



## Staying Current: AHSEMS:

The following modules have just been released or updated, please visit

[AHSEMS.com](http://AHSEMS.com) to review at your earliest convenience:

-HAM (High Acuity Medication) training module

-Baxter ClearLink IV

-EMS Palliative care and end of life assessment

## Alberta College of

## Paramedics:

As the college prepares to transition to the **Health Professions Act** Practitioners are encouraged to consider **Practitioner Liability Insurance**. For more info, visit:

<http://www.collegeofparamedics.org/home/liability-insurance-home.aspx>

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EMX 15

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Alberta has been working hard to ensure that our communities are prepared in the event of a large scale disaster. February 24th through 26th 10 municipalities participated in a single mock disaster stemming from a streak of bad weather causing widespread road closures, power outages and large structure collapses. These municipalities put their daily operations on hold for a couple of days and participated whole heartedly. Some playing out the scenario via table top exercises with injects from the Provincial Operations Center, while others got much more in depth actually playing out their scenarios in partially demolished structures with the assistance of Canadian Task force 2 and local drama students. On site Field Hospitals and Morgues were even assembled.

With Emergency Preparedness Week approaching in May I would like to encourage you all to consider how you would handle a widespread disaster? Do you have supplies to last the standard 72 hrs? What if you are at work when disaster strikes? Or called upon after the fact?

As first responders we all must consider this possibility...



### What are Core Values and why are they important?

Within any organization there exists a set of fundamental beliefs or "Values" by which everything we say and do is based. Core values are not descriptions of the work we do or the strategies we employ to accomplish this work but rather, they are the values that underlie our work, how interact with each other, and which strategies we employ to fulfill our common goal.

Associated Ambulance has four Core Values that guide us:

- **Leading by Example**
- **Innovative Thinking**
- **Family Principles**
- **Excellence in Care**



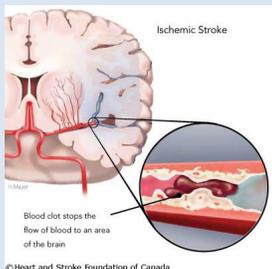
*"We're here for Life"*

## WHAT IS A STROKE?

A Stroke is a sudden loss of brain function. It is caused by the interruption of blood flow to the brain (ischemic stroke) or the rupture of blood vessels in the brain (hemorrhagic). Arteries carry blood that is rich in oxygen and nutrients throughout the body. When an artery to the brain becomes blocked or bursts, the blood supply to a part of the brain is cut off. The longer the brain goes without oxygen and nutrients, supplied by blood flow, the greater the risk of permanent brain damage. Brain injuries can also result in uncontrolled bleeding and permanent brain damage; this is usually referred to as an Acquired Brain Injury.

## DIFFERENT STROKE TYPES

**ISCHEMIC STROKE:** The majority of strokes are ischemic which means they are caused by the interruption of blood flow to the brain due to a thrombus (blood clot). The buildup of plaque (made up of fatty materials, calcium and scar tissues) contributes to most ischemic strokes by narrowing the arteries that supply blood to the brain, interfering with or blocking blood flow. This narrowing is called atherosclerosis.

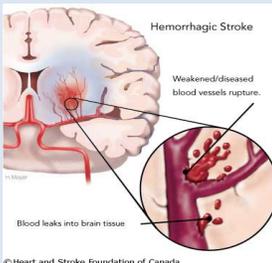


There are two types of ischemic strokes:

A **thrombotic stroke** is caused by a blood clot that forms in an artery directly leading to the brain.

An **embolic stroke** occurs when a clot develops somewhere else in the body and travels through the blood stream to the brain.

**HEMORRHAGIC STROKE:** Hemorrhagic strokes are caused by uncontrolled bleeding in the brain. This bleeding interrupts normal blood flow in the brain and kills brain cells by flooding at the leakage site or by shortage of blood supply beyond the leakage.



There are two main types of hemorrhagic stroke:

**Subarachnoid hemorrhage** is uncontrolled bleeding on the surface of the brain, in the area between the brain and the skull.

**Intracerebral hemorrhage** occurs when an artery deep within the brain ruptures.

Both types of hemorrhage can be caused by uncontrolled hypertension and structural problems with the blood vessels inside the brain. These problems include:

**Aneurysm:** A weakened area in the blood vessel wall which fills with blood and bulges. Hypertension or trauma can cause the bulge to rupture.

