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INSIDE

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Researchers Outline Effective Ways to Prescribe Opioids, Reduce Waste

More than 81,000 people died of drug overdoses between summer 2019 and spring 2020. It was the highest number of overdose deaths ever recorded within 12 months, according to the CDC.[1]

The biggest drivers of death were synthetic opioids; use of these jumped 38.4% in this period. Federal officials attributed the high number of deaths to the COVID-19 pandemic's disruption of daily life.[1]

Surgery professionals and the rest of the healthcare industry have been working on this problem for several years, trying everything from alternative pain management to prescribing fewer pills.

As the authors of a recent study noted, opioid stewardship continues after an operation and after the patient's pain has improved.

These researchers created guidelines that outline how surgeons can prescribe opioids in a way that spares excess but meets patients' needs. Further, the guidelines also describe a successful strategy to reduce diversion of unused pills.[2]

To start, investigators examined previous research on the variability in opioid prescriptions for common general surgical procedures. For example, one research group discovered patients' needs for opioids could have been met with 43% of the actual number of pills prescribed; 70% of prescribed pills were never taken.[3]

The authors theorized overprescribing likely occurred because providers might have perceived some patients needed more opioids than others. Also, this might happen because of variances from practice to practice in policies regarding the number of pills a clinician is allowed to prescribe at once.

Richard J. Barth, Jr., MD, FACS, professor of surgery at Dartmouth and section chief of general surgery at Dartmouth-Hitchcock Medical Center, is a co-author of the guidelines produced this year and worked on some of the other investigations that went into building those guidelines.

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After considering the literature, Barth and colleagues theorized if a patient did not take any opioids the day before discharge, then he or she did not need any opioids at home. Conversely, if the patient needed four or more opioid pills the day before discharge, then he or she could be sent home with a prescription for many pills.[4]

Validating the Theory

To try this idea in practice, Barth and colleagues enrolled 229 patients admitted for 48 hours or longer after elective surgery. Procedure types were gynecologic, colorectal, thoracic, and urologic.

When patients were discharged, they received prescriptions for nonopioids and opioids based on their consumption of the latter one day before discharge. If patients took zero oral morphine milligram equivalents (MME) one day before discharge, then they received five 5-mg oxycodone pill-equivalents.

If patients used one to 29 MME, then they received 15 5-mg oxycodone pill-equivalents. If patients took 30 or more MME, then they received 30 5-mg oxycodone pill-equivalents.

Overall, 213 of 229 patients reported they were satisfied with how they could manage their pain. Satisfaction was especially high among low-level opioid users (95% of subjects used nonopioid analgesics).

Here, it is important for surgeons to play a central role. Set pain expectations for patients (i.e., there likely never will be zero pain; at least a little pain should be expected). When it comes to prescribing nonopioid alternatives, don't just make the recommendation; write the actual prescription.

"When I see a patient, even before the surgery, I set their expectations for what they need after the surgery," Barth says. "I discuss how we'll manage their pain in the hospital and explain to them that if they are not taking opioids in the hospital, then we'll send them home without opioids."

Although many of the 229 patients underwent serious surgery, Barth says this approach is generalizable across many different operation types. For example, Barth, working with other researchers, established recommendations for opioid prescriptions after outpatient surgeries, including orthopedic and

EXECUTIVE SUMMARY

Opioid overdoses surged during the COVID-19 pandemic, a problem surgery professionals can help solve by paying greater attention to prescription opioid misuse and abuse.

- Opioid stewardship should include education and outreach to encourage patients to properly dispose of unused pills.
- Patients should be offered information on various ways to safely dispose of unused pills, including medication disposal drop boxes placed at convenient locations.
- Evidence shows surgeons can reduce the number of pills prescribed, and patients still will report satisfaction with their pain control.

oral maxillofacial procedures, in which overprescription was common. Following those guidelines led to a 53% reduction in opioid pills prescribed.[3,4]

Preventing Misuse, Waste

Researchers also worked with these 229 patients to improve proper disposal of unused opioids. They used four tactics:

• **Education.** This could be a quick conversation on the day of discharge. It would include information on the risks of driving while on the medication.

• **Automated phone calls.** When the call went out to remind patients of follow-up appointments, there also was a request for patients to bring any unused pills to the appointment.

