ILLINOIS ITLS news
Illinois Chapter of International Trauma Life Support
ITLS International Trauma Life Support ILLINOIS
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Can You Make the Diagnosis?

Art Proust, MD, FACEP

An 84-year-old male with underlying coronary artery disease and hypertension taking a baby aspirin presented to the emergency department one week after a motor vehicle collision in another state. He was the restrained driver in a vehicle that sustained driver side impact at an estimated speed of 45-50 mph.

He had no LOC or amnesia of the event. There was no airbag deployment. He was complaining of chest pain, especially with movement, and occasional SOB. He was also concerned about the bruising to his chest wall. He had no head, neck, abdominal, back or extremity pain. He stated he had "negative" imaging studies and was discharged home from the ER. At this point, what are your concerns? What are his immediate or potential life threats?

The patient presented ambulatory to the emergency department. His vital signs were: T 97.9, P 60, R 18, BP 168/74, SpO2 95%. His exam (primary and secondary survey) was notable for diffuse anterior chest wall ecchymosis and diffuse tenderness, left more so than the right. There was no palpable crepitus. Heart, lung, and spinal exam as well as neurological exam were unremarkable.

Figure 1

Figure 2

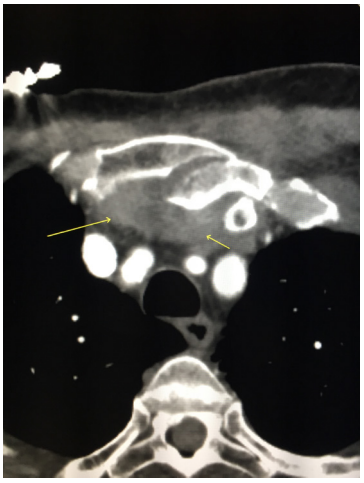

Figure 3

Figure 4

Records from his prior evaluation were accessed and revealed a normal EKG, normal laboratory data, negative head CT scan, and negative x-rays of his cervical spine, chest and left shoulder. Our work-up also noted a normal CBC, cardiac enzymes and EKG. Immediate and potential life-threatening injuries were considered (see Chest Trauma, ITLS 8th edition) but unlikely given his presentation one week after his motor vehicle collisionage.

A chest CT scan was subsequently ordered and revealed a fracture dislocation of his left sternoclavicular joint (suspected based on the depressed upper manubrium fracture) and a left upper manubrium posterior depressed fracture (Figures 1 and 2), retrosternal hematoma (Figure 3), and left 1st and 2nd rib fractures (Figure 4).

There was no evidence for an aortic tear, pneumothorax, significant hemothorax, pericardial effusion or pulmonary contusion. Given these findings, both a thoracic and orthopedic surgeon became involved

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Inside

Can You Make the Diagnosis?

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and elected to follow the patient conservatively. The patient did well without requiring surgical management.

According to the US Census Bureau, during the last century the number of people over age 65 has increased 11-fold, and this number will double over the next 25 years. The elderly population has the highest hospitalization rate after injury. Currently, approximately 13 percent of the U.S. population over age 65 accounts for almost one-third of all deaths from injury, and incurs a higher population-based death rate than any other age group.

Increasing age has been found to be an independent risk factor for a poor outcome after traumatic injury. Elderly patients (defined as 65 years and older) have up to fourfold greater morbidity and mortality compared with injury severity score-matched younger patients, especially due to thoracic and head injuries. As thoracic injury is second only to head injury as a factor contributing to death in the elderly trauma victim, reliable assessment is essential.

Rib fractures are the most common injury found in elderly blunt chest trauma patients, and each additional rib fracture increases the odds of dying by 19 percent and of developing pneumonia by 27 percent. Elderly trauma patients also have a higher incidence of respiratory complications and infections including pneumonia, acute respiratory distress syndrome (ARDS), unanticipated intubation, transfer to the intensive care unit (ICU) for hypoxemia, and death secondary to pulmonary sequelae.

