The Economic Burden of COPD in the Workplace

Interview with William B. Bunn, III, MD, JD, MPH

Healthcare costs, disability, and lost productivity from chronic obstructive pulmonary disease are of vital relevance to business management. In this interview conducted by Dr Vogenberg, Dr Bunn discusses the economic burden of chronic pulmonary disease on employers, and why proper management of employees with this progressive condition can save significant costs to the company, while also improving productivity. Applying his Employer Impact model, which measures the actuarial burden of illness, to chronic pulmonary disease in his company, Dr Bunn found that medical costs alone were 3 times greater for employees with this disease than for others. Absenteeism and presenteeism are particularly prevalent to this patient population. Raising awareness to smoking cessation in the workplace and implementing successful incentives to stop smoking can greatly improve productivity and reduce costs to employers. The interaction of business and regulatory initiatives can help reduce the economic burden of this disease. [AHDB. 2009;2(4):198-200.]

F. Randy Vogenberg, RPh, PhD: How does chronic obstructive pulmonary disease (COPD) affect people in the workplace, both as patients and as family caregivers? What are the effects on productivity?

William B. Bunn, III, MD, JD, MPH: Healthcare costs, lost productivity, absenteeism, and presenteeism are the major effects of COPD in the workplace. Our research and other studies have shown that COPD translates into a high cost for the patient with this diagnosis, and a large proportion of that cost is the result of lost productivity.¹²

Vogenberg: Are there any differences in impact between a union population and a white collar or management population with COPD?

Bunn: The incidence of active smoking, or of a history of smoking, is usually much greater in a union or blue collar population than in a white collar population. For us, the percentage of white collar smokers is about half that of blue collar workers, although the prevalence of smoking is decreasing in both populations. Union employees represent a higher-risk population, as well as a higher-cost population for employers. The union population also has probably one of the highest costs of care for retirees. There is a significant cost for people with COPD who have retired even if they are in Medicare, because they have wraparound coverage. Therefore, the risks of COPD and the cost per case is higher, although the prevalence of smoking and COPD is decreasing.

Vogenberg: What does the literature, as well as your research, say about the economic burden of COPD in the workplace?

Bunn: COPD has a major financial impact, particularly when we add productivity into the mix.¹³ It is an expensive disease in terms of overall cost. Our studies showed 2 aspects of the economic burden: medical costs (including disability costs and similar factors) and loss of productivity, as measured by absenteeism.¹² However, other studies of our workforce have shown the correlate of absenteeism and presenteeism.⁴⁵ Rates of disability and the cost of disability are substantially higher among working-age people (40-63 years old) who have COPD.⁶

Vogenberg: What can be done to mitigate or better manage the loss of worker productivity associated with COPD to lessen that economic burden?

Bunn: Worker education is a big piece of the puzzle. In COPD, some education is directed toward smoking cessation, and some education relates to early and continued appropriate treatment. Smoking-cessation education should include both primary and secondary prevention, and it is essential to get workers who have been identified with COPD into smoking-cessation programs.
Case management is another way of addressing health and productivity. Our company has disease management programs that cover COPD, along with other respiratory diseases. If people are out of work for a period of time because of their disease, we involve them in a specific case-management program. Education, disease management, and case management are all important approaches that can reduce the loss of productivity.

**Vogenberg:** Have there been measurable results from smoking-prevention efforts?

**Bunn:** Yes. In our company, the restrictions that we have placed on smoking in the workplace have had an effect. Workers can no longer smoke in any of our plants. Some of these restrictions were the result of statutory changes, and some occurred through renegotiation of union contracts. These smoking restrictions make it very challenging to smoke at work, because often the workers cannot get outside the building or to the edge of the property easily.

We have also imposed financial disincentives to smoking. We charge smokers $50 more than nonsmokers in monthly healthcare premiums. Using a monetary approach in the health benefit plan appears to have a significant impact. Of course, cigarettes cost a lot more than the $50, but the additional $50 really incent people. We were one of the first companies to introduce this approach to a benefit design.

Before increasing premiums, we offered people the opportunity to join a smoking-cessation program for 6 months. Our antismoking campaigns have been very successful. We are doing a study now involving the newer, oral-based smoking-cessation drugs, and we are having success in combining drugs with psychosocial therapy.

And the corporate culture has changed. When I first came to this company 15 years ago, most of the senior management smoked; now, none does. I estimate that the number of smokers is half what it was 10 years ago. Former Surgeon General Dr C. Everett Koop was instrumental in initiating the antismoking campaign, but now corporate leaders have gotten on the bandwagon.

**Vogenberg:** What are the regulatory influences on workplace smoking?

**Bunn:** Most states limit smoking in various places, such as restaurants, but some states prohibit smoking in all public buildings. Over the past 10 years, significant new regulations at the local, state, and federal level have all deterred people from smoking, or certainly deterred them from smoking as much as they used to.

**Vogenberg:** What about regulations in specific industries?

**Bunn:** Depending on the type of funding for an employer’s health plan, state or federal regulations may apply. For fully funded plans—the type of plan used by the majority of small- to medium-size companies in this country—the state’s department of insurance regulates the insurance plan offerings. Federal laws, such as the Employee Retirement Income Security Act (ERISA), apply to self-funded employer plans. All plans, of course, must be in compliance with the Americans with Disabilities Act. There are different ways to design health insurance plans and their components, such as disease prevention, but all plans must be in compliance with the applicable federal and state regulations.

