COPD is the fourth leading cause of death in the United States, exceeded only by heart attacks, cancers, and stroke. As the recognition of the impact of COPD on health and mortality in the United States has grown, a number of programs have been set up in order to assess the scale of the problem, and how best to counter the growing burden of the disease. These programs and surveys are reviewed elsewhere in this Supplement, and underscore the importance of exploring approaches for early detection of disease, including pulmonary function measures, biochemical or immunologic tests, or identification of genetic markers of susceptible smokers.

Outside the United States, COPD has had a similar impact on health and mortality throughout the developed and underdeveloped world, and many of the important issues surrounding COPD in the United States apply elsewhere. On a worldwide scale, COPD is underdiagnosed, and it is vital to increase awareness of the disease in the primary-care setting. Similarly, smoking is the largest single contributor to the pathogenesis of COPD in any country, and smoking cessation would certainly head the list of strategies to combat COPD anywhere in the world. However, the projected increase in smoking rates throughout the world has led to the recognition that COPD will increase as a global burden of disease. Worldwide, COPD is the only leading cause of death that still has a rising mortality, and it has been estimated that by the year 2020, COPD will be fifth among the conditions that will be the most burden to society. It is therefore essential that strategies are implemented on a global scale to assess the prevalence of COPD, and to study the causes and outcomes of the disease and how best the burden of COPD might be mitigated.

Prevalence data on COPD depend on multiple factors: diagnostic criteria, confounding conditions, the need to make appropriate age adjustments, and the need to make adjustments for revisions in the International Classification of Disease codes. Thus, estimates of frequency and distribution of COPD tend to be inadequate and incomplete, and it is very difficult to make comparisons between countries. A variety of national medical and scientific bodies have devised guidelines for the diagnosis of COPD (Table 1) that have been used to estimate the prevalence of the disease in the respective countries and regions. Unfortunately, the guidelines are by no means consistent. A study by Viegi et al, elsewhere in this Supplement, demonstrates how estimates of the prevalence of COPD can be substantially different, depending on whether the guidelines of the American Thoracic Society or the European Respiratory Society are used.

Figure 1 provides mortality data for COPD and allied conditions for men and women aged 35 to 74 years in 25 industrialized countries for the latest year available from the World Health Organization (WHO). Taken at face value, these data indicate substantial variation among countries for both sexes, and it is likely that COPD will increase as a global burden of disease.
although death rates were lower among women than among men in every nation. Differences in COPD death rates among countries have attracted considerable attention, with multiple suggested hypotheses, including smoking behaviors, type and processing of tobacco used in cigarettes, outdoor and indoor pollution, climate, frequency and management of respiratory infections, and genetic factors. Some or all of these factors may well play an important role in the reported differences in death rates. However, the lack of standardization of death certification and coding practices, as well as differences between countries in diagnostic practices and availability and quality of medical care, severely limits the scope for interpretation of the data. Clearly, no meaningful international comparisons of COPD prevalence, severity, or response to treatment can be possible until investigators can be confident that they are all using the same standards of measurement.

In an effort to develop a public health approach to COPD and to develop better classification schemes to identify individuals at risk, the National Heart, Lung, and Blood Institute (NHLBI), in collaboration with the WHO, has implemented a Global Initiative for Obstructive Lung Disease (GOLD). The aim of this initiative is to develop and disseminate public health strategies to reduce the burden of COPD. The objectives of the GOLD initiative have been defined as follows:

1. To recommend effective COPD management and prevention strategies for use in all countries.
2. To increase the awareness of the medical community and public health officials and the general public that COPD is a public health problem.
3. To decrease morbidity and mortality from COPD through implementation and evaluation of effective programs for diagnosis and management.
4. To promote study into reasons of increasing prevalence of COPD, including the relationship with the environment.
5. To implement effective programs to prevent COPD.

Another major goal of the GOLD is to develop approaches for collection of data on COPD to

![Figure 1. Age-adjusted death rates for COPD by country and sex, in individuals aged 35 to 74 years. Year of data shown in parentheses.](image-url)
yield better intercountry and intracountry comparisons. A panel of experts, working with existing COPD guidelines from multiple countries, is developing a program document that will be available for distribution by early 2000. This will address the need for a consistent set of guidelines, and make recommendations for their implementation. At that time, the NHLBI and the WHO will collaborate on dissemination. The implementation of consistent guidelines for diagnosis and management of COPD is an essential undertaking if the best use is to be made of the wealth of data from public health surveys and investigations arising from the international community.

**SUMMARY**

COPD is the only leading cause of death that is increasing in prevalence. While it is known that cigarette smoking is the major cause of this disease, and it is therefore largely preventable, COPD is already a major burden on the health-care community, a burden that will continue to escalate around the world in the next century. Work is underway through an NHLBI/WHO GOLD initiative to bring information about COPD to public health officials, the medical community, and the public. However, more effective methods are required for early detection of disease.

**REFERENCES**