As I celebrate my first anniversary as the Trauma Center Medical Director, I am reminded of everything that went into preparing for this transition.

I took over a role held by a physician who started the entire trauma program in the Fox Valley. It should have been intimidating. But, in truth, years of mentoring and partnership helped create an environment that doesn’t depend on one specific person, and I got 13 years to prepare with the best mentor anyone could ask for! Ray Georgen, MD, had the foresight to create a system that functions most efficiently as a network. In essence, he had been preparing this role for someone else from Day One.

**Behind the Scenes**

This year’s annual report is focused on everything that goes on behind the scenes to prepare for a trauma response. This theme fits nicely with our current work in advance of our upcoming reverification visit by the American College of Surgeons this spring.

As the longest continuously verified Level II Trauma Center in the State of Wisconsin, you might assume all the preparation is complete and we simply need to follow established systems. The reality is that we maintain such high levels of care thanks to various forms of continuous improvement at all times - not just during reverification years - including:

- Regular review of policies and protocols for relevance and best practice
- Ongoing education for our trauma providers
- Shared education with our partners
- Prioritizing prevention of our leading mechanisms of injury
- Creating public programming, like Stop the Bleed, to help us all help each other
Plan for the Worst, Hope for the Best

Preparing for the worst-case scenario helped save Alicia Schram’s life last January when her skull detached from her cervical spine during a motor vehicle crash.

The ThedaStar crew had no way of knowing the extent of Alicia’s injuries at the scene, but they are well-trained to assume everyone has a catastrophic neck injury until proven otherwise. Their extensive knowledge and commitment to following treatment protocols meant Alicia made it to the Trauma Center and got the rare opportunity to recover from these devastating injuries. Read more about her incredible story on page 6.

Prevention

Prevention Continues to be The Best Medicine

Preparation is essential, but preventing as many trauma events as possible continues to be a priority. Falls are a significant cause of mortality and mobility issues. Irresponsible driving accounts for a growing number of motor vehicle crashes (MVC). Read more about the creative programs the Trauma Center at ThedaCare Regional Medical Center-Neenah is developing and implementing to counteract falls and MVCs on page 4.

Sincere Thanks -

Finally, I want to thank the trauma care community for welcoming and supporting me through this transition year. It has never been more clear to me that we are the best kind of family.

David Schultz, MD, FACS
Trauma Center Medical Director
The boy scouts knew what they were doing when they chose their motto: **Be Prepared.**

“**Prevention** requires **awareness** of possible outcomes along with **preparation** to avoid or prevent unwanted outcomes,” says **Kathi Hegranes, ThedaCare injury prevention and outreach coordinator**. “While there will always be things you can’t control, you are responsible for the choices you make and actions you take.”

ThedaCare’s trauma program helps prepare first responders, EMS professionals, referring hospital programs, and trauma providers for a variety of scenarios by offering ongoing education and coordinating standard protocols and best practices throughout the region.

At the same time, the Trauma Center works to reduce the need for trauma care altogether by giving our communities information to understand their risk and the tools to help take steps to prevent injury.

Our prevention programming focuses on the most common mechanisms of injury we see locally for the biggest impact. Our two largest outreach projects are fall prevention and P.A.R.T.Y. at the PAC. In addition, Stop the Bleed continues to grow in importance and acceptance.

### FALL PREVENTION

The community-based website FindingBalanceTogether.org has enjoyed growing popularity over the last year. The cooperating agencies involved held an event in October called Stay Active, Stay Upright at Bubolz Nature Preserve. National expert Patricia Quigley, PhD, ARNP, gave a keynote address entitled Fighting Falls, One Step at a Time. Other experiences included roughly 200 people trying tai chi for the first time, vision and hearing screenings, blood pressure checks, caregiver information, and other educational sessions.

Did you know that **YOU** can contribute to this website’s ongoing success? Submit any of the following to hello@FindingBalanceTogether.org:

- Classes or community workshops that help prevent falls through building strength, improving balance, or reducing risk.
- Resources or checklists to help prevent falls.
- Blog posts or articles that inform or inspire using expert advice, personal stories and anecdotes, or recent research.

