I am a medical device start-up business owner whose sole product captures the surgical plume that is the result of incision and coagulation of human tissue that occurs in all ORs. Its removal protects the long-term respiratory health of surgical team members and the patients that they care for. The price of the product is minimal and its design allows direct application to the patient without need for intraoperative involvement of the staff. Its use has not interfered with surgical vision with or without a microscope or use of retractors (personal communication from Drs. Timothy Garvey and Joseph Perra, Twin City Spine Center, Mpls., Mn. July, 2013). The device supports the Occupational Safety and Health Administration (OSHA) mandate to provide a healthy work environment and worker protection from contaminants and pollutants. The National Institute for Occupational Safety and Health (NIOSH), the research arm of OSHA, has warned of the mutagenic and carcinogenic potential of inhaled surgical smoke. Routine use of our smoke capture device, called miniSquair®, in conjunction with any standard smoke evacuation system, would protect workers and hospitals from future employee health-related disability and civil liability claims and their associated high insurance costs. Despite these attributes of use, the overall response to our arguments based on documented evidence supporting smoke removal is, “I don’t want to be bothered.” This response suggests that the surgeon is indifferent to the need to protect the respiratory and long-term health of the personnel who are so important to patient outcomes.

THE DANGERS OF SURGICAL SMOKE

When I am met with indifference about surgical smoke, I wonder how scientifically trained health care professionals, as well as well-educated hospital administrators, can deny or disregard the ill effects of chronic inhalation. Environmental and occupational health experts have revealed that exposure places team members at risk for developing diseases such as Parkinson and Alzheimer disease, collagen and cardiac diseases, and cancer, depending on an individual’s pre-existing illnesses and personal genetics. Such disregard certainly doesn’t exist in the Canadian and Nordic country health systems in which evacuation of smoke from ORs is rigidly managed. In those countries, the nurses, led by objective evidence, insisted that hospital administrators develop policies for smoke evacuation that required universal adherence which they did and to which surgeons acquiesced.
GROWING AMBIVALENCE

I believe that the “why bother?” attitude of American surgeons is the result of several aspects of today’s health care environment:

- They are given the freedom to say “No” to the nurses’ request for relief.
- They tend to be unfamiliar with documented research that shows the need for routine smoke removal.\textsuperscript{15,16}
- Often, there is no hospital-based mandate that requires smoke removal during surgery.\textsuperscript{17}

And, perhaps, there is a rising population of dispirited surgeons, who, for a number of reasons, have decided not to be bothered by issues other than completing their procedures and then rushing off to complete other prioritized tasks such as rounds, consultations, and office hours. The question is, why would surgeons not bother to protect the respiratory health of themselves and their coworkers when to do so would not lessen their own effectiveness as a surgeon?

TRANSITION PERIOD

Perhaps this is a time of transition characterized by fear and anxiety, which are so common during periods of change. The physicians are abdicating the control of their practices as they become health system employees, which they have accepted as a way to counteract decreasing reimbursements and increasing office expenses. Heightened anxiety has accompanied such a significant change. They may also fear losing their positions since, as employees, they may experience termination by administration.

As professionals who underwent long, arduous training to be equipped to take responsibility for the lives of their patients, physicians are now being asked to share responsibility as part of a team. Physicians, who used to determine practice pathways while administrators supported them, have witnessed a transposition of roles. This has resulted in an alienation of physicians from their hospitals.\textsuperscript{18} Physicians have looked at hospitals as being pivotal to their lives. They may have met their spouses at the hospital, witnessed their children being born there, possibly seen their parents die there, and experienced their immediate family members being cared for there. So the transition from being the “captain of the ship” to being a member of the crew has caused physicians to look at the hospital not as hallowed ground, but as a workplace and nothing more.\textsuperscript{19}

The emotional distancing of physicians from the hospital’s patients for whom they are allowed to care, as well as the facility itself, has resulted in a lessening of their natural desire to contribute further to their profession as they feel less and less likely to benefit from their maximal effort.\textsuperscript{20} This
negative attitude has been reinforced by recognition that business decisions have started to trump medical decisions. These issues can be seen to have coalesced around the decision for enhanced smoke evacuation. Material managers discourage new, albeit superior, technology for smoke capture because of in-place contractual relationships with major distributors who may sell less efficient alternatives (personal communication, Materials Manager employee, at a major Minnesota health system, March, 2013). Their decision, aided by barriers to adoption such as value analysis committees that may exclude physicians’ input, actually work counter to the need for a long-term administrative decision regarding respiratory protection for perioperative nurses.

**SUCCESSFUL TRANSITIONS**

Psychologists have described the problems inherent in any transition period, which may include feelings of disbelief, despair, denial, uncertainty, confusion, loss of confidence or perhaps, excitement. Health care personnel get through these issues in phases as described by Williams.²¹ So, what can hospital administrators do to lessen their effects? The answer is, once again, to empower the physicians and nurses whose interests certainly parallel those of administrators; that is, to achieve higher quality results. This change can only come from the top, where executive decisions and policies originate. As surgeons regain input into purchasing decisions, one can expect reciprocal benefits to the hospital through greater surgical referrals and, perhaps, by their suggestions for off-setting reductions in other expenses. Physician acceptance of administrative diktats would result instead of experiencing their surly resistance. An example would be the surgeon’s acceptance of new smoke evacuation technology that ensures the hospital’s adherence to OSHA and Joint Commission guidelines, thus avoiding a possible asbestos-like financial debacle for the health system.

Putting forth efforts and making decisions that are patient- and employee-based will awaken physicians’ sense of mutual commitment and allow innovative thoughts and efforts to once again flourish instead of being stifled by indifference. Let us consider, as a first step, routine acceptance of smoke evacuation by administrators and physicians as a test of reversal of their attitude toward coworkers and their acknowledgement of the current compelling research. A clinical staff that is engaged is a creative staff, which, ultimately, will serve as the engine of growth for the hospital.


References

3. Gretchen P Maglisch, Commissioner, Department of Labor and Industry, State of Minnesota versus Miller-Dwan Medical Center, Duluth, MN, April, 1999.