For those who wanted to dispose of pills before an appointment, these calls provided information about FDA-approved methods for doing so (e.g., crush the pills, mix with kitty litter or coal, place in charcoal containers, and drop off at a pharmacy or fire station).

• **Drop-off box.** Researchers designated a specific box where these patients could leave unused pills.

• **Questionnaire.** Patients completed a survey about what they did with their opioid pills. They were encouraged to be responsible for any unused pills.

The questionnaire also made it possible for researchers to get to the root of why patients wanted to keep pills (e.g., "I want to save a few pills in case I feel pain again later.").

A main point providers should emphasize to patients is that leftover opioid pills can be a gateway drug to a younger population. "You may not think it's irresponsible for yourself, but it can be a gateway for someone else, and saying that usually encouraged people to do the right thing," says **Eleah D. Porter**, MD, a surgery resident at Dartmouth-Hitchcock who worked with Barth and colleagues on the guidelines. "We also would say that this is an addictive drug. If they need an opioid, they may be at risk of being addicted, so they should see a doctor."

"It's also important for a surgeon, when they're seeing patients back in the office, to ask patients about what they've done with their opioids and whether or not they have disposed of them," Barth adds. "This is like checking with the patient on their bleeding or something else from the surgery."

These four tactics paid dividends. A total of 138 patients did not use all the pills prescribed; 114 used an FDA-appropriate disposal method, and 58 used the drop box. Out of about 2,600 total pills dispensed, patients only kept 187.[2]

"The drop box in a pharmacy near our offices made it easy and nonjudgmental to drop off excess opioids," Barth says. "A lot of patients know they can drop off [opioids] at police departments, but they may not feel comfortable dropping off the pills there. Dropping them off at the pharmacy makes it very easy and doesn't have stigma associated with it at all."

Changing Practice Habits

This research has helped change post-surgery prescribing of pain medication at Dartmouth-Hitchcock. "We've continued to manage opioids as they were managed on the study," Barth reports.

These changes and other opioid-sparing tactics represent a serious practice shift from just six years ago. "When I started in 2015, you wouldn't blink an eye to prescribe copious amounts of opioids," Porter says. "By doing this prospective trial, we are saying to the skeptics that it's better than we thought, and we're not getting calls for [opioid] refills, and people are using less than they were."

Surgeons are walking into their practices with a completely different mindset about opioid prescribing after operations.

"We're showing that with some good research, dedication, and public interest, we can change our practice and eliminate the opportunity for surgeons to contribute to the opioid crisis," Barth says. "We want to make sure our study results are disseminated to others so they can incorporate these changes, which are pretty easily incorporated into practice and can change the way opioids are prescribed when people are discharged from surgery."

As a training surgeon, Porter says this work has evolved her practice and how she views her own responsibility.

"It's completely changed how I'll approach opioids as a surgeon," she says. "It's my responsibility as a surgeon to make sure the opioid pills are properly disposed of as leftovers, and we can treat pain, but also can do it in a safe manner that will be the standard of care going forward." ■

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Study: Surgery Centers Handled COVID-19 Patients Safely

A new study of 3,762 ambulatory surgery patients revealed those who tested positive for COVID-19 and underwent a procedure after the positive test fared well.[1]

"We were curious because not much has been reported since opening ambulatory surgery centers and since every patient was tested for COVID-19," says **Christopher G. Larsen**, MD, study co-author and an orthopedic surgery resident at Northwell Health. "We wanted to know the rate of people testing positive and how that was impacting their surgery experience."

The average age of the patient population was younger than other cohorts in similar investigations (42 years). Further, similar investigations included patients who underwent high-risk procedures.[2,3] Here, Larsen and colleagues studied patients who underwent a wide variety of procedures: general surgery; urology; orthopedic; OB/GYN; ear, nose, and throat; gastroenterology; and other procedures.

The goal was to determine whether positive COVID-19 tests resulted in delayed procedures and how long the delays lasted.

"We were able to get a list of all patients who had undergone ambulatory procedures and sorted out which had a record of a positive COVID-19 test," Larsen says. "It was a smaller number than we initially expected."

