INCREASE NOTED IN REPORTED WRONG-SITE SURGERY EVENTS FROM INTERVENTIONAL RADIOLOGY

By **Patient Safety Authority**

Keywords: wrong-site surgery, interventional radiology, surgery, medical error, events, wrong site, wrong side, wrong procedure

Disclosure: The author declares that they have no relevant or material financial interests.

Submitted
November 15, 2023

Accepted
November 15, 2023

Published
December 31, 2023

Patient Safety Authority. Increase noted in reported Wrong-site surgery events from Interventional Radiology. *Patient Safety*. 2023;5(Highlights of 2023):91634.

Wrong-site surgery (WSS) is a well-known type of medical error that continues to occur in healthcare facilities. Wrong-site surgery involves all surgical procedures performed on the wrong patient, wrong body part, wrong side of the body, or wrong level of a correctly identified anatomic site.[1,2] Wrong-patient surgery may include patients who were never scheduled for a procedure, procedures performed that were not scheduled, and procedures scheduled correctly in which a different one was performed.[2]

The National Quality Forum (NQF) defines surgery as "an invasive operative procedure in which skin or mucous membranes and connective tissue is incised or an instrument is introduced through a natural body orifice. Surgery begins, *regardless of setting*, at the point of surgical incision, tissue puncture, or the insertion of an instrument into tissues, cavities, or organs."[3]

Research published by the Patient Safety Authority revealed that these events occur on average of 1.42 WSS events per week in Pennsylvania.[4] While it is true that a majority of the WSS events occur in the perioperative areas, a steady number of these events arise outside of the operating theatre in areas such as interventional radiology (IR).

In our December 2020 study published in *Patient Safety*, research found that "The frequency of WSS was consistently greater in the hospital OR (operating room) than IR; nevertheless, IR experienced a range of 6 to 13 WSS events per year, over the 5-year period."[4]

Ongoing research into reported WSS events has revealed an alarming finding. For the period January 1, 2023, through March 31, 2023, there were eight WSS events originating from interventional radiology. These reported WSS events (examples below) included wrong site, wrong side, and wrong procedure cases. The number of IR WSS cases in the first quarter of 2023 was the highest quarterly total since the PSA initiated including procedural WSS events occurring outside of the perioperative setting in 2015.

"A patient goes to interventional radiology (IR) for nephrostomy tube placement. Upon return to the inpatient unit, it is realized that the tube was placed on the wrong side. The patient returns for the correct tube placement the following day."

"… patient with a compression fracture of T-12 vertebra … underwent a kyphoplasty in IR … after reviewing CT results, MD discovered the T-12 fracture remained with kyphoplasty being performed on T-11 …"

In 2008, the Standards of Practice Committee of the Society of Interventional Radiology released the current "Quality Improvement Guidelines for Preventing Wrong Site, Wrong Procedure, and Wrong Person Errors: Application of the Joint Commission 'Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery' to the Practice of Interventional Radiology."[5] These guidelines supplement The Joint Commission Universal Protocol[6] as well as the PSA's Principles for Reliable Performance of Correct-Site Surgery[7] and the PSA/Department of Health Final Recommendations to Ensure Correct Surgical Procedures and Correct Nerve Blocks.[8]

We encourage facilities to review/revise their universal protocol policies and procedures and monitor for compliance to decrease the likelihood of a future WSS event both in the perioperative areas as well as the interventional medicine departments.

References

1. Kwáan MR, Studdert DM, Zinner MJ, et al. Incidence, Patterns, and Prevention of Wrong-Site Surgery. *Arch Surg.* 2006;141(4):353-7.

2. ECRI. Wrong-Site Surgery. In: *Healthcare Risk Control, Supplement A: Surgery and Anesthesia* 26. 2003.

3. National Quality Forum (NQF). *NQF Patient Safety Terms and Definitions*. Washington, DC: NQF; 2009.

4. Yonash R, Taylor M. Wrong-Site Surgery in Pennsylvania During 2015–2019: A Study of Variables Associated With 368 Events From 178 Facilities. *Patient Safety*. 2020;2(4):24-39. doi:10.33940/data/2020.12.2

5. Angle JF, Nemcek AA, Cohen AM, et al. Quality Improvement Guidelines for Preventing Wrong Site, Wrong Procedure, and Wrong Person Errors: Application of the Joint Commission "Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery" to the Practice of Interventional Radiology. *J Vasc Interv Radiol.* 2008;19:1145–1151. Available from: https://www.sirweb.org/practice-resources/clinical-practice/guidelines-and-statements/safety-professional-development/quality-improvement/qi_preventing_wrong_site/

6. The Joint Commission. The Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery. In: Hospital: 2024 National Patient Safety Goals. The Joint Commission; 2023. Available from: https://www.jointcommission.org/-/media/tjc/documents/standards/national-patient-safety-goals/2024/npsg_chapter_hap_jan2024.pdf

7. Patient Safety Authority. Principles for Reliable Performance of Correct-Site Surgery. PSA website. https://patientsafety.pa.gov/pst/Pages/Wrong%20Site%20Surgery/principles.aspx. Published November 2011. Accessed June 2023.

8. Patient Safety Authority, Pennsylvania Department of Health. Final Recommendations to Ensure Correct Surgical Procedures and Correct Nerve Blocks. Pennsylvania Bulletin. 2022;52(12):52 Pa.B. 1716. Available from: https://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol52/52-12/448.html

About the Author

Patient Safety Authority (patientsafety.pa.gov) is an independent state agency that oversees the Pennsylvania Patient Safety Reporting System (PA-PSRS), the largest database of its kind in the United States.