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Patient-Centered Care: Understanding Patient Perception of Surgical Infection Prevention Technology

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With patient-centered care, a patient's individual healthcare needs, perspectives and desired outcomes are the basis of the healthcare plan and outcome measures.¹ In the arena of surgical care, likely the single the most highly desired outcome on the part of patients and hospitals alike, is zero preventable surgical site infections (SSIs).

With the continual introduction, but variable adoption of, technology to support SSI prevention, a market survey was undertaken to better understand the patient's perspective.

Preventing SSI is a key U.S. healthcare priority, especially given that the number of surgical procedures performed continues to increase. Public reporting of SSI rates and compliance with prevention processes is now required by law, and reimbursements to hospitals for treating SSIs are being reduced or denied.² In 2006, CMS began basing hospital reimbursement, in part, on patient satisfaction through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) program. Together, these developments contributed to an increased focus by hospitals on patient satisfaction with care provided, and the emergence of a movement called patient-centered care with the goal of empowering patients to become active participants in their care.³ Patient satisfaction has now become a standard quality metric, and Patient Centered Care an imperative among hospitals and hospital systems wishing to be successful under increasingly competitive and financially challenging conditions. In one report from Impact Advisors and the Scottsdale Institute, 80 percent of chief information officers (CIOs) said that patient experience is one of the highest organizational priorities.⁴

In parallel, patients are becoming more discerning consumers regarding the quality of healthcare, the skill of providers and the products designed to make healthcare safer. As has been reported in studies and conference presentations, until recent years, very few patients would have challenged physicians and healthcare workers on their hand hygiene. However, this perception is shifting as patients become better informed. Programs such as "It's OK to Ask" have become common in healthcare facilities, empowering patients to request hand hygiene by their providers to ensure their own safety.^{5,6} This is a trend which will likely only increase over time, and lead to more frequent and similar conversations between patients and surgeons, for instance, relative to the use of new technology designed to reduce surgical infection risk. With consideration of this trend, a market survey was planned to better understand patient perspectives regarding this type of technology.

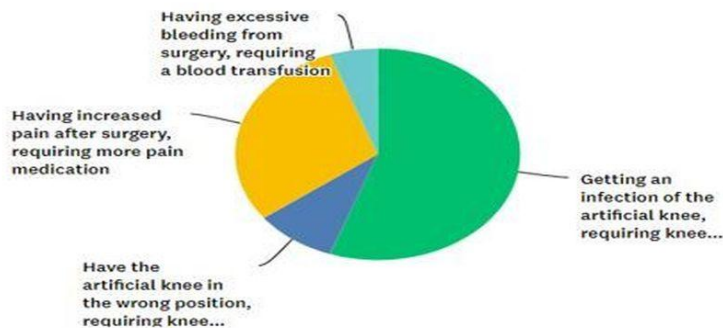
Understanding the patient's perspective of the risk of SSI and the measures taken to prevent SSI including technology and innovation, is foundational to intervening to ensure best-in-class surgical care, and patient satisfaction scores reflecting the same.

In 2018, a market survey was commissioned with the goal of learning about patient perception regarding new technology designed to reduce surgical infection risk. The survey comprised 11 multiple-choice questions and was performed via electronic questionnaire of 311 U.S. residents over the age of 45, using Survey Monkey. Sample size was calculated per SMA (Simplified Memory Bounded) algorithm to estimated accuracy of plus or minus 5 percent. In the respondent sample, there were no significant differences in gender, geographic location or age subgroup.

The survey responses indicated that the potential post-operative surgical complication of greatest concern to these patients was post-operative surgical infection (more than bleeding, post-op pain, and incorrect implant position)

Of the potential complications you could get from elective surgery (such as knee replacement) which concerns you the most:

Answered: 312 Skipped: 0



ANSWER CHOICES	RESPONSES
Getting an infection of the artificial knee, requiring knee removal	55.45% 173
Have the artificial knee in the wrong position, requiring knee repositioning	9.29% 29
Having increased pain after surgery, requiring more pain medication	29.81% 93
Having excessive bleeding from surgery, requiring a blood transfusion	5.45% 17
TOTAL	312

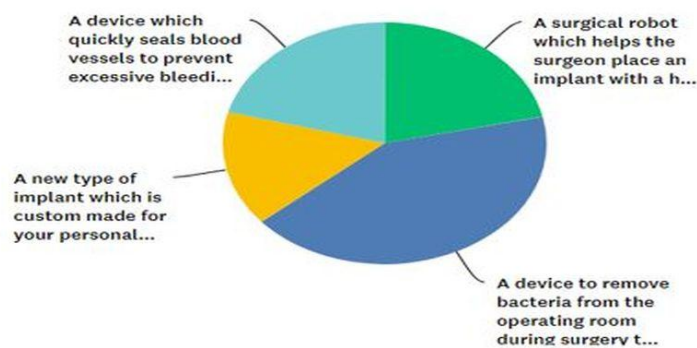
Many respondents (60 percent) would even delay or cancel surgery due to fear of infection. And they were nearly unanimous in a desire for transparency by hospitals regarding surgical infection rates and prevention efforts in use including technology and innovation (>90 percent).

The survey also revealed a strong desire for the use of new technology to enhance prevention efforts, with 74 percent indicating they would select a hospital that uses new technology for surgical infection prevention over any others. Most indicated a preference regarding learning about the technology directly from their surgeon versus through advertising or news media. Between 60 percent and 70 percent of respondents would drive 50 miles further to that hospital and would pay up to \$500 out of pocket if needed to receive care from a hospital that uses new technology to support prevention of surgical infection.

When given a choice between four categories of new surgical infection prevention technologies, most respondents (55%) selected “a technology to prevent you from getting an infection at the area of surgery”, instead of technology to make surgery more accurate, to make recovery faster, or to make surgery less expensive. When given a further choice regarding specific types of surgical infection technology, most respondents (42 percent) selected “a device to remove bacteria from the operating room during surgery to reduce risk of infection”, instead of surgical robot for placement of implant, 3D printed implant, device to prevent excessive bleeding.

If a hospital near me adopted a new technology for surgery, and I needed surgery, the kind of technology I would be most excited about is:

Answered: 312 Skipped: 0



ANSWER CHOICES	RESPONSES
▼ A surgical robot which helps the surgeon place an implant with a high degree of accuracy	21.47% 67
▼ A device to remove bacteria from the operating room during surgery to reduce risk of infection	42.31% 132
▼ A new type of implant which is custom made for your personal anatomy with 3D printing	15.38% 48
▼ A device which quickly seals blood vessels to prevent excessive bleeding during surgery	20.83% 65
TOTAL	312

There was general agreement that the operating room staff and surgeon hold the greatest responsibility to ensure patient safety and prevent surgical infections.

As patients become more informed consumers, introduction of technology to support the drive to zero preventable surgical infections may be the edge required to protect revenue and remain competitive in an increasingly challenging environment.

Sue Barnes, RN, CIC, FAPIC, is a national infection prevention thought leader and policy specialist. Disclosure: the author provides consultation services to Aerobiotix.

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