

Perioperative Action Bundle: Prevention and Reduction of Wrong-Patient, Wrong-Site, Wrong-Procedure Events
Articles and Websites

Ambulatory surgery: percentage of ambulatory surgery center (ASC) admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant.

<http://www.qualitymeasures.ahrq.gov/content.aspx?id=35282>. Published March, 2012. Accessed December 16, 2013.

ASCs begin using wrong site surgery tool. *Bull Am Coll Surg*. 2012;97(10):60.

Berenholtz S, Schumaker K, Hayanga A, et al. Implementing standardized operating room briefings/debriefings at a large regional medical center. *Jt Comm J Qual Patient Saf*. 2009;391-397.

Bohmer AB, Wappler F, Tinschmann T, et al. The implementation of a perioperative checklist increases patients' perioperative safety and staff satisfaction. *Acta Anaesthesiol Scand*. 2012;56(3):332-338..

Braaf S, Manias E, Riley R. The role of documents and documentation in communication failure across the perioperative pathway. a literature review. *Int J Nurs Stud*. 2011;48(8):1024-1038.

Butcher L. Wrong-site surgery. *Hosp Health Netw*. 2011;85(11):34-7, 1.

Chinthapalli K. Checklists can reduce errors in intraoperative emergencies by 75%, says expert. *BMJ*. 2013;346:f2767.

Clarke JR. What keeps facilities from implementing best practices to prevent wrong-site surgery? barriers and strategies for overcoming them. *PA Patient Saf Advis*. 2012;9((Suppl 1)):1-15.

Cohen SP, Hayek SM, Sukdeb D, et al. Incidence and root cause analysis of wrong-site pain management procedures: a multicenter study. *Anesthesiology*. 2012;112(3):711-718.

Cobb TK. Wrong site surgery-where are we and what is the next step? *Hand (N Y)*. 2012;7(2):229-232.

Croskerry P. From mindless to mindful practice—cognitive bias and clinical decision making. *N Engl J Med*. 2013;368(26):2445-2448.

Davis JS, Karmacharya J, Schulman CI. Duplication of surgical site marking. *J Patient Saf*. 2012;8(4):151-152.

ElBardissi AW, Sundt TM. Human factors and operating room safety. *Surg Clin North Am*. 2012;92(1):21-35.

Eye care: percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and had any of a specified list of surgical procedures in the 30 days following cataract surgery which would indicate the occurrence of any of the following major complications: retained nuclear fragments, endophthalmitis, dislocated or wrong power IOL, retinal detachment, or wound dehiscence. US Department of Health & Human Services Agency for Healthcare Research and

Quality. <http://www.qualitymeasures.ahrq.gov/content.aspx?id=27981&search=wrong+site+surgery>. Accessed January 14, 2014.

Eye care: percentage of patients aged 18 years and older with a procedure of cataract surgery with IOL placement who received a comprehensive preoperative assessment of 1) dilated fundus exam; 2) axial length, corneal keratometry measurement, and method of IOL power calculation; and 3) functional or medical indication(s) for surgery prior to the cataract surgery with IOL placement within 12 months prior to cataract surgery. 2010 Sep. NQMC:003802. US Department of Health & Human Services Agency for Healthcare Research and Quality.

<http://www.qualitymeasures.ahrq.gov/content.aspx?id=27983&search=wrong+site+surgery> Accessed January 14, 2014.

Gibbs VC. Thinking in three's: changing surgical patient safety practices in the complex modern operating room. *World J Gastroenterol*. 2012;18(46):6712-6719.

Hu YY, Arriaga AF, Roth EM, et al. Protecting patients from an unsafe system: The etiology and recovery of intraoperative deviations in care. *Ann Surg*. 2012;256(2):203-210.

Hyman D, Laire M, Redmond D, Kaplan DW. The use of patient pictures and verification screens to reduce computerized provider order entry errors. *Pediatrics*. 2012;130(1):e211-9.