There were 37 patients who tested positive preprocedure for COVID-19, but were asymptomatic. Of these 37 patients, 21 delayed their procedures for an average of about 29 days until they tested negative. Sixteen of the COVID-19-positive patients underwent their procedures because of time sensitivity, but they experienced no major complications or 30-day readmissions.

"There are limited data on how COVID-19 patients do after surgery," says **Jessica M. Intravia**, MD, study co-author and an orthopedic surgeon at the North Shore-Long Island Jewish Medical Center in New York. "In some studies, they showed that COVID patients did poorly in major surgeries.[2,3] But in the ambulatory population, these patients are healthier and have less comorbidities, and we were not sure whether it was safe to proceed."

Also, there is less guidance on when to proceed after a COVID-19 infection. Surgeons need to know whether it is safe to perform a procedure on an asymptomatic patient, or whether the procedure places them at higher risk.

"How long is the minimum amount of time needed to delay

EXECUTIVE SUMMARY

Researchers with Northwell Health in New York studied younger patients who underwent a variety of procedures during the COVID-19 pandemic. They found patients fared well, suggesting the health system handled surgery decisions well.

- The study authors targeted 3,762 patients who underwent ambulatory procedures. Of those, 53 were previously diagnosed with COVID-19, but recovered and tested negative at preprocedural testing. Of 3,709 asymptomatic patients, 37 tested positive during preprocedural testing; 21 patients delayed their procedures an average of 28.6 days until testing negative, while 16 underwent their procedures before testing negative because the operation was time-sensitive. There were no major complications or 30-day admissions in any asymptomatic patients.
- These data suggest there may be no increased risk for an asymptomatic, COVID-19-positive patient to go forward with surgery, although more research is needed before surgeons can create evidence-based guidelines.
- Although this study is limited by its size and retrospective nature, it stands out from previous similar investigations that focused on older patients undergoing much riskier procedures.

surgery for those who test positive in presurgery testing?" Intravia adds.

For a low-risk outpatient procedure, these findings suggest proceeding as planned. "But there are limitations to our study, and more data are needed before this is regarded as a rule," Larsen cautions.

For instance, this work included patients only from one health system. Further, the study was retrospective in nature, and the information used mostly was epidemiological. There also was no comparison group.

"It's a first step that needs to be explored more thoroughly, but it's a promising first step," Intravia says. "More studies need to be performed, and there need to be firm guidelines. With asymptomatic patients who test positive, we're treating them similar to other positive-test patients, but they're a unique cohort that is very interesting."

While trying to follow overarching pandemic guidelines issued by federal and state agencies, surgery centers and other healthcare systems often varied on how to handle COVID-19 patients. For example, Northwell Health limits the ability of ambulatory surgery settings to handle COVID-19-positive patients.

"The health system is trying to keep ambulatory surgery centers a low-risk environment," Intravia explains. "I believe the decision depends on the patient's overall health, risk factors, whether sedation is required. Our data suggest it could be of no increased risk — if they're asymptomatic — to go forward with surgery."

The study authors found no cases of patients who acquired COVID-19 because of their ambulatory surgery. There were three patients who tested negative for COVID-19 before surgery, but tested positive at an average of about 20 days after the procedure. Larsen believes because of the timing of their positive tests, these patients likely did not become infected during the surgery.

"We're concluding the nosocomial rate of infection, patients who acquired COVID in house, is very low," Larsen adds. "We can't definitively say it's none, because some patients may have tested positive outside of our health system. But it's very low." ■

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Surgery Pros Prepare for Life After COVID-19

As surgery centers coped with the changing landscape of the COVID-19 pandemic, federal and professional organizations tried to produce the most up-to-date, relevant information.

It was not easy, as evidence-based data takes time to emerge. As surgery centers waited for professional guidance, most organizations built general recommendations based on CDC guidelines.

