mended their interactions with staff. A majority described staff as friendly and helpful. However, patients also expressed concerns, such as poor physician visibility, unanswered questions, and, most frequently, lengthy response time. Six patients felt that health care staff took too long to respond to calls for assistance.

Our interviews explored patient perceptions of CPs and how these perceptions may impact overall patient care perceptions. We did not find a statistically significant difference in patient satisfaction between the experimental and control groups. It appeared that if patients received education on the why of CPs, they were more likely to view these measures positively. Hospital leaders should consider making patient education regarding PPE and CPs a standard part of care, performed when the patient is in a state to receive this information. Efforts like these will help mitigate the unintended yet deleterious effects that CPs have on patients.[7] Although being under CPs has been observed to have a protective factor for adverse events, our study found that patients' perceptions are still adversely affected.[8] CP education can assuage patients, decreasing negative psychological impact.[9] Patient education efforts, guided by adult learning theories, should be made up front, yet this is atypical.[10] Study limitations include interviewing only English language speakers, social desirability bias, a small and homogeneous sample, and no access to medical records, making illness history/notes on education received unknown. From our small study, we hypothesize that patient education, as a required part of care, may reduce anxiety or feelings of stress or stigma while simultaneously improving patient satisfaction. As resistant infection rates continue to rise, hospital leadership should consider training health care providers on how to educate patients on their isolation status.

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Conflicts of interest: None to report.
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Risk factors for infection in spine surgery: Nested case-control in tertiary hospital in France

To the Editor:

We read with interest the article by Gu et al,[1] "Incidence and Risk Factors for Infection in Spine Surgery: A Prospective Multicenter Study of 1764 Instrumented Spinal Procedures." In this prospective multicenter study, Gu et al[1] included patients ($\geq$18 years old) who had spinal diseases treated by instrumented surgery between January 2015 and February 2016. Their study showed that 58 patients (3.3% of the population) had developed a surgical site infection (SSI) and that the main risk factor for an SSI in this population was the reason for surgery (degenerative disease).

We conducted a similar study on the same subject but with a different methodology. We performed a single-center case-controlled study at Rouen University Hospital, a tertiary care hospital in North West France, to identify specific risk factors for SSI in spinal surgery. Patients aged 18 years and older who underwent spinal surgery between January 1, 2012, and June 30, 2014, were included in prospective SSI surveillance. Cancer surgery was excluded. Possible cases of SSI were validated by both the surgeons and the infection control team. Possible risk factors such as age, sex, obesity, diabetes, current smoking, medical history of spinal surgery, surgical approach, presence of fusion to pelvis, implant, presence of dural tear, reason for surgery (herniated disc, trauma, deformation or degeneration), intraoperative blood loss, American Society of Anesthesiologists Score, surgical sites (cervical, thoracolumbar, thoracic, lumbar), intraoperative transfusion, emergency versus scheduled surgery, multiple trauma, number of levels fused, and surgical antibiotic prophylaxis in accordance with guidelines were retrospectively collected in patients' files, and their association with SSI was assessed with a univariate analysis.

We observed 17 cases of SSI among 384 surgical procedures (incidence rate, 4.4%; 95% confidence interval [CI], 2.4-6.5). The reason for surgery was trauma in 8 cases, degenerative or deformation disease in 8 cases, and herniated disc in 1 case. All 17 procedures involving SSI were done in a posterior approach. Eight of the 17 patients with SSI had lumbar site surgery (47%). Thirteen of the 17 patients (76%) had an implant during their intervention.

Eighty-three control patients (approximately 5 per case) were randomly selected among listed operations, excluding patients with SSI and patients with cancer surgery. Risk factors identified in

univariate analysis were body mass index (BMI) ≥35 (odds ratio, 11.11; 95% CI, 2.35-52.59; $P = .002$), and number of spinal levels fused >5 (odds ratio, 18; 95% CI, 2.47-131.27; $P = .033$).

We observed a similar rate of SSI to that observed by Gu et al[1] (3.3% vs 4.4%). Our study was performed in a tertiary care university hospital, where patients usually have more serious pathologies and are therefore more at risk of SSI, and we included patients with history of spinal surgery (which is a risk factor for SSI). Gu et al[1] included patients from level 1 and level 2 hospitals.

The univariate analysis allowed us to identify BMI ≥35 and the number of spinal levels fused higher than 5, which were not identified as risk factors by Gu et al.[1] This difference could be explained by analytical differences. Indeed, for BMI, we treated the variable as a binary categorical variable (BMI ≥35 or <35), whereas Gu et al[1] used 5 BMI categories. Our categories for the reason for surgery (herniated disc, trauma, deformation or degeneration) were different from those used by Gu et al[1] (spinal fracture only, spinal cord injury only, fracture combined with spinal cord injury, degenerative disease). Of note, reservations about Gu et al's[1] results were presented in a letter to the editor by Garcia et al,[2] who questioned the validity of their model and therefore their results and their interpretation. We did not perform a multivariate analysis given the small number of cases and the limitations of such an analysis highlighted by Garcia et al.[2]

Our results (BMI ≥35 and spinal levels fused), based on prospective surveillance, highlight the specificities of obese patients during their hospital care. In a time of rising prevalence of obesity, this risk factor for SSI should be taken into account during a patient's management for spine surgery. Accordingly, following this preliminary study, we have undertaken an evaluation study to explore whether specific measures regarding cutaneous skin preparation before surgery could be implemented in a specific population of obese patients.

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Standardizing mask use during intra-articular injections

To the Editor:

We read with great interest the case series describing septic arthritis owing to oral streptococci following intra-articular injection. The big question remains, how can we change the standard of care to include wearing a mask when performing these procedures? Implementation can be difficult because of the attitudes and beliefs of practitioners. As Cain et al[1] state in their study, oral flora causing septic arthritis after an intra-articular injection is rare. Therefore, practitioners tend to rely on anecdotal evidence by saying that, previously, they had never experienced an infection after an intra-articular injection. The key to overcoming this barrier is to illustrate that although the circumstance is rare, it can lead to increased morbidity, hospitalization, and financial cost, among other items. First, changing the Centers for Disease Control and Prevention injection safety and outpatient guidelines to include wearing a surgical mask for intra-articular injections would disseminate the recommendation to a wider audience who access these guidelines but may not necessarily be familiar with the APIC position paper. Second, the position paper can be presented to the relevant medical societies (eg, the American Academy of Orthopedic Surgeons) for consideration to create new guidelines.

We recognize that although the widespread uptake of safe injection practices among all practitioners has not yet occurred,[2] using a