Sternoclavicular dislocations are quite rare (less than 1 percent of all dislocations) but almost 30 percent will have life-threatening injuries due to damage of the underlying structures. Disruption of this ligament requires a significant force and will usually occur via one of two ways: direct force, such as in a motor vehicle collision, or indirect force via lateral compression of the shoulder joint, such as from contact sports. The sternoclavicular joint is the only true articulation between the arm and the axial skeleton. It participates in all movements of the upper extremity. Ranging the arm will often elicit sternoclavicular joint pain.

Anterior sternoclavicular dislocations may be easier to detect. They may have a visible deformity of the clavicle pushing out against the skin. Posterior sternoclavicular dislocations may be more complicated. Sometimes you may see an obvious divot at the spot. Delayed presentations may have edema or induration of the skin that can mask the divot.

Posterior dislocations are orthopedic emergencies. The sternoclavicular joint directly overlies the superior mediastinum. This area has tight real estate and contains the great vessels, esophagus, trachea, lung apices and other important structures. Posterior dislocation causes direct compression of these structures and can lead to serious neurovascular or aero-digestive compromise. Presenting symptoms may reflect compromise of the underlying structures of the superior mediastinum. Damage to the trachea could result in dyspnea or a hoarse voice. Patients may have neurologic or vascular deficits. Damage to the esophagus could result in dysphagia.

The dislocation can be difficult to detect on x-ray and the chest x-ray with AP and lateral views may be unremarkable. CT with contrast or MRI are considered non-invasive gold standard diagnostic imaging modalities.

An orthopedic surgeon needs to be consulted for possible reduction. In certain circumstances, a cardiothoracic surgeon may be needed as well. Anterior sternoclavicular dislocations do not need to be seen emergently by orthopedics. It is reasonable for these patients to be seen as an outpatient.

However, posterior sternoclavicular dislocations become a true emergency if the patient has a pulseless limb. Consults with orthopedic and cardiothoracic surgery are mandatory in these instances with either emergency room or OR reduction performed with a traction-countertraction technique utilized.

References

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Announcing the Publication of the Pediatric ITLS 3rd Ed. Update – 2017

ITLS is pleased to announce the release of the Pediatric Trauma Life Support 3rd Edition Update – 2017!

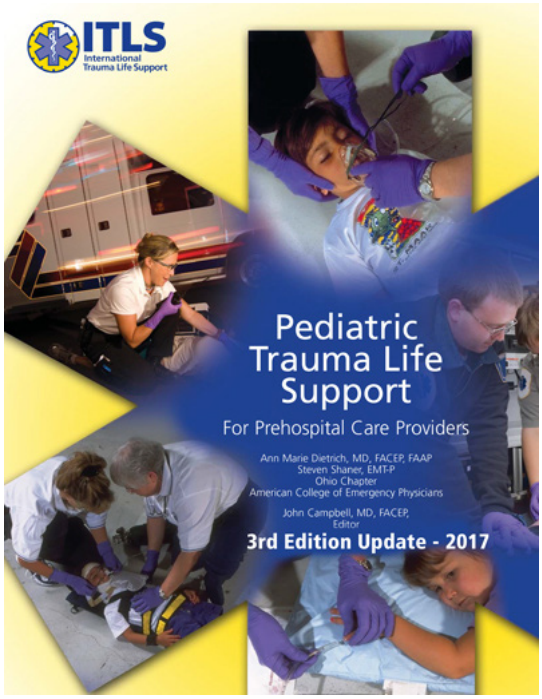
The new materials align with the changes published in the 8th Edition International Trauma Life Support for Emergency Care Providers. They have been updated to reflect the latest guidance for pediatric patients on spinal motion restriction, airway management, and more.

Materials are available now:

PowerPoint Slide Set: $25
ISBN: 978-0-9647418-4-3
To order, call the ITLS Illinois Bookstore at 630-495-6400, ext. 213. Sorry, orders cannot be placed online at this time.

3e Update 2017 Text Addendum eBook: FREE to download! (PDF)
ISBN: 978-0-9647418-3-6
Visit ITRAUMA.org/2017peds to download.

The Pediatric Trauma Life Support 3rd Edition Update – 2017 text addendum should be used to supplement, not replace, the complete Pediatric Trauma Life Support, 3rd Edition, text.



Why choose Pediatric ITLS?