For example, the American Society of Anesthesiologists (ASA) and the Anesthesia Patient Safety Foundation recently issued a joint statement, referring to the CDC's guidance for physicians to use when deciding whether to discontinue transmission-based precautions for hospitalized patients recovering from COVID-19, or home isolation for outpatients.[1]

For questions about COVID-19 vaccines, the Association of periOperative Registered Nurses (AORN) provides links to the CDC website, as well as to AORN's own COVID-19 toolkit.[2]

The American Hospital Association, along with the ASA, AORN, and the American College of Surgeons, issued a joint statement in late 2020 about how healthcare organizations could continue to provide surgery during the pandemic, referring to CDC recommendations on PPE, COVID-19 testing, and other regulatory and operational issues.[3]

What happens if and when the pandemic ends? What, if any, precautions will surgery professionals continue to take even after the worst is over? Will testing continue even after most Americans have received a vaccine? The short answer is, "Yes."

"For now and in the foreseeable future, we're going to continue to need COVID testing before surgery," says **Beverly Philip**, MD, FACA, FASA, president of the ASA. "The virus still is in the population, and our patients need to be protected all the time. On the provider side,

physicians, anesthesiologists, and all others [in surgery centers] will need to continue to take precautions and wear personal protective equipment."

At press time, not every patient may have been vaccinated, but by now, surgery center staff should have had access to at least one dose, if not both doses, of the vaccine. "The vaccine is highly effective in preventing bad disease by anyone who gets any of the shots. It's an amazing thing," Philip says.

Still, COVID-19 testing should continue, regardless of patients' vaccine status. The CDC's Advisory Committee on Immunization Practices provides recommendations for vaccination prioritization. As more people are vaccinated, the CDC's priorities for COVID-19 testing likely will evolve.[4]

Researchers who have studied surgeons' response to the pandemic also say the next few years will see a continuation of infection prevention precautions as SARS-CoV-2 mutates and causes surges, even in vaccinated regions.

Thus, surgery professionals should continue to take all infection prevention precautions until further recommendations come out, according to **Christopher G. Larsen**, MD, an orthopedic surgery resident at Northwell Health.

"Wear full personal protective equipment, even with people who are vaccinated," he says. "Nothing has come out saying that if you're vaccinated, there is no way you could transmit COVID."

The COVID-19 vaccine prevents serious illness, but if someone who was vaccinated becomes even mildly sick with the virus, it's possible they could be a vector to spread the disease. "Everyone needs to maintain proper precautions with full PPE when dealing with COVID-positive patients. That's our policy," Larsen says of Northwell Health. "When we take COVID patients to the operating room, everyone is wearing N95 respirator masks, gloves, face masks and shields, and eye protection."

Before these heightened infection prevention practices change, more data are needed about how the world responds to vaccination, says **Jessica M. Intravia**, MD, an orthopedic surgeon at the North Shore-Long Island Jewish Medical Center in New York. "There are very few tests that every surgery patient gets, and the COVID-19 test is one of the few," she notes.

Early data indicate the three COVID-19 vaccines in circulation in the United States are safe and efficacious. There is widespread enthusiasm among healthcare professionals and the general public about receiving the vaccine, although there are plenty of reports about skepticism among ordinary citizens and health professionals alike. Anecdotally, it does not appear mandates are widespread, but Philip believes there could be a time "down the road" when many are required to take the COVID-19 vaccine.

Until then, surgery leaders should emphasize to staff that continuation of PPE and additional disinfection processes should continue through the vaccination period.

"The issue of why we continually test and use PPE is that it's for patients' safety," Philip explains. "There are enough reports that some patients who have surgery while they have COVID do not do well afterward."

Follow the CDC's and ASA's guidance on how long patients with COVID-19 should wait to undergo elective surgery. "In general, if it's uncomplicated COVID-19, wait a month before having truly elective surgery," Philip offers. "If you have had more serious COVID-19, then it might be several months."

Patients should discuss this with their surgeon and primary care physician to determine when it would be safe for them to undergo a procedure after COVID-19 illness. "If surgery needs to be done now, it needs to be done. That's fine," Philip adds.

Other pandemic-era changes in surgery likely will continue indefinitely, such as limiting the number of family members who accompany the patient and stay in waiting rooms. At some facilities, depending on size, families may continue to be asked to drop off patients and wait until they are called to pick up the patient. There may be

EXECUTIVE SUMMARY

Some best practices included in COVID-19 pandemic safety guidance issued by federal and professional organizations are likely to continue even after the worst of the emergency is over.