Our editorial board will review all articles and edit for grammar and accuracy.

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

P.A.R.T.Y. stands for Prevent Alcohol and Risk-related Trauma in Youth, which is held every October at the Fox Cities Performing Arts Center (PAC). The 2018 event reached more than 5,900 high school sophomores from 42 area schools with information, personal stories, and a realistic simulation of the aftermath of a motor vehicle crash.

One of the main messages this year addressed society’s tendency for multitasking in our modern fast-paced lifestyle.

“The one place it is critical to NOT multitask is in your vehicle,” Hegranes emphasizes. “Preventing motor vehicle crashes today is not just about drinking and driving. It’s about texting, talking on the phone, eating, managing your song playlist, driving way too fast for conditions, and more.”

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.
Many people consider falls and motor vehicle crashes “accidents” that can’t be prevented. However, experts have found there is a lot we can all do to minimize these risks. **A little preparation can go a long way!**

### CAR CRASHES
You can’t control weather conditions or others’ behavior on the road. Here’s what you **CAN CONTROL**:

- **Clear your windshield** from snow, ice, and rain. Replace your wipers regularly.
- **Check your tires**. Are they properly inflated? Make sure your tread hasn’t worn down.
- **Don’t drive too fast for conditions**. Remember that it’s better to arrive safely than on time.
- **Wear your seat belt**. For drivers and front-seat passengers, seat belts reduce the risk of death by 45% and the risk of serious injury by 50%.
- **Use a designated driver** or call someone to pick you up.
- **Give driving your full attention**. Cell phones are designed to draw you in and capture your attention. Turn them off, use an app to silence while driving, or put a passenger in charge of your phone.
- **Eating and drinking in your car should be minimized**. Driving deserves both hands and your full attention.
- **Model the driving behavior you expect** from your soon-to-be or new drivers.

### FALLS
1 in 3 people age 65+ will have a fall that results in injury. One big reason this statistic continues to be so high year after year is that most adults still believe it won’t happen to them, so they don’t take the necessary precautions to prevent a fall:

- **Build strength**. Include weight lifting in your exercise routine (especially by age 40).
- **Improve balance**. Stability training, such as yoga or tai chi, has been shown to reduce the risk of falling at any age. ThedaCare’s tai chi classes are modified for all levels so moves can be done sitting, supported, or standing unassisted.
- **Get your eyes and ears checked regularly**.
- **Maintain a healthy blood pressure**.
- **Wear shoes**. Flip flops or socks without grippy bottoms can trip/slip you up.
- **Understand medication side effects**. Some common prescriptions can cause dizziness.
- **Evaluate your home**. The majority of falls happen at home. Simple modifications can help.
- **Learn more at FindingBalanceTogether.org**.
On a snowy evening in January, 28-year-old Alicia Schram was in a car crash that caused catastrophic injuries, including traumatic atlanto-occipital dissociation (AOD), also known as internal decapitation.

The vast majority of people whose skulls are detached from their cervical spines never make it to the hospital. Nearly one-quarter of those who reach the hospital survive only hours.

But the trauma team has been preparing for this with every protocol and training program and trauma we’ve ever responded to.

One year later, Alicia miraculously has almost no lasting effects from her trauma other than some limited mobility in her neck.

DEFYING THE ODDS

ThedaStar Air Medical Transport arrived on scene within 12 minutes of receiving the call. Flight nurse Adam Lenth and paramedic Jeff Roehrig saw scattered debris and engine fluids strewn about, evidence of the high-impact, head-on crash.

Members of the local fire department were working to extricate Alicia from her vehicle as a police officer held her head in a neutral position to stabilize her spine.

“We had no idea if she would wake up... no idea if she would be able to move... no idea if she would understand.”

- Ray Georgen, MD, FACS
Trauma Surgeon at ThedaCare Regional Medical Center-Neenah

The weather was harsh and cold, so they moved Alicia inside an ambulance for shelter.

“Weather can play a big role since hypothermia is a major contributing cause of trauma deaths,” explains Roehrig.

