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Supersized Suites

To the Editor:

Obesity is now an epidemic in the United States, after increasing dramatically during the past 20 yr.* People are so obese that they're damaging their health, probably shortening their lives, and definitely changing anesthesia practice. This problem developed insidiously. We adapted. Now obesity includes us, and we're looking for solutions—besides buying bigger equipment.

Caring for obese patients has gone from rare to frequent during my career. While training 35 yr ago, I cared for a woman who weighed 300 pounds and needed a cesarean section. This circumstance challenged me. Because spinal anesthesia was the preferred technique, we positioned patients on their sides to place the anesthetic. At the time, needles came in one length, 3½ inches. Overcoming these challenges required enough innovation that I discussed her care at a department case conference.

Much has changed in anesthesiology during my career—from the phase out of flammable agents to the phase in of digital technology—but the greatest change may be people: they're bigger. Today, I frequently anesthetize women who weigh 300 (or more) pounds for cesarean sections.

It's not just pregnant women, though, who weigh more, it's most of my patients . . . and a few of my colleagues. Men and women, young and old, sick and healthy. Patients and workers are coming to operating rooms overweight, changing clinical techniques and suite culture.

To place spinal anesthetics now, we usually sit patients upright and locate their vertebral columns halfway between the left and right sides of their bodies. Then we probe for vertebral interspaces with one of our extra length spinal needles, which can now be up to 12-inches long. To discuss anesthetic innovations for an obese parturient at a department conference today would require a 400-pound patient.

The construction and staffing of our operating rooms have changed greatly during my career. Surgical suite hallways were once 6-feet wide with doorways that were 46-inches wide, which comfortably accommodated 24-inch wide patient stretchers. Patients got larger. Hospitals bought wider stretchers and beds, up to 50-inches wide. When hallways and doorways became obstructed with the flow of these bigger beds, they were enlarged to 10 feet and 70 inches,

respectively. Standard surgical tables are 20-inches wide with hydraulic systems that handle loads of up to 350 pounds, inadequate for many of today's patients. Thus, we stock other tables that expand to 37 inches and support 500 pounds. For patients weighing more than 500 pounds, we join together two tables. To support side-drooping tissue, we attach a second set of arm boards. To prevent such improvising in the future, we've ordered even larger tables—which will support up to 1,000 pounds.

After anesthetic induction, the surgeon, anesthesiologist, and surgical nurse have always positioned patients for operations. The body weights of many patients today, though, often necessitate help from additional people and specialized machinery. One ingenious mover that we use is a hover mat. It is powered by an air compressor and floats above horizontal surfaces. Of course, getting patients onto these mats requires other lifting and rolling equipment, which we store in our enlarged suite. Recently, it took ten people 1 h to position a 450-pound patient laterally for a temporal craniotomy after head pinning. We now staff our supersized surgical suite with sufficient personnel to handle these chores.

It's not just larger patients and equipment that must be accommodated, however. Physicians and operating room personnel have gotten larger. When I trained, scrub clothes came in three sizes: small, medium, and large. Everyone fit into these clothes, or they custom-altered personal ones. Today, these three traditional sizes are augmented by four others: XL, 2XL, 3XL, and 5XL. The last one accommodates waists up to 59 inches. We've also added extra large gloves and reinforced stools to our operating room inventory.

Scrub clothes are color-coded by size. Small, medium, and large scrub pants, for instance, have yellow, brown, and white waist ties, respectively. Years ago, people who gained weight and consequently began wearing larger pant sizes tucked their ties inside their pants. Such "size shyness" is seldom seen today. The commonality of corpulence has led to its acceptance—and a rainbow of colors.

Because adipose tissue can absorb anesthetics, obstruct airways, and increase the work of breathing, obese patients may emerge from anesthesia slowly, with diminished breathing. Adipose tissue can also lengthen the preanesthetic period, hiding the veins required for intravenous infusions. Thus, we're learning to use shorter-acting anesthetics, ramped positioning, special airway devices, intraoperative glucose checks, and ultrasound localization of veins. To measure blood pressure in obese patients, we stock our anesthesia carts with thigh cuffs, later placing them on arms and, occasionally, forearms.