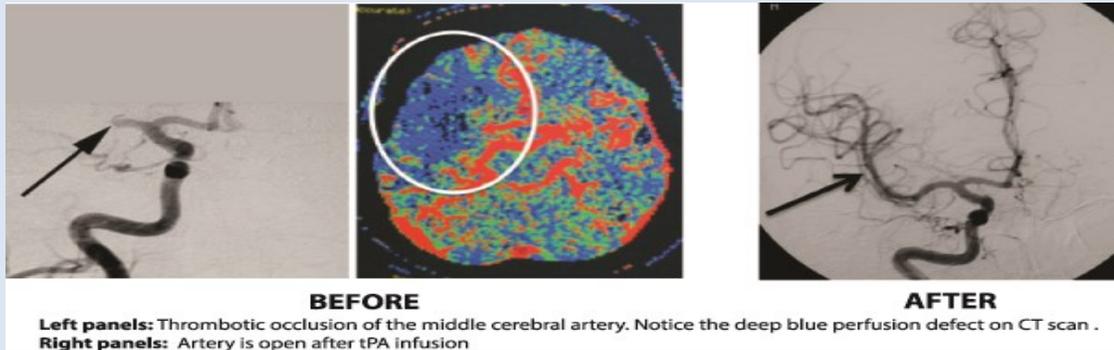
**AVM (arteriovenous malformation):** A malformation of blood vessels in the brain, usually present at birth, which causes the artery walls to be weak and increases the risk of hemorrhagic stroke.

**TIA (Transient Ischemic Attack or Mini Stroke):** A TIA happens when a clot stops blood from flowing to the brain for a short time. A TIA is a serious warning that indicates there is a problem with blood flow to the brain and there is a higher risk for having a stroke immediately after the TIA and for up to one year after.

The most common cause of a TIA is a blood clot or plaque that prevents blood from flowing to your brain. Here's how it happens:

**TIA caused by plaque:** plaque refers to a build-up of cholesterol, fatty deposits and other substances. It gathers inside the wall of an artery and narrows the size of the blood vessel (also called atherosclerosis). Plaque can also break off and block arteries to the brain.

**TIA caused by a blood clot:** many blood clots travel from the heart to the artery that feeds the brain, however, a blood clot may form in other parts of the body and travel to the brain. Someone is a higher risk for having a stroke if they have A-fib, heart valve problems, a patent foramen ovale (a defect in the wall between the two upper chambers of the heart), or a weak heart muscle.



**Pediatric Stroke:** The age of the child at the time of the stroke makes a difference in how doctors identify and treat the problem. Strokes can occur in three different age groups (prenatal phase, newborn phase, and from infant years up to 18 years old). The reasons why strokes occur in children are varied and include malformations of the blood vessels and rare diseases.

The **causes of hemorrhagic strokes in children** include an artery malformation or disorder, a brain tumor, trauma, and in rare cases drug or alcohol abuse by the mother during pregnancy.

The **leading risk factors for ischemic stroke in children** include:

When children are born with a **heart defect or heart disease**.

**Blood-clotting disorders**, also known as prothrombotic disorders, cause the blood to thicken and clot faster.

**Irregular or narrowed arteries in the brain** (arteriopathy).

**Heart or brain surgery**.

**Sickle cell disease**.

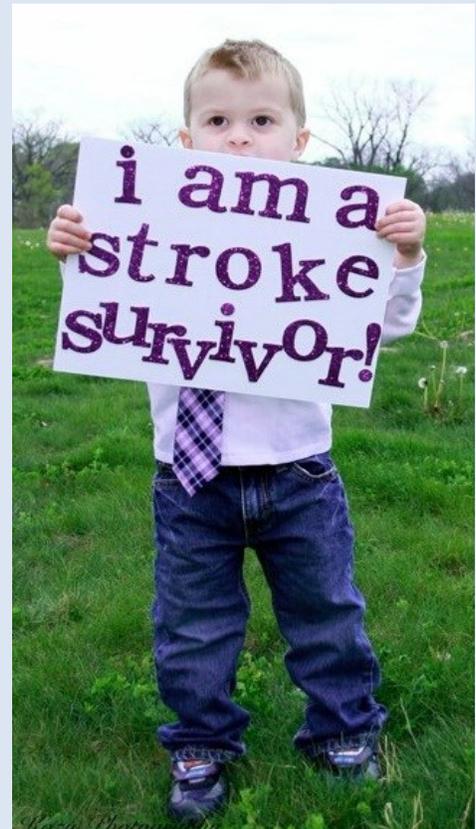
**Autoimmune disease that attacks arteries in the brain**.

**Trauma to the brain or neck**.

### **References:**

**-Heart and Stroke**

([http://www.heartandstroke.com/site/c.ikQLcMWJtE/b.3483935/k.736A/Stroke\\_\\_What\\_is\\_Stroke.htm](http://www.heartandstroke.com/site/c.ikQLcMWJtE/b.3483935/k.736A/Stroke__What_is_Stroke.htm))



# Recognizing the Signs of a Stroke

Every 10 minutes in Canada, an individual suffers from a stroke (1). This is most often seen in our elderly populations, as each milestone of 10 years of life TRIPLES an individual's likelihood of stroke, compounded with many other risk factors from genetics to lifestyle and health (2). The key in the prehospital setting is rapid recognition and transport for treatment.