Alicia was unresponsive with shallow respirations, tachycardia (fast heart beat), and low blood pressure. Lenth and Roehrig applied a C-Collar to keep her head upright and in-line and elected to put in a breathing tube. Alicia was moving a little despite being unconscious, so the ThedaStar crew administered a sedative and paralytic.

“Our first priority is to establish and protect the airway. We really had no indication that she had such a severe spinal injury,” Roehrig admits. “Our training prepares us to treat every patient like this is the worst case scenario until proven otherwise.”

The more obvious significant injuries were causing massive blood loss from Alicia’s pelvis and lower extremities. Lenth and Roehrig dressed the wounds and started pushing O- blood and liquid plasma. The pilot started the helicopter for a “hot load.”

After landing at The Trauma Center at ThedaCare Regional Medical Center-Neenah, trauma surgeon Ray Georgen, MD, FACS, from Surgical Associates of Neenah and the trauma team performed an ABCDE assessment, which stands for Airway, Breathing, Circulation, Disability, and Exposure.

“It was one of those moments that just stops you in your tracks. Every new cut on the catscan seemed to show new injuries.”

- Ray Georgen, MD, FACS
Trauma Surgeon

Alicia had some bleeding on her brain. The ligaments and bones that are supposed to hold her skull on her body were fractured and dislocated. Three of her four main arteries were dissected. There were bruises on her lungs. She had extensive bowel injuries, and Dr. Georgen was concerned that she might bleed to death internally.
The first surgery was simply damage control to stop the bleeding and remove portions of her bowel. They would need to repair Alicia’s neck and leg when she was more stable.

Her complete list of injuries:

- **Internal decapitation** (Skull base fracture at the clivus with dislocation of the atlanto-occipital junction and subluxation of the atlanto-axial junction)
- **Traumatic Brain Injury (TBI)** with diffuse axonal injury and subarachnoid hemorrhage
- **Internal carotid artery dissections on both sides** that compromised arterial flow and created a high risk of clot and stroke (her artery walls had split)
- **Right subclavian artery dissection with pseudoaneurysm**
- **Pulmonary contusions** (bruising in the lung tissue impairing oxygenation)
- **Multiple rib fractures**
- **Multiple injuries to small bowel and mesentery**

“In my heart of hearts, I wondered if there was any chance this young woman would actually survive these injuries. And if she did, what kind of quality of life would she have?” shares Dr. Georgen.

“That’s the lesson. You never know. You simply do everything you can to save the life in front of you even if it seems impossible at the time. You’ve got to think logically and never skip a step. That methodical approach means you don’t ever make assumptions.”

Over the course of many days, teams from trauma, neurology, pulmonary medicine, orthopedics, and more worked to put Alicia back together. Surgeries included:

- **Exploratory laparotomy** with jejunum resection and reanastomosis to control bleeding
- **Ileocecectomy** with ileo-colostomy reconstruction and placement of a gastrostomy tube
- **Repair of bilateral groin lacerations** (14 and 12 cm long)
- **Repair and closure of knee injuries**
- **External fixation and later intermedullary rodding of tibia and fibula fractures**
- **Fused cervical spine from skull to C5**

The team wouldn’t know if their efforts had made a difference until Alicia was weaned off the paralytic medication days later. Within a few hours of attempting to wake her, she started moving her eyes, then her extremities, and even responding verbally.

“I’m not a big ‘miracle’ guy, but this was a miracle,” Dr. Georgen admits. “Alicia beat the odds. I’ve never seen anyone with her catastrophic injuries live without ending up quadriplegic or suffering other significant long-term injuries.”

**SUPPORTING THE PEOPLE WHO SUPPORT THE PATIENT**

“It’s the call nobody wants to get,” says Alicia’s mother. Ginny and Jim Schram met Alicia’s new boyfriend (now fiancé) for the first time in the hospital waiting room.

“Dr. Georgen came in and explained everything that was going on with Alicia from head to toe,” Ginny remembers. “He could not have been more informative or more caring. I just knew she was in the best of hands.”

Alicia’s parents stayed at the ThedaCare Guest House right across the parking lot. In fact, they didn’t go home for weeks.

