Waterbury HEALTH

EMS UPDATE

Service Spotlight—Beacon Hose Company #1

In 1949, the Beacon Hose Company #1 had just turned 50 years old. That was also the year this volunteer fire company in Beacon Falls began providing ambulance service to the town.

It all began with a Packard hearse donated by the Buckmiller Funeral Home in Naugatuck. The hearse was converted into an ambulance with a white paint job and a red light and siren. Soon after, firemen began answering calls instead of the ad hoc system previously in place. Prior to Beacon Hose providing the service, Naugatuck police would send and ambulance to town and pick up a state trooper on Main Street to answer any medical emergencies.

In 1954, the fire company purchased a new ambulance. They then donated the Packard to the Oxford Fire Department, which began that town's ambulance service. "With the donation of our ambulance to Oxford, the Buckmiller family actually helped create two services", said Brian DeGeorge, the Beacon Hose fire chief.

In 1979, a second ambulance was added to Beacon Hose's fleet of fire and EMS vehicles. In 1999, an EMS fly car was also placed into service.

With an annual EMS call volume averaging 650 per year, the department is able to staff vehicles with a combination of primarily volunteer personnel along with paid EMT's during weekdays. "We have a paid EMT/Administrative Assistant that manages our day-to-day business Monday through Friday", explained DeGeorge. "We cover the other daytime shifts with part timers made up of our members. The rest is volunteers".

With a history of progressive thinking, Beacon Hose had members in the state's first EMT class in the 1970's. They were also the first BLS service in the region to carry an AED in the early days of those devices.

In April of this year, the company lost one of their ambulances to a catastrophic engine compartment fire while transporting a patient. While there were no injuries to the crew and the patient they were transported did not suffer any deleterious effects, the ambulance was destroyed. Beacon Hose took delivery of a brand new ambulance in August. During the time of the fire and the delivery of a replacement, they borrowed an ambulance from Southbury Training School Fire Department. "We are so grateful to STS and Chief Baldwin for loaning us their ambulance as our back up", said Beacon Hose EMS Director Peter Monti. "We enjoy a great relationship with our neighboring towns as well as our longstanding partnership with Waterbury Hospital".

Statistics:

Organized: 1899 as a fire company with ambulance service added in 1949
Fire Chief: Brian DeGeorge
EMS Director: Peter Monti
Number of EMS responders: 25
Annual Call Volume: 650
Number of EMS Vehicles: 3, (2 Ambulances, 1 Fly Car)

Overdose Response Technician Program

In response to Waterbury's opioid overdose epidemic, the city has hired two Overdose Response Technicians (ORT's).

"Quite frankly, the mayor (O'Leary) was fed up with the number of ODs in the city", explained Jennifer Dewitt.

Dewitt is the city's overdose response coordinator. Along with Waterbury Police Lieutenant Michael Stokes, she oversees the program that focuses on getting those with drug addiction the easy and swift access to recovery and support resources. With nearly four decades of peer recovery, family counseling, mental health and addiction experience between them, Stokes and DeWitt are enthusiastic about the pilot program.

PHOTO: In the photo, front row from left: Cameron Breen and Rushnee Vereen, back row from left: Jennifer DeWitt and LT Michael Stokes.

Prior to the August 3rd launch of the ORT program, Waterbury first responders provided what is known as a *cold hand off* to persons who have overdosed. Under the cold hand off system, victims of overdose would be given some pamphlets or brochures with information about treatment and recovery options. "First responders would put the paperwork in their pocket or hand it to family and that was it", said DeWitt.

The addition of the ORTs has afforded the city and first responders an opportunity to offer overdose victims with a *warm hand off*. With a warm hand off, overdose victims are in direct contact with an ORT either on scene of the overdose or at the hospital emergency department. ORTs work with overdose survivors and determine what resources they need or want. "Most people are receptive to talking with us", said ORT Cameron Breen. There are also follow up phone calls periodically for up to a month. "We are meeting them where they are, in a non-judgmental way", DeWitt said. Sometimes that means meeting the person with addiction disorder at their home, place of work, or even a parking lot.

