Raising Awareness of COPD in Primary Care*

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COPD is a major cause of mortality and a significant drain on health-care resources but is widely underdiagnosed in the primary-care setting. There is an urgent need to raise the profile of the disease among both primary-care physicians and patients. At the workshop “COPD: Working Towards a Greater Understanding,” a panel of COPD experts from Europe and the United States discussed ways in which awareness of COPD could be raised. Access to spirometry, and education in its use and relevance, was identified as a major goal for primary-care physicians. Simple questionnaires can promote patient awareness and provide feedback to physicians. COPD needs to be identified as not just a disease of smokers.

Key words: awareness; COPD; diagnosis; prevalence

COPD represents a significant drain on health-care resources, yet COPD is significantly underdiagnosed. If the burden of this disease is to be reduced over the coming years, it will be essential to improve awareness and raise the profile of the disease among primary-care physicians and their patients.

Evidence from the field of cardiovascular medicine demonstrates that a major public health campaign can successfully raise awareness of risk factors and can influence treatment patterns. For example, the United States National High Blood Pressure Education Program, established in 1972, resulted in an increased awareness of hypertension among patients, from 51% in 1976 to 1980, to 73% in 1988 to 1991, and to 68% in 1991 to 1994. Treatment levels by physicians also have risen, from 31% in 1976 to 1980, to 55% in 1988 to 1991, and to 53% in 1991 to 1994. During the 1980s, the activities of the National Cholesterol Education Program resulted in an increased awareness and treatment of hypercholesterolemia. For example, the numbers of adults who reported having their cholesterol level checked increased from 35 to 65% between 1983 and 1990. In addition, by 1990, >90% of the 1,600 physicians contacted were aware of the recommendations of the National Cholesterol Education Program Expert Panel Report.²

The value of educational activities within the field of respiratory medicine also has been recognized with the establishment of the National Lung Health Education Program in 1998.³ “Test Your Lungs, Know Your Numbers” is an important primary-care and public education initiative being driven by the National Lung Health Education Program. For the full potential of this effort to be realized, however, fundamental mortality and morbidity issues surrounding COPD will need to be reinforced on an ongoing basis.

The image of COPD has a common, though misguided, perception of being a self-inflicted disease of elderly smokers. Compounding this poor image, sufferers often consider symptoms of the disease to be a natural part of aging and are reluctant to seek medical advice. Primary-care physicians may commonly express a nihilistic view and approach regarding the treatment and prognosis of these patients.

At a workshop entitled “COPD: Working Towards a Greater Understanding,” a group of respiratory physicians from the United States and Europe explored ways of changing the current view of COPD, focusing on ways of improving its image and raising awareness. Elevating the profile of this common and debilitating disease among primary-care physicians and their patients was recognized as the key route to achieving this objective. This article summarizes the results of the workshop. Pulmonary specialists, and those who influence primary care, will play a vital role in disseminating the message that COPD is an
important lung disease the treatment and prognosis of which benefit from early detection and intervention.

COPD: THE OTHER LUNG DISEASE

Internationally, there is great awareness among primary-care physicians and patients surrounding major lung diseases such as lung cancer and asthma. However, few recognize “the other lung disease” COPD, and fewer still are aware that COPD is rapidly becoming a major global health-care concern.

The importance of COPD as a major, worldwide respiratory health problem should not be underestimated. In 1990, COPD was estimated to be the 12th greatest burden of disease (measured using disability-adjusted life-years). By 2020, however, COPD is predicted to rise to fifth place, after ischemic heart disease, unipolar major depression, road traffic accidents, and cerebrovascular accidents.

In 1998, the World Health Organization estimated that 4.2% of deaths worldwide were due to COPD, making this disease the fifth most common cause of death. By the year 2020, it is estimated that COPD will become the third most common cause of death.

The immensity of the problem represented by COPD today, and the fact that it is expected to get worse over the next 2 decades, is a clear message that needs to be disseminated to primary-care physicians.

PUTTING A FACE TO COPD: RAISING THE PROFILE

Cigarette smoking is well established as the major risk factor for COPD. However, many smokers may not develop clinically significant airflow limitation, although it has been estimated that about 10 to 30% of smokers will develop COPD. Furthermore, other evidence suggests that as many as 10% of nonsmokers will develop the disease, perhaps as a consequence of exposure to air pollution, as a consequence of their genetic susceptibility, or both. Patients with long-standing asthma also may develop COPD. Thus, while COPD is a disease of smokers, it is not only a disease of smokers.

Owing to the large pulmonary function reserve, airflow obstruction can progress undetected for many years without the development of overt clinical symptoms of disease. Thus, while many patients diagnosed with COPD are elderly, a decline in lung function often can be detected in smokers as young as 40 years of age. Not only should primary-care physicians therefore consider COPD in younger at-risk patients, they should also consider investigat-

ing airflow obstruction in at-risk individuals who are not yet complaining of respiratory symptoms.

While COPD patients are viewed traditionally as being either “blue bloaters” or “pink puffers,” guidelines have made efforts to stress that many patients will fall into neither group. The image of COPD does not include, for example, a 42-year-old nonsmoking woman with α₁-antitrypsin deficiency, or the 35-year-old male smoker who has a chronic, productive cough but does not consider these symptoms worthy of mention to his primary-care physician.

To ensure that COPD is diagnosed at an early stage in patients, before daily activities become significantly limited, and to ensure that interventions are initiated where appropriate, it is vital to expand the perception of the disease beyond its being a disease affecting smokers and to explain that COPD is a disease that affects people in their 30s and 40s, and is not solely a disease of the elderly.

