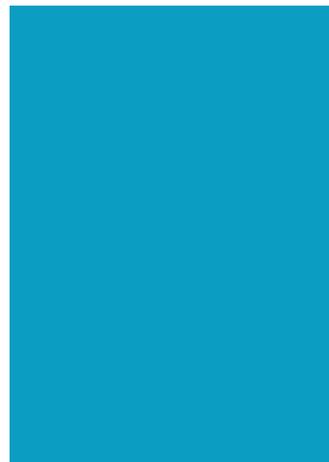




2017 Trauma Annual Report



We all have certain transition points in life. I'm at one of those points. It's a humbling experience with awesome responsibility.

As I close out my career as the Medical Director of the trauma program, I feel proud that I did what I set out to accomplish: serve the community.

I'm very excited that Dr. Schultz is taking over as Trauma Medical Director. Nobody wants to feel the fear of your life's work falling to the wayside in neglect. On the contrary, I'm confident that Dr. Schultz's professionalism and dedication to carrying on a local, comprehensive trauma program that benefits the people of our community and raises the bar for health care overall in the Fox Valley will only continue to improve the program that I poured my heart into for nearly 30 years.

I'm also excited about the next steps for my own passions. I have felt a calling my entire life to teach. At the beginning of this adventure, I tapped into that passion for teaching to instill a culture of urgency within the hospital trauma program and the entire trauma system. In the coming years, I will be focusing on teaching a new generation of trauma providers as we develop a surgical residency program in partnership with the University of Wisconsin as well as a surgical physician assistant training program through Marquette University.

Life Lessons and Special Thanks

This experience shaped me. On a daily basis, it helps me understand that life is precious. It helps me maintain perspective when my plane is late or when I get a flat tire. When put into the context of others dealing with life and death, it helps reset my view of the world and learn not to sweat the small stuff. I don't know if I would have had that same perspective in any other job. It has kept me grounded to what is really important in my life.

This work also includes its share of sacrifices. My family put up with cold dinners and dinners missed entirely, with my absence from important events in their lives, and with many many disrupted plans. My absolutely amazing wife is a nurse, so she understands...but understanding doesn't make it any easier.

It takes a certain type of person to work in trauma. We may cure cancer in my lifetime or my children's lifetime, but we will never "cure" trauma. It is gut-wrenching and all-consuming and more rewarding than any other profession I can imagine.

It has been a remarkable voyage.

I look forward to handing the reigns over to someone so capable and committed. And I look forward to having more time to treat patients, teach and mentor new providers, and enjoy the people that mean most to me.

I can only feel this level of confidence and contentment with moving on to the next phase of my career because the trauma program belongs to all of us: dispatch, the first responders, air and ground transport, the trauma care providers, and all the specialists who help take patients to the next level, as well as prepare them for the transition home. I know we're all in this together, and I'm grateful for sharing this experience with each of you.

Ray Georgen, MD, FACS
Trauma Center Medical Director, 1990-2017



A TRIBUTE TO
DR. GEORGEN
AND A SPECIAL THANKS TO HIS TEAM

No review of the trauma program and its transformation over the years would be complete without a special tribute to Dr. Ray Georgen. It seems an especially fitting time as he completes his tenure as ThedaCare Trauma Medical Director.

Some things that people may not know about Dr. Georgen:

He is a teacher at heart. He spends a minimum of one hour every Monday and Friday doing rounds teaching the entire team involved with trauma, including all therapy services, pharmacy, and many many more – even patients. He wants everyone to truly understand every aspect of patient care. That commitment to education never diminished over his nearly 30 years as trauma medical director.

He teaches in memorable ways. Dr. Georgen uses movie references and funny acronyms to make his lessons stick in your mind. Anyone who has worked with him knows the meaning of “what’s on the floor plus four more” and “shitake mushrooms out of the chest tube” and countless other clever tricks. And his teaching is interactive. You better be ready to answer questions or fill in the blank!

He has a genuine passion for people. Whether a patient, a colleague, a friend, or family, Dr. Georgen makes you feel like the most important person in his life at that moment... because you are at that moment.