James MA, Seiler JG 3rd, Harrast JJ, Emery SE, Hurwitz S. The occurrence of wrong-site surgery self-reported by candidates for certification by the American board of orthopaedic surgery. *J Bone Joint Surg Am*. 2012;94(1):e2(1-12).

Johnson HL, Kimsey D. Patient safety: Break the silence. *AORN J*. 2012;95(5):591-601..

Joint Commission Center for Transforming Healthcare launches second targeted solutions tool: tool focuses on reducing the risk of wrong site surgery. *Jt Comm Perspect*. 2012;32(3):1, 15.

Kalapurakal JA, Zafirovski A, Smith J, et al. A comprehensive quality assurance program for personnel and procedures in radiation oncology: Value of voluntary error reporting and checklists. *Int J Radiat Oncol Biol Phys*. 2013;86(2):241-248.

Longo UG, Loppini M, Romeo G, Maffulli N, Denaro V. Errors of level in spinal surgery: an evidence-based systematic review. *J Bone Joint Surg Br*. 2012;94(11):1546-1550..

Mahar P, Wasiak J, Batty L, Fowler S, Cleland H, Gruen RL. Interventions for reducing wrong-site surgery and invasive procedures. *Cochrane Database Syst Rev*. 2012;9:CD009404.

Mainthia R, Lockney T, Zotov A, et al. Novel use of electronic whiteboard in the operating room increases surgical team compliance with pre-incision safety practices. *Surgery*. 2012;151(5):660-666.

Mallett R, Conroy M, Saslaw LZ, Moffatt-Bruce S. Preventing wrong site, procedure, and patient events using a common cause analysis. *Am J Med Qual*. 2012;27(1):21-29.

New targeted solutions tool to prevent wrong site surgery. *Bull Am Coll Surg*. 2012;97(4):43-44.

Marshall MB, Emerson D. Patient safety in the surgical setting. *Thorac Surg Clin*. 2012;22(4):545-550.

McLaughlin N, Winograd D, Chung HR, Van de Wiele B, Martin NA. University of California, Los Angeles, surgical time-out process: evolution, challenges, and future perspective. *Neurosurg Focus*. 2012;33(5):E5.

Mehtsun WT, Ibrahim AM, Diener-West M, Pronovost PJ, Makary MA. Surgical never events in the United States. *Surgery*. 2013;153(4):465-472.

Neily J, Mills PD, Paull DE, et al. Sharing lessons learned to prevent incorrect surgery. *Am Surg*. 2012;78(11):1276-1280.

Nemeth SA, Lawrence N. Site identification challenges in dermatologic surgery: a physician survey. *J Am Acad Dermatol*. 2012;67(2):262-268.

Newkirk JD. Preventing surgical mishaps: using surgical checklists. *Clin Plast Surg*. 2013;40(3):475-487.

Nuclear medicine—radionuclide bone imaging: percentage of patients, regardless of age, undergoing bone scintigraphy, considered to be potentially at risk for fracture in a weight-bearing site for whom there is documentation of direct communication to the referring physician within 24 hours of completion of the imaging study. US Department of Health & Human Services Agency for Healthcare Research and Quality. <http://www.qualitymeasures.ahrq.gov/content.aspx?id=47026> Accessed January 14, 2014.

Oszvald A, Vatter H, Byhahn C, Seifert V, Guresir E. "Team time-out" and surgical safety-experiences in 12,390 neurosurgical patients. *Neurosurg Focus*. 2012;33(5):E6.

Palumbo MA, Bianco AJ, Esmende S, Daniels AH. Wrong-site spine surgery. *J Am Acad Orthop Surg*. 2013;21(5):312-320.

Papaconstantinou HT, ChanHee J, Reznik SI, Smythe Wr, Wehbe-Janek H. Implementation of a surgical safety checklist: impact on surgical team perspectives. *Oschner J*. 2013;13: 299-309.

