Introduction to the Diagnosis and Management of Cough
ACCP Evidence-Based Clinical Practice Guidelines

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(Key words: acute cough; chronic cough; clinical practice guideline; subacute cough)

The impact of cough on health is substantial. It can (1) be an important defense mechanism that helps clear excessive secretions and foreign material from the airways; (2) be an important factor in the spread of infection; and (3) present as one of the most common symptoms for which patients seek medical attention and spend health-care dollars.1

Cough of undifferentiated duration is one of the most common complaints for which patients seek medical attention. In fact, it is the most common complaint leading patients to consult with primary care physicians in the United States and Australia.2,3 Of the estimated 829.3 million visits to office-based physicians in the United States in 1998, 3.6%, or 29.5 million visits, were for cough.2 Because the common cold is the most common affliction of man and woman, and it is almost always accompanied by an acute4 (ie, < 3 weeks in duration)5 and usually self-limited cough, it is likely that the greatest majority of these coughs being seen by primary care physicians are acute in duration. Additionally, referral of a patient with a persistently troublesome chronic cough (ie, > 8 weeks in duration)5 of unknown etiology has been shown to be one of the most common reasons for new patient visits to pulmonologists or respirologists.1

While the annual aggregate cost of treating cough on a global basis is not known, it can be conservatively estimated to exceed several billion dollars.6

This estimate is primarily derived from data from the over-the-counter market for cough and cold products collected in 1999. It has been estimated that in the United Kingdom and United States hundreds of millions of pounds and several billion dollars, respectively, are spent for these products that for the most part are at best only partially effective.6 These figures clearly underestimate the total cost of treating cough because they do not include the cost of prescription drugs for the common cold and other causes of acute and subacute cough (ie, cough of between 3 and 8 weeks duration),5 or the treatment of chronic cough. Because cough is one of the most common complaints for which patients seek medical attention and health-care expenditures for treating cough are substantial, it is important to publish an up-to-date evidence-based clinical practice guideline for diagnosing and treating cough in adult and pediatric populations. Because diagnostic and therapeutic recommendations may differ between adult and pediatric populations, especially in patients who are < 15 years of age, clinicians caring for pediatric populations are encouraged to first refer to the pediatric section, and to the pediatric portions of the section on “Habit and Psychogenic Cough.” Because the literature and recommendations in all other sections of this guideline are primarily adult-focused, caution is advised when extrapolating these recommendations to the pediatric populations.

Recognition of the importance of cough in clinical medicine was the impetus for the original evidence-based “Consensus Panel Report on Managing Cough as a Defense Mechanism and Symptom,” published in 1998,1 and for this updated revision. Compared to the original cough consensus statement, the objectives of this revision were as follows: (1) to more narrowly focus the guidelines to the diagnosis and treatment of cough the symptom in adult and the pediatric populations, and to minimize the discussion of cough as a defense mechanism; (2) to improve on the rigor of the evidence-based review and to describe the methodology in a separate section; (3) to

*The author does not have any conflicts of interest to disclose. While he has served on the Advisory Board of Deep Breeze, a biomedical technology company that is developing a new way to image the lungs, during the writing of this document, this activity has not had anything directly or indirectly to do with cough and specifically the diagnosis or treatment of cough. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians (www.chestjournal.org/misc/reprints.shtml). Correspondence to: Richard S. Irwin, MD, FCCP, University of Massachusetts Medical School, Room 86-842, 55 Lake Ave North, Worcester, MA; e-mail address: Irwinr@ummhc.org
update and expand all previous sections when appropriate; and (4) to add new sections not previously covered. These new sections include nonasthmatic eosinophilic bronchitis; acute bronchitis; nonbronchiectatic suppurative airway diseases; cough due to aspiration secondary to pharyngeal dysfunction; environmental/occupational causes of cough; tuberculosis and other infections; cough in the dialysis patient; uncommon causes of cough; unexplained cough previously referred to as idiopathic cough; an empiric integrative approach to the management of cough; assessing cough severity and efficacy of therapy; potential future therapies; and future directions for research.

To mitigate future diagnostic confusion, the Committee, by consensus and expert opinion, introduces and recommends substituting two new diagnostic terms for two older terms that may represent misnomers. It is recommended that the term unexplained cough replace the term idiopathic cough, and that the term upper airway cough syndrome replace the term postnasal drip syndrome. The reasoning behind these substitutions can be found in their respective sections.

Because the testing characteristics (ie, sensitivity, specificity, and positive and negative predictive values) of the individual components of a diagnostic testing protocol are covered, when the data are available, within each disease section, there is no separate section that specifically deals with this information. While the testing characteristics of some tests such as assessing indices of inflammation in induced sputum are unknown, the Committee by consensus continues to conclude the following: the principal strength of diagnostic testing is in ruling out suspected possibilities. The principal limitation is that a positive test result cannot necessarily be relied on to establish the diagnosis; a positive test result has not been able to consistently predict a favorable response to specific therapy. A positive test result, by itself, is not diagnostic of the cause of cough unless a favorable response to therapy is witnessed.

The format of this clinical practice guideline is as follows. It begins with an executive summary of the clinical recommendations. This is followed by an extensive review of the literature, divided into sections, that contains diagnostic and therapeutic recommendations; recommendations are repeated verbatim in the “Summary of Recommendations” at the end of each section. The concluding sections provide (1) a collation of anticipated therapeutics that are currently in clinical trials or under consideration for approval for future treatment and (2) an array of proposed topics for future research in areas in which there is currently a dearth of evidence. The strength of recommendations grading system is described in detail in the section on “Methodology.” Briefly, the grading of the strength of recommendations is based on both the quality of the evidence and the net benefit of the diagnostic or therapeutic procedure. In the descriptions of methods in each section, there is a wide variety of start dates for the various literature searches. Many of the searches begin with the early MEDLINE or PubMed conception, but other dates were selected based on the author’s knowledge of when a particular topic first appeared in the literature or became a germane issue. By providing summaries in different formats and different contexts, the Committee hopes to meet the potential varied needs of readers who, on the one hand, might want to read a quick overview of the subject; or, on the other hand, might want to use the document as an evidenced-based reference source and for in-depth selected reading. With respect to recommendations, the Committee unanimously agreed to occasionally include a clinically important treatment that has been shown to be effective for a specific disease even when the evidence was based on a clinical outcome other than cough.

The Committee consisted of individuals with expertise and research experience related to cough from the fields of adult and pediatric pulmonology and respirology, pharmacology, neurology, speech and swallowing, and anatomy and physiology. The Committee was international in scope with individuals from Australia, Canada, the United Kingdom, and the United States. Official representatives from the three liaison organizations, the American College of Physicians, the American Thoracic Society, and the Canadian Thoracic Society, were active participants in the panel.

When a disagreement occurred concerning the interpretation of data, the Committee reviewed the controversy in question and was able to agree by consensus. The final report was reviewed by the Committee panel members; members of the Health and Science Committee of the American College of Chest Physicians; a representative from the Clinical Pulmonary Medicine, Respiratory Care, Pediatric Chest Medicine, Occupation and Environmental Health, and Airway Disorders Networks of the American College of Chest Physicians, the Board of Regents of the American College of Chest Physicians, the Board of Directors of the American Thoracic Society, and the Standards Committees of the Canadian Thoracic Society.

References