We've all seen the below image from AHS APSS (3), but the truth is that sometimes these signs are misinterpreted, or even completely missed. This can happen to the layman, the patient, and even the EMS practitioner.



Let's break down these items:



This is seen as facial droop, ataxia causing unilateral weakness such as arm drift, or generalized unexplained weakness. Often this occurs on the contralateral side from the location of the stroke. Right sided injury, left sided effects. As this can create problems with extrication of the patient from scene, use your resources! Stair Chairs, bystanders, spine boards, or Fire Fighters for extra hands.



Aphasia or dysphasia – difficulty speaking, understanding speech, or other communicative problems. This can range from someone sounding like they've got cotton balls in their mouth, to the total inability of the practitioner or bystanders to communicate with the patient. This can greatly hamper our ability to obtain a comprehensive assessment and history. Utilize bystanders when available if necessary. Often we will see poor word association – ie, asking the patient their name, and getting an unrelated answer back.



Depending on the area effected by the stroke, the pathways to the ocular region can be damaged. This can be presented at blurriness, inability to focus, inability to process images, blackness in part of field of vision, or possibly full vision loss. These items are not uncommon at all, occurring in approximately 66% of stroke patients (4).



Headaches are a common ailment, and are frequently associated with cerebral ischemia. Whether caused by clot formation or by aneurysm and bleeding, there are challenges to the ICP, swelling of the lesion, and pressures on the brain in general. Be cautious in not dismissing a severe and sudden headache. Follow your protocols and look for red flags in the Cincinnati PreHospital Stroke Screen (5).



Again, we are seeing the disruption of cerebral function, resulting in abnormal results or conditions for our patients. We also see this with head injuries (6), so thorough history taking is essential. Like headaches, do not take dizziness lightly as there may be severe causes to the body's reactions.

1 <http://www.heartandstroke.ab.ca/site/c.lqIRL1PJtH/b.3650897/k.35F8/Statistics.htm>

2 <http://www.albertahealthservices.ca/hi-2011-02-11-aps-valuation-report.pdf>

3 <http://www.strokestrategyab.ca/health-resource-links.html>

4 [http://www.stroke.org.uk/sites/default/files/F37\\_Visual%20problems%20after%20stroke\\_0.pdf](http://www.stroke.org.uk/sites/default/files/F37_Visual%20problems%20after%20stroke_0.pdf)

5 <http://stroke.ahajournals.org/content/24/11/1621.full.pdf>

6 <http://emedicine.medscape.com/article/884361-overview>

# Stroke Bypass Criteria- As Per AHSEMS Protocols

When your assessment of a patient finds positive stroke signs, the next step is determining the appropriate destination and method of transport. Primary Stroke centers and Comprehensive Stroke Centers expect your patient to arrive with at least 1 18g IV site, and the head of stretcher elevated 10-20 degrees.

Utilize your paper form Stroke Screen document, as this should be available in all PCR clipboards on car. Fill in the information and note the times as appropriate, being as accurate as possible. In the event of handing off to STARS, ensure a copy of the Stroke Screen goes with the patient, and ensure facility pre arrival notification has been or will be completed.

## Following the Stroke Screen for By-Pass:

**Alberta Health Services** Stroke Screen

EMS must obtain critical patient information on scene and complete the Stroke Screen en route.

**Sample**

EMT/Paramedic: [ ] [ ] Patient name: [ ] Event number: [ ]  
 Date (yy/mm/dd): [ ] Time (hh:mm): [ ] Patient last seen by (person name): [ ] Witness phone: [ ]  
 History provided by: [ ] [ ] History provider name: [ ] History provider phone: [ ]  
 Partner  
 Family member  
 Other (specify): [ ]

Complete Physical Examination Findings below, then continue with screening process

**Physical Examination Findings:**

<b>Level of Consciousness</b> <input type="checkbox"/> Alert <input type="checkbox"/> responds to Verbal <input type="checkbox"/> responds to Pain <input type="checkbox"/> Unresponsive	<b>Speech</b> <input type="checkbox"/> Normal <input type="checkbox"/> Slurred <input type="checkbox"/> Incomprehensible or mute	<b>Facial Smile</b> <input type="checkbox"/> Normal <input type="checkbox"/> Right Droop <input type="checkbox"/> Left Droop
<b>Arm Strength</b> <input type="checkbox"/> Normal <input type="checkbox"/> Right-Droop down <input type="checkbox"/> Left-Droop down <input type="checkbox"/> Right-Falls rapidly <input type="checkbox"/> Left-Falls rapidly	<b>Leg Strength</b> <input type="checkbox"/> Right-Droop down <input type="checkbox"/> Left-Droop down <input type="checkbox"/> Right-Falls rapidly <input type="checkbox"/> Left-Falls rapidly	<b>Hand Grips</b> <input type="checkbox"/> Normal <input type="checkbox"/> Right-Weak grip <input type="checkbox"/> Left-Weak grip <input type="checkbox"/> Right-No grip <input type="checkbox"/> Left-No grip

