

Surgery as a Teachable Moment

Lost Opportunities to Improve Public Health

UNDERGOING A SURGICAL procedure, no matter how minor, is regarded by most as a significant event. In my own life, a laminectomy for acute radiculopathy 15 years ago motivated me to begin a sustained (thus far) exercise regimen, something that I had always known I should but never quite got around to doing. This is an example of a “teachable moment”—a health event that spontaneously motivates behavioral change. Because I had a family history of heart disease, my laminectomy had a double benefit. Not only did the surgery resolve my acute radiculopathy, but it was the impetus to maintain good physical conditioning, which will hopefully translate to improvements in the quality and length of my life. Because behavioral change is difficult to initiate and maintain (as I am reminded each morning while sweating in the gym), the exploitation of surgery as a teachable moment could have a profound effect on public health, given that more than 60 million surgical procedures are performed in the United States annually.¹

Perhaps the best example of how surgery as a teachable moment could benefit public health is smoking. Despite significant decreases in its prevalence in the United States during the last decades, smoking is still the most important preventable cause of excess mortality. Each year tobacco use kills more than 440 000 Americans.² Although policy changes, such as increases in tobacco taxes and establishing smoke-free environments, are important tools to reduce smoking prevalence, there are still approximately 45 million smokers in the United States who need to quit, one at a

time.² There is now good evidence that surgery can serve as a teachable moment for smoking cessation. Whereas only about 3% to 5% of smokers will spontaneously quit smoking per year, up to half or more of smokers undergoing major surgical procedures associated with smoking-related diseases (such as coronary artery bypass grafting) will successfully quit after their procedure.³ Even undergoing surgical procedures for diseases not directly related to smoking increases the likelihood of abstinence. Because an estimated 8 million smokers require surgery each year in the United States, any interventions that could take advantage of this teachable moment to further increase abstinence rates could reach a significant proportion of smokers and have a real impact on public health.

Unfortunately, physicians who provide surgical care do not typically take advantage of this opportunity. Surveys show that most anesthesiologists and surgeons do not consistently advise their patients to quit smoking, much less provide assistance for them to do so,⁴ this despite the fact that most smokers want to quit.^{5,6} This lack of involvement is all the more unfortunate because even short-term abstinence from cigarettes may directly improve outcomes of surgery,³ especially by reducing the risk of wound-related complications, such as wound infections, which should interest those caring for surgical patients.

Several barriers, real or perceived, can prevent surgeons and anesthesiologists from providing tobacco interventions.^{4,6} As clinical production pressures grow, time is an increasingly scarce commodity, and some feel that they are simply too busy. Few surgeons or anesthesiologists have any training or ex-

perience with tobacco interventions and are not confident in their ability to effectively intervene. Some surgeons think that their patients are too stressed to deal with their smoking or that they will offend their patients if they discuss it. However, recent data show that smokers who are abstinent from cigarettes do not experience increases in stress in the perioperative period⁵ and they in fact expect their physicians to discuss their smoking, especially how it may affect their surgery.⁶ Some texts still teach that quitting smoking immediately before surgery is dangerous and should be avoided, increasing the risk of pulmonary complications, though this is now known not to be true.³ Many surgeons fear that nicotine replacement therapy, which can double the rate of successful quitting, will interfere with wound and bone healing.³ Although high doses of nicotine can impair healing in animal models, the more modest doses used as an aid to cessation do not, and human studies show that abstinence from smoking with concurrent nicotine replacement therapy dramatically decreases the rate of wound-related complications.⁷ Finally, many consider preventive services such as tobacco interventions to not be a part of their responsibilities as surgical specialists.

Surgeons and anesthesiologists are not the only physicians who do not consistently address their patients' tobacco use. Despite the promulgation of an excellent clinical practice guideline designed to promote tobacco interventions in clinical practice using evidence-based strategies,⁸ implementation of these guidelines in the real world remains challenging. In particular, many practices find it difficult to provide the extended counseling and follow-up that increase the chances

of success. Fortunately, such services are now readily available through telephone "quitlines," which are accessible to all Americans (and in many other countries) free of charge through a single national toll-free number: 1-800-QUITNOW. The role of the clinician can then be to ask patients about their tobacco use, advise them to quit smoking, and then refer them to tobacco quitlines, a task that requires little training in tobacco control and that can be quickly accomplished.⁹ This technique may be particularly applicable in busy surgical practices. There is evidence to suggest that even brief perioperative abstinence may be beneficial, which may be an attractive option for smokers who are not willing to make a sustained quit attempt.³ The American Society of Anesthesiologists has developed a variety of tools to help surgical providers help their patients quit smoking (<http://www.asahq.org/stopsmoking/provider>) and has shown them to be feasible in actual practice.¹⁰

As they say, we never want a serious crisis to go to waste; the "crisis" surgery poses to the individual would seem an opportune time to address not only smoking, but potentially a variety of other behaviors that impact health; examples could include obesity, physical activity (important as a component of rehabilitation from many surgical

procedures), and substance abuse. Obviously there are very real limits of time and other logistical challenges that make it more difficult to address health behaviors and provide preventive services as a part of surgical care. However, for behaviors such as smoking that have very real potential adverse consequences for both surgical outcomes and long-term health, the opportunity is too good to ignore. The challenge is to devise convenient, effective strategies that are tailored to the particular needs of these practices and patients. If the health of our nation is to improve, every physician must accept the responsibility to take advantage of every chance to improve the health of their patients, whether or not it falls within the scope of their traditional specialty areas. Otherwise, we are merely narrowly focused technicians, operating with blinders. Broadening our vision can lead to great personal and professional satisfaction; for example, if my efforts help even a single smoker quit, that patient gains an average of 6 to 8 years of life.⁸ If surgical specialists can seize the teachable moments presented by surgery, they can give their patients not only a more pleasing nose or functional hip, but the long-lasting benefits of behavioral change that may otherwise be difficult to achieve.

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