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Practice Parameter

Diagnosis and management of rhinosinusitis: a practice parameter update

Anju T. Peters, MD; Sheldon Spector, MD; Joy Hsu, MD; Daniel L. Hamilos, MD; Fuad M. Baroody, MD; Rakesh K. Chandra, MD; Leslie C. Grammer, MD; David W. Kennedy, MD; Noam A. Cohen, MD, PhD; Michael A. Kaliner, MD; Ellen R. Wald, MD; Achilles Karagianis, MD; and Raymond G. Slavin, MD
Chief Editors: Anju T. Peters, MD; Sheldon Spector, MD

This parameter was developed by the Joint Task Force on Practice Parameters, representing the American Academy of Allergy, Asthma and Immunology, the American College of Allergy, Asthma and Immunology, and the Joint Council of Allergy, Asthma and Immunology.

Disclaimer: The American Academy of Allergy, Asthma and Immunology (AAAAI) and the American College of Allergy, Asthma and Immunology (ACAAI) have jointly accepted responsibility for establishing the "Diagnosis and Management of Rhinosinusitis: A Practice Parameter Update." This is a complete and comprehensive document at the current time. The medical environment is a changing environment, and not all recommendations will be appropriate for all patients. Because this document incorporated the efforts of many participants, no single individual, including those who served on the Joint Task force, is authorized to provide an official AAAAI or ACAAI interpretation of these practice parameters. Any request for information about or an interpretation of these practice parameters by the AAAAI or ACAAI should be directed to the Executive Offices of the AAAAI, the ACAAI, and the Joint Council of Allergy, Asthma and Immunology (JCAAI). These parameters are not designed for use by pharmaceutical companies in drug promotion.

Reprints: Reprints are not available, but published parameters may be downloaded at the JCAAI Web site: http://www.jcaai.org or at http://www.allergyparameters.org.

Disclosures: The following is a summary of interests disclosed on Work Group members' Conflict of Interest Disclosure Statements (not including information concerning family member interests). Completed Conflict of Interest Disclosure Statements are available upon request. Conflicts of interest disclosure statements for the Joint Taskforce (JTF) are available on its Web site. Dr Peters is a consultant for Baxter. Dr Spector has received research grants from AstraZeneca, GSK, Merck, Novartis, BI, Genentech, TEVA, Sanofi Aventis, Amgen, Cephalon, Johnson & Johnson, and Cytos; has consulted for Novartis and BI; has received honorarium from AstraZeneca and Merck; and served as speaker for AstraZeneca. Dr Baroody is a consultant for Johnson & Johnson and served as speaker for Merck. Dr Cohen is a consultant and speaker for Acclarent (J&J). Dr Hamilos received a research grant from Merck and is a consultant for Merck and Sanofi. Dr Kaliner is a speaker and consultant for Meda, Genentech, Mylan, Sanofi, and McNeil. Dr Kennedy has received royalties from Medtronic-Xomed; served on the medical advisory boards of Merck, Sinuwave, and IntersectEnt; is a partner in AcceptEnt; and is medical director of EntEntCare. The other Working Group members have nothing to disclose. The JTF recognizes that experts in a field are likely to have interests that could come into conflict with development a completely unbiased and objective practice parameter. To take advantage of that expertise, a process has been developed to prevent potential conflicts from influencing the final document in a negative way. At the workgroup level, members who have a potential conflict of interest do not participate in discussions concerning topics related to the potential conflict or, if they do write a section on that topic, the workgroup completely rewrites it without their involvement to remove potential bias. In addition, the entire document is reviewed by the JTF and any apparent bias is removed at that level. Finally, the practice parameter is sent for review by invited reviewers and by anyone with an interest in the topic by posting the document on the web sites of the ACAAI and the AAAAI.