Not all persons with addiction take the hand held out to them. However, the team continues to make the effort and reach as many people as possible. For some drug users, treatment and recovery are not appealing or sought out. The immediate goal is harm reduction in the form of Narcan, Fentanyl test strips and clean syringes.

Both city ORTs are not strangers to the effects of addiction. Breen has been in recovery from heroin addiction since 2017. It was only after a year in prison that he was able to get his life and dreams back on track. "I was an IV drug user for almost four years", Breen proclaimed. "I am living proof that recovery is possible". He went on to explain that his mission is to provide hope and give back to those in despair, like he was. "I took (from others) for a long time. I overdosed myself and lost friends to drugs. It is time for me to give back after taking for so long".

The team is completed by Rushnee Vereen. A native of Bridgeport, she spent nearly 20 years working with DCF as a social worker until an injury sidelined her career. "I was prescribed Percocet for an injury and became addicted. When the doctor stopped the prescription I sought other methods", she described. Like Breen, she too is in recovery and has dedicated her life to helping others. "It is my responsibility to pay it forward".

As the first full month of operation draws to a close, the team reports they have worked with 17 overdose victims. "We have been able to guide three people to recovery programs, including at Waterbury Hospital", said Breen. "Waterbury Hospital's program makes them easy to work with".

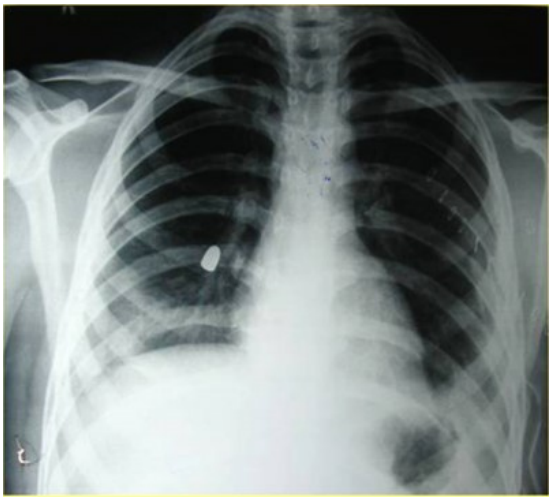
The grant-funded program is slated to receive state and federal dollars until at least 2022. The success of the program is not a single goal. It includes education, reduction in death, recovery as well as mental health.

DeWitt is more than a little optimistic of the program and its staff and praised Breen and Vereen. "We couldn't picked two better people for our ORTs", she said. Meanwhile, the two ORT's continue to learn their roles and evolve as the program develops.

"Each year things have gotten better for me and I have been able to become a role model for others", Vereen says with humility.

Waterbury Hospital—Trauma Time

"What happens to the bullet?" – The GSW patient



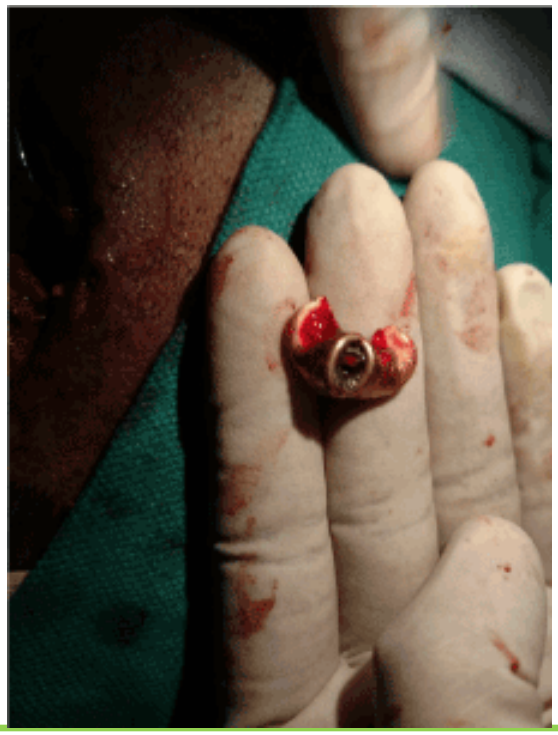
Penetrating trauma, specifically from gunshot wounds, is one of the most lethal mechanisms of injury in the trauma patient, and firearm injury remains a public health epidemic in the United States. After initial management and control of hemorrhage, followed by more definitive management in the operating room, the same age-old question arises: Do you remove the bullet or not?