But Dr. Georgen - being who he is - would say no tribute to him would be complete without special thanks to the many people who helped make his work possible. And Dr. Georgen - being who he is - would be RIGHT!

That special team includes _____

Dan Thearle, MD, who had the initial concept for a true trauma system in Northeast Wisconsin. Dr. Thearle is responsible for creating the vision of what is possible and hiring the right people to make it happen.

Kelly Jung, RN, who served as ThedaCare’s first Trauma Coordinator and as Dr. Georgen’s partner in establishing the beginnings of this program. Her role and her important work could never be overstated.

Theresa Pichelmeyer, VP, and **Bob Malte, SVP**, who both served as administrative champions behind moving the trauma program forward.

Neurosurgeons **Tom Lyons, MD**, **Philip Yazbak, MD**, and **Thomas Wascher, MD**; general surgeon **Jeffrey Burkett, MD**; and orthopedic surgeons **Brian Sears, MD**, and **Jeffrey Ralston, MD**; who all dedicated time and expertise early on to establishing a trauma program at ThedaCare.

Dispatch personnel, the first responders, EMS, referring providers, administrative staff, air and ground transport, pastoral care, and all the various specialists and organizations who work together as a team every day.

And, of course, thanks go to -

Incoming Trauma Medical Director
Dr. David Schultz, MD, FACS

Trauma Program Manager
Tabitha Uitenbroek, RN, MSN, TCRN

Trauma Registrar
Tina Brechlin, CSTR

Trauma Coordinator
Amanda Daniels, RN, TCRN

Injury Prevention & Outreach Coordinator
Kathi Hegranes, CPST-I

Who have all stepped up to continue the awesome responsibility and tradition of exceptional trauma care in Northeast Wisconsin.



Transitions & Transformations

Many people throughout Northeast Wisconsin don't remember what it was like before an integrated and comprehensive trauma program existed to keep our community safer. In reality, it wasn't that long ago when people in crisis had to receive life-saving care and recovery elsewhere...or nowhere.

The Trauma Center at ThedaCare Regional Medical Center-Neenah has been filled with transitions and transformations.

FOR THE PROVIDERS, there are clear points of transition when we hand off care beginning with dispatch all the way to therapy and rehabilitation experts, and everything in between.

FOR THE PATIENT, a significant trauma event almost certainly transforms life, creating a definitive "before" and "after" state of mind. Our goal is to make that trauma event a mere transition, helping our patients create a new normal that is as close to their previous life as possible.

FOR THE TRAUMA SYSTEM, there have also been many points of transition and transformation along the way. Sometimes, it's easy to forget how far we've come in such a short time. In this year's report, we have outlined some of the key moments of growth in the ThedaCare trauma program and the State Trauma System.

HOW IMPORTANT IS TRAUMA CARE ?

Unintentional injury is the leading cause of death in Wisconsin for people ages 1-44 and the third-leading cause of death for all age groups combined.