Contributors: The JTF has made a concerted effort to acknowledge all contributors to this parameter. If any contributors have been excluded inadvertently, the JTF will ensure that appropriate recognition of such contributions is made subsequently. **Workgroup Chair:** Anju T. Peters, MD, Associate Professor of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, Illinois. **Joint Taskforce Liaison:** Sheldon L. Spector, MD, Clinical Professor of Medicine, UCLA School of Medicine, Los Angeles, California. **Joint Task Force Members:** David I. Bernstein, MD, Professor of Clinical Medicine and Environmental Health, Division of Allergy/Immunology, University of Cincinnati College of Medicine, Cincinnati, Ohio; Joann Blessing-Moore, MD, Adjunct Clinical Associate Professor of Medicine and Pediatrics, Department of Immunology, Stanford University Medical Center, Palo Alto, California; David A. Khan, MD, Associate Professor of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, Texas; David M. Lang, MD, Head, Allergy/Immunology Section, Division of Medicine, Director, Allergy and Immunology Fellowship Training Program, Cleveland Clinic Foundation, Cleveland, Ohio; Richard A. Nicklas, MD, Clinical Professor of Medicine, George Washington Medical Center, Washington, DC; John Oppenheimer, MD, Department of Internal Medicine, New Jersey Medical School, Pulmonary and Allergy Associates, Morristown, New Jersey; Jay M. Portnoy, MD, Chief, Section of Allergy, Asthma & Immunology, The Children's Mercy Hospital, Professor of Pediatrics, University of Missouri-Kansas City School of Medicine, Kansas City, Missouri; Christopher C. Randolph, Clinical Professor of Pediatrics, Yale Affiliated Hospitals, Center for Allergy, Asthma, & Immunology, Waterbury, Connecticut; Diane E. Schuller, MD, Professor of Pediatrics, Pennsylvania State University Milton S. Hershey Medical College, Hershey, Pennsylvania; Sheldon L. Spector, MD, Clinical Professor of Medicine, UCLA School of Medicine, Los Angeles, California; Stephen A. Tilles, MD, Clinical Assistant Professor of Medicine, University of Washington School of Medicine, Redmond, Washington; Dana Wallace, MD, Assistant Clinical Professor of Medicine, Nova Southeastern University College of Osteopathic Medicine, Davie, Florida. **Parameter Workgroup Members (alphabetical order):** Fuad M. Baroody, MD, Section of Otolaryngology-Head and Neck Surgery, The University of Chicago Medicine and the Pritzker School of Medicine, Chicago, Illinois; Rakesh K. Chandra, MD, Department of Otolaryngology Head and Neck Surgery, Northwestern University Feinberg School of Medicine, Chicago, Illinois; Noam A. Cohen, MD, PhD, Department of Otorhinolaryngology, Head and Neck Surgery, University of Pennsylvania, Philadelphia, Pennsylvania; Leslie C. Grammer, MD, Professor of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, Illinois; Daniel L. Hamilos, MD, Division of Rheumatology, Allergy & Immunology, Massachusetts General Hospital, Boston, Massachusetts; Joy Hsu, MD, Allergy-Immunology Fellow, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, Illinois; Michael A. Kaliner, MD, George Washington University School of Medicine, Washington, DC, and the Institute for Asthma and Allergy, Chevy Chase, Maryland; David W. Kennedy, MD, Department of Otorhinolaryngology, Head and Neck Surgery, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; Raymond G. Slavin, MD, Division of Pediatric Allergy & Immunology, Saint Louis University, St. Louis, Missouri; Ellen R. Wald, MD, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin.