VALUE OF EARLY DETECTION: SPIROMETRY MADE SIMPLE

Spirometric measurements of airflow obstruction, primarily FEV₁ and FVC, play a pivotal role in the objective diagnosis of COPD. However, few primary-care practices have access to spirometric equipment or the trained technicians required to produce meaningful results. In their 1997 guidelines, the British Thoracic Society recognized this inadequacy within the primary-care environment and identified the need to provide open-access hospital referral to lung function laboratories (similar to the access to radiographic facilities).

Not only do physicians need access to spirometry, they also need the motivation to use such equipment or services. Part of this motivation may come from encouraging physicians to test themselves, in much the same way they might test their own BP or cholesterol level, and to become familiar with the various parameters of lung function and patterns of lung function abnormalities. Thus, the use of spirometry in primary-care settings needs to focus on the most important aspects of lung function; in particular, the clinical meaning of FEV₁ and FVC need to be explained simply and readily.

In cardiovascular medicine, hypertension and hypercholesterolemia are now well-established risk factors for subsequent cardiovascular events. In a similar way, it is important to reinforce the importance of nonsymptomatic airflow obstruction and its association with increased morbidity and mortality. COPD should be regarded as an indolent disease process that only produces symptoms when a considerable loss of lung function has occurred. Most
Importantly, primary-care physicians need to understand that spirometry results predict mortality.

**Educating Patients Within Primary Care**

Educating and informing patients, in addition to primary-care physicians, will help to increase awareness of COPD. By alerting patients to the factors that may increase their risk of developing COPD and to the symptoms that they should recognize, they will be prompted to seek medical attention at an earlier stage in the disease process. Patient awareness within the primary-care setting should focus not only on those patients who are symptomatic, but also on those who are at risk of developing symptomatic COPD in the future. A short and simple self-administered questionnaire that covers not only symptoms but also risk factors would be an ideal vehicle to raise patient awareness and to seek the desired information.

**Conclusions and Recommendations**

Raising awareness of COPD among primary-care physicians so that the disease is detected during the course of usual medical care requires a two-pronged approach: education and empowerment. Physicians need to be educated about the enormous health burden that COPD, the “other lung disease,” represents in terms of morbidity and mortality. Physicians need to know that symptoms mean something, especially when present in individuals who do not fit the traditional picture of a “blue bloater” or a “pink puffer.” Physicians need to be aware that the profile of patients with COPD is not solely elderly infirm individuals, and they need to understand that smoking is a major risk factor for developing COPD but is not the only cause. Overall, a more positive image and perception of patients with COPD needs to be created, perhaps through a poster campaign or via an educational pamphlet directed at physicians.

Easy access to spirometry is essential for an objective diagnosis of COPD, but physicians will need to understand what the data mean and what should happen after diagnosis. Thus, spirometric measurements and their clinical relevance need to be explained in simple terms. Again, an educational pamphlet can be used for this purpose. Use of a simple questionnaire (Table 1) can help promote awareness among patients and can provide feedback to physicians about the scale of the problem within their clinics.

Importantly, primary-care physicians need to be motivated to make a difference. They need to understand what impact early diagnosis and early intervention will have on their patients’ current and future conditions. Physicians need to feel empowered to make a difference, and they need to know what that difference will be.

To date, smoking cessation is the only intervention that has been documented consistently to modify the rate of decline of lung function, even in relatively young smokers with only mild and moderate airflow obstruction. However, it is essential that COPD intervention does not equate solely with stopping patients from smoking. Initiatives aimed at increasing awareness of COPD and the subsequent diagnosis of COPD must focus on what can be done for the patient, for example, in terms of improving lung function, symptoms, and quality of life, rather than on what cannot be done.

The early identification of COPD will no doubt improve the patient’s general well-being and the primary-care physician’s ability to improve longitudinal care. Increasing primary-care physician and patient awareness, hopefully, will provide a political force to discover and investigate new and effective disease-modifying interventions.

**Table 1—Proposed Questionnaire for Alerting Patients to the Signs and Symptoms of COPD**

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<thead>
<tr>
<th>Question</th>
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<tr>
<td>Do you suffer from</td>
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<td>Cough?</td>
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<td>Sputum production?</td>
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<tr>
<td>Shortness of breath?</td>
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<tr>
<td>Wheezing?</td>
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<td>Are you now, or have you been, a regular smoker?</td>
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<td>Did you need antibiotics for a cold last winter?</td>
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<td>Do you have trouble climbing stairs/carrying groceries?</td>
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<td>Have any of your family members suffered from respiratory diseases?</td>
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<td>Did you have respiratory illnesses as a child?</td>
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**Appendix**

The discussion panel consisted of the following participants: N.F. Voelkel, MD (Denver, CO); T.L. Petty, MD, Master FCCP (Denver, CO); D.W. Mapel, MD, MPH, FCCP (Albuquerque, NM); S.S. Hurd, PhD (Bethesda, MD); P. Stang, PhD (Blue Bell, PA); G. Viegi, MD (Pisa, Italy); R. Pauwels, MD, FCCP (Ghent, Belgium); S.I. Evenard, MD, FCCP (Omaha, NE); P.M.A. Calverley, MD (Liverpool, UK); S. Sethi, MD (Buffalo, NY); J.A. Nadel, MD (San Francisco, CA); and W. MacNee, MD (Edinburgh, UK).

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