

# HEALTHCARE EXECUTIVES' Perceptions & Awareness of RSIs

## INTRODUCTION

The cost of medical errors is great to both patients and medical facilities. Even when the greatest cost of all, the loss of a human life, is avoided, facilities and patients may incur increased costs in prolonged care, unnecessary or unreimbursed medical expenses, lawsuits and large settlements.

Executives in health systems and other provider settings hope to avoid those costs and consequences by staying on top of the industry's best available practices and technology. As developments in research and products become available, those leaders typically adopt such advancements to protect their patients, staff and facilities.

However, a common medical error—retained surgical sponges—are flying under the radar of many healthcare executives, despite their cost to patient safety and the bottom line.

Retained surgical items occur 39 times each week in U.S. medical facilities.<sup>[1]</sup> The vast majority of these (69%)

involve surgical sponges.<sup>[2]</sup> RSIs can require additional unnecessary readmissions and surgeries—many times not reimbursed—malpractice and legal costs, quality metrics penalties, reputation loss and more. As the healthcare industry deepens its commitment to value-based care, mistakes like these can and should be avoided.

While pre- and post-procedure counting and X-ray have been the industry norm in addressing RSIs, their effectiveness is questionable: 88% of RSIs occur when sponge counts are identified as correct<sup>[3]</sup>, and X-ray is effective in detection only 67% of the time.<sup>[4]</sup> The only available method clinically demonstrated to have 100% sensitivity and specificity is radio-frequency (RF) based detection.

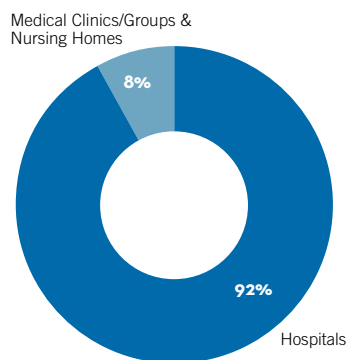
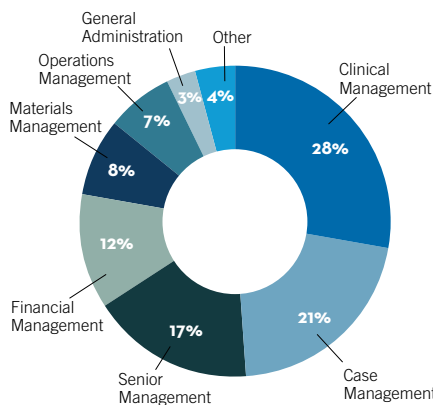
How aware are healthcare executives of this issue? What processes have they chosen to address RSIs and retained sponges? How much could this problem be costing their organizations? This survey of 291 executives answers those questions and more.

## ABOUT THE SURVEY

This briefing summarizes the results of a survey conducted for Medtronic by Modern Healthcare Custom Media in November 2016. Invitations to participate were sent by email to 16,422 healthcare professionals. By the closing date, 435 returns were received for a response rate of 2.7%. This report is based on 291 respondents who are employed by a hospital, medical clinic/nursing home.

As an incentive to complete the survey, respondents were offered a chance to win a \$400 gift card. The findings of this survey may be accepted as accurate, at a 95% confidence level, within a sampling tolerance of approximately +/-5.7%.

### Who Took This Survey?



## FREQUENCY & AWARENESS AMONG EXECUTIVES

The majority of executives surveyed were not aware of the prevalence of retained surgical items, and a significant percentage were unaware that so many of these incidents involve sponges. Of the respondents, 57% said they were surprised to learn that a retained surgical item event occurs 39 times each week in the U.S., and 21% said they were surprised to learn sponges make up 69% of those incidents. [Figure 1]

Surveyed executives perceive retained surgical items to be the second most prevalent sentinel event in operating rooms at their organization. While two-thirds of respondents indicated their organizations have experienced such an event, 20% of respondents are unaware of the frequency at which a retained item occurs at their own facility [Figure 2]. According to The Joint Commission, retained surgical items are the most common sentinel event.<sup>[5]</sup>

Surveyed Financial executives knew less about sentinel events in their organizations than other corners of the C-suite. Thirty-six percent of financial executives report not knowing when their organizations last experienced a sentinel event involving a retained surgical sponge, compared with only 12% of clinical and case management executives. [Figure 2]

FIGURE 1  
Which fact surprises you?

