CFx
Center for Complex Fractures and Limb Restoration

Denver Health Orthopaedics In The News

Volume 1, January/February 2011

Philip Stahel, M.D.

Preventing Wrong Site Surgery

Any surgical procedure involving wrong site, wrong patient or wrong procedure is unacceptable, and yet, these events still occur. The article "Wrong-Site and Wrong-Patient Procedures in the Universal Protocol Era," written by Philip F. Stahel and colleagues and published in *Archives of Surgery*, October 2010 issue, was designed to analyze the frequency, root causes and outcomes of wrong-site and wrong-patient procedures performed throughout the state of Colorado.

This analysis was performed on 27,370 physician self-reported adverse events from the Colorado Physician Insurance Company (COPIC) database between January 1, 2002 and June 1, 2008. A total of 25 wrong-patient, and 107 wrong-site procedures were identified. Five of the wrong-patient procedures, and 38 of the wrong-site procedures resulted in significant harm to the patient. One patient died secondary to a wrong-site procedure.

The two main causes leading to wrong patient procedures were errors in diagnosis and errors in communication. Wrong-site occurrences were related to errors in judgment and lack of performing a "time-out" to verify patient and procedure. Shockingly, nonsurgical disciplines equally contribute to patient injuries related to wrong-site procedures. These findings emphasize a continuing and concerning occurrence of wrong-site and wrong-patient procedures leading to frequent patient harm and even patient death.

The results were not taken lightly as this study received national and international attention and was featured in both *The Denver Post and The New York Times.* Wrong-site, wrong-patient procedures are called "never events" because such mistakes should never happen. A strict adherence to the Universal Protocol must be expanded to non-surgical specialties to achieve a zero-tolerance philosophy for these preventable incidents.

Preventing Wrong Site Surgery received attention from national media outlets including:

- *The New York Times*
- *Time magazine*
- *The Los Angeles Times*
- *Business Week*
- *CNN*
- *The Hill*
- *Voice of America*
- WebMD
- *Medscape*
- *HealthDay*
- *MedPage Today*
- *Becker's Hospital Review*
- *FierceHealthcare*
- DOTMed.com
- *Medical News Today*
- UPI.com.

Following the release of the article, Dr. Stahel occupied the first 11 pages of Google News.

Case of the Month

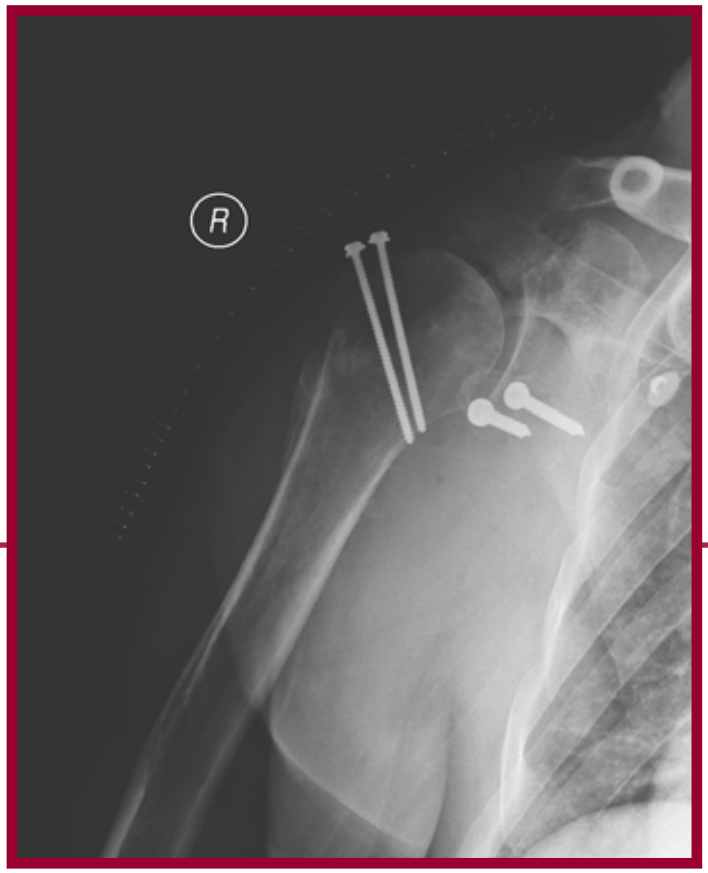
A right hand dominant 56-year-old male was involved in an altercation eight months prior to presenting to the Denver Health Orthopaedic Clinic complaining of constant pain and difficulty using his arm.