- Adapts the ITLS framework of rapid assessment, appropriate intervention and identification of immediate life threats to the special needs of young trauma patients
- Demonstrates the practical skills needed to feel confident when caring for a critically injured child
- Teaches proven techniques for communicating with young patients and their parents

Join Your ITLS Illinois Colleagues at 2017 Conference in Quebec City!

The 2017 International Trauma Conference will be held in Quebec City, Quebec, Canada on November 2-5. Save the date and plan to join ITLS for trauma education and networking in the heart of picturesque Quebec City.

The conference hotel, the Hilton Quebec, is the perfect base for exploring the heritage and charm of North America's oldest city, located on Parliament Hill and just blocks from historic Old Town. The special ITLS room rate of $179 CAN per night plus all applicable taxes includes complimentary guest room WiFi. The conference hotel reservation link will be available online later in February.

Preconference workshops will be held Thursday and Friday, November 2-3. The Opening Reception will be the evening of November 3, and the conference will be held over the weekend, on Saturday and Sunday, November 4-5. More details and a sneak peek at the agenda are coming soon to ITRAUMA.org/conference. Download the save-the-date flyer and help ITLS spread the word.

New Provider Course Core Curriculum Paves Way for More Effective, Customized Course

International Trauma Life Support strives to continually improve the content and delivery of courses and educational materials. ITLS recently released new guidelines related to the ITLS core curriculum that will offer more flexibility in the delivery of ITLS Provider programs and hopefully a more engaging experience for learners.

After the guidelines were developed by the Core Curriculum Task Force of the Editoral Board and Board of Directors, ITLS Illinois course coordinators were given the opportunity to review and provide feedback. Their response was overwhelmingly positive and resulted in the release of the final guidelines from International.

The changes were initiated to ensure that ITLS remains focused on the original concept that Dr. John Campbell outlined when developing Basic Trauma Life Support in 1982. This was to allow trauma providers access to an educational program that embraced excellent hands-on trauma care coupled with a good underpinning of knowledge.

ITLS coordinators and instructors advised the ITLS Editorial Board that the ITLS course was becoming too PowerPoint dependent, which resulted in students not having a sufficient opportunity to practice in-depth patient assessment skills, which is the foundation of ITLS.

Currently, the core curriculum states that all textbook chapters and their associated lectures must be taught in an ITLS Provider program. The changes to this requirement as outlined below focus on the core principles that should ensure a high-quality trauma care program.

The following core content will now be the requirement for all ITLS Provider courses:

- Scene Size-up
- Trauma Assessment and Management
- Shock Evaluation and Assessment
- Trauma Arrest
- Trauma in Pregnancy
- Pediatric Trauma
- Geriatric Trauma

While these are the required topics for all ITLS Provider courses, it does not mean that these subjects are the only subjects that should be taught. The course must continue to be a minimum of 16 hours.

The local course coordinator in consultation with the course medical director will have the flexibility to decide what additional subjects should be added to the course to make it a complete program. These decisions should be based on the coordinator's knowledge of student population and local requirements. Instructors will receive guidance from the coordinator as to which topics will be taught at each course, as it will vary.

ITLS recognizes that the Provider course is designed to teach trauma assessment,

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News from ITLS Illinois Advisory Committee

Thank You to Dr. Susan Fuchs

The Advisory Committee recognizes Susan Fuchs, MD, FACEP, for her years of service on the ITLS Illinois Advisory Committee. Her participation will be missed!

Welcome to 2016-2017 Advisory Committee Members

The Advisory Committee welcomes seven new members for the 2016-2017 term: Tony Cellitti, CCEMT, NRP, Mark Donvito, MD, FACEP, Danelle Geraci, EMT-P, Marilyn Hallock, MD, MS, FACEP, Basem Khisfe, MD, Matt Moyes, RN, NRP/IC, and Matthew Smetana, DO. Art Proust, MD, FACEP, ITLS Illinois Medical Director, will continue to chair the committee. Also continuing to serve on the committee are: Eric Brandmeyer, RN, EMT-P, John W. Hafner, Jr., MD, MPH, FACEP (Board liaison), Louis Hondros, MD, FACEP, Jason Kegg, MD, FACEP, Edward Kemnitz, EMT-P, Greg Love, NREMT-P, Rosemary McGinnis, RN, and David Meiners, EMT-P.