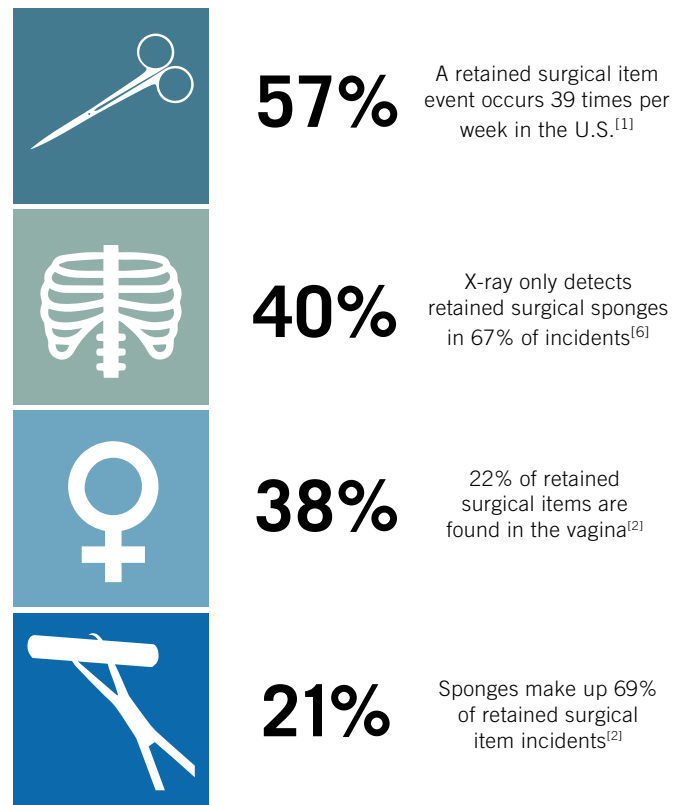
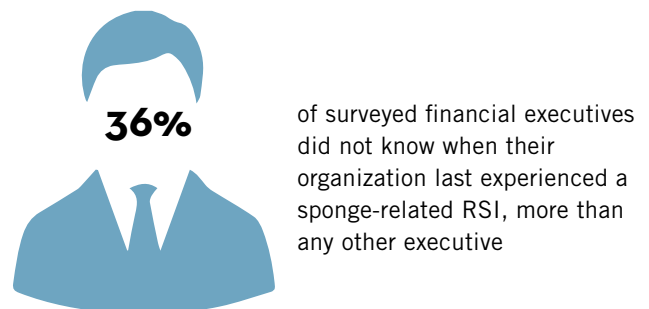
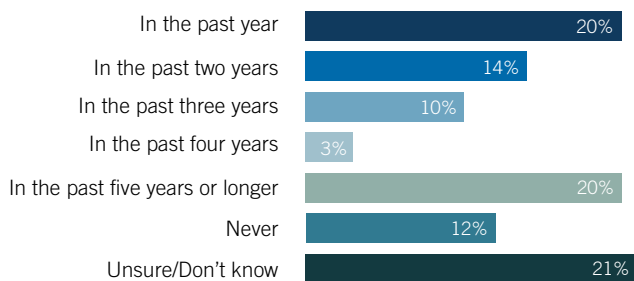


FIGURE 2  
When was the last time your organization experienced a retained surgical sponge?