*Wisconsin Dept. of Health Services
Annual Death Report*



Moments in Time

- **1909** – Theda Clark Medical Center is built in honor of Theda Clark Peters, a young expectant wife who died from complications following childbirth with no hospital nearby.
- **1986** – ThedaStar air medical transports its first patient on June 6, 1986. The helicopter responds to crash and trauma scenes 24 hours/day, 365 days/year.
- **1990** – Dan Thearle, MD, shares his vision for a comprehensive local trauma center by hiring Raymond Georgen, MD, to develop the trauma program.
- **1990** – initial phase of the Trauma Center at Theda Clark Medical Center opens.
- **1990 - 2017** – Raymond Georgen, MD, FACS serves as Trauma Medical Director.
- **1995** – ThedaCare begins participation in the Trauma Registry.
- **1996** – Kelly Jung, RN, becomes ThedaCare's first Trauma Coordinator.
- **1998** – Pam Witt-Hillen, RN brought P.A.R.T.Y. to Theda Clark. (Prevent Alcohol and Risk-related Trauma in Youth)
- **1998** – Trauma Center at Theda Clark Medical Center becomes the first hospital in the state outside of Madison or Milwaukee to get verified as a Level II trauma center. As a whole, Wisconsin was on the forefront of trauma care in the Midwest since Minnesota and Iowa still had no verified trauma programs by this time.
- **1999** – The State Trauma Advisory Council (STAC) is formed with Dr. Georgen as an integral member and leader.
- **2001** – Trauma Center at Theda Clark Medical Center is reverified as a Level II trauma center by the American College of Surgeons for the second time. Our Trauma Center is one of only eight Level II centers in Wisconsin. There are two adult Level I trauma centers in Wisconsin, which adds the requirement of serving as a teaching hospital.
- **2001** – ThedaStar becomes the first aircraft to lift off and fly in Wisconsin after the 9/11 terrorism event, requiring special permission to respond to a vehicle crash.
- **2001** – State Trauma System activated. The State Trauma System took nearly a decade to develop and establish, finally implementing initial trauma plan recommendations in 2001. The recent events of 9/11 validated the need to complete this coordinated statewide system.
- **2001** – Emergency Department and Trauma Unit at Theda Clark Medical Center are redesigned and remodeled, creating two fully equipped trauma bays and enabling near-complete care for trauma patients right at their bedside.
- **2001** – ThedaStar Air Medical upgrades to a twin engine to provide an added margin of safety and enable flight over large bodies of water, such as Lake Winnebago, speeding up response times. Community support, including our rural service areas, was largely responsible for this upgrade.
- **2004** – Trauma Center at Theda Clark Medical Center is reverified as a Level II trauma center by the American College of Surgeons for the third time, a task that becomes more difficult over time.

2005 – P.A.R.T.Y. at the PAC (Prevent Alcohol and Risk-related Trauma in Youth) shares survivor stories and performs its first dramatic crash simulation to help teens grasp the potential consequences of risky behaviors, such as drunk driving, speeding, and distracted driving. The program has reached more than 65,000 students since that first curtain call - impacting nearly a generation!

2007 – Trauma Center at Theda Clark Medical Center is reverified as a Level II trauma center by the American College of Surgeons for the fourth time.

2010 – Trauma Center at Theda Clark Medical Center is reverified as a Level II trauma center by the American College of Surgeons for the fifth time.

2011 – Dual helipads are built, allowing multiple helicopters to work together and land simultaneously when responding to large crashes or more than one trauma.

2013 – Trauma Center at Theda Clark Medical Center is reverified as a Level II trauma center by the American College of Surgeons for the sixth time.

2013 – P.A.R.T.Y. at the PAC (Prevent Alcohol and Risk-related Trauma in Youth) adds a separate parent component to the event to encourage parents to model safe behaviors and offer guidance in talking about safety with their teens.

2015 – Theda Clark Medical Center changes name to ThedaCare Regional Medical Center-Neenah.

2015 – Trauma Center at ThedaCare Regional Medical Center-Neenah begins participation in Trauma Quality Improvement Program (TQIP), which involves additional components to the trauma registry and ongoing education for all trauma services staff.

2015 – The Fall Prevention Roadshow and the Stepping On programs raise awareness about fall prevention and give people tools to reduce their risk of falling.

2015 – Received national attention following response to Trestle Trail Shooting.

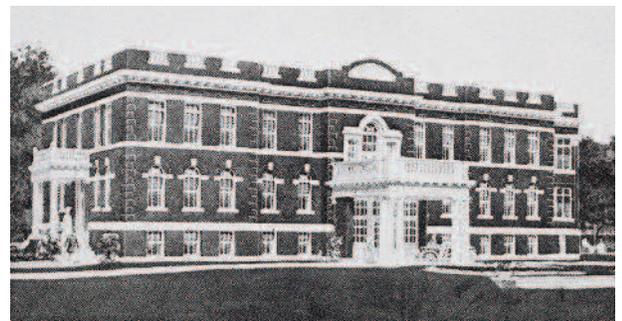
2016 – Trauma Center at ThedaCare Regional Medical Center-Neenah is reverified as a Level II trauma center by the American College of Surgeons for the seventh time and continues to be **the longest continuously verified Level II trauma center in Northeast Wisconsin.**

2016 – Recognized as one of the top 4 programs in the Nation offering community exemplary service for the P.A.R.T.Y. at the PAC Program (Foster McGaw).