Perea-Perez B, Santiago-Saez A, Garcia-Marin F, Labajo-Gonzalez E. 2011. Proposal for a surgical checklist for ambulatory oral surgery. *International Journal of Oral and Maxillofacial Surger*. 2011;40(9) 949-954.

Perioperative protocol: percentage of wrong surgery events per month. US Department of Health & Human Services Agency for Healthcare Research and Quality. <http://www.qualitymeasures.ahrq.gov/content.aspx?id=39396&search=wrong+site+surgery>. Accessed January 14, 2014.

Pernar LI, Shaw TJ, Pozner CN, et al. Using an objective structured clinical examination to test adherence to joint commission national patient safety goal—associated behaviors. *Jt Comm J Qual Patient Saf*. 2012;38(9):414-418.

Poore SO, Sillah NM, Mahajan AY, Gutowski KA. Patient safety in the operating room: II. intraoperative and postoperative. *Plast Reconstr Surg*. 2012;130(5):1048-1058.

Potera C. Making a list and saving a life: checklists reduce the failure rate of lifesaving procedures during operating room crises. *Am J Nurs*. 2013;113(4):15.

Prevention of wrong-site or wrong-patient surgery: does the hospital have a protocol for prevention of wrong-site or wrong-patient surgery? Department of Health & Human Services Agency for Healthcare Research and Quality.

<http://www.qualitymeasures.ahrq.gov/content.aspx?id=27536&search=wrong+site+surgery>. Accessed January 14, 2014.

Quarterly update: What might be the impact of using evidence-based best practices for preventing wrong-site surgery? *Pa Patient Saf Advis*. 2011;8(3):109-13.

[http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2011/sep8\(3\)/Pages/109.aspx](http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2011/sep8(3)/Pages/109.aspx). Accessed December 16, 2013.

Quarterly update on wrong-site surgery: facilities with barriers to best practices may experience more wrong-site surgeries. *Pa Patient Saf Advis* 2012 Dec;9(4):145-9.

[http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2012/Dec;9\(4\)/Pages/145.aspx](http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2012/Dec;9(4)/Pages/145.aspx). Accessed September 18, 2013.

Rahmathulla G, Recinos PF, Traul DE, et al. Surgical briefings, checklists, and the creation of an environment of safety in the neurosurgical intraoperative magnetic resonance imaging suite. *Neurosurg Focus*. 2012;33(5):E12.

Reducing the risk of wrong site surgery. The Joint Commission Center for Transforming Healthcare.

http://www.centerfortransforminghealthcare.org/assets/4/6/CTH_WSS_Storyboard_final_2011.pdf. Published May 13, 2013. Accessed December 16, 2013.

Rexford J, Hoyler MM. More emphasis on safety needed: The patient advocate's perspective. *Bull Am Coll Surg*. 2013;98(3):47-48.

Ricci MA, Brumsted JR. Crew resource management: Using aviation techniques to improve operating room safety. *Aviat Space Environ Med*. 2012;83(4):441-444.

Rossy KM, Lawrence N. Difficulty with surgical site identification: What role does it play in dermatology? *J Am Acad Dermatol*. 2012;67(2):257-261.

Russ S, Arora S, Wharton R, et al. Measuring safety and efficiency in the operating room: development and validation of a metric for evaluating task execution in the operating room. *J Am Coll Surg*. 2013;216(3):472-481.

Rydrych D, Apold J, Harder K. Preventing wrong-site surgery in Minnesota: a 5-year journey. *Patient Saf Qual Healthc*. 2012;9(6):24-34.

Sentinel event. The Joint Commission. http://www.jointcommission.org/sentinel_event.aspx. Accessed August 28, 2013.

Sentinel event data summary. The Joint Commission.
http://www.jointcommission.org/sentinel_event_statistics_quarterly/ . Published February 7, 2013.
Updated August 16, 2013. Accessed December 16, 2013.

Shapiro FE, Punwani N, Urman RD. Checklist implementation for office-based surgery: a team effort. *AORN Journal*. 2013;98(3):305-309.