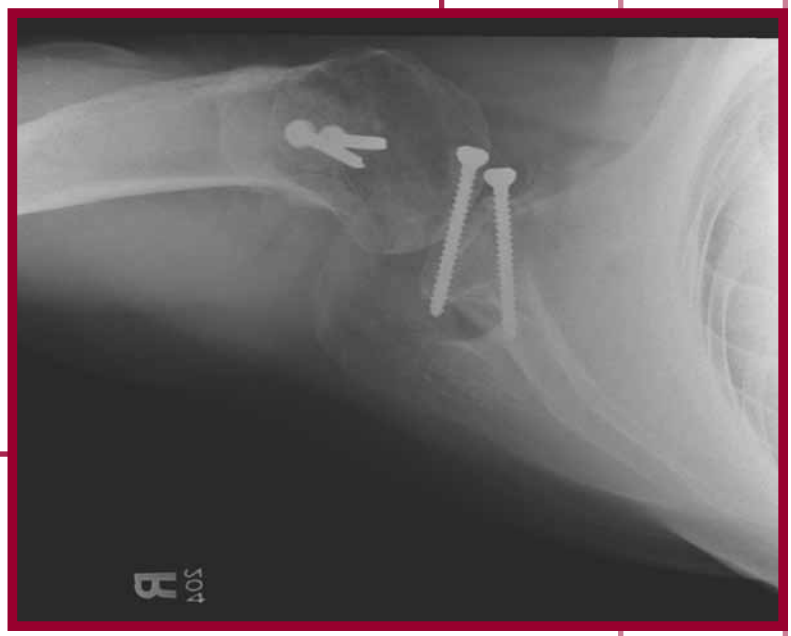
He demonstrated normal sensory and motor function at the hand, wrist, and elbow, but was unable to forward flex his arm beyond 45 degrees.

He would not tolerate any attempts at rotation of the shoulder. His strength at resisting internal and external rotation forces was rated at 3+/5. He was diagnosed with a chronic anterior glenohumeral dislocation with a greater tuberosity malunion. On CT scan there did not appear to be any glenoid insufficiency anteriorly, nor was there a significant Hill Sach's defect. It was felt that an attempt to reduce the shoulder and maintain his own joint surfaces would provide the most durable shoulder function with the least risk for long term problems.

Open anterior surgery via a deltopectoral approach with a coracoid osteotomy was performed. The superior, tendinous portion of the subscapularis was ruptured, and an extensive posterior capsular release had to be performed along with osteotomy and repair of the greater tuberosity malunion in order to reduce the glenohumeral joint.

The coracoid was transferred and secured to the anterior inferior glenoid, and the subscapularis tendon was repaired to the lesser tuberosity. A conservative rehabilitation program ensued and as of his eight week follow-up he described minimal discomfort at rest and was able to actively forward elevate to 90 degrees and externally rotate to 30 degrees with minimal discomfort.





8 week post-operative x-rays.
See outside of mailer for preoperative x-rays.

Surgeon Spotlight

Todd VanderHeiden, M.D.

A Colorado native, Dr. Todd VanderHeiden, M.D., Orthopaedic Surgeon, began his Denver Health career as a volunteer in 1997, while working toward his Bachelor of Arts in Molecular, Cellular, Developmental Biology and Biochemistry.

His passion for science led him to attend the University of Colorado School of Medicine followed by an internship in General Surgery and residency in Orthopaedics at The University of Colorado Hospital.

Subsequent to his residency, Dr. VanderHeiden completed a Spinal Surgery Fellowship at the Panorama Orthopaedics and Spine Center in Golden, Colorado.