## PREVENTION & EFFECTIVENESS

While at least four different methods that attempt to prevent RSIs are being used, often simultaneously, surveyed hospital executives lack knowledge of which methods are being applied, and whether or not they are truly effective. A large number, 40%, were surprised to learn that X-ray fails to detect about one-third<sup>[6]</sup> of RSIs involving sponges. Still, 57% of respondents report their organizations use X-ray for detection, which is only effective 67% of the time in detecting retained sponges.<sup>[6]</sup> [Figure 3]

Eighty-five percent of executives surveyed reported that their institutions are proactively avoiding retained surgical item events through prevention and process. Yet, merely 16 percent use the only clinically-proven 100% sensitive and specific detection technology—radio frequency, or RF—to detect retained surgical sponges, which occur approximately 27 times each week in the United States.<sup>[1]</sup> [Figure 4]

Financial executives were the least informed of any surveyed group about what their organizations do to address RSIs. In fact, 1 in 4 do not know what processes their organizations use.

FIGURE 3

### X-Ray Used for Detection, Not Trusted

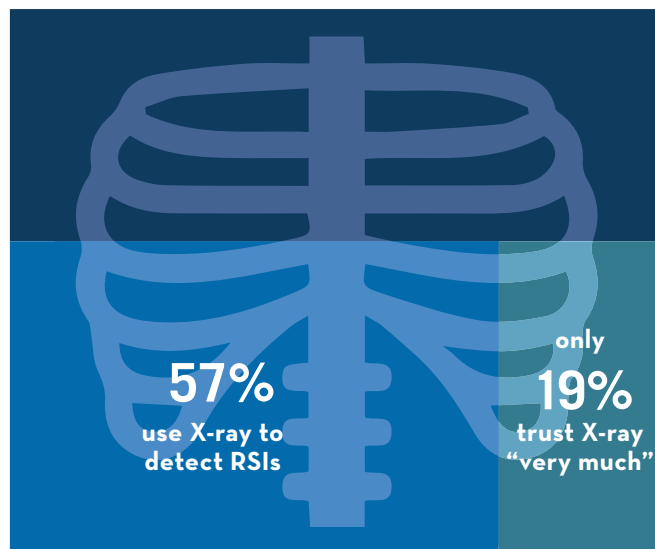
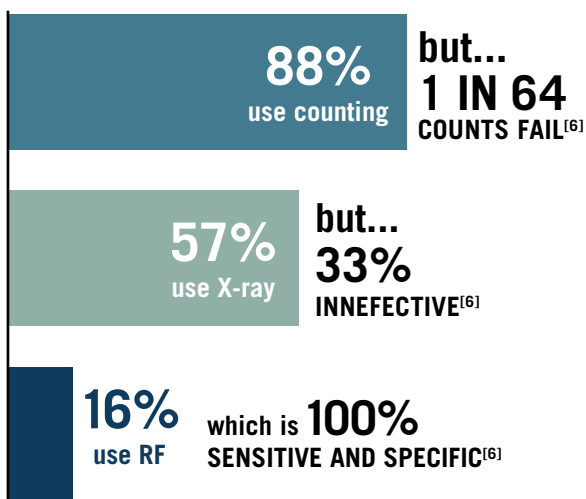
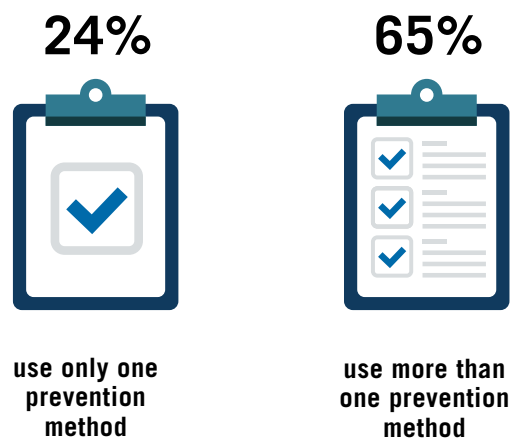