- Expect to continue presurgery COVID-19 testing on all patients.
- Surgery professionals will continue to use personal protective equipment and take all additional infection prevention precautions.
- Leaders will need to monitor and address staff stress and burnout through the rest of 2021 and beyond.

beeper systems like restaurants use. This tactic prevents visitors from transmitting infections.

Some may like these new techniques because they are more efficient. Rather than waiting in the surgery center for an hour or longer, a person could run an errand and return when he or she receives a notification that the patient is ready for pickup. "The need for distancing and more limited family in the surgery center will continue for a while, and it's for the patient's family's safety," Philip says.

Using telemedicine to communicate with patients and family exploded in popularity during the pandemic. The tool might have improved overall care and made patient-physician meetings a little more efficient, according to Philip.

"Physicians and anesthesiologists are responsible for patients being well enough to have surgery beforehand and for after medical care," she says. "Now, we have telemedicine to check in on patients, and that wasn't there before. I think these precautions will persist. I think the days of the entire family coming in and staying around and cheering on their family member is not coming back any time soon."

Mask-wearing and strict hand hygiene also will persist.

"We're all aware that the number of people who get sick from influenza this year has been very small because the same thing that protects us from COVID-19 protects us from all these other diseases," Philip says. "One of my colleagues reminds us that when HIV came on the scene, we learned how to deal with that, and it changed our practices. Now, I think what COVID-19 will do is give us a background level of protection from airborne illnesses, and a lot of that is good."

Another change that surgery leaders will need to acknowledge over the next year and possibly longer involves staff's stress and wellness.

"How do you keep everybody at work feeling they can work with the physical stresses there are?" Philip asks. "Fortunately, now we have what appears to be a light at the end of the tunnel. Getting the vaccine takes off stress. It's a real comfort that my odds of getting sick from COVID-19 are now [near] zero."

But leaders still should watch for mental health issues, signs of burnout, and support their colleagues by offering time for stress reduction and providing information on techniques to reduce stress.

"COVID-19 now is part of our environment," Philip explains. "It will become a less bothersome part of our environment, but to expect it to vanish is not a realistic expectation." ■

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Wearing Clear Masks Could Boost Patients' Trust Levels

Patients are more likely to trust surgeons wearing a clear mask rather than one obscuring the mouth, according to new research.[1]

Surgeons who wore clear masks were considered to be better at demonstrating empathy, showing respect, and communicating clearly, says **Muneera R. Kapadia**, MD, MME, study co-author and an associate professor of surgery at the University of North Carolina at Chapel Hill.

"We asked surgeons who were willing to participate to wear either a clear mask or a standard covered mask, depending on their randomization," she says. "After the clinic encounter with new patients, one of our researchers went into the examination room and said, 'We'd like to ask you some questions about your surgeon's communication behaviors.'"

Researchers asked patients how well the surgeon explained things, how much they trusted the surgeon's decisions, and how comfortable they were in meeting the surgeon. The study stemmed from Kapadia's own experience as a surgeon, wearing masks while trying to optimize patient rapport and communication.

"Last summer, I had a patient [who had colon surgery], and at the end of his three-day hospital stay, he said to me, 'Doc, you've taken out half of my colon, and I don't know what you look like. I've never seen your face,'" Kapadia recalls. "I've had a long-standing interest in surgeon-patient communication, so it got me thinking about what is the effect of us as providers, as surgeons, wearing masks? How does it affect communication between us and our patients?"

During the COVID-19 pandemic, it was not feasible to randomize surgeons to wearing a mask or not wearing any mask.

"We started to think about whether there was another way [to cover] your face. Dr. Ian Kratzke came on board and provided us with the ideas of clear masks, which we could use as a proxy for not wearing masks," Kapadia says.

Patients' impressions of the masks also showed a higher rating for the clear mask. Patients of surgeons who wore the clear mask offered unanimous positive ratings. But this was not true of covered masks. "We asked patients on a scale of 1 to 4 to rate the clear mask and the covered mask," Kapadia says. "Four was highest, 1 was lowest, and the patients in the clear mask group gave it a 4 rating."

The study's most surprising finding was there were so many differences in patients' opinions about their surgeon based on which mask the surgeon wore, Kapadia notes.