As the newest addition to the renowned Orthopaedic team at Denver Health, Dr. VanderHeiden is dedicated to working with the spine, particularly in the treatment of degenerative spine disorders, spine trauma, and spinal deformities.

Todd VanderHeiden, M.D.

A member of Denver Health's Level I Trauma center, Dr. VanderHeiden is highly trained and capable of treating the most severe and complex injuries.

"It's an indescribable feeling to be able to call on my training and know-how to restore function in a patient and positively impact their lives. I feel very lucky and blessed to be in this position – this is my calling in life," says Dr. VanderHeiden.

Current Publications

Hak DJ, Pittman JL. **Biological rationale for the intramedullary canal as a source of autograft material.** *Orthop Clin North Am.* 2010, 41(1):57-61.

Flierl MA, Stoneback JW, Beauchamp KM, Hak DJ, Morgan SJ, Smith WR, Stahel PF. **Femur shaft fracture fixation in head-injured patients: when is the right time?** *J Orthop Trauma.* 2010, 24(2):107-14.

Flierl MA, Gerhardt DC, Hak DJ, Morgan SJ, Stahel PF. **Key issues and controversies in the acute management of hip fractures.** *Orthopedics.* 2010, 33(2):102-10.

Hak DJ, Althausen P, Hazelwood SJ. **Locked plate fixation of osteoporotic humeral shaft fractures: are two locking screws per segment enough?** *J Orthop Trauma.* 2010, 24(4):207-11.

Suzuki T, Smith WR, Hak DJ, Stahel PF, Baron AJ, Gillani SA, Morgan SJ. **Combined injuries of the pelvis and acetabulum: nature of a devastating dyad.** *J Orthop Trauma.* 2010, 24(5):303-8.

Ozer K, Kramer W, Gillani S, Williams A, Smith W. **Replantation versus revision of amputated fingers in patients air-transported to a level 1 trauma center.** *J Hand Surg Am.* 2010, 35(6):936-40.

Suzuki T, Smith WR, Stahel PF, Morgan SJ, Baron AJ, Hak DJ. **Technical problems and complications in the removal of the less invasive stabilization system.** *J Orthop Trauma.* 2010, 24(6):369-73.

Stahel PF, Flierl MA, Smith WR, Morgan SJ, Victoroff MS, Clarke TJ, Sabel AL, Mehler PS. **Disclosure and reporting of surgical complications: a double-edged sword?** *Am J Med Qual.* 2010, 25(5):398-401.

Suzuki T, Hak DJ, Stahel PF, Morgan SJ, Smith WR. **Safety and efficacy of conversion from external fixation to plate fixation in humeral shaft fractures.** *J Orthop Trauma.* 2010, 24(7):414-9.

Suzuki T, Morgan SJ, Smith WR, Stahel PF, Flierl MA, Hak DJ. **Stress radiograph to detect true extent of symphyseal disruption in presumed anteroposterior compression type I pelvic injuries.** *J Trauma.* 2010, 69(4):880-5.

Stahel PF, Sabel AL, Victoroff MS, Varnell J, Lembitz A, Boyle DJ, Clarke TJ, Smith WR, Mehler PS. **Wrong-site and wrong-patient procedures in the universal protocol era: analysis of a prospective database of physician self-reported occurrences.** *Arch Surg.* 2010, 145(10):978-84.

Hak DJ, Toker S, Yi C, Toreson J. **The influence of fracture fixation biomechanics on fracture healing.** *Orthopedics.* 2010, 33(10):752-5.

Flierl MA, Stahel PF, Hak DJ, Morgan SJ, Smith WR. **Traction table-related complications in orthopaedic surgery.** *J Am Acad Orthop Surg.* 2010, 18(11):668-75.

Lefaivre KA, Starr AJ, Stahel PF, Elliott AC, Smith WR. **Prediction of pulmonary morbidity and mortality in patients with femur fracture.** *J Trauma* 2010, 69(6):1527-36.

