital stays.
 - Patients with mild persistent or moderate to severe asthma; 60% of patients with asthma also have allergies and their asthma symptoms won't improve if they continue to have upper airway inflammation
- Patients will get an appointment within a few weeks; follow up will be every 2 months until symptoms are stable
- What Testing to Complete
 - Patients should come in with all testing they have received in the past since the allergy physicians don't have access to PRISM
 - Their office is the only location in the local area that offers skin prick testing. Skin prick testing is really effective for determining environmental control measures patients can use to control their allergies.
 - RAST tests are expensive and less specific than skin prick testing and should only be ordered if you are monitoring a specific allergy in a patient
- Potential Treatments for Allergic Rhinitis
 - Allergy Shots
 - Sublingual Therapy: This therapy will be available next spring for patients with pollen allergies. It is less effective than shots but great for patients who can't make it into the office. The first therapy must be observed in office and rest of therapy can be completed at home

Slide 4B: Community Perspective

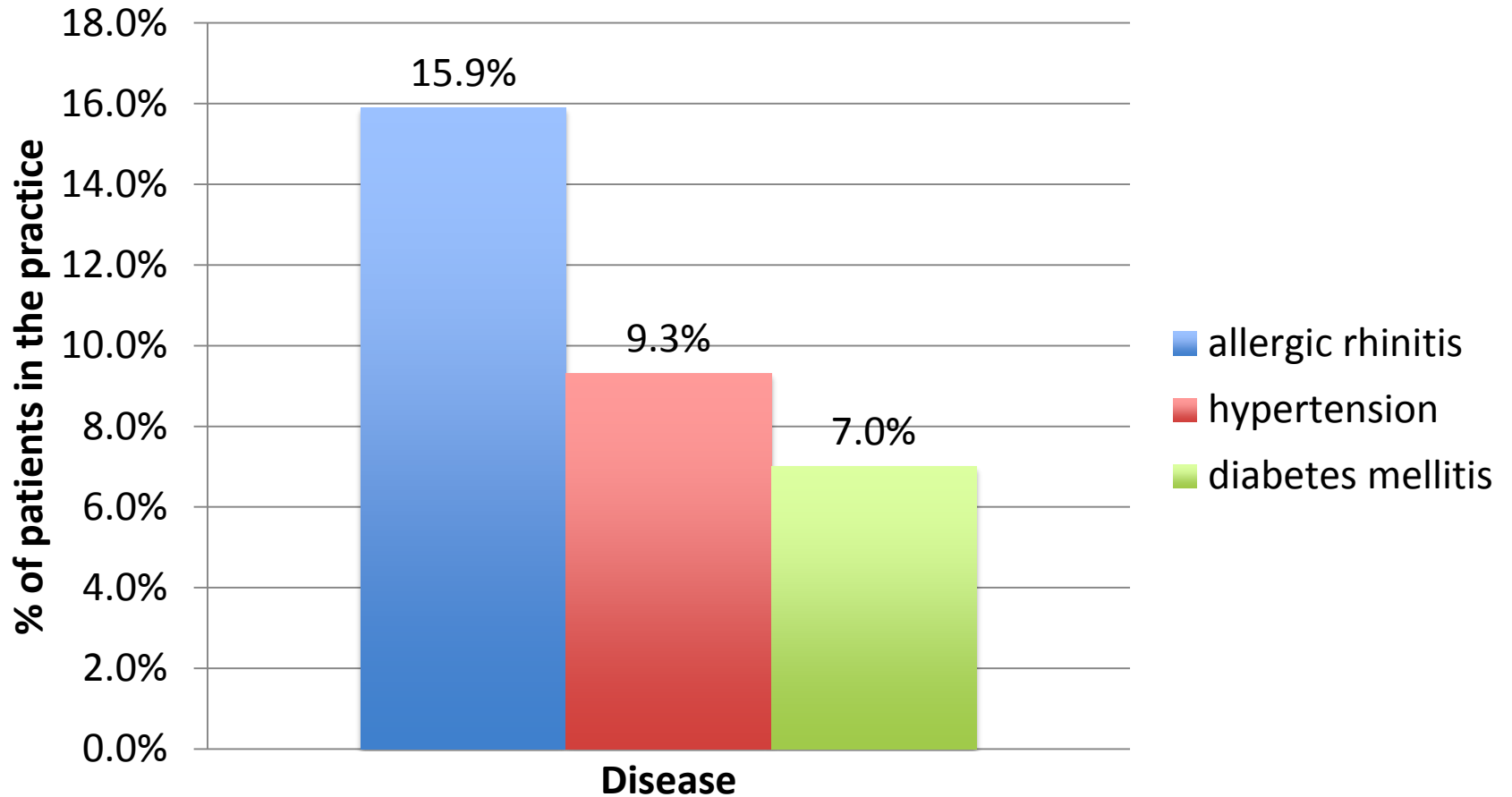
Interview 2: *Name Withheld*, MD of FAHC Otolaryngology

- Allergic rhinitis can be difficult to treat because symptoms don't match what is seen on imaging, and patients may have a threshold for allergen exposure for when symptoms appear and interfere with quality of life that can make therapy challenging
- When to refer
 - Frustrating patients who have refractory symptoms
- What Testing to Complete
 - CT imaging if anatomic abnormality is apparent or highly suspected
 - Serum eosinophil count if it is unclear whether symptoms are due to allergic or non-allergic rhinitis
- Potential Treatments for Allergic Rhinitis
 - Surgery