Obese colleagues, medically savvy and occupationally active, demonstrate the difficulties many people have today managing their weight. The prevalence of obesity has changed surgical suite discussions, making diet and calorie counts common topics for break-room conversations. Seldom heard is the word "fat," which is now ill defined, perhaps too applicable, and slightly pejorative. Currently in

* Centers for Disease Control and Prevention. U.S. Obesity Trends: Trends by State, 1985-2009. September 1, 2010. Available at: <http://www.cdc.gov/obesity/data/trends.html>. Accessed November 5, 2010.

vogue is “fluffy,” understood by patients and better accepted by the “weight challenged.”

The steady increase of obesity during the past three decades has undoubtedly blunted our recognition of its consequences. So much so that I believe many young anesthesiologists don't realize how profoundly the obesity epidemic has changed anesthetic practices. They seem to view heavy patients, reinforced equipment, and XL scrubs as normal—even associating adulthood with bariatric surgery, as I once did childhood with tonsillectomy.

This situation may be changing though. It happened previously with cigarette smoking, which was the scourge of anesthesia when I trained. Smokers emerged from anesthesia coughing and bucking, sometimes cyanotic. Some department members smoked and resisted change. When the Surgeon General declared smoking a health hazard, we talked, innovated, gave up our own cigarettes, and learned to counsel patients. Now, no one in the department smokes. Anesthesiologists comfortably prescribe nicotine patches and refer patients to smoking cessation clinics.

Similar incipient stages for tackling obesity seem to be occurring, with government pronouncements, personal recognition, and cautious conversations under way. The pervasiveness of obesity is uniting patients and caregivers, empowering new conversations. The message, of course, is still in development—with drafts ranging from sympathetic and accepting to scolding and assertive. Since anesthesiologists are intelligent, evidence-driven, and adaptive, solutions should follow. Perhaps then, smoking *and* obesity will become minor problems, and we'll put something besides big equipment in our supersized suites. A fruit bowl and an exercise bike in the break room would be great.

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American Society of Anesthesiologists P5: “With or without” Definition?

To the Editor:

The ASA (American Society of Anesthesiologists) Physical Status Classification System is the most widely used system globally to describe a patient's preoperative medical condition. The first four categories (P1–P4) in the classification have changed little since they were first proposed in 1941,¹ and are familiar to all anesthesiologists.

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† American Society of Anesthesiologists. ASA Physical Status Classification System. Available at: <http://www.asahq.org/clinical/physicalstatus.htm>. Accessed November 24, 2010.

However, the fifth category, P5, as a description of a moribund patient, was first introduced in 1961² and adopted by the ASA in 1963.³ Initially P5 was defined as “a moribund patient who is not expected to survive for 24 h *with or without* operation [emphasis added].”^{3,4} However, this definition was changed during the 1980s (Karen Bieterman, M.L.I.S., Librarian, American Society of Anesthesiologists, Wood Library-Museum of Anesthesiology, Park Ridge, IL, written communication) to “a moribund patient who is not expected to survive *without* the operation [emphasis added].”†

This change was not merely minor nor semantic, however, as the earlier definition implied that the P5 patients would be unlikely to survive 24 h irrespective of operative intervention, while the later (current) definition suggests that survival is possible—but only with operative intervention. Moreover, the current definition has no time period specified. In other words, these two definitions describe two different types of patients.

Unfortunately, this change appears to have been missed by many researchers and authors. For example, in the 7th edition of *Anesthesia*,⁵ P5 is defined as “a moribund patient who is equally likely to die in the next 24 h *with or without* surgery [emphasis added].” Similarly, in the 6th edition of *Clinical Anesthesia*,⁶ P5 is defined as “moribund patient who has little chance of survival, but is submitted to surgery as a last resort (resuscitative effort).” Several recent journal articles have also incorrectly defined P5. For example, Aplin *et al.*⁷ quoted the earlier definition, as did Sidi *et al.*,⁸ whereas others, such as Skaga *et al.*,⁹ have quoted the later, current ASA definition.

This persistent misquoting of the definition for P5 has implications for clinicians and investigators. It means that, unless a specific definition or reference is provided, it will not be clear to what “P5” refers. It also means that data from studies using the earlier definition cannot be compared directly to data from studies using the later definition. Of greater concern is the fact that many studies do not specify which definition of P5 has been used.

Whether P5 is used appropriately to describe patients' preoperative physical status, or less appropriately as a surrogate risk score, the ASA Physical Status Classification System, including P5, is used extensively in anesthesia and surgery. All clinicians and investigators should be aware of the current definition for P5, and be alert for the potential use of an incorrect definition, either defined or undefined.

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