FIGURE 4

### Most Effective Methods: Not the Most Widely Used



### Processes Used to Prevent Retained Surgical Sponges



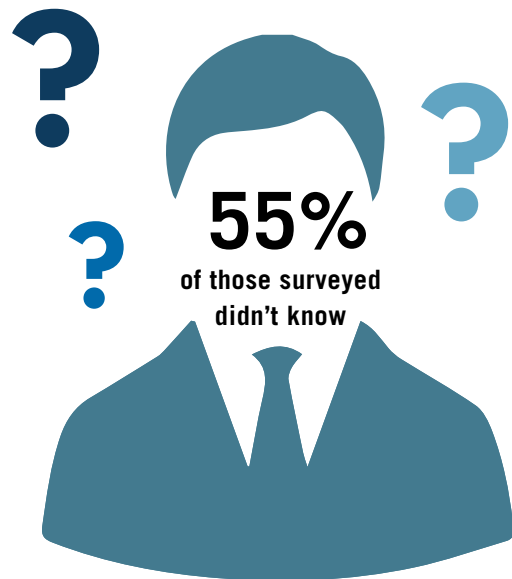
## COSTS UNKNOWN TO EXECUTIVES

Despite the frequency of retained surgical sponges, most of the surveyed executives appeared to know little or nothing about the costs associated with the problem. It is estimated that a retained surgical sponge event can cost an institution more than \$450,000<sup>[7]</sup> due to legal defense, settlements and reimbursement losses. This does not include the cost of OR time and X-ray to rule out the presence of retained surgical sponges, which is estimated to be \$219,056 annually.<sup>[8]</sup>

Of the executives surveyed, 55% said they were unsure or don't know how much their organizations spend annually on sentinel events involving retained surgical sponges. Even among financial executives, 50% said they are unaware of how much sentinel events involving RSI cost their organizations. [Figure 5]

More specifically, almost half (49%) of overall respondents said they do not know how much their organizations spend on X-rays to detect RSIs, and another 32% think it's less than \$100,000 annually.

FIGURE 5  
Annual Organizational Cost of RSIs



## Medtronic

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Medtronic plc ([www.medtronic.com](http://www.medtronic.com)), headquartered in Dublin, Ireland, is among the world's largest medical technology, services and solutions companies - alleviating pain, restoring health and extending life for millions of people around the world. Medtronic employs more than 88,000 people worldwide, serving physicians, hospitals and patients in approximately 160 countries. The company is focused on collaborating with stakeholders around the world to take healthcare Further, Together.

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## REFERENCES

<sup>[1]</sup> Mehtsun et al. Johns Hopkins Report, 2013.

<sup>[2]</sup> Gawande et al. N Engl J Med, 2003.

<sup>[3]</sup> Gawande et al. N Engl J Med, 2003.

<sup>[4]</sup> Cima et al. N Engl J Med, 2003.

<sup>[5]</sup> Joint Commission 2015 sentinel event data summary, published February 2016.

<sup>[6]</sup> Steelman, Amer J Surg, 2011

<sup>[7]</sup> NOTE: Amounts based on data provided in below four sources. Calculations based on an occurrence of 1 in 7,000 procedures, assuming 10,000 procedures annually. 1. Stone PW, Braccia D, Larson E. Systematic review of economic analyses of health care-associated infections. American Journal of Infection Control 2005;33(9):501–509. doi:10.1016/j.ajic.2005.04.246. 2. Carroll AE, Parikh PD, Buddenbaum JL. The Impact of Defense Expenses in Medical Malpractice Claims. The Journal of Law, Medicine & Ethics, Spring 2012:135–142. 3. Fact Sheet: CMS Proposes Additions to List of Hospital Acquired Conditions for Fiscal Year 2009. www.cms.gov 2008. Available at: [http://www.cms.gov/newsroom/mediareleasedatabase/factsheets/2008factsheetsitems/20080414.html#\\_ftn3](http://www.cms.gov/newsroom/mediareleasedatabase/factsheets/2008factsheetsitems/20080414.html#_ftn3). Accessed June 2015. 4. Lincoln, Taylor. Malpractice Payments Sunk to Record Low in 2011: Skyrocketing Healthcare Costs and Rampant Medical Errors Discredit the Promises Put Forth by Advocates of Tort Reform. Public Citizen, July 2012.

<sup>[8]</sup> Williams TL. et al. JACS 2014