2017 – Finding Balance Together online resources project went live in January.

2018 – David Schultz, MD, FACS becomes Trauma Medical Director on January 1st.

2018 – Stop the Bleed program offers its first set of classes to the public in February 2018 to prepare people for how to help themselves and others with a significant bleeding injury.



Live Fully. Live Aware.

“Nobody is asking people to live life so cautiously that you don’t experience a life full of wonder or adventure,” says Kathi Hegranes, ThedaCare injury prevention and outreach coordinator. “We simply want everyone to live with an awareness of what’s going on around you and understand the risks associated with your actions in order to make responsible choices.”

Vocabulary plays a role in that awareness.

“The word accident takes away some of the mindfulness tied to risky behaviors,” Hegranes explains. “It implies that nothing could be done to avoid an injury. Instead, we call injuries preventable.”

In truth, prevention techniques can help you live a longer, healthier, happier - FULLER - life.

ThedaCare’s trauma program works to prevent injury and build awareness by focusing on the most common mechanisms of injury we see locally for the biggest impact. Our two largest outreach programs are fall prevention and P.A.R.T.Y. at the PAC. In addition, Stop the Bleed is a new outreach effort for 2018.

P.A.R.T.Y. at the PAC

P.A.R.T.Y. at the PAC stands for Prevent Alcohol and Risk-related Trauma in Youth. Held every October at the Fox Cities Performing Arts Center (PAC), the event reaches nearly 5,800 high school sophomores with information, personal stories, and a realistic simulation of the aftermath of a motor vehicle crash.

Our goal is to change attitudes and actions regarding risky behaviors at an age and in a format that is relevant to new or soon-to-be drivers.

In addition to the crash simulation, a speaker told the students about hitting a sanitation worker in the street because she didn’t completely clear her windshield of snow. It caused a blind spot that changed two lives forever.

“It’s a busy world, but take the extra five minutes to do things right,” Hegranes urges. “There are so many reasons to be purposeful.”

Fall Prevention

This year, falls return as the most common reason people are seen in our Trauma Center.

ThedaCare learned that people are 50 percent less likely to fall after completing a tai chi program. Geared toward people who already have a balance issue, the classes have (over) filled quickly and completely. We have trained four instructors so far and have been holding tai chi classes in two counties. We intend to continue expanding the availability over time.

A new fall prevention website called **FindingBalanceTogether.org** became a reality in 2017. The Trauma Center at ThedaCare Regional Medical Center-Neenah is part of this multi-community effort to provide one place where people can go to:

- Read articles and blog posts by local experts on fall prevention.
- Find classes and programs throughout Northeast Wisconsin to meet a specific need.
- Reduce effort and improve convenience for people seeking assistance.

This project is an example of what diverse organizations can do when they partner to create a greater good for all.

- Kathi Hegranes



Know Your Risk

Source: <http://injuryfacts.nsc.org/all-injuries/preventable-death-overview/odds-of-dying/>



You are more likely to be struck by lightning than die in a plane crash.
Take cover in inclement weather.



You are 2.5 times more likely to die from a hornet, wasp, or bee sting than a dog attack.
Have nests removed professionally and be aware of and prepared for allergies.



Roughly 1 in 4,050 people die each year on a bicycle.
Wear your helmet and follow road rules.



Roughly 1 in 100 deaths are due to a motor vehicle crash.
Buckle up. Use a designated driver. Give driving your full attention by putting phones away. Make sure your vehicle is in good working condition.