Edited by Jarrod King, M.D., Orthopaedic Surgeon, Denver Health Medical Center

For patient referrals, call 303-436-3555 or e-mail cfx@dhha.org

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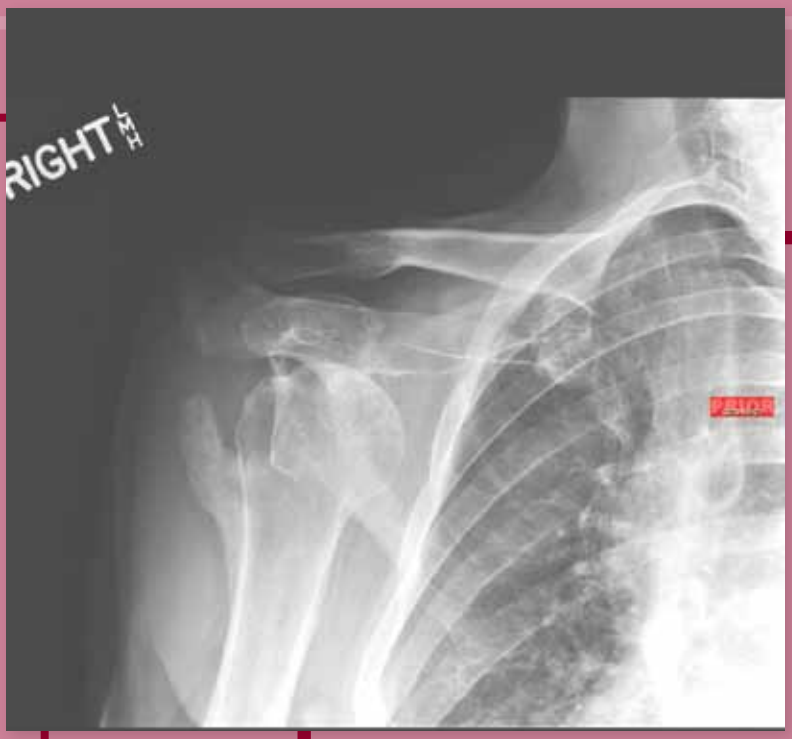
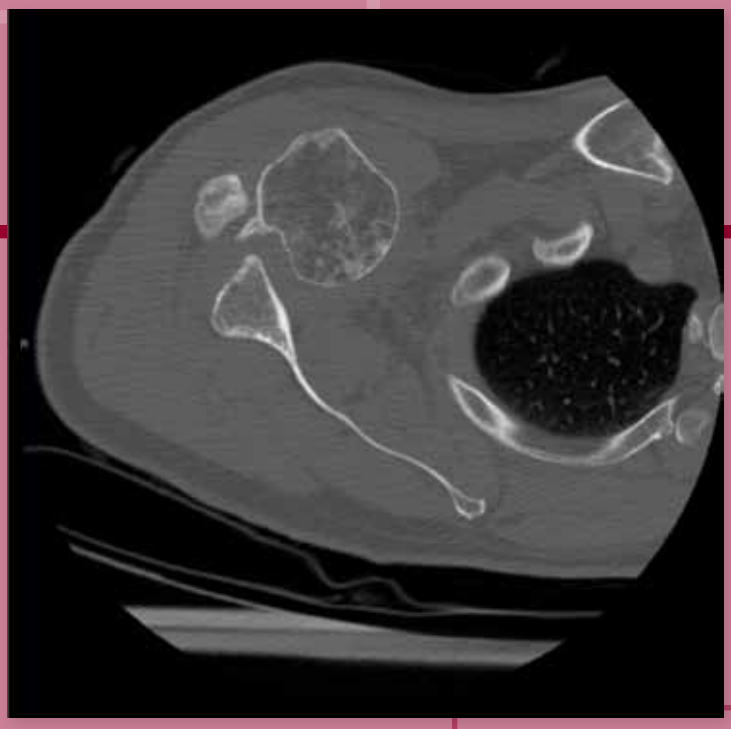
How would you approach this problem?

Please e-mail clinical comments and thoughts to Jarrod.King@dhha.org.





Look inside to see how we restored mobility to this patient.

www.denverhealth.org/orthopaedics