"We didn't have surgeons change anything else besides their masks, and we found lots of differences where the clear mask was rated significantly higher," she says. "When we asked patients about their trust in the surgeon's decisions, when surgeons wore a covered mask [their trust] was significantly lower than when they wore a clear mask." Then, researchers asked patients, "How comfortable are you with the surgeon operating on you?"

"What we're concerned about is that patients were saying, 'I trust you a little less when I can't see your face, but I guess I'll still let you operate on me,'" Kapadia says.

On the Likert scale about trust, a 4 was considered a positive answer, and researchers hoped to see that score across the board. Even though that was not the case, Kapadia notes a score of 3 indicated trust existed, just not to the extent researchers might have hoped.

"Ultimately, for me as a surgeon, that's concerning," she says. "We want our patients to go into the relationship with the highest trust. It should take a lot of trust for a patient to say, 'Yes, doctor, I'm going to let you operate on me.' The fact that patients are reporting diminished trust when we're wearing masks is concerning to me."

Kapadia and colleagues also asked surgeons whether they would choose the clear mask over their standard covered mask. A majority (53%) said they would not. Surgeons responded to open-ended questions about what they thought of the clear mask and how likely they were to use it again.

"There's definitely a disconnect between patients and surgeons," Kapadia observes. "Patients loved the clear mask. With surgeons, it was lukewarm at best."

Surgeons cited fit, fogging, and concerns about protection. The study authors chose one clear mask type because it allowed people to see most of the physician's face, and it was rated for safety similar to standard surgical masks. Still, if one is talking to a COVID-19-positive patient, or someone showing signs of infection, Kapadia says it might be best for surgeons to stick with standard masking protocols, not the clear mask. Nevertheless, it appears Kapadia and colleagues uncovered an issue that should be addressed — namely, improving communication between surgeons and patients. Wearing a clear mask could be one solution.

"There are other solutions that we could study — spending more time with patients, using more empathetic statements," Kapadia offers. "These are other potential solutions that may be just as effective."

It is possible patients like clear masks because they can see surgeons' facial expressions. Some patients also might be relying on lip-reading. "When we cover our mouths, those patients no longer have an extra cue to tell what you're saying," Kapadia observes. In fact, the authors recorded specific statements on this issue, such as "If somebody is going to operate on you, it's very helpful to see their face," and "[Clear masks] really helped to communicate."

Kapadia and colleagues did not address the impact of nurses and other clinicians wearing clear masks, which could be included as part of future investigations.

"One might have a hypothesis that given the overwhelming positive response from our patients when surgeons wore the clear mask that patients would appreciate other people wearing the clear mask, but that's far outside of our study," Kapadia says. "What is important to me is understanding the impression that wearing a mask has on patients and ... [the] effect on the patient-surgeon relationship." ■

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Text Messaging App Might Improve Patient Response Rate

Using an automated text messaging system as a communication tool proved to be handy for patient follow-up, specifically for ambulatory surgery patients who received a nerve block.[1]

Researchers found an automated text messaging system to query patients resulted in an average response rate of 91% among patients ages 18 to 90. This was higher than the rate of daily phone contact follow-up.

The traditional method of calling surgical patients after their procedure can be time-consuming and inefficient in an era when people do not answer calls they do not recognize.

"We mostly have trainees doing follow-up, and I did a lot of these calls when I was a trainee. It's hard to get people on the phone sometimes," says **Daniel Gessner**, MD, study co-author and clinical assistant professor in the department of anesthesiology, perioperative, and pain medicine at Stanford.

Sending follow-up messages via email or through an app that patients have to download on their phones also create barriers. Asking someone to download an app can create a technology barrier. Just as the volume of spam phone calls are on the rise, so, too, are the number of junk email messages.

"Imagining myself after surgery, and thinking about how I would like to communicate after surgery, I would like an option where I don't have to answer the phone," Gessner says. "Text messages can cut through a lot of the clutter."

The key is to ask patients if it is OK to send a text message the next day for follow-up. "The vast majority of the patients we offered it to accepted it and wanted it," Gessner reports. "We did not receive any rejected messages, and we didn't have any patients who were unable to follow the instructions."

The automated message asked patients if their nerve block had worn off, what time it wore off, and whether there were any leftover tingling sensations.