Mark Your Calendar for 2017 Advisory Committee Meetings

There will be three ITLS Illinois Advisory Committee meetings in 2017: April 26, September 27, and December 8, from 10 AM to 12 PM. Meetings are held at the ICEP office in Downers Grove, as well as at Illinois Central College in Peoria and Memorial Hospital in Belleville, with videoconferencing at ICEP and ICC. Attendees may also participate by teleconference. As a reminder, all Affiliate Faculty are **required** to attend **one meeting every 2 years.** Attendance at additional meetings is optional.

Research Forum Abstract Showcase

2016 Winner Focuses on Surgical Training for Torso Exsanguination

The Research Forum returned in 2016 at the International Trauma Conference, as an opportunity to present selected abstracts of original research as ePosters. In 2016, six abstracts were selected for presentations, with presenters from the United States and Singapore.

The abstract presented by 2nd Lt. Noelani Arango, OMS III, Medical Student at Rocky Vista University in Greeley, Colorado, was selected as the winner of the Excellence in Research award by the Forum's panel of judges.

ITLS Illinois Medical Director Art Proust, MD, FACEP served as a Forum judge, along with Darby L. Copeland, Ed.D, RN, NRP, NCEE, Kyee Han, MBBS, FRCS, FRCEM, and Hiroyuki Tanaka, MD. Jonathan Epstein, MEMS, NREMT-P, served as the Forum moderator.

The abstracts from all selected presentations are available online at ITRAUMA.org/research.

Lt. Arango's winning abstract appears below:

Surgical Training for Torso Exsanguination in Weightlessness and Difficult Oceanic Conditions

Background: Exsanguination is the leading preventable cause of post-traumatic death, a risk faced by civilians, soldiers, sailors and astronauts alike. Immediate intervention is mandatory. Space adventure, difficult sea states, and austere environments all have similar identifiable problems including the need for hemorrhage control by non-surgeons in and outside of the body cavity.

Objective: Develop the surgical task trainer for difficult repetitive training for US Northern Command Partners.

Design/Methods: The visceral compartment of the human worn partial task surgical simulator (Cut-suit) was contained within a custom-made, sealable surgical "bathtub" on board both a small National Research Council of Canada jet. 10 damage control laparotomies were performed within 168 parabolas in microgravity. A new class of naval vessel designed for "shallow water" littoral combat was simulated at the US Navy NSWC Bio dynamics Laboratory. 36 procedures were performed at calm sea, sea state 3,and sea state 4.

Outcome Measures	Evaluation	
Suture (3-0 Silk, Interrupted)	4	
Blood Loss (from start of task to start of bowel repair)	Elapsed Time: 98 Blood Lost: 275	Calculated Flow Rate .168 L/min
Blood Loss (from bowel repair to end of task)	Elapsed Time: 631 Blood Lost: 300	Calculated Flow Rate .028 L/min
Total Elapsed Time	729	
Total Blood Lost	575	
Overall Performance	4	

Results: Blood loss was easily measured by the delivery system thus easily telling the effectiveness of the trainer and simulation platforms. At simulated sea, there was no statistical difference identified between the twelve procedures at calm seas versus either sea state 3 or 4. Blood flow at each state was reduced 35% and the topped. Sea state roughness did not alter the ability to perform hepatic hemorrhage control. In parabolic microgravity, all open damage control laparotomies were performed in the allotted time. Blood loss at 1G was 408.2 ML (SD 102) vs Zero G 307.6 ML(SD 178.1)

Conclusion: Previous conclusions that surgery is not possible at any sea state other than sea state 1 are not supported. The results of this study have generated a 21-day at sea study to continue this research. All damage control surgery was completed in microgravity with data available by meeting date. It is now time to combine the remote training capabilities with non-surgeons to determine if non-surgeons can truly become proficient at damage control. This surgical phantom created a training/research tool to further studies of torso exsanguination.

Submit an Abstract for 2017 Forum

Details and application online at ITRAUMA.org/research

Deadline: July 14, 2017

8th Edition eTrauma Online Course Set for Early Spring Release

The highly anticipated 8th Edition ITLS eTrauma course is expected to be released in March.

