

**Causation for the Increasing
Number of Trauma Centers**

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Disclosures

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- Peter L. Althausen, MD, MBA
- 6: The Orthopedic Implant Company(OIC)

The following relationship(s) exist:
6) Stock or stock options in a company

Trauma Center Basics

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- The American College of Surgeons, recommends having one or two high-level trauma centers for every 1 million people
- There is some variability based on location and injury severity
- Those treated at trauma centers have a 25% higher survival rate compared with those seen in hospitals without those services
 - 2006 *New England Journal of Medicine*
- Multiple orthopaedic studies have shown that complex injury patterns have better outcomes when treated at trauma centers

Historical Perspective

- Before 2006, trauma centers and emergency rooms were closing across the nation
- There was a shortage of trauma surgeons and orthopaedic traumatologists
- Multiple articles were published documenting the problem and residents were recruited at national meetings
- In response to this, the trauma landscape has changed drastically

The Landscape

- More than 200 trauma centers have opened since 2009 in more than 20 states, and another 75 hospitals are seeking approvals
- States with the greatest number of new centers include Texas, Alabama, Arizona and California.
- The growth reverses more than a decade of closures in the 1990s and early 2000s
- For-profit hospital systems are leading the charge
 - HCA has added 20 trauma centers since 2009
 - Community Health Systems, added seven trauma centers in the past three years
 - Kaiser is rapidly expanding its trauma network as well

Why is this happening ?

- Supply and Demand
- Economics

Supply and Demand

- Many have accused the OTA and AAOS of causing this problem.
- If you look at graph of fellowship spots and trauma center openings, there does appear to be a correlation

Ortho Trauma Fellows

Year	Number of Fellows
2006	65
2007	70
2008	80
2009	75
2010	80
2011	80
2012	80
2013	75

Critical Care Fellows

Year	Number of Fellows
2009	170
2010	160
2011	160
2012	170
2013	160

“The Answer is Money, What is the Question?”

- Hospitals once regarded Trauma Centers as money losers but that has changed
- Administrators have figured out how to bill for trauma patients and improve efficiency
- Trauma centers make money
- “If a hospital is not making money on trauma, then it's not structured the right way.”
 - 9/24/2012, Mike Williams, president of the consulting firm Abaris Group in Martinez, Calif.

Hospital Collections

- Vallier et al (JOT, 2008) demonstrated the concepts of an orthopedic charge multiplier & net revenue multiplier
- For every \$ 1.00 of professional charge, hospital charges \$3.86
- For every \$ 1.00 of revenue generated by orthopedic trauma surgeon, the hospital generated \$7.81

How Hospital Makes \$ on Trauma

- Trauma activation fees
- Radiology charges
- Laboratory fees
- Consultations
- Not all patients are uninsured

Trauma Contribution at Our Institution

Total Charges	\$ 77,719,354
Trauma Activation Fees	\$ 7,420,000
Xray	\$ 2,424,083
CT	\$ 12,638,411
MRI	\$ 612,480
Laboratory Fees	\$ 3,400,270

• Net Profit \$5.1 Million
 ✦ Althausen, JBJS 2009

Trauma Activation Fees

- A fee charged by accepting hospital to provide initial care for trauma patient
- Common since 2006
- Originally designed to offset underinsured and cover overhead
- Quickly has become an arbitrary number
- USA today published article on activation fees in Florida 9/2012
 - Lawnwood Regional Medical Center in Fort Pierce \$29,000
 - Orange Park, \$20,000
 - Shands Jacksonville, \$7,000
- Based on this alone, many hospitals see this as a \$ generator and want to become involved

Other Benefits

- Aside from activation fee and treatment revenue, many other economic benefits of a strong trauma program exist which Dr. Hill and Mike Williams will address including:

- Keeping business in the community
- Marketing Implications
- Increasing reimbursement due to higher ACS Status
- Implications of The Affordable Care Act