"We asked if they were satisfied in their care, with a 1 for 'yes,' a 2 for 'no,' and a 3 for 'not sure,'" Gessner explains.

The REDCap automated system did not accept invalid responses, such as a "no" answer when the question asked for a number response. "We had 12 of 85 patients who sent an invalid response at some point," Gessner says. "Those 12 had some trouble, but they fixed it themselves and responded correctly."

Text messages for follow-up are particularly useful during the COVID-19 pandemic, but their effectiveness suggests this is a method that could continue. "We're still struggling to return to some normalcy. As we move back to thinking about normal changes, I'm looking forward to using it more," Gessner says.

The method is affordable and can be used for other aspects of surgical practice. "There's no limit to what you could ask patients as long as you have their permission," Gessner offers.

A drawback to automated text messaging is it takes away the personal touch. "To be honest, I actually enjoyed these follow-up phone calls as a trainee," Gessner says. "As an attending, I liked them too; it's one of the few opportunities you have to feel like a doctor."

A surgical professional's daily experience involves few moments for real interactions with patients. "I enjoyed the phone calls, but they're logistically challenging," Gessner explains. "I do worry about losing the opportunity for personal interaction, a personal touch."

Nevertheless, patients appear to like the text messages.

"It's important to respect patients' time after surgery. If the patient doesn't want to hear from you and be bothered, it's up to them," Gessner says.

If surgeons used text messages for more than an automated response system, then there is a chance it could lead to richer communication. "There could be some form of electronic communication, and it doesn't have to be impersonal," Gessner suggests. "It's complicated because of security and privacy, but we should imagine the possibility of electronic communication that is easy to use, secure, and private — and that also has a human element to it." ■

REFERENCE

1. Gessner D, Hunter OO, Kou A, Mariano ER. Automated text messaging follow-up for patients who receive peripheral nerve blocks. *Reg Anesth Pain Med* 2021;rapm-2021-102472.

Age, BMI, Gender Among Factors Affecting Same-Day Surgery Discharge Rate

Total knee arthroplasty (TKA) procedures are less likely to lead to successful same-day discharge among patients who are older, female, nonwhite, with a body mass index of 35 kg/m^2 or higher, living with primary hypertension, and living with other comorbidities, according to the results of a recent paper.[1]

The same-day discharge rate is becoming an important statistic in orthopedic surgery. "We routinely have patients go home on the same day from the hospital or ambulatory surgery center [ASC]," says **James MacDonald**, MD, study co-author and orthopedic surgeon at Luminis Health Orthopedics, Annapolis, MD. "In the clinic, we aim to identify the correct patients who are good candidates for that discharge plan to avoid problems at home or returns to the emergency room."

In addition, an American Society of Anesthesiologists (ASA) Physical Status Classification System score of 3 or higher also decreased the likelihood of a same-day discharge.

"Using these seven factors, we were able to generate a model that was able to correctly identify same-day discharge patients in approximately 77% of cases," says **Justin Turcotte**, PhD, MBA, study co-author and director of orthopedic and surgery research at Luminis Health.

The ASA score was an important indicator of physical health used for patient selection in this study (and elsewhere), but it is only one factor.

"Our study highlights some of the specific demographics and comorbidities that should serve as red flags when deciding which patients are candidates for same-day discharge," Turcotte explains. "The odds ratio for each risk factor was calculated holding all other variables in the model constant to independently assess their influence on same-day discharge."

Researchers also considered the bigger picture of TKA and same-day discharge, attempting to answer questions such as "How much physical therapy will a patient need?" or "How much help at home will a patient require?"

"The answers to these questions are essential to providing the best care for each individual patient at the lowest cost," MacDonald explains. "Our goal is to leverage large data sets and predictive models to improve our patients' results after hip and knee arthroplasty."

Same-day surgery decisions should be made jointly by patients and surgeons.

"The surgeon's intuition on who is a good candidate becomes our guide," MacDonald says. "However, as more patients opt for same-day discharge and as more joint replacements are done in ambulatory surgery centers, we need to quantify the criteria upon which we choose patients for accelerated discharge."

This paper provides useful data for surgeons to consider when creating and adjusting criteria for same-day procedures. But it is just one snapshot of the bigger picture of what may work in a particular center.

