Undertreatment of Tobacco Use Relative to Other Chronic Conditions

One might expect that treating nicotine use would be a leading priority for physicians. The reality is that this is not the case. More in this expert commentary, with practical tips for clinicians.

Consider the following: A 53-year-old man visits his internist for an initial visit. He has hypertension and type 2 diabetes mellitus, and he smokes 10 cigarettes a day. When the patient leaves his doctor's office, which of these conditions—hypertension, diabetes, or nicotine addiction—is most likely to have been treated?

Smoking remains the leading cause of death in the US. Tobacco kills more than 400,000 Americans every year, about 20% of all deaths, making it the leading cause of preventable morbidity and mortality. The list of ailments associated with smoking is lengthy and continues to grow: acute myeloid leukemia, cataracts, and periodontal disease were identified in the 2004 Surgeon General’s report as being tobacco-related, joining the more prevalent cardiovascular, respiratory, cerebrovascular, and oncological diseases, which are the country’s leading causes of death. Direct and indirect costs associated with smoking now total $200 billion a year.

One might expect, then, that treating tobacco use would be a leading priority for physicians. The reality is that this is not the case. Although most physicians routinely ask their patients about tobacco use, far fewer routinely offer treatment. The reasons for this are complex.

A newer model of tobacco dependence treatment considers smoking to be a chronic relapsing disease. Similar to patients with diabetes and hypertension, smokers may have periods of good control (ie, abstinence) and periods of poor control. According to this model, pharmacological and behavioral treatments should be offered as long as needed to promote and maintain abstinence. We therefore decided to study whether physicians are, in fact, treating smoking like other chronic diseases. We chose to examine data from the 2005-2007 National Ambulatory Care Medical Survey (NAMCS). The NAMCS is an annual survey of visits to 3000 outpatient physician offices. It is conducted by the CDC National Center for Health Statistics and uses a complex, multistage design to ensure representative sampling of practices from across the country. About 20,000 visits are sampled each year and are weighted to provide national estimates. Of note, each case in the NAMCS represents a visit, not a patient, so one must be cautious in making inferences about overall care provided to individual patients.

The NAMCS records a variety of data, including basic demographics, ICD-9 codes associated with the visit, use of tobacco products, and medications and other interventions prescribed at the visit. We examined data for the years 2005 to 2007 and extracted visits for patients with any of the following conditions: tobacco use, hypertension, diabetes, hyperlipidemia, asthma, or depression. We recorded whether the patient received a medication for any of these conditions during the visit. We also recorded whether any behavioral treatment was ordered. The NAMCS allows us to do this by recording whether patients received health education or counseling, categorized as none, asthma education, tobacco use or exposure, diet or nutrition, exercise, weight reduction, growth or development, injury prevention, stress management, and other.

We counted patients with asthma who received asthma education as having received behavioral counseling. Smokers who received counseling on tobacco use or exposure were recorded as having been counseled. We recorded patients with hypertension, diabetes, or hyperlipidemia as having received behavioral counseling if any of the following were discussed: diet or nutrition, exercise, or weight reduction. Behavioral counseling was not defined for depression because none of the available responses were evidence-based therapies for depression.

In the years studied, the NAMCS recorded 72,671 visits to 3128 providers, representing nearly 2.3 billion patient visits total. Of these, 53.1% were made by patients with at least one study condition. Tobacco users were more likely to have Medicaid or no insurance than were patients with the other study conditions.
The key findings of the study are that smokers were much less likely to receive medications or behavioral treatment than were those with the other conditions. The proportion of visits for hypertension that resulted in a prescription was 57.4%; for diabetes, 46.2%; for hyperlipidemia, 47.1%; for asthma, 42.4%; for depression, 53.3%; and for tobacco use, 4.4% ($P < .001$). In a logistic regression model controlling for age, gender, race, ethnicity, expected source of payment, new or established patient, physician specialty, and provision of counseling, the odds of receiving a prescription for medication for the comparator conditions, relative to tobacco use, were: hypertension, 32.8; diabetes, 20.9; hyperlipidemia, 16.5; asthma, 22.1; and depression, 24.0. All $P$ values were highly significant. In other words, the odds of a diabetic patient receiving a prescription for diabetes were 20.9 times greater than the odds of a smoker receiving pharmacotherapy for that condition.

For behavioral interventions, the odds of receiving counseling for the comparative conditions, relative to tobacco use, were: hypertension, 1.20; diabetes, 1.45; hyperlipidemia, 1.53; and asthma, 0.28. Again, all $P$ values were significant. This time, patients with asthma were less likely to receive counseling than were smokers; patients with the other conditions were more likely to receive counseling than were smokers.

The study results are rather sobering. Nearly a half-century after the 1964 release of the landmark Surgeon General’s report on smoking, the approval by the FDA of 7 medications for tobacco dependence treatment, and innumerable reports in the scientific and lay press, tobacco use remains grossly undertreated by US physicians. This doubtless reflects a variety of factors, including lack of training in tobacco dependence treatment, concerns about time and reimbursement, and discomfort with the office-based treatment of addictions and behavioral disorders. Each one of these concerns can be addressed, however, and some medical schools and residency programs are starting to do so. The Table below suggests how this study might inform clinical practice.

### Tips for treating tobacco use disorder
- Ask the patient about tobacco use at every office visit.
- Encourage patients who smoke to quit.
- Reinforce that quitting will lead to a longer life and help prevent tobacco-related diseases.
- Explain that there are many FDA-approved safe, effective medications to assist in quitting.
- Let patients know that free counseling in the form of state-sponsored quitlines is available.
- Make greater use of evidence-based treatments, such as nicotine replacement, varenicline, bupropion, and quitlines.

These suggestions will lead to a healthier, more productive society, and continue to mitigate the profound clinical and economic costs of smoking.

### Disclosures:
Dr Bernstein is Professor of Emergency Medicine and Vice Chair, Academic Affairs, Yale School of Medicine, New Haven, Conn. He reports no conflicts of interest concerning the subject matter of this article.

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