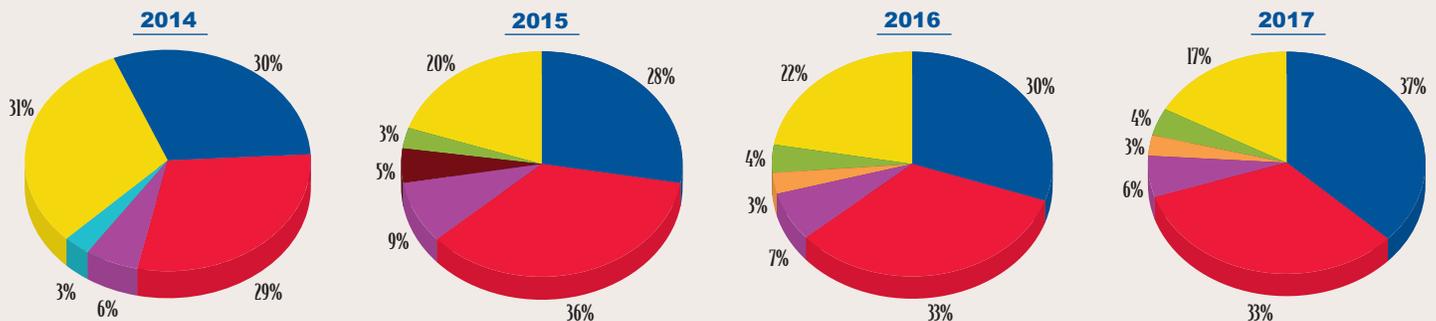
More people die from drowning than die from fires or smoke.
Never swim alone. Keep an eye on young swimmers. Remember that people who are drowning rarely thrash around. Instead, they are often quiet as they try to reorient and hold their breath.



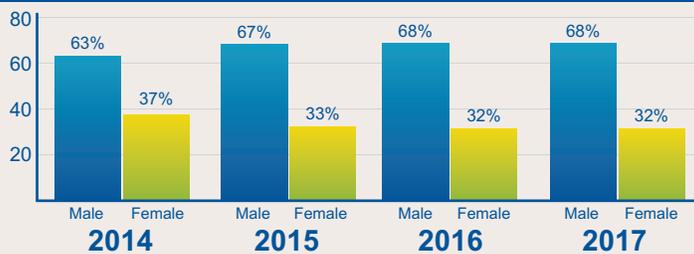
Falling is the most common reason people visit the Trauma Center.
Build strength and balance by taking a tai chi class, exercising regularly, and lifting weights. Get your vision and hearing tested regularly. Learn more about preventing falls at FindingBalanceTogether.org

MECHANISM OF INJURY 2014 - 2017

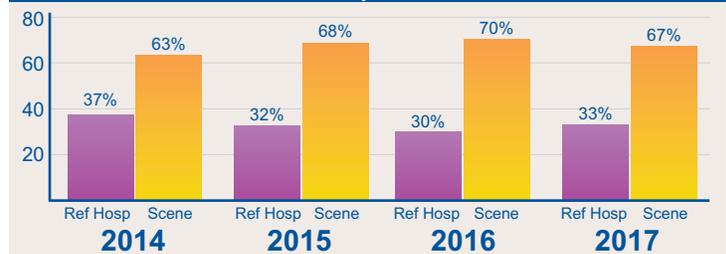
■ Fall ■ Motorcycle ■ Snowmobile ■ MVC vs Cycle ■ Other
■ MVC ■ Assault ■ Struck



Gender

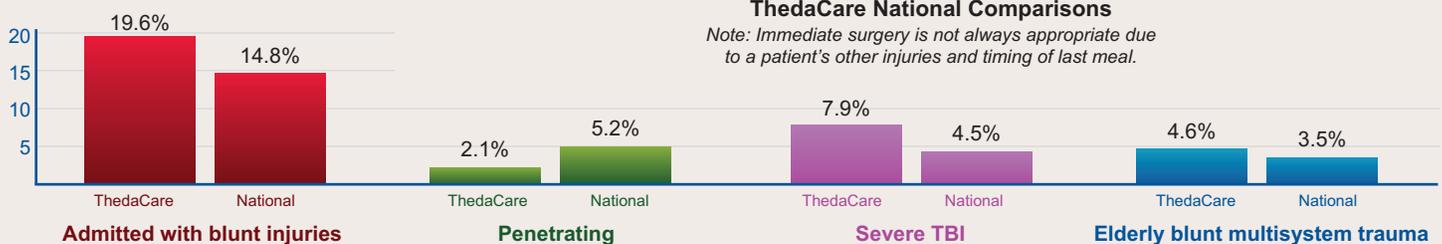


Interfacility vs Scene



ThedaCare National Comparisons

Note: Immediate surgery is not always appropriate due to a patient's other injuries and timing of last meal.