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Members of the Joint Taskforce on Practice Parameters: David Bernstein, MD; Joann Blessing-Moore, MD; David Khan, MD; David Lang, MD; Richard Nicklas, MD; John Oppenheimer, MD; Jay Portnoy, MD; Christopher Randolph, MD; Diane Schuller, MD; Sheldon Spector, MD; Stephen A Tilles, MD; Dana Wallace, MD

Practice Parameter Workgroup: Anju T. Peters, MD; Sheldon Spector, MD; Joy Hsu, MD; Daniel L. Hamilos, MD; Fuad M. Baroody, MD; Rakesh K. Chandra, MD; Noam A. Cohen, MD, PhD; Leslie C. Grammer, MD; Michael A. Kaliner, MD; David W. Kennedy, MD; Achilles Karagianis, MD; Ellen R. Wald, MD; Raymond G. Slavin, MD

Classification of recommendations and evidence

Recommendation rating scale

Statement	Definition	Implication
Strong recommendation (StrRec)	A strong recommendation means the benefits of the recommended approach clearly exceed the harms (or that the harms clearly exceed the benefits in the case of a strong negative recommendation) and that the quality of the supporting evidence is excellent (Grade A or B)*. In some clearly identified circumstances, strong recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits strongly outweigh the harms.	Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.
Recommendation (Rec)	A recommendation means the benefits exceed the harms (or that the harms clearly exceed the benefits in the case of a negative recommendation), but the quality of evidence is not as strong (Grade B or C)*. In some clearly identified circumstances, recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits outweigh the harms.	Clinicians also should generally follow a recommendation but should remain alert to new information and sensitive to patient preferences.
Option (Opt)	An option means that the quality of evidence that exists is suspect (Grade D)* or that well-done studies (Grade A, B, or C)* show little clear advantage to one approach vs another.	Clinicians should be flexible in their decision making regarding appropriate practice, although they may set bounds on alternatives; patient preference should have a substantial influencing role.
No recommendation (NoRec)	No recommendation means there is a lack of pertinent evidence (Grade D)* and an unclear balance between benefits and harms.	Clinicians should feel little constraint in their decision making and be alert to new published evidence that clarifies the balance of benefit vs harm; patient preference should have a substantial influencing role.

Category of evidence

- Ia Evidence from meta-analysis of randomized controlled trials
- Ib Evidence from at least 1 randomized controlled trial
- IIa Evidence from at least 1 controlled study without randomization
- IIb Evidence from at least 1 other type of quasi-experimental study
- III Evidence from nonexperimental descriptive studies, such as comparative studies
- IV Evidence from expert committee reports or opinions or clinical experience of respected authorities or both

*Strength of recommendation**

- A Directly based on category I evidence
- B Directly based on category II evidence or extrapolated recommendation from category I evidence
- C Directly based on category III evidence or extrapolated recommendation from category I or II evidence
- D Directly based on category IV evidence or extrapolated recommendation from category I, II, or III evidence
- LB Laboratory based
- NR Not rated

How this practice parameter was developed

The Joint Taskforce on Practice Parameters

The Joint Taskforce (JTF) on Practice Parameters is a 13-member taskforce consisting of 6 representatives assigned by the American Academy of Allergy, Asthma and Immunology, 6 by the American College of Allergy, Asthma and Immunology, and 1 by the Joint Council of Allergy and Immunology. This taskforce oversees the development of practice parameters; selects the workgroup chair(s); and reviews drafts of the parameters for accuracy, practicality, clarity, and broad utility of the recommendations for clinical practice.

Diagnosis and Management of Rhinosinusitis Practice Parameter Workgroup

The Diagnosis and Management of Rhinosinusitis: A Practice Parameter Update workgroup was commissioned by the JTF to develop practice parameters that address Rhinosinusitis. The chair (Anju T. Peters, MD) invited workgroup members to participate in the parameter development who are considered experts in the field. Workgroup members have been vetted for financial conflicts of interest by the JTF and their conflicts of interest have been listed in this document and are posted on the JTF Web site at http://www.allergyparameters.org. Where a potential conflict of interest is present, the potentially conflicted workgroup member was excluded from discussing relevant issues.

The charge to the workgroup was to use a systematic literature review in conjunction with consensus expert opinion and workgroup-identified supplementary documents to develop a practice parameter that provides a comprehensive approach for rhinosinusitis based on the current state of the science.

Protocol for finding evidence

A search of the medical literature was performed by searching PubMed and Google Scholar. References identified as being relevant