**Thrombotic Criteria:**

	Yes	No	UNK
On aspirin therapy at present			
Recent MI within 3 months			
Recent stroke within 3 months			
Recent trauma within 3 months			
Recent surgery within 3 months			
Recent bleeding (puncture or within 3 months)			
Recent seizure activity within 24 hours			

**EMS Care and Transport:**

	Yes	No
Was the nearest hospital bypassed?		
Was a patch placed to the receiving hospital?		
Was the patient transported lights and siren?		

**Decision Trees:**

- Blood glucose level greater than 2.0 mmol/L?**
  - No → Transport to closest medical facility
  - Yes → Continue screening process
- Is one or more red Physical Examination Findings checked?**
  - No → Transport to closest medical facility
  - Yes → Continue screening process
- Last seen normal to arrival at Primary or Comprehensive Stroke Centre less than 4.5 hours?**
  - No → Continue screening process
  - Yes → Bypassing process - EMS Stroke Screen is positive. En route, provide early notification in closest Primary or Comprehensive Stroke Centre and notify the telephone number of an "Acute Disabling Stroke"
- Last seen normal to arrival at Primary or Comprehensive Stroke Centre between 4.5 - 6 hours?**
  - No → Continue screening process
  - Yes → Bypassing process. Treat and transport as per local stroke triage guidelines
- Awoke with symptoms?**
  - No → Transport to closest medical facility
  - Yes → Treat and transport as per local stroke triage guidelines

Provider name (print): [ ] Date (yy/mm/dd): [ ]

Stroke Screen

Assess for signs and symptoms of acute disabling stroke – our “Red Flags” of neurological impairment. This comes down to our Cincinnati Stroke Scale of troubles speaking, unilateral weakness, and facial droop. Ensure glucose levels are checked, treated as necessary, and are greater than 3.0 prior to confirming stroke/TIA. Confirm history of the events leading to the call, and that time of onset is less than 4.5hrs, unless the patient awoke with symptoms.

The screening process outlines clearly in RED items that will have you bypass your local hospital in favor of a primary or comprehensive stroke center. Inform your dispatch that you will be implementing the Stroke Bypass, and confirm which of your local centers is accepting. Sometimes your local Primary center will be unavailable, and you will need to bypass further to another Primary or a Comprehensive center. Keep in mind the Time of Onset of Symptoms. The goal for EMS is to have the patient in to CT at less than 4.5hrs from onset, although there is still the ability to treat with other methods during the 4.5-6hr window. Time, as always, is tissue.

If you’ve encountered that “borderline patient” who is tickling your spidey-sense but is not quite making the Red Flag criteria, use your judgement and experience. If you are leaning towards the benefits of CT sooner vs later, call OLMC to discuss the situation. The physicians on the other end of the phone are there to support us and our patients. Be sure to document the time of the call, the name of the physician, and the results of the discussion.

**OLMC – 1-855-617-7329**

## Reducing time spent in Transport:

Air support is an excellent option when it is available for the outlying areas further from Primary or Comprehensive centres. Whether by fixed wing planes, or via STARS helicopters, flying can greatly reduce transport times as you can guess from speeds noted above. The fixed wing brethren from Alberta Central Air Ambulance run at a speed of 260 knots (<http://www.albertacentralairambulance.com/fleet.php>). Do not delay in requesting these resources as they can take some time to get organized, manned, de-iced, and in the air to you. Ensure you have determined that bypass is appropriate, and that you have the following information ready when you request air support:

# ***Primary vs. Comprehensive Stroke Centers:***

As health care practitioners we are from time to time called upon to deal with CVAs of various types. Fortunately, we have tools and facilities available to evaluate and assist those patients that suffer a CVA. In terms of EMS, we have essentially three transport options in the event we are called to a CVA. The first option is the closest Hospital. Sometimes that's the best choice. Often times it's the best choice because the patient has called for help and they are so far outside the window, that there is no great rush to get a CT. At this point, all that a CT shows is how much damage happened. If it were earlier, perhaps it would show how much damage is potentially preventable. There are potentially other reasons for transporting to the closest hospital. Feel free to refer to your own judgement, OLMC, the AHS stroke screen tool and best clinical practices to aid in that judgement.