Some regulations, for example, the federal Department of Transportation regulations of pilot licensing, are becoming more rigorous. With regard to COPD, however, there are no statutes, to my knowledge, that say people cannot smoke in their car or truck. The regulations that have had the biggest impact on COPD are the laws that prohibit smoking in restaurants or workplaces.

**Vogenberg:** Do most of those in senior management understand the true health costs of a worker with COPD? Do they understand all the different costs involved in this disease?

**Bunn:** Everyone knows that medical costs will be high for workers with COPD. But costs related to workers’ compensation and disability also come into the picture, along with the cost of lost productivity related to absenteeism and presenteeism. Most chief financial officers probably understand absenteeism as it relates to COPD, but we need more education on the impact of presenteeism on productivity. I am not sure that people truly appreciate that workers with COPD are less productive.

**Vogenberg:** When you reported the results of your research showing that the cost for an employee with COPD averaged $20,000, as opposed to $8000 for an employee without COPD, was that compelling information internally?

**Bunn:** Yes. Senior management is less interested in the incidence of disease or minor improvements with medication. That is not convincing in terms of making a business decision. But if they know that they are losing $12,000 per employee because of COPD, this becomes an incentive to do something. Medical costs for employees with COPD are approximately 3 times greater than...
the costs for employees who do not have COPD (Table). That cost gets their attention. They realize that they cannot afford an additional $12,000 for each person with COPD, so they decide to act to reduce the incidence of that disease in their employee population. Showing senior management clinical study results that indicate minor improvements from better therapy does not convince them to spend money on new programs. But telling them that other companies—particularly their competitors—are intervening and saving the extra $12,000, that will make them more inclined to do the same thing, to even the playing field.

Vogenberg: What is being done, or what could be done better, by different stakeholders to increase awareness of COPD in the workplace?

Bunn: Aggressive smoking-awareness programs, such as the Great American Smokeout and similar initiatives, are important. Campaigns to get pharmaceutical companies and other stakeholders to incentivize people to use smoking-cessation drugs and measure outcomes would also be good. There is a panoply of approaches to consider. Clinical guidelines, HEDIS scores, and association recommendations for appropriate treatment are helpful. Diseases need to be not just treated, but treated well. Clinical guidelines provide weight to why companies and providers are recommending a certain approach.

Providing all the tools for raising awareness to COPD will be necessary. It would not hurt to have a “Thou Shalt Quit Smoking” or any workplace program supported at the congressional level, maybe tied to a corporate or individual tax break. That may come with the prevention laws that are being considered in Congress now. Congress could apply more of the money from tobacco litigation to smoking prevention.

Vogenberg: In implementing a different premium cost structure for a smoker, what are some of the ERISA guidelines to be aware of?

Bunn: The use of different cost structures for people with certain conditions is becoming a legal or regulatory compliance issue. Research such as ours on COPD clearly shows a quantifiable difference in the benefit cost between smokers and nonsmokers. The biggest difference was found between smokers and former smokers rather than between smokers and never-smokers: never-smokers accounted for one third of the difference between smokers and nonsmokers.

When we instituted our $50/month increase in premiums for smokers, we clearly worded it as a penalty, not as an incentive to quit. A couple of things permitted us to do this. As mentioned, we gave people a chance to quit during a 6-month period, and we had quantified the different cost to us for smokers and nonsmokers. We had to be able to prove that what we were charging people was equal to or less than the true cost.

Smoking was a condition for which there are data to create a cost differential, because data are available on the smoking-related increases in medical costs and productivity loss. Data are important. It is one thing to say that a certain behavior is a risk factor and has an adverse impact on cost, and it is another thing to know exactly how much more cost is the result of that behavior. We do not penalize people for having a disease. They can only be penalized for an activity or a behavior that can be avoided and increases cost.

Vogenberg: How can we get employers to realize the benefit of proper COPD management on productivity and cost?

Bunn: We need to increase awareness on how good medical management of COPD has an impact on cost. We hear a lot about the merits of good diabetes management, but we do not hear much about good COPD management. We have the evidence for COPD, but no one is publicizing that if employers manage their employees with COPD effectively, they will save money.

We also do not hear much about the problem of patients with early-stage COPD who continue to smoke. For those people, are employers doing everything possible to help them quit smoking?

Not many health plans or employers are requiring the best clinical practice management for COPD. Good medical management of COPD can improve productivity and result in cost-effective care. This is a message we need to get out to employers and to other stakeholders.

References


Table | Cost Comparisons: Employees with and without COPD, 2005
<table>
<thead>
<tr>
<th>Mean Cost per Employee</th>
<th>With COPD, $</th>
<th>Without COPD, $</th>
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<td>Medical</td>
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<tr>
<td>Prescription drugs</td>
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<td>957</td>
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<tr>
<td>Short-term disability (absence)</td>
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<td>871</td>
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COPD indicates chronic obstructive pulmonary disease.