8th Edition ITLS eTrauma

Taking Trauma Training Online

International Trauma Life Support's online provider course is updated to the 8th edition and better than ever! The new edition features:

- A streamlined, intuitive new user interface
- Modern look and feel with updated art and animations
- New content focusing on updated SMR guidelines, hemorrhage control and TXA, mass shooting events and more

The 8th Edition ITLS eTrauma course offers three options: the online course accompanied by a hard-copy textbook, the online course with the eText built in, or the standalone online course for those who already own the 8th edition book.

When the course is released, it will be sold through Pearson, as previous editions have been. The direct links to purchase through Pearson are available at ITRAUMA.org/etrauma.

Why choose ITLS eTrauma?

The interactive reinterpretation of the ITLS Provider Course lectures in an online format is flexible and self-paced, accessible and affordable, and accredited to provide continuing education hours. After completing eTrauma, students are eligible to attend an ITLS Completer Course in-person to earn ITLS certification.

For the first time, the 8th Edition ITLS eTrauma course will provide CME hours for physicians and PAs, as the activity has been approved for *AMA PRA Category 1 Credit™* by the American College of Emergency Physicians (ACEP).

The course is also accredited for all levels of EMS personnel by CAPCE, the Commission on Accreditation of Pre-Hospital Continuing Education (formerly CECBEMS).

The release date for 8th Edition ITLS eTrauma will be publicized on ITLS social media as soon as it is confirmed.

Provider Course Core Curriculum Announced

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hands-on skills and cognitive knowledge to a wide range of students around the world with varied experience levels and scopes of practice. For this reason, ITLS has continued to adopt a flexible approach to the delivery of its courses. This allows instructors the ability to decide how to deliver the required core subjects as well as the additional subjects chosen to meet student and program needs.

The required core subjects and additional subjects can be delivered as a standard PowerPoint presentation or by case-based scenario. One example of how to deliver the material could be that core subjects are delivered as standard PowerPoint presentations, with additional subjects delivered within a hands-on or case-based scenario format (Appendix 1). For example, if you run a case-based scenario with a head injury, you can ensure that the important learning points, such as the recognition and treatment of herniation syndrome, are included in the case and feedback to the students.

The Core Curriculum Task Force, the Board of Directors and Editorial Board are continuing to evaluate the many flexible and innovative ways of delivering trauma care education that will support the ITLS Instructor and enhance the learning experience for our students. Additional guidance and tools are forthcoming to help support instructors and the delivery of an effective ITLS Provider course.

Highlights of 2016 Trauma Conference

The 2016 International Trauma Conference, held October 27-29 in San Antonio, Texas, was a success with more than 260 trauma care and EMS professionals from 20 countries worldwide in attendance.

ITLS Illinois was well represented with 12 in attendance from around the state. Serving as voting delegates for Illinois at the Business Sessions were: Dana Carr, NREMT-P, Mike Dant, EMT-P, Ed Kemnitz, EMT-P, Rosemary McGinnis, RN, BSN, Dave Meiners, NREMT-P, FP-C, Matt Moyes, NRP, CCEMT-P, RN, TNS, ASMC, and Art Proust, MD, FACEP. Also in attendance from Illinois were: Jeremy Hafliger, EMT-P, Sharon Heuiser, EMT-P, Missy Mallory, EMT-P, Eric Wilson, EMT-P, and Cheryl Caribardi-Wilson, EMT-P.

See all conference photos on the ITLS International Facebook page: Facebook.com/ITLStrauma.

ITLS Illinois instructors Jeremy Hafliger, Mike Dant, Rosemary McGinnis, Missy Mallory, Ed Kemnitz, and Dave Meiners with Chapter Coordinator Sue McDonough at the conference.

Board of Directors Elections

Three members of the Board of Directors were elected during the conference's Business Session. Serving his first term on the Board of Directors is Miles Darby, EMT-P, Chapter Coordinator for ITLS Pennsylvania. Returning to the Board are Tony Connelly, EMT-P, BHSc, PCGEd., of Alberta, Canada, and Gianluca Ghiselli, MD, of Italy.

ITLS Annual Awards

Four individuals were honored at the conference with ITLS' annual awards.

