

CLINICAL PRACTICE GUIDELINES UPDATE APP



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AGENDA

- What are Clinical Practice Guidelines (CPG) and how are they used
- What is the problem with how doctors currently use the CPG
- How can we solve this issue





CLINICAL PRACTICE GUIDELINES

- General guidelines for doctors regarding patient diagnosis and treatment
- One for almost every issue (e.g., depression, asthma, etc.)
- Updated every 3-5 years
- Do not have to strictly follow

PROBLEM WITH CLINICAL PRACTICE GUIDELINES

- Each set of guidelines is updated at different times
- Hard to keep track of all updates
- Doctors who have practiced for a long time may be more familiar with older versions





SOLUTION AND PROOF OF CONCEPT

- Provides summary guidelines
- Finds differences between old and updated guidelines

2. 2020 Guideline: International Consensus Statement on Allergy and Rhinology

- **Scope and Objective:** This guideline aims to address diagnostic and therapeutic approaches for rhinitis, with a strong emphasis on differentiating between allergic and non-allergic forms and improving the accuracy of diagnosis.
- **Key Recommendations:**
 - **Diagnosis:**
 - Emphasizes a detailed clinical history as the cornerstone of diagnosis, including triggers, symptom patterns, and family history.
 - Recommends skin prick testing or specific IgE testing for confirmation of allergic rhinitis.
 - **Treatment:**
 - **Medication Review:** Clinicians should evaluate current medications to rule out drug-induced rhinitis.
 - **Validated Instruments:** Use of validated questionnaires or scales to assess the severity of rhinitis and monitor treatment effectiveness.
 - **Strong Recommendations:** The guideline strongly recommends a detailed history, physical examination, and allergen testing for diagnosis. It also suggests not using food allergen testing routinely for AR.

Key Differences:

- **Diagnosis Approach:** Both guidelines emphasize the importance of clinical history and specific IgE testing for diagnosing AR, but the 2020 guideline places a stronger emphasis on the detailed clinical history and the exclusion of non-allergic triggers.
- **Treatment Recommendations:** While both guidelines recommend intranasal steroids as first-line therapy, the 2015 guideline additionally recommends second-generation antihistamines prominently, while the 2020 guideline focuses more on ruling out drug-induced rhinitis and using validated instruments to monitor the condition.
- **Imaging and Testing:** The 2015 guideline explicitly advises against routine sinonasal imaging for AR diagnosis, which is not discussed in the 2020 guideline with the same clarity.
- **Flexibility and Patient-Centered Care:** Both guidelines emphasize the importance of shared decision-making, but the 2020 guideline specifically discusses the need for validated tools to aid in assessing severity and treatment outcomes, reflecting a more structured approach to patient assessment.



Summary of the Clinical Practice Guidelines on Allergic Rhinitis

1. 2015 Guideline: Otolaryngology–Head and Neck Surgery (AAO-HNSF)

- **Scope and Objective:** Focused on quality improvement for clinicians treating both pediatric and adult patients with allergic rhinitis (AR). It aims to standardize care, improve diagnosis and treatment, and reduce variations in clinical practices.
- **Key Recommendations:**
 - **Diagnosis:**
 - Clinical diagnosis based on history and physical examination. Key symptoms include nasal congestion, runny nose, itchy nose, or sneezing.
 - Specific IgE testing (skin or blood) is recommended if the diagnosis is uncertain or if the patient does not respond to treatment.
 - **Treatment:**
 - **First-line:** Intranasal steroids for patients whose symptoms affect quality of life.
 - **Antihistamines:** Second-generation, less sedating antihistamines are recommended for primary symptoms like sneezing and itching.
 - **Immunotherapy:** Sublingual or subcutaneous immunotherapy is recommended for patients not responding to pharmacological treatment.
 - **Imaging:** Routine sinonasal imaging is not recommended for diagnosing AR.
- **Flexibility:** The guideline emphasizes the role of clinical judgment and acknowledges that recommendations should not limit individualized patient care.

IMPROVEMENTS

- Make into mobile app – AWS Amplify
- Store all Clinical Practice Guidelines – Amazon S3
- Parse data – AWS Textract
- Analysis of guidelines – Amazon Comprehend
- Get updates in real time – AWS Lambda and AppSync
- Customizable notification system – Amazon SNS



THANK YOU



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