

The Fire and Emergency Medical Services News



New Hampshire Fire Academy



Fall 2004

Volume XXIII **Number 4**

A Service of New Hampshire Division of Fire Standards & Training and Emergency Medical Services

Training on the Leading Edge

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Dear New Hampshire Emergency Responders:

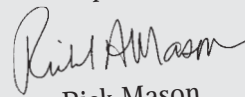
Well summer has passed us by, actually only a few really nice days, but we can not complain that we are having a high wildland fire season, as it blessed us with green grass for the entire season!

The field we have chosen, whether volunteer, paid-on-call or full-time is one that has numerous risks... Risks of injury when we go to a build-ing fire, risks of being exposed to a debilitating disease on a rescue call, risks of contracting painful illness from hazardous materials exposure, risks of being involved in a motor vehicle crash, risks of succumbing to stress at any emergency of a training call. Who would ever think we would have to be vulnerable to risks from suit!

Well I know of several cases around the country where people are being sued, sometimes with good outcomes where the laws helps them, and some-times just the opposite! New Hampshire has several laws that indemnify, hold harmless, limit liability, and the like. Now I must profess that I am NOT an attorney, but think that it may be a good idea to know what your limitations are, so you are not surprised in the future. I am also not telling every firefighter and emergency responder in the state to hire an attorney, but it is always good as a unit head/fire chief to have conversation with those that will defend you should an accident, or similar, occurs.

We are quickly approaching our busy season, when heating systems are fired up for the season and wood stoves start cranking...so let's all train for the worst, hope for the best...and STAY SAFE!

Respectfully,


Rick Mason

PELVIS TRAUMA UPDATE

Emergency Medical Service (EMS) providers should have a good working knowledge of how to effectively treat severe pelvis injuries. Internal bleeding from pelvic fractures can be rapidly fatal. There are simple techniques that can be applied in the pre-hospital setting that can reduce mortality and morbidity. Let's take this opportunity to review pelvic injuries and up-to-date treatments.

The mechanisms of injury that most commonly cause pelvis trauma include motorcycle crashes, pedestrians stuck by a motor vehicle, and direct crushing injuries to the lower torso. Motor vehicle collisions are less likely to cause pelvis trauma to occupants, but it does still occur.

In order to treat a pelvic fracture, the EMS provider must be able to recognize one. This is not as easy as the textbooks indicate. A high index of suspicion based on the mechanism of injury (discussed above) is an important start. Actual hands-on assessment for an unstable pelvis is often described as pressing downward with the heel of the hand on the symphysis pubis of the supine patient, followed by compressing and rocking the pelvis to feel for instability. There are two important points to consider with this practice. The first is that rocking a patient who may have a spinal injury may be detrimental. A better technique is to grasp both pelvic bones on the front of the patient (anterior iliac crests) and attempt to manipulate the pelvis as if you were opening and closing a book. Not many people have ever had the experience of feeling an unstable pelvis. Essentially you will know it when you feel it. Which leads to the second point, that if you do feel pelvic instability stop your assessment of the pelvis at that point. The Advanced Trauma Life Support Course for physicians (ATLS) warns that continued manipulation of an unstable pelvis is dangerous. So this is not a learning moment for other members of your crew to share.

The pelvis is a complex bony structure that can be fractured in several different locations. The most life threatening is the open book fracture, in which one side of the pelvis is completely separated from the rest of the pelvic structure. The unsupported side of the pelvis flops open like an open book. Major blood vessels pass through the pelvis, and trauma to the area can cause significant internal hemorrhaging. Researchers believe bleeding associated with open book fractures is profound because the unstable pelvis allows the pelvic compartment to expand with the bleeding. An intact pelvis tends to maintain pressures within the pelvic compartment that will usually stop the bleeding. Life-saving intervention for a patient with an open book pelvis fracture entails returning the integrity of the pelvic ring. Application of circumferential pressure (pressure completely around the pelvis) will bring the bones back into alignment, restoring pressure within the pelvic compartment.

Once a potential open book fracture is recognized there are several ways to treat the injury. This is one of the few injuries for which the pneumatic anti-shock garment (PASG) is still recommended. Unfortunately for poor PASG, they are not very good for this task either. PASG do provide circumferential compression of the pelvis, but accomplish it by pressing down on the abdominal/pelvic region. Thus they increase pressure around the outside, but tend to push in on the open book pelvis, which is counterproductive. Fortunately better techniques have been developed.

A simple pelvic splint can be made from a hospital sheet. Fold the sheet lengthwise until it is about 8 inches wide. Slide the sheet under the patient's lower back, then bring it down until the sheet is centered at the patient's greater trochanters (hipbones). Cross the ends of the sheet in front of the patient and pull tight. Secure the ends with clamps or with a secure knot.

There is a new commercial pelvis splint on the market that has several advantages over the bed sheet method and is not very expensive. The device is the Sam Sling(tm), manufactured by the same company that makes the Sam Splint(tm). It is easy to apply and has the substantial advantage of alerting the user when the optimal circumferential pressure has been achieved. Development of the device is well grounded in medical research. Unfortunately the device is not approved for children, so the sheet method is recommended.

Any EMS agency considering adding the Sam Sling(tm) to their toolbox should discuss the device with their medical director and conduct inservice practice with staff.

Suppose a patient you transported has an open book pelvic fracture, but you did not find it. It's not always easy to detect. Often this injury is only found on X-Ray or CT scan. Your knowledge of pelvic stabilization techniques can still come into play in the Emergency Department (ED). ED staff may not be familiar with pelvic stabilization techniques, and may call for EMS assistance. This is a good opportunity for you to strengthen EMS/ED teamwork. Any trauma patient with an open book fracture who is being transferred to another facility must have some form of pelvic stabilization applied.

The NH Division of Fire Standards & Training & EMS is working with both EMS and ED providers to increase awareness of pelvis trauma. The Division is offering a pelvis trauma update program to hospital emergency departments free of charge. For additional information on this program or any issues related to pelvis trauma or the NH Trauma System please contact Clay Odell, EMTP, RN, CEN, Trauma Coordinator at 448-4927 or codell@safety.state.nh.us.