Alicia was in ICU for two weeks and then moved to the Neuro step-down unit for another two weeks. On February 12, she was discharged for inpatient rehab closer to home in Green Bay. She came back at Easter to replace the rod in her leg due to infection and again on Thanksgiving for a bowel obstruction.

“You hear stories about doctors and hospitals being impersonal these days,” says Ginny. “If anyone has lost their faith in health care, they should get to know these people. Every inch of the Trauma Center was set up so that Alicia could survive and thrive and walk away from this.”

In gratitude, Ginny and her employer were able to provide a unique gift after Alicia left ThedaCare. Ginny works in the administrative offices for the Green Bay Packers. The Ladies of Lambeau donated a mural entitled “Go for Your Goals” in recognition that it takes a team to make miracles happen…

…a team that prepares relentlessly.

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*The woods are lovely, dark and deep,*

*But I have promises to keep,*

*And miles to go before I sleep,*

*And miles to go before I sleep.*

- From “Stopping by Woods on a Snowy Evening” by Robert Frost

(Alicia’s favorite poem)
Data abstraction and analytics provides the trauma program with the ability to step back and evaluate. This evaluation is then used to guide practice changes (earlier hospital mobility to decrease length of stay), to direct educational efforts (creative fall prevention efforts in older adults), and to prompt effective outreach (focus on EMS partners providing patient care on scene pre-hospital).
“First, I prepare. Then I have faith.”

- Joe Namath

It’s human nature to focus on success stories. However, those happy endings in trauma care are usually the result of *decades* of preparation and established protocols coming together during a trauma system response.


In truth, most successful outcomes happen thanks to meticulous preparation and continuous improvement of systematic protocols. In other words, it’s all in the details that transpire before the next patient comes through our doors.

Of course, we appreciate the miracles, too. *First, we prepare. Then we have faith.*
The Trauma Services team has embraced the opportunity to lead Stop the Bleed education in our community. Last year, 40 instructors were certified and roughly 1,250 people learned the techniques for treating a bleeding injury until professional health providers arrive and respond. Nearly 30 local organizations and businesses welcomed us for on-site training, ranging from church groups and schools to large manufacturers to government agencies and public utilities. The feedback from these events has been tremendously positive. When we ask “Was this training what you expected?”, course attendees report they feel ready, confident, aware, and thankful.

Save a life

What everyone should know to stop bleeding after an injury

- Ensure your safety.
- Look for life-threatening bleeding.
- Is a trauma first-aid kit available?

Where is the wound?

- Arm
- Leg
- Neck
- Shoulder
- Groin

Is a tourniquet available?

- Yes
- No

Pack the wound with bleeding control (hemostatic) gauze (preferred), any gauze, or clean cloth.

- Apply above the bleeding site.
- Tighten until the bleeding stops.
Since Stop the Bleed is a national movement originally created in response to mass shootings at schools, providing this training to teachers, administrators, school nurses, and others involved in-and-around schools is a priority. Thedacare Trauma Program Manager Tabitha Uitenbroek, RN, MSN, TCRN will lead a session at the Wisconsin Association of School Nurses Conference in April 2019 in hopes of spurring even more school districts to provide Stop the Bleed events.

As we move into 2019, we already have a handful of school districts and churches scheduled for Stop the Bleed training. Uitenbroek will continue to lead efforts of the Fox Valley Regional Trauma Advisory Council (FVRTAC) to create more training opportunities and community partnerships to spread these life-saving skills. In addition, FVRTAC is creating a scheduling platform for their website for easier registration and sign-up.

**BLEEDING CONTROL KITS**

The Trauma Program has been working to provide Bleeding Control Kits as a resource to accompany the course. The kits include instructional booklets, training C-A-T tourniquets, protective gloves, special gauze, and more. In addition, businesses and individuals can purchase kits to place throughout their home/car or facility. Through our partnership with FVRTAC, we’re working to place a Bleeding Control Kit with every AED throughout the Fox Valley.

Special thanks to the ThedaCare Family of Foundations for their support in providing training kits and the first few kits placed in the community.

**May 23, 2019, is National Stop the Bleed Day.** Please visit [BleedingControl.org](http://www.BleedingControl.org) to learn more about how you or your organization can join
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