Pete Gianas, MD, of Florida, was presented with the Jackie Campbell Award. This special award is ITLS' highest honor and recognizes individuals for their enduring service as "the wind beneath our wings." Dr. Gianas is a former ITLS Board member and longtime medical director of ITLS Florida.

Rick Murray, Director of EMS and Disaster Preparedness at the American College of Emergency Physicians (ACEP), was presented with the ITLS Ambassador Award for his work in promoting ITLS programs and demonstrating a clear belief in the ITLS mission. Mr. Murray has been instrumental in facilitating a solid partnership between ITLS and ACEP.

Lisa Hrutkay, DO, FACEP, Chapter Medical Director for ITLS Mid-Atlantic, was presented with the John Campbell, MD, FACEP,

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LEFT: Rosemary McGinnis, Mike Dant, and Missy Mallory explore a vendor's products. CENTER: Dr. John Campbell, ITLS founder and president, poses for a picture with Missy Mallory. RIGHT: The ITLS Illinois group enjoys dinner on the San Antonio River Walk.

Highlights of 2016 Trauma Conference

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ITLS Medical Director of the Year Award. Dr. Hrutkay has served as the Medical Director for ITLS West Virginia, and now ITLS Mid-Atlantic, for many years.

Corey Pittman, EMT-P, of North Carolina, was honored posthumously with the Pat S. Gandy, RN, ITLS Coordinator of the Year Award. The award recognizes Mr. Pittman's outstanding leadership and service in promoting ITLS and prehospital trauma training under the North Carolina chapter until the time of his unexpected death earlier in 2016.

Roy Alson, PhD, MD, FACEP, authored and read a memorial resolution in honor of Mr. Pittman and Terry DeRhodes, EMT-P, longtime North Carolina Chapter Coordinator who also passed away in 2016.

ITLS Competition

Four teams competed in the annual ITLS Trauma Competition at the conference, using the ITLS assessment to triage and treat trauma patients in three creative and challenging simulated scenarios.

Teams represented Niagara EMS, North East Ambulance Service UK, Slovenia, and West Virginia – Berkeley County Ambulance Authority.

The team from Niagara EMS was again declared the winner of the 2016 Competition. Team members were captain Tracy Groszeibl, ACP, Brock Browett, ACP, Connor McCulloch, ACP, and Len Kowalik, ACP.

The 2017 conference will be held November 3-5, 2017 in Quebec City, Quebec, Canada.

Interested in sending a team to the 2017 Competition?

We would love to see Illinois represented! Application online at ITRAUMA.org/competition

Upcoming ITLS Illinois Courses

For the most updated list of upcoming courses in ITLS Illinois, including registration information, please visit http://cms.itrauma.org/CourseSearch.aspx. You do not need to log in to access this page. Here are some of the upcoming courses in Illinois:

February 27-28: Advanced Provider Certification
Registration: Deborah Woelfel, T 618-258-9930
Alton Memorial Hospital EMS, East Alton

March 18-19: Combined Provider Certification
Registration: Shelley Peelman, T 217-359-6619
Presence Regional EMS, Champaign

April 7: Combined Provider Recertification
Registration: Shelley Peelman, T 217-359-6619
Presence Regional EMS, Champaign

May 5-6: Combined Provider Certification
Registration: Eric Brandmeyer, T 618-391-6516
Anderson Hospital, Maryville

May 23-24: Advanced Provider Certification
Registration: Dean Buch, T 618-223-4378
MedStar Ambulance, Belleville

June 6: Combined Provider Recertification
Registration: Danelle Geraci, T 309-624-4638
Peoria Area EMS, Peoria

June 7-8: Combined Provider Certification
Registration: Danelle Geraci, T 309-624-4638
Peoria Area EMS, Peoria

July 28: Combined Provider Recertification
Registration: Shelley Peelman, T 217-359-6619
Presence Regional EMS, Champaign

Sept. 22-23: Combined Provider Recertification
Registration: Karyn Eisemann, T 618-257-5736
Memorial Hospital, Belleville

Sept. 26-27: Advanced Provider Certification
Registration: Dean Buch, T 618-223-4378
MedStar Ambulance, Belleville