Outside the realm of the closest hospital, we have stroke centers. They come in two flavours, Primary and Comprehensive. They offer varying levels of treatment and availability, so it is important to understand the differences. Primarily, we have Primary Stroke Centers (PSCs). These are regional hospitals, located throughout the province and although their capabilities are not all encompassing, they are substantially greater than the care provided at the vast majority of rural hospitals. These facilities have CT machines, health care professionals with advanced training in the treatment and identification of CVAs and the ability to administer tPA as a treatment. Furthermore, PSCs use modern communications technology (in the form of "Telestroke") to communicate with stroke experts located in other communities. (Jeerakathil T, 2010) With pre-notification, these facilities have a "door to CT" time of less than twenty minutes. (AHSEMS, 2012) It must however be noted that not all of these PSCs are available 24/7. Early communication with your dispatch center is crucial.

According to AHSNCC Policy, the dispatchers will be phoning ahead and confirming with the most appropriate PSC that the facility is open, available and staffed. This will be done whenever EMS is dispatched to a call with a determinant prefix of 28, whenever the crew advises dispatch that they will need a stroke bypass or when directed by the Deployment Manager (DM) or Emergency Communication Officer occupying position 8. (Management, 2012)

## **Primary Stroke Centers available under the auspices of NCC:**

Peace River Community Health Centre	QEII Hospital in Grande Prairie
Westlock Healthcare Centre	Hinton Healthcare Centre
Northwest Health Centre	Cold Lake Health Centre
Edmonton Stroke Centres	Dawson Creek Hospital in B.C
Camrose Health Centre	Northern Lights Regional Health Centre (Fort McMurray)

In the Edmonton zone, it should be noted that all of the major hospitals (GNH, MCH, Sturgeon, RAH and UAH) may be considered a PSC when it comes to transporting a patient with an onset of symptoms more than 4.5 hours ago.

The second type of stroke center available to us as Albertans is the Comprehensive Stroke Center (CSCs). These are facilities that pull out all the stops and have all the doodads available 24/7 including surgical and radiological interventions not available at the PSCs. (AHSEMS, 2012) These are the ones you really want to hope for when you have a CVA onset of less than three hours ago. There are currently only three facilities in Alberta that function as such currently. The Foothills Hospital located in Calgary is the only CSC in the southern half of our province. The other two are both located in Edmonton and function collaboratively as a "Comprehensive Stroke System", these being the Grey Nuns and the University of Alberta Hospital. (AHSEMS, 2012)

The decision to transport any given patient to any given destination is one that a sole practitioner does not make alone. Nor even together with your partner. The transport decision in these cases is a team effort involving your dispatch center, the receiving hospitals and OLMC. The logistics of transport may become further complicated if STARS gets involved, the nearest fire department, the local hospital and any maintenance staff they may need to operate the STARS landing pad, available airports etc.

In conclusion, dealing with a CVA patient isn't as simple as most of our calls. Our potential treatments remain fairly minimal, but the depth and breadth of the knowledge and skillsets it takes to successfully operate and conclude any given CVA incident are rather large. Without a thorough understanding of how the systems work and how they interact, the potential for confusion and delays in treatment escalate.

# Case Study...

## Case Study

It is 07:48 and EMS is called for a 31C2 (Fainting episode, alert with pre-existing cardiac history) at a private residence. An 80 year old female is found sitting in the kitchen surrounded by concerned family and friends. Pt appears anxious, but is alert and oriented to EMS presence.

Daughter reports she was on the phone with patient at 07:05 when, in mid-conversation, mother's speech became inexplicably incoherent. She noticed her mother was "unable to find words" and stuttering. Alarmed by this new development, the daughter drove into town to check on patient, then called EMS when symptoms persisted.

EMS assessment finds the patient is A&O X 4, responsive to questioning, but still presenting with aphasia. She is able to communicate with yes/no, and writing only.

First set of vitals are as follows:

Heart Rate	Blood Pressure	SP02	Respirations	BGL
88 regular	152/78	94% @ RA	20 non labored	6.8mmolL

Neurological exam shows equal grip and plantar strength, no arm drift, no facial droop. Pupils are equal and reactive at 3mm. No other pertinent findings are found on first assessment.

Past medical history includes long standing angina, lung cancer (tumor removed surgically), COPD, and anxiety attacks.

Patient is positive to one red physical exam criteria on the stroke screen ('incomprehensible or mute') with a onset of less than 4.5 hours, the stroke bypass protocol is initiated.

Oxygen and IV are initiated enroute to primary stroke center, which is approximately 90 minutes away by ground ambulance.

Continued neurological exams find the following:

08:20 Patient condition improves—patient is able to now construct full sentences without difficulty. Patient is frustrated and annoyed by EMS making such a 'big fuss'.