SAVE A LIFE

Increasing Survival, Enhancing Citizen Resilience

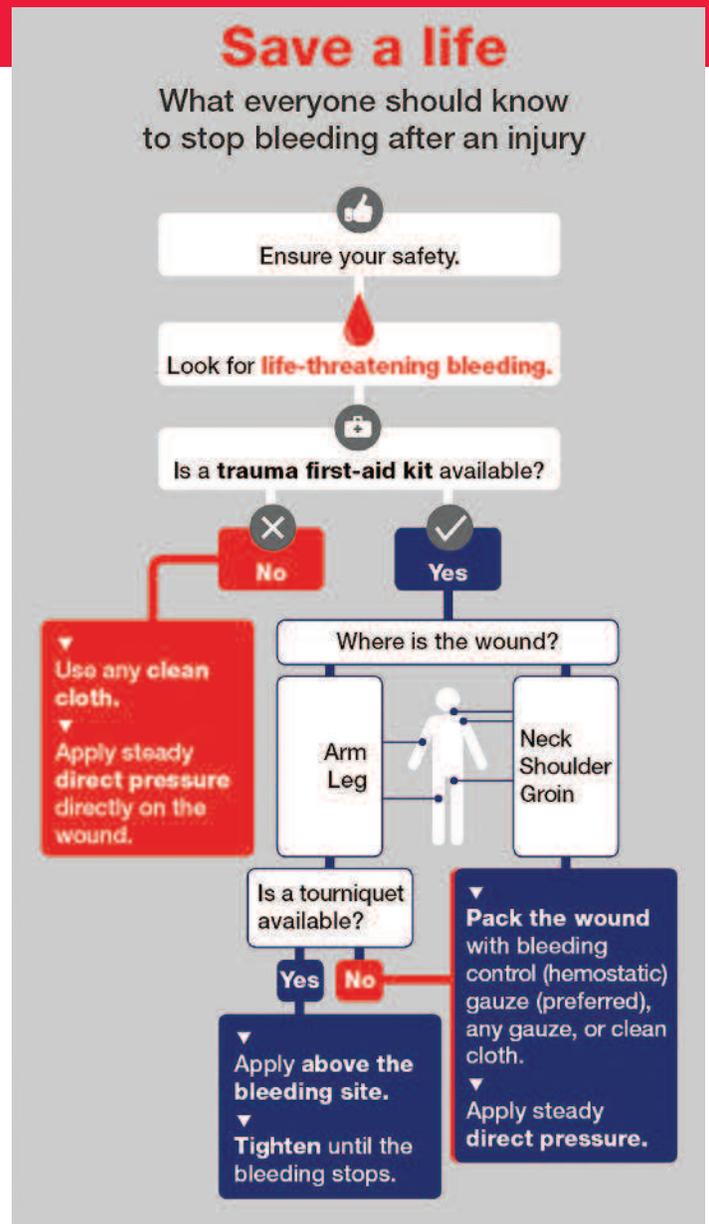
Following the events at Sandy Hook Elementary School, in Newtown, CT, Lenworth M. Jacobs, Jr., MD, FACS, a surgical leader and dedicated trauma surgeon, reached out to the American College of Surgeons with his concerns regarding the pattern of injury that was seen in the casualties. He personally embarked on a comprehensive review of the injuries and, through this examination process, determined that providing first responders with more ready access to the sites of active shooter and mass casualty events could have a positive impact on survival.

