mandatory to monitor pain (Joint Commission on Accreditation of Health Care Organizations).[3] With the high predictive value of discovering no and mild pain (97%), the skin conductance monitor may possibly help to at least give less analgesia to patients with no pain and facilitate work in the hospitals when the physicians and nurses know when to ask patients about their pain status.

It would be interesting if Choo *et al.*[1] reanalyzed their data and used a 15-s analyzing window, as Hullett *et al.* did,[2] and cutoff values for the calculation of sensitivity and specificity of 0.13 SCFs/s (to discover moderate and severe pain).[2] It would be important to reproduce the results of Hullett *et al.* to know whether the SCFs per second may facilitate the way to monitor pain in children. Moreover, important clinical knowledge could have been discovered if 0.28 and 0.33 SCFs/s were used as cutoff values to discover severe pain, based on the findings from Choo *et al.* (fig. 3 in their article). Moreover, Choo *et al.* should also find the predicative values for no/mild and severe pain based on the cutoff values 0.13, 0.28, and 0.33 SCFs/s. These results would have been helpful to know whether the Skin Conductance Algesimeter index, SCFs per second, is useful in children postoperatively to discover no or mild pain and acute severe postoperative pain with high specificity. It would then probably be in agreement with the conclusions from the articles by Choo *et al.* and Hullett *et al.*; in addition, new important clinical information would be added from the article by Choo *et al.*

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In Reply:

We thank Dr Storm for the comments regarding our article.[1] We agree with Dr Storm that in awake patients, stressors such as nausea, vomiting, and anxiety influence the number of fluctuations in skin conductance (NFSC) and, therefore, limit the specificity of the Medstorm device as a measure of postoperative pain. These variables would inevitability be present in the clinical context of postoperative pain in children.

This is not the first study to demonstrate that the Medstorm device has poor sensitivity and specificity for pain in the postoperative period. A study of 100 adults by Ledowski *et al.*[2] indicated an optimized (by receiver operating characteristic curve analysis) NFSC cutoff of 0.1, which resulted in a sensitivity of 58% and a specificity of 61%, for a numeric pain rating score of more than 5.

We suggest that a test that is sensitive, but not specific, is not clinically useful. Therefore, a cutoff of 0.0 NFSCs would yield a sensitivity of 100% but a specificity of 0% and would clearly not be useful. We suspect that few clinicians would benefit from a device that "gives an indication on when to ask a patient about their pain" when it is relatively simple to routinely ask all patients about their pain level. We believe that the averaging interval should be a magnitude greater than the NFSC. In our clinical experience, postoperative pain does not last for only 15 s nor would it require a pharmaceutical intervention if it did occur for this short period.

The Medstorm device may have utility for detecting intraoperative pain; the variables of movement and anxiety can be appropriately controlled. However, in the complex setting of postoperative pain, the accuracy of NFSC measurements is severely compromised by numerous nonnoxious confounders of sympathetic activity.

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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 preanesthesic 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.