Optimization of Rhinosinusitis Care in a Resource-Limited Setting

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SLIDE 2: PROBLEM IDENTIFICATION

- Acute rhinosinusitis accounts for 1 in 5 antibiotic prescriptions for adults[1]
  - 5th most common reason for an antibiotic prescription
  - 2/3 of patient's symptoms subside without treatment

- **Description of need**
  - Medicaid is not currently covering over-the-counter prescriptions per pre-interview with Emily Sutton
  - Access to otolaryngologists are limited
  - Primary care providers need to know how to manage rhinosinusitis in the outpatient setting and help low-income and Medicaid patients navigate their prescriptions

- **AHEC Focus Area**: Social Determinants of Health

SLIDE 3: PUBLIC HEALTH COSTS RELATED TO ACUTE/CHRONIC RHINOSINUSITIS

- Chronic rhinosinusitis affects approximately 14-16% of the adult U.S. Population[2]

- Rhinosinusitis is a leading cause of employees missing work and short-term disability (accounting for 11.5 million workdays missed)[3]
    - This number has increased over the years to account for 73 million restricted activity days[4]

- Overall, the care that is provided to patients with sinusitis costs approximately 3.9 to 12 billion dollars (USD) annually[5]

SLIDE 4A: COMMUNITY PERSPECTIVE

Interview I: *Emily Sutton, PharmD* – Clinical Pharmacist at Community Health Centers of Burlington

- There have been recent changes to Medicaid that do not cover over-the-counter prescription medications
  - The patients on Medicaid and those at the Community Health Centers cannot afford these over-the-counter medications if they have to pay out-of-pocket
- Prior to placing a referral to UVM Otolaryngology—Head & Neck Surgery:
  - Providers typically try first, second, and sometimes the third-line treatment
  - However, due to limited otolaryngologists in Vermont, a lot of referrals are denied given that there is no surgical intervention needed
  - This leaves both patients and primary care providers trying various treatments
- If patients are seen by UVM Otolaryngology—Head & Neck Surgery as a consultation, primary care physicians have noted:
  - There are great recommendations, but patients sometimes have a difficult time comprehending the available treatments for them if there is no surgical intervention needed

SLIDE 4B: COMMUNITY PERSPECTIVE

Interview II: *Patient* at Community Health Centers of Burlington and Community Member

- Patient has been diagnosed with chronic rhinosinusitis and has been evaluated by UVM Otolaryngology—Head & Neck Surgery
- Prior to being seen by UVM Otolaryngology, they tried cetirizine, Benadryl, fluticasone nasal spray, and daily nasal irrigation which did not help with their symptoms
- On chart review, the patient had a comprehensive history taken and physical exam performed with flexible laryngoscopy – 5 different types of treatments were offered for the patient to try
- The patient reported that despite their symptoms affecting their quality of life, they:
  - Cannot afford the medications needed to treat their symptoms
  - Are unsure how to properly use the daily nasal irrigation and/or intranasal corticosteroid
  - Feel like their primary care provider does not know how to adequately treat their chronic rhinosinusitis

SLIDE 5: INTERVENTION AND METHODOLOGY

- **Intervention**:
  - Provide providers and patients with a list of all common over-the-counter (OTC) medications used to treat both acute and chronic rhinosinusitis from up-to-date to use as a treatment guidance aid
  - Provide providers with the locations in and near Burlington, VT that have the cheapest OTC medications so that they can send the medication in and patients can use GoodRx for discount

- **Methodology**:

- Comparison of the prices of OTC medications to help treat acute and chronic rhinosinusitis based on the American Academy of Otolaryngology—Head & Neck Surgery Guidelines
  - Utilizing GoodRx platform, transformed the prices into an excel sheet to compare which store had the cheapest prices of the medication
  - This can help providers know where the cheapest OTC medications are in town to improve access to medications for rhinosinusitis

SLIDE 6: RESULTS

1. **<u>Treatment Aid Flowchart</u>**
   - Up-to-Date
   - Providers can use this aid to understand which medications the patient has tried
     - Also, can be used during office visit and provider can circle the treatment(s) that they would like the patient to use for treatment

2. List of Resources for providers for where the cheapest medications can be bought, using GoodRx
   - Costco had the cheapest options for patients
   - The author called Costco, who reported that only patients who have Costco memberships are able to purchase OTC medications and receive benefits of prescription medications
   - A standard Costco membership at the time this study was published was about $65 per year

SLIDE 7A: EVALUATION OF EFFECTIVENESS

1. Provider survey before and after regarding knowledge of where to send prescriptions for patients who are on Medicaid so that they can get the cheapest prescriptions
   - Likert scale with approximately 5 questions
   - If the treatment aid and resource list was effective, then we would find a statistically significant difference in provider knowledge before and after they were given the treatment aid and list of resources

2. Patient surveys for patients with different insurance statuses (Medicaid, Medicare, BCBS, and no insurance) asking them if after they were provided with the cheapest options of medications, if they were able to save money
   - It would be important to compare savings between the different groups and determine if patients saved money compared to buying them where they typically would go (or if their insurance covered it)
   - If providing patients with the resource aid and the most cost-effective price was effective, then we would see a statistically significant difference in price patients would have paid for their medications and price they paid with the resource aid

SLIDE 7B: EVALUATION OF LIMITATIONS

- The resource aid is currently only in English and there could be educational and language barriers that do not allow patients to comprehend the treatment
- Some patients may not have transportation or other means to access the various locations available since not all pharmacies included are on the bus line
- Patients may try to use all treatments available at once or not in the way it is intended which could make their condition worse
- Patients might also try treatments for a shorter period of time than necessary to see benefit and then move onto other treatments

SLIDE 8: RECOMMENDATIONS FOR FUTURE INTERVENTIONS

- In order to help patients who are low income or on Medicaid/no insurance, given that Costco had the majority of the cheapest interventions, it would be beneficial to try and create a partnership between the University of Vermont Health Network, Community Health Centers of Burlington, and Costco so that eligible patients would be able to access Costco's OTC medications/prescriptions
  - An application that providers fill out for their patients based on eligibility could be created to allow access only to Costco's OTC medications and prescriptions
- Explore whether or not medication kits could be created by CHCB's Pharmacy Department to help with treatment
- Utilization of social work case management to create patient-assisted programs to help address barriers that patients might have included how to use distilled water or boil water for Neti Pot use or related treatments

SLIDE 9: REFERENCES

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