They developed what has become known as the Hartford Consensus, creating a protocol for national policy to enhance survivability from active shooter and intentional mass casualty events. The committee's first report established a new algorithm for initial response to deadly injury: THREAT, which is built on the concept of Threat suppression, Hemorrhage control, Rapid Extrication to safety, Assessment by medical providers, and Transport to definitive care.

The latest report, the Hartford Consensus III, focuses largely on immediate responders, such as bystanders, and what they can do to stop bleeding and prevent mortality. By teaching everyone the challenges of uncontrollable hemorrhage and the basic principles of stopping bleeding, lives will be saved.

Just as bystander training in cardiopulmonary resuscitation has contributed to a reduction in mortality following cardiac arrest, the Hartford Consensus will be viewed historically as bringing hemorrhage control and its feasibility to a common denominator of the lay public.

Taken from a letter by:
David B. Hoyt, MD, FACS
 Executive Director,
 American College of Surgeons



While Stop the Bleed was created nationally with mass incidents in mind, the reality is that this knowledge is beneficial in a variety of scenarios, including:

- Motor Vehicle Crashes
- Lawnmower, Power Tool, or Chainsaw Injuries
- Hunting Injuries
- Workplace Injuries
- And more

The Trauma Center at ThedaCare Regional Medical Center-Neenah is offering Stop the Bleed instruction and classes beginning in February 2018. Visit www.thedacare.org/classes keyword 'bleed' to sign up today.

The American College of Surgeons Trauma Quality Improvement Program (ACS TQIP®) works to elevate the quality of care for trauma patients in your trauma center.

In fact, we're already doing that in more than 750 participating trauma centers across the United States. TQIP accomplishes its work by collecting data from your trauma center, providing feedback about your center's performance, and identifying institutional characteristics that your trauma center staff can implement to improve patient outcomes. The program uses risk-adjusted benchmarking to provide your hospital with accurate national comparisons.

TQIP also provides education and training to help your trauma center staff improve the quality of your data and accurately interpret your benchmark reports. You can network and share information about best practices with other trauma professionals at the TQIP annual meeting, through the TQIP Google group, and in regular web conferences.

<https://www.facs.org/quality-programs/trauma/tqip>



The Trauma Center in Neenah has been participating in TQIP since 2015. We have been able to benchmark in a more meaningful way with trauma programs throughout the United States. Here are a few examples of what we've learned:

- Patients cared for in this facility have a lower rate of death and lower rate of complications than at other centers reporting through TQIP.
- The injury severity score method (see below for definition) indicates that older patients (≥65) with multisystem injuries have a higher median score than the national comparison, but a significantly lower mortality rate. This tells us that our attention to the care of the patient with complex and competing injuries is creating better outcomes. In 2018, we are building upon this foundation to further enhance our care to the aging population through new nursing assessment tools, comprehensive order sets to prompt earlier involvement of therapies, and standardizing procedures to monitor unique labs.
- We are judicious with our use of blood products from the Community Blood Center. Through our relationship with the Community Blood Center, we have been able to expand the use of Liquid Plasma on ThedaStar and in the Emergency Department.
 - Liquid Plasma is never frozen and can be immediately transfused into a patient in need.
 - Why the focus on blood instead of IV fluid? Military and Level I Trauma Center research is showing that patients respond better to blood product replacement than IV fluid: fewer complications, less fluid overload, better respiratory status, and fewer bleeding issues.

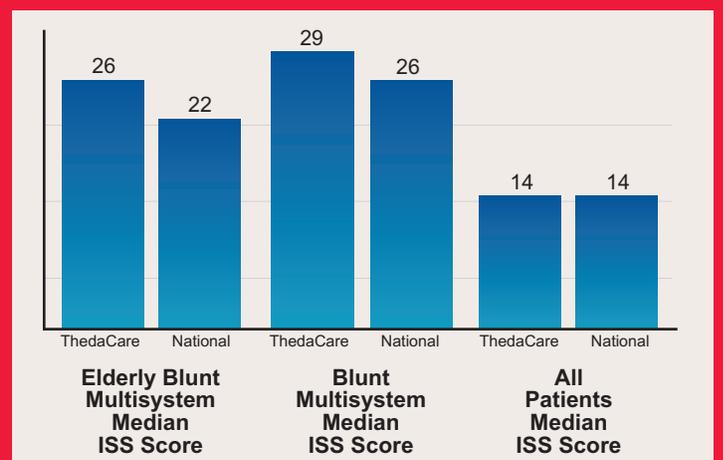
INJURY SEVERITY SCORE (ISS)

Injury Sererity Score (ISS) is a numerical score given to each trauma patient that categorizes the severity of injury with a minimum score of 1 and maximum 75.