08:55 Patient condition worsens—Dysphasia increases, patient is having difficulty responding to questions with single words.

09:15 Patient is now presenting with total aphasia, slight right sided facial droop, and extreme agitation. Grip and plantar strength remain equal and strong.

09:27 Patient's aphasia lessens, although she is now presenting with severe dysphasia. Patient shows obvious difficulty with 'finding' the correct words. Facial droop is still present. There is no change in grip or plantar strength.

Care is transferred to primary stroke center at 10:00, just slightly less than 3 hours from onset of symptoms.

Patient is rushed to CT—the scan and bloodwork findings indicate patient is a viable candidate for thrombolytic therapy.

Although there will most likely be chronic lingering affects from this CVA—to this day, the patient is visible in the community, with no obvious disabilities.

# EMX 15—Thorhild

On February 25<sup>th</sup> and 26<sup>th</sup>, Associated Ambulance had the opportunity to participate in a province wide simulated emergency. Communities involved in this exercise were:

Mayerthorpe	Thorhild	Lloydminster	Airdrie
High River	Raymond	Chestemere	Lethbridge County

While most of these locations were involved in simulated table top exercises, the Thorhild location provided an unique opportunity to facilitate a mock disaster of a school collapse. A local school had been slated for demolition and thus allowed the National Task Force 2 Team, based out of Calgary to conduct live training in real time to rescue trapped individuals in the school played by local high school drama students. Associated Ambulance participated at two of these locations, Mayerthorpe and Thorhild.

To set the scenario, a 4 day ice storm had plagued the region with accumulations of up to 30 mm of freezing rain causing massive power outages, treacherous road conditions, and severe wind chills that had taxed the EMS system in the region. On the morning of February 25, an older school in Thorhild succumbed to the conditions and collapsed reportedly trapping 13 students and the principal inside. The local Fire Department was unable to adequately and safely remove the trapped victims and activated the National Task Force Team.

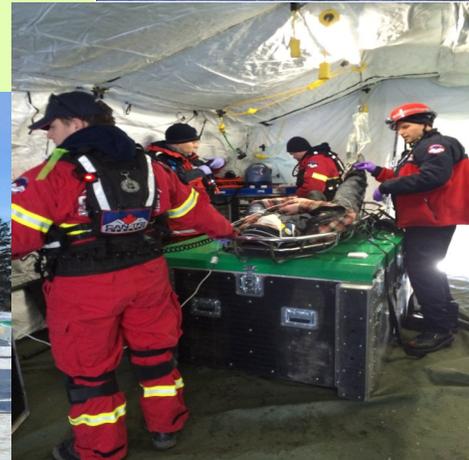
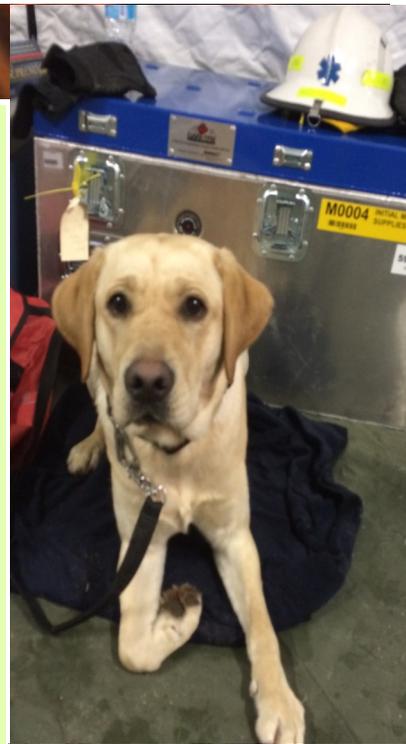
A total of 88 personnel consisting of the Task Force 2 Team, K-9 Search team, exercise controllers, and the Task Force 1 Team out of Vancouver, BC as evaluators, Associated Ambulance Management and the Thorhild EMS unit attended the scene. Also on scene were local authorities including Fire, Ambulance, and County and town representatives. The exercise started at 07:00 and spanned for two days. The Task Force Team arrived on scene and started to set up operations. On site there was a command center, a mobile hospital staffed with seven specially trained rescue medics and one trauma Doctor, a temporary morgue, a cut tent (to manufacture required cribbing required in the structure) and support operations including meal and washroom facilities. I arrived on scene at 07:06 and offered our assistance as the local EMS Authority. Our role in this event was to provide coordinated transport of patients once they had been treated at the Mobile Hospital, and to provide guidance to patient destination as the area was unfamiliar to the Task Force Team.

Although our available resources were virtual in nature, availability was based upon real time MDT information. We were able to have our Thorhild unit on scene for a few hours at the beginning of the exercise. Our crew in Thorhild, Michael Harland and James Smith, provided hands on movement of patients out of the temporary on site hospital and transported just off site, allowing them to turn around and assume the role of the next incoming ambulance.