Slide 5: Intervention and Methodology

- Intervention
 - Create a quick reference fact sheet for primary care providers with information on local practice statistics, diagnostic guidelines, and referral information
- Methodology
 - Conduct PRISM reports for the presence of allergic rhinitis and/or asthma on a patient's problem list in the last year
 - Review for guidelines and images of physical exam symptoms of allergic rhinitis

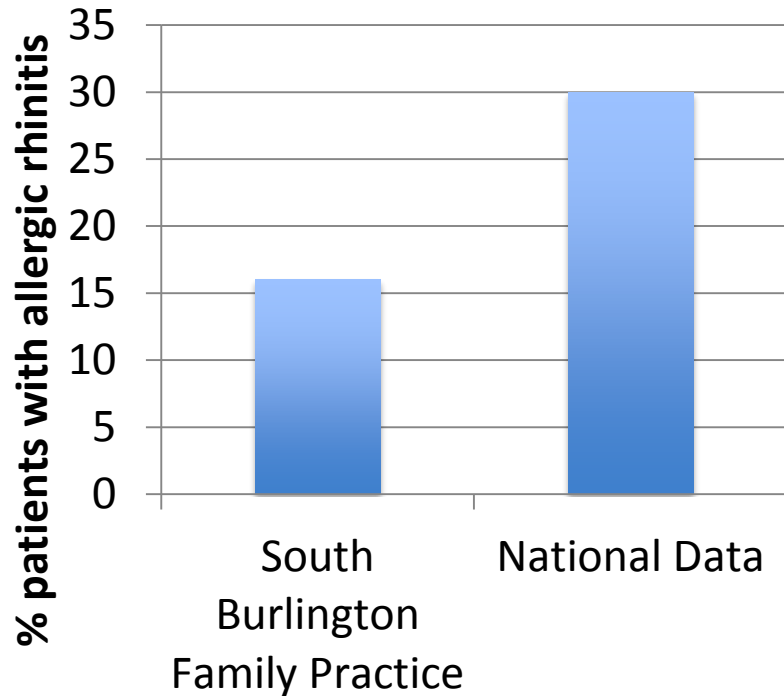
Slide 6A: Results



Allergic rhinitis is more prevalent than other commonly treated diseases in the practice

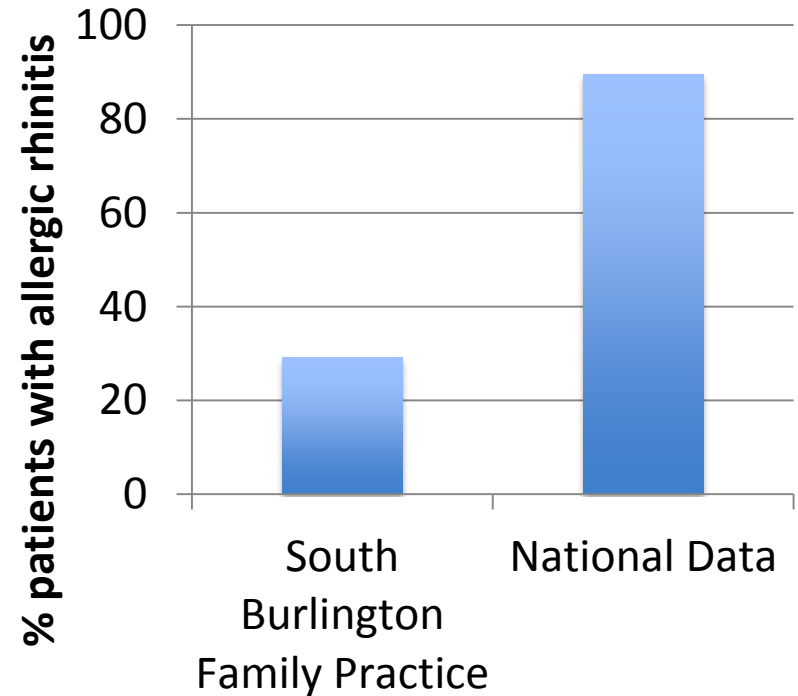
Slide 6B: Results

All Patients



The rate of allergic rhinitis diagnosis in the practice is less than the national average

Patients with Asthma



A smaller percentage of patients in the practice with asthma have been diagnosed with allergic rhinitis compared to published data

Sources for National Data: Nathan, R. A. *et al.* The prevalence of nasal symptoms attributed to allergies in the United States: findings from the burden of rhinitis in an America survey. *Allergy Asthma Proc* **29**, 600–608 (2008). Coexistence of asthma and allergic rhinitis in adult patients attending allergy clinics: ONEAIR study. **18**, 233–238 (2008)

Slide 7: Evaluation

- Effectiveness
 - Provided valuable information on the local patient population in comparison to published data
 - Raised awareness of the need to evaluate and treat allergic rhinitis in patients with asthma
 - Reduced barriers with specialty referral by offering information from local specialists
 - Alerted family practitioners of the need to evaluate penicillin allergy in patients with a formal allergy referral
 - Reviewed the newest guidelines for diagnosing and treating allergic rhinitis
 - Reviewed signs of allergic rhinitis on physical exam for those in the practice that are not familiar with more subtle findings
- Limitations
 - The short study period did not enable data collection after the implementation of the fact sheet
 - The study only looked at a single location in the Vermont community and results may have been subject to undetectable bias

Slide 8: Future Projects

- Determine if the prevalence of allergic rhinitis changes after distribution of fact sheet to physicians in the practice
- Determine if the prevalence of allergic rhinitis diagnosis changes in patients with asthma after distribution of fact sheet to physicians in the practice
- Determine if more patients in the practice are formally evaluated for penicillin allergy after distribution of fact sheet to physicians in the practice
- Collect data for other practices in the area to determine if they have similar statistics

Slide 9: References

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