Although guidelines on indications for bullet removal are scarce, there is some literature on the risks and benefits of bullet retrieval versus leaving it alone. All of the studies were obviously observational.

The **RISKS OF RETRIEVAL** – there is evidence that trying to extract a bullet, especially those that come to rest in a deep location, may cause extra harm (hemorrhage) to the patient. It is often more disruptive to the vessels and organs to go digging the projectiles out than to just leave them in place, hence why trauma professionals frequently have to leave the bullets in the patients.

The **RISKS OF LEAVING IN** – studies have been done in order to prove (or disprove) a correlation between retained bullet fragments and elevated blood lead levels and lead toxicity. The conclusion of on study from 1982 showed a common thread – patients that experienced injury involving the joint, or bursa near a joint, have a higher chance of developing lead poisoning.

A more recent meta-analysis (2019) was published that provides more information on this topic. It showed that retained bullet fragments are probably not a big worry in most patients, but the most severe cases are those that have fragments in or near a bone or joint. In these cases, although only few developed actual lead toxicity, lead levels approaching 5 micrograms/dL can have physiologically significant negative effects.



Concluding from the research, the simple answer to this question would be: No, the bullet does not need to be removed. However, if there are retained bullet fragments near a bone or joint, or multiple retained fragments, the patient should have blood lead levels measured every three months for the first year. Only a few criteria exist for definite bullet removal, and those include bullets found in CSF, the globe of the eye, those that impinge on a nerve or a nerve root, and bullets lying within the lumen of a vessel.

Reference: *Lead toxicity from retained bullet fragments: A systematic review and meta-analysis. J Trauma 87 (3):707-716, 2019.*

Reference: McGonigal, M. (2020) More on lead poisoning and retained bullets. https://thetraumapro.com/2020/06/05/more-on-lead-poisoning-and-retained-bullets-2/

Reference: Indications for bullet removal: Overview of the literature and clinical practice guidelines for European trauma surgeons. Scandanavian Journal of Trauma Resuscitation and Emergency Medicine 38(2): 89-93, 2012.

Any questions, thoughts, ideas, concerns, or feedback in regards to the care of the trauma patient at Waterbury Hospital? Please contact Monika Nelson, Trauma Program Coordinator – monika.nelson@wtbyhosp.org

Stroke Update

Waterbury Hospital has just been awarded the American Heart Association (AHA)/ American Stroke Association's (ASA) Get With the Guidelines® Stroke Gold Plus Award for the second year in a row. Additionally, the hospital earned Target: Stroke Honor Roll indicating that at least 75% of eligible stroke patients receive IV Alteplase (t-PA) in the emergency department in under 60 minutes. I would like to extend my sincerest thanks and appreciation to all of EMS for helping to make this possible. Without your collaboration with emergency department staff and dedication to the stroke patient population we serve, we would not be able to maintain this excellent standard of care.

Along with measuring and reporting door-to-needle times to the Joint Commission and AHA/ASA for acute ischemic stroke patients that receive IV Alteplase, we must also submit data regarding stroke transfers. The standard time for transferring a stroke patient out of the ED to a comprehensive stroke center (Yale New Haven Hospital or Hartford Hospital) is less than 120 minutes. This is to help ensure stroke patients achieve the best possible outcome, since *time lost=brain lost*. Patients with a confirmed large vessel occlusion (LVO) on CT scan and last known well (LKW) time within 24-hours may benefit from mechanical thrombectomy (clot retrieval). The quicker we can get these patients to a comprehensive stroke center for reperfusion, the likelier they are to experience better outcomes after acute stroke.