Due to nature of the event, the Task Force Team had to breach concrete floors, cinderblock walls, shore and crib fallen and collapsed walls to search, locate, extricate, treat and move the patients to the on site mobile Hospital. On three occasions the Doctor was requested to enter the structure to conduct field amputations simulated by the use of cow legs, to facilitate extrication. Although operations were suspended at 21:00 hrs the first night and resumed in the morning, the exercise to locate, remove, treat and transport a total of sixteen patients took a total of 21 hours.

We would like to take this opportunity to thank all who organized and participated in these events, It was such a great opportunity to play an active role in this scenario !

Jeff Steinwand, EMT-P , Operations Manager





## **Case Study... Don't send My Helicopter Away!** *By John Ross, EMT-*

It is late evening in early Fall when we get toned out to a rural road intersection for a stabbing victim. We are informed that Police are on scene and STARS has been dispatched. From our station, we are 12 to 15 minutes away.

As we arrive on scene, we are met by one of the officers and he proceeds to tell us that the patient has been stabbed multiple times and that he was driven from the scene of the incident to this location. The officer continues by saying that the patient is in the front passenger seat of the car, he has no apparent signs of life and that STARS has been cancelled.

Now, I believe we are well trained professionals and we go to great lengths to find out what is wrong with our patient. When we have a patient that appears lifeless, we search long and hard for any signs of life before we declare them dead.

I start towards the car while my partner opens up the back of the Ambulance. When I reach the patient I find that he is unresponsive. I feel for a carotid pulse and start a visual check for injuries. I can see a couple of large holes in his shirt and there is massive blood loss. I think I feel a faint carotid pulse so I keep my fingers in place while I check his pupils. As I am looking down at the patient's chest, I notice that one of the fingers on his right hand moves ever so slightly. I call to my partner to bring the stretcher and forget the spine board. I am reasonably sure that we don't have a lot of time on our hands.

We hustle our patient to the back of the truck and start to work. We apply oxygen and while my partner prepares IV supplies, cuts off clothes and attaches the monitor, I make a quick phone call to Dispatch and ask them to turn STARS around. I really would like the helicopter.

The patient's respirations are weak and shallow at 8 bpm but he is protecting his airway. He is unresponsive, blood pressure is 60/40 and he is in sinus tach. As my partner exposes the patient's torso I start a large bore IV in the right AC, give a 500 ml bolus and then run the IV wide open.

Our patient has three stab wounds, two of them significant and one superficial. The largest is on the left side of the chest, midaxillary, starting just distal to the axilla and running to about the fourth rib. It is approximately 10 cm long and is open to the chest cavity. The next largest is on the left side of the abdomen, is about 8 cm long and is open to the abdominal cavity. At this point, I started an IO in the right leg and run that wide open as well.

We are putting occlusive dressings on the wounds when the patient begins to respond. He is groggy but he is staying conscious. We are getting another set of vitals when STARS lands.

When the crew gets into the back they said they were surprised to be turned around because they were told that the patient was dead. My only response was; "Not quite." By now the patient was speaking in short sentences and was answering some questions. His respirations were stronger, blood pressure was 110/70 and he was still tachycardic. We helped package him up for the flight to the City.

There has been much talk of late about the use of spine boards after extrication has taken place. The bulk of the subject concerns long distance transfers for patients requiring DI after a traumatic injury. Much of the documentation states that there is no hard evidence that having a patient secured to a spine board for any length of time is entirely beneficial. In the future, I am sure we will see changes in common practice along with certain specifics addressed in our protocols.

One issue that did not arise during the recent spine board discussions was the use of the boards for penetrating trauma patients.

In an article written for Canadian Paramedicine, October – November 2013, Volume 36 – Number 6, author Christopher Foerster addressed this issue. For those that have read the article, I am sure you found it informative. Opinions on the use of spinal immobilization for gunshot wounds were published as early as 1998, articles relating to penetrating trauma, in general, first appeared in 2010.

PHTLS has advocated against the routine use of spinal immobilization for penetrating trauma and our protocol make no mention of its use for these types of injuries. Still, we generally tend to consider it as a necessary treatment in penetrating trauma.

One of the key items we need to consider at all times is the mechanism of injury. Certainly, with a high mechanism and a penetrating injury, SMR would be prudent. If the injury is lacking the high mechanism, we can be more judicious in our use of SMR. Even gunshot wounds are not always candidates for SMR, according to recent information. To quote the article just mentioned, "Routine spinal immobilization for penetrating trauma patients is not only unnecessary but also harmful." The key word here is "routine."

Our clinical judgment and scene size up are two important tools we use on every call. We constantly have to remember to weigh risk versus benefit.