Calculations include:

- The severity of injury
- Body region of injury
- The number of injuries

The higher the ISS number, the more severe the injuries sustained by the patient. ISS greater than 15 is considered major trauma. The ISS is used to assess survivability and is often compared with benchmarks, such as ISS versus length of stay, ISS and mortality, and so on.



A relatively high percentage of trauma patients suffer orthopedic injuries to some degree. Yet, these injuries are often very different from the typical conditions treated by general orthopedic surgeons.

“Traumatic orthopedic injuries are much more likely to involve multiple extremities from a high-energy impact or involve a fracture to the pelvic ring or hip socket,” says ThedaCare Orthopedic Trauma Surgeon Jeffrey Sundblad, MD. “It comes down to anatomy. These centrally located injuries require in-depth knowledge of certain arteries and nerves.”

These injuries require a unique skillset learned during fellowship training. Many people don’t realize that not all orthopedic surgeons are specially trained to effectively treat these complex trauma injuries.

The orthopedic trauma group has evolved over time and has recently morphed again into the next stage of practice. In the past, we had two orthopedic trauma surgeons, but it was only in the last two years or so that our local specialists became dedicated to a 100 percent trauma practice.

What does this mean to the level of trauma care in Northeast Wisconsin?

“There are only three orthopedic trauma surgeons north of Milwaukee,” explains ThedaCare Orthopedic Trauma Surgeon Joshua Blomberg, MD. “And we have two of them here at ThedaCare in Neenah.”

Dr. Blomberg claims part of that coup is due to the Trauma Center itself. “The Trauma Center elevates care throughout the hospital,” he shares. “The need to interact with other specialists helps us all learn more and step outside our narrow perspectives. I’m always amazed at the skill and level of care in our specialty services, like the interventional radiologists or the ability of our ENTs to repair facial injuries. It’s really remarkable.”

Without question, the Trauma Center at ThedaCare Regional Medical Center-Neenah is blessed to partner with a rich pool of specialists committed to trauma care in the Fox Valley and beyond.



Jeffrey Sundblad, MD
ThedaCare Orthopedic Trauma Surgeon



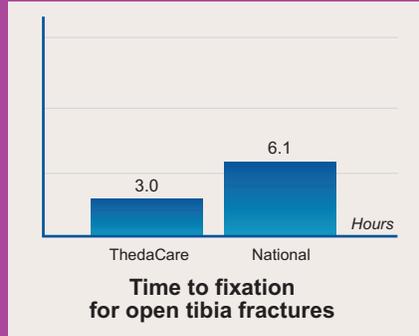
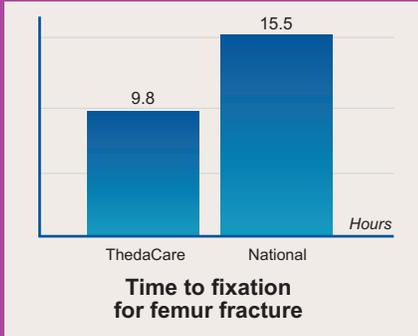
Joshua Blomberg, MD
ThedaCare Orthopedic Trauma Surgeon

“ There are only three orthopedic trauma surgeons north of Milwaukee, and we have two of them here at ThedaCare in Neenah. ”

Joshua Blomberg, MD
ThedaCare Orthopedic Trauma Surgeon

ORTHO SPECIFIC DATA

Our dedicated Orthopedic Trauma Surgeons with specific OR time each day to prioritize these patients has been instrumental in these numbers.



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