Over the last year, we have focused our efforts toward improving door-in-door-out (DIDO) times for stroke patients, especially those with confirmed LVO and who are thrombectomy eligible. In 2019, 17 patients were transferred from our ED after alteplase and/or for possible thrombectomy with an average time of 208 minutes. In 2020 so far, 12 patients have been transferred after alteplase and/or for possible thrombectomy with an average of 146 minutes. While we have not quite yet reached our goal of 120 minutes, we have decreased the length of stay for these patients by over one hour! Since many of these patients are transferred via ground ambulance, you all played an instrumental part in making this happen, so thank you! As a reminder, vital signs and neurological checks should be done every 15 minutes during interhospital transfer to assess for signs of instability and/or neurological deterioration. If any changes are noted, these should be communicated with the receiving hospital immediately.

Again, I want to thank you all for continuing to trust us to care for stroke patients within our community and as always, feel free to reach out to me with any questions, comments and/or concerns you may have.

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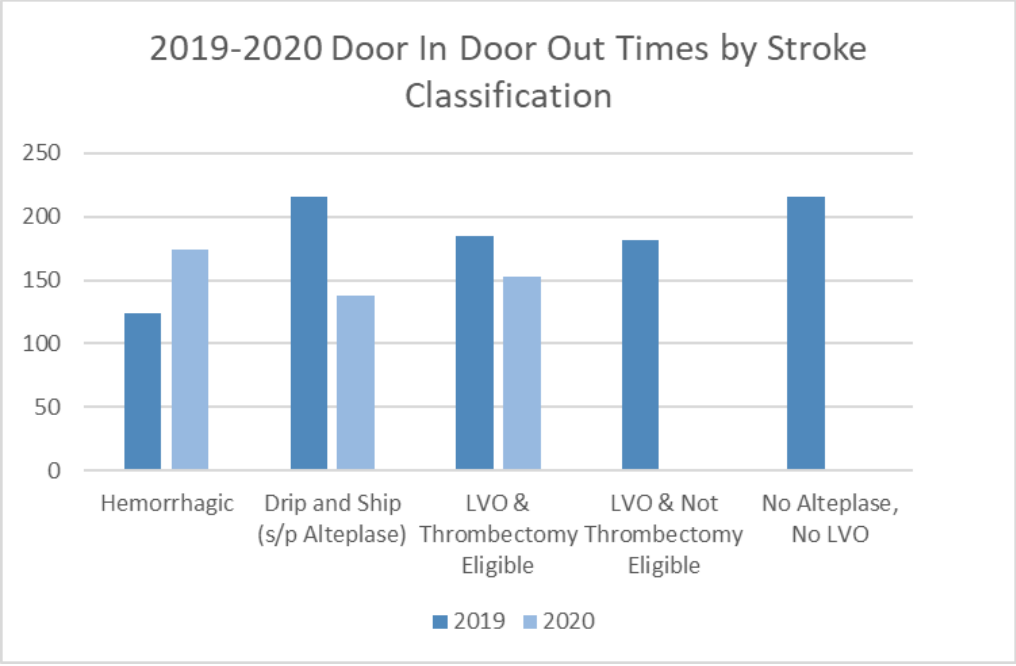

Wednesday, October 21, 2020 (18:00 – 19:30) - EMS CME - Dr. Holden will be speaking about CVA's via Zoom

Join Zoom Meeting
https://zoom.us/j/91902129702?pwd=eE5HbkpIU3RyM0xmaTNGYmMrU1pHZz09
Meeting ID: 919 0212 9702
Passcode: WJ7BA8