It is difficult to determine with certainty if the time we saved with our patient by not doing SMR was beneficial. We all know how long it can take to properly immobilize and extricate a patient from a vehicle. Even when we are very fast, it takes time. In our case, the window of opportunity was very small. We may not have lost the patient if we immobilized but we may have had a tougher time getting him stabilized.

Always assess each situation carefully and use what you need.

And don't let anyone else send your helicopter away.

# Announcements...



## It's your Move ~ Safe Client Handling~

We have just added 7 Its Your Move trainers to our team.

We are very excited to begin rolling this knowledge and equipment out to all of our staff to assist with those difficult lifts.

Our target company wide implantation date is *June 1st, 2015*

Please keep an eye out for training dates near you!!



## Arrival of new units and Stryker Power stretchers

The next group of new ambulances are scheduled to arrive in Edmonton sometime during the first week of April to begin the commissioning process prior to being placed into service. Once the commissioning process is completed (radio, stretcher, MDT, equipment installs), and pending any major issues in the interim, units are currently scheduled to be placed into the following stations over the next couple of months:

Athabasca	Mayerthorpe
Jasper	Rocky Mountain House
Boyle	Sylvan Lake
Hinton	Westlock
Lac La Biche	Whitecourt

In addition, a number of other unit moves will occur, resulting in a redistribution of units and retirement of a number of others.

Along with the rollout of the new units, we will be distributing newly arriving Stryker Powercots along with each new unit, as well as replacing a number of current stretchers. Training for the new cots will occur as they are rolled out and will be provided by a group of recently trained power-users.

If you have any questions as these units and stretchers are rolled out you are asked to contact your Operations Manager for further information.

## Payroll is going Paperless

We began a testing our new payroll reporting form with Athabasca, Evansburg, Mayerthorpe and Jasper on March 1, 2015. It has been a learning curve for all of us and changes have been made already to the form based on some very good feedback from these stations. We are going to continue with these 4 stations for the rest of this month and hopefully we will be able to say goodbye to their timesheets. We hope to roll this out to a few more stations in the very near future.

## Westlock Crew recognizes local Heroes

Two high school students were recognized at a school assembly on March 20 for their brave actions. The Duo was walking along when they came across an unconscious male, without hesitation the teens contacted 911 and began CPR until EMS arrived.

Kudos to them!!



## Electronic Patient care Record (ePCR)

The planning process for implementation of the AHS ePCR system has now commenced and an aggressive target of September 30<sup>th</sup> has been established by AHS to have all contracted EMS agencies transitioned to the new system. Over the next couple of months we will be releasing further details on the training process that will have to be followed in advance of a go-live date sometime later this fall. In the meantime a significant amount of work is underway designing and developing a reliable data bridge that will enable us to continue our billing processes without interruption.

## In the next issue:

Do you have a suggestion for upcoming issues of the Gazette?

We want to hear from you.

Please email your suggestions to [nfisher@associatedambulance.com](mailto:nfisher@associatedambulance.com)

## Recruitment:

Our Recruitment and Orientation Program has brought many new faces into the Associated family recently.

In February we welcomed 14 new staff to the company and in March we completed an orientation for the 7 new staff that joined us when Nordegg became our 21<sup>st</sup> station!

We also have an orientation planned for April that will welcome an additional 15 new staff to our company.

During the 3 day orientation process our new members are exposed to some key members of our organization, provided with a policy and procedure review, EMSM use training, and unit familiarization. Our Safety Officer Dion, provides the in house EMS based PDIC training to all staff.

Our new members are hitting the road equipped with their MCP training complete, N95 testing complete, and the newly offered Its Your Move Certification.

The class room orientation is followed by a 24hr third on car mentorship with one of our senior field trainers where the new staff gain a hands on understanding of the daily operational requirements of the company.

Thank you for choosing to work with us at Associated Ambulance and Welcome to the team!

Melissa Kennedy, EMT-P, Operations Manager

## Associated Ambulance Gazette Issue 04 April 2015

Associated Ambulance proudly supports the

### [Paramedic Pay It Forward Award](#)

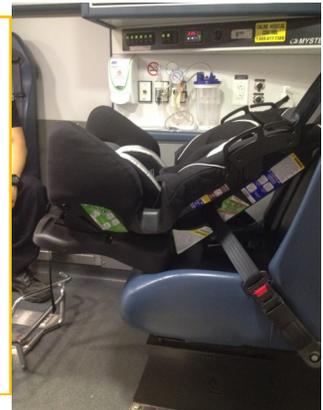


Do you have a question for us??

Maybe there is other staff members wondering the same thing....

Please feel free to email the group and we just might post your question in our next edition.

Or simply send us a pic and we may post that as well!!



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