"Track your results," MacDonald suggests. "Locally, you may find a different set of criteria to help identify appropriate patients for same-day discharge. To improve the quality of care delivered, it is essential that we continually evaluate our data and adjust our approach to achieve optimal patient outcomes." ■

REFERENCE

1. Turcotte JJ, Menon N, Kelly ME, et al. Preoperative predictors of same-day discharge after total knee arthroplasty. *Arthroplast Today* 2021;7:182-187.

Accommodating Expanded ASC Orthopedic, Spine Procedures

By Stephen W. Earnhart, RN, CRNA, MA
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Healthy patients undergoing hip and knee replacements, along with certain spine procedures, only intended for in-patient settings now can undergo these procedures in an ASC. The problem is some patients will need pain control and monitoring beyond the 23 hours, 59 minutes recovery window CMS allows in an ASC.

Post-surgical options for patients who require 48-hour (up to 72-hour) pain control is needed in a separate recovery center that does not jeopardize the Conditions of Coverage for CMS-certified ASCs.

While there are no uniform solutions that solve all problems for everyone, there are some options that can help:

• **Hospitality suite.** This is an attractive and popular option because of the light regulatory burden and small operating cost. However, it is difficult for some facilities to maintain high-quality care standards that other options offer. Because of the lack of regulations and quality standards, this option is not reimbursed by most payors unless is it included in a bundled payment arrangement, through self-pay, or under some type of other contract with a payor.

• **Skilled nursing facility (SNF).** Strictly regulated and licensed with steep operating cost rules, SNFs can be troublesome.

Typically, Medicare requires a three-day qualifying hospital stay, and most patients do not need the higher level of acuity associated with SNF patients. However, these facilities do allow for private and federal reimbursement.

• **A pain management and recovery care center.** Some use another licensed ASC for post-op pain and monitoring to gain an additional 23 hours, 59 minutes.

The logistics could be difficult based on location, and reimbursement might not be enough to make this feasible.

• **Medicare-approved 72-hour stay facility.** This is the best option. ASCs need to be able to provide an opportunity to keep patients longer in an ASC or adjacent facility that will qualify for commercial and federal reimbursement.

This is the next logical step to keep patients out of the hospital, with adequate incentives for ASCs to develop facilities and programs to provide longer recovery times for many approved procedures. ■

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CME/CE OBJECTIVES

After reading *Same-Day Surgery*, the participant will be able to:

- identify clinical, managerial, regulatory, or social issues relating to ambulatory surgery care;
- identify how current issues in ambulatory surgery affect clinical and management practices;
- incorporate practical solutions to ambulatory surgery issues and concerns into daily practices.

COMING IN FUTURE MONTHS

- PACU nurse training lacks international standards
- Study predicts who may fail at same-day discharge
- Best practices in quality improvement projects
- New toolkit helps with antimicrobial stewardship

SAME-DAY SURGERY

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CME/CE QUESTIONS

1. **A study of guidelines for patient-centered opioid prescribing and best practices in disposing excess pills revealed patients recorded a high compliance rate of disposing pills safely after receiving:**

   a. physician's follow-up call, text message link to opioid misuse information.
   b. patient education, automated phone call reminder, convenient drop box for medications, and a follow-up questionnaire.
   c. a charcoal container to store excess pills.
   d. a pamphlet about the dangers of leaving unused opioids in the medicine cabinet.

2. **What current COVID-19 pandemic practice likely will continue, indefinitely, before ambulatory surgery?**

   a. Patient testing for COVID-19
   b. Surgery centers will only handle emergency procedures every time there is a COVID-19 outbreak
   c. Telemedicine pre-op visits for all patients
   d. Double-masking in operating rooms and patient care areas

3. **In a study of patients' trust of mask-wearing physicians, the authors found patients unanimously rated physicians a high positive score if they:**

   a. wore a blue surgical mask.
   b. allowed patients to see their face as they explained the surgical procedure.
   c. wore a clear mask that showed their mouths and noses.
   d. wore a picture mask, reflecting the doctor's personality.

4. **Which communication technique worked well when following up on patients after a peripheral nerve block procedure?**

   a. Email communication by doctors
   b. Follow-up phone calls by physicians
   c. Nurses calling patients
   d. Automated text messaging