Stelman VM, Graling PR. Top 10 patient safety issues: What more can we do? *AORN J*. 2013;97(6):679-98.

Stelman VM, Graling PR, Perkhounkova Y. Priority patient safety issues identified by perioperative nurses. *AORN J*. 2013;97(4):402-418.

Surgical checklists come to ambulatory centers. *Hosp Peer Rev*. 2012;37(3):27-28.

Targeted solutions tool for wrong site surgery. The Joint Commission Center for Transforming Healthcare. http://www.centerfortransforminghealthcare.org/tst_wss.aspx. Accessed December 16, 2013.

Thakkar SC, Mears SC. Visibility of surgical site marking: A prospective randomized trial of two skin preparation solutions. *J Bone Joint Surg Am*. 2012;94(2):97-102.

Time out remains key weapon in fight against wrong-site surgeries. *AORN J*. 2013;97(6):C5-6.

Treadwell JR, Lucas S. Preoperative checklists and anesthesia checklists. In: *Making Health Care Safer II: An Updated Critical Analysis of the Evidence for Patient Safety Practices*. Rockville (MD): Agency for Healthcare Research and Quality. 2013. <http://www.ncbi.nlm.nih.gov/books/NBK133353/>. Accessed December 16, 2013.

Urman R, Rosenberg N, Stenglein J, Gallagher S, Shapiro F. A customizable, office-based surgical safety checklist improves the rates of key patient safety indicators and outcomes. Institute for Safety in Office-Based Surgery. http://isobsurgery.org/wp-content/uploads/2012/10/ASA-ISOBS-Oct-2012_v3.pdf. Accessed January 31, 2014.

Vachhani JA, Klopfenstein JD. Incidence of neurosurgical wrong-site surgery before and after implementation of the universal protocol. *Neurosurgery*. 2013;72(4):590-5.

Warren GJ, Roberts WW, Hollingsworth J, Wolf JS, Jr, Faerber GJ. Prevention of wrong site surgery during upper tract endoscopy. *Urology*. 2012;79(2):475-477.

What you can do to prevent wrong-site surgery? Patient Safety Authority Commonwealth of Pennsylvania.
http://patientsafetyauthority.org/PATIENTSCONSUMERS/PatientConsumerTips/Pages/Wrong_Site_Surgery_Consumer_Tips.aspx. Published June, 2007. Accessed September 18, 2013.

Whitlock J. The value of active followership. *Nurs Manag (Harrow)*. 2013;20(2):20-23.

Wong JM, Bader AM, Laws ER, Popp AJ, Gawande AA. Patterns in neurosurgical adverse events and proposed strategies for reduction. *Neurosurg Focus*. 2012;33(5):E1.

Wrong-site surgery cited as top OR safety challenge among U.S. hospitals, survey finds. Infection Control Today. <http://www.infectioncontroltoday.com/news/2013/08/wrong-site-surgery-cited-as-top-or-safety-challenge-among-us-hospitals-survey-finds.aspx>. Published August 1, 2013. Accessed January 31, 2014.

Facts about the Targeted Solutions Tool™. Joint Commission Center for Transforming Healthcare. http://www.centerfortransforminghealthcare.org/assets/4/6/TST_Fact_Sheet.pdf Accessed September 19, 2013.

Wrong site surgery project. Joint Commission Center for Transforming Healthcare. <http://www.centerfortransforminghealthcare.org/projects/detail.aspx?Project=2>. Accessed September 19, 2013.

Yoon RS, Alaia MJ, Hutzler LH, Bosco JA. Using “near misses” analysis to prevent wrong-site surgery. *J Healthc Qual*. 2013. [Epub ahead of print.]

Zuckerman SL, France DJ, Green C, Leming-Lee S, Anders S, Mocco J. Surgical debriefing: A reliable roadmap to completing the patient safety cycle. *Neurosurg Focus*. 2012;33(5):E4.