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TO: MA Licensed Ambulances Services
Accredited EMS Training Institutions
All MA Certified EMTs

FROM: Abdullah Rehayem, Director

RE: Ensuring Ambulance Cot Safety and Preventing Cot Tip Over

DATE: January 24, 2012

Over the last year, the Massachusetts Department of Public Health (Department)'s Office of Emergency Medical Services (OEMS) has received and investigated an increased number of reports of incidents in which an elevated ambulance cot with a patient on board tipped over. Several of these incidents resulted in serious injuries to the patients, and sometimes injuries to the EMTs as well. While the causes and factors in each incident have varied, the Department confirmed as the most common factors in these cases, the following:

- The cot not being lowered to a safe rolling height per the manufacturer's recommendations;
- EMTs not grasping the cot with both hands while in motion;
- Insufficient number of EMTs to safely transport heavier patients and/or additional equipment, and
- Cot wheels catching on cracks or gradient changes in the pavement.

By using proactive safety measures, ambulance services can and must decrease the number of these incidents and mitigate harmful effects to patients and EMTs.

The Department is therefore reminding all ambulance services of their regulatory obligations to make sure all equipment, including ambulance cots, are maintained and used in accordance with manufacturer's recommendations and/or specification, and the need for the following cot safety enhancement measures:

1. Reviewing and updating, as necessary, written policies and procedures for the proper operations, inspection, maintenance and supervision of ambulance cots;
2. Orientation training and annual refresher training for EMTs and supervisors, incorporating pertinent ambulance service policies and procedures, and manufacturers' safety recommendations, both initial and any time that new equipment is introduced;
3. Specifically highlight in EMT training the importance of the following:
 - a. Selecting lower or mid-range cot elevated positions when moving patients. This practice increases stability and provides for a lower center of gravity, decreasing the chance of the cot tipping over. Please note that all cot manufacturers supply cot handle extensions and straps to enable EMTs to walk upright while pulling or pushing the cot. Higher cot elevated positions and cot loading positions should be restricted to special circumstances and ambulance loading/unloading evolutions;
 - b. Selecting the lowest practical position of cot elevation when they move a heavy patient;

- c. When it is essential and unavoidable that EMTs carry equipment on the cot on which they are moving a patient, selecting the lowest practical position of cot elevation;
 - d. Being alert to pavement and terrain condition hazards at all times when moving a patient;
 - e. Both EMTs keeping both hands on the cot frame, handles and straps supplied to assist with moving the cot at all times when moving a patient;
 - f. Using required cot restraint straps to provide both transverse and longitudinal patient protection. Straps are required at patient's knees, hips, chest and over shoulders (shoulder straps must be tethered together at cot frame);
 - g. Being careful when they use newer model cots: These cots roll easier and faster than older models. Heavier patients coupled with a heavier model cot that rolls easier means that a cot may be more likely to tip over when meeting an uneven surface or object, and especially during a sudden turn.
4. Carefully documenting all training, inspection, maintenance and supervisory activities;
 5. Ensuring preventive maintenance of all ambulance cots, related systems and accessories in accordance with manufacturers' recommendations and timeframes (105 CMR 170.480(B) and Administrative Requirements 5-401 and 5-402);
 6. Instituting a supervisory system designed to assess and monitor cot safety practices, incorporating use of the Administrative Check List tool, below, and ensure there are enough personnel to safely move the patient if conditions warrant extra staff.
 7. Implementing a process for identifying and working to correct commonly traveled areas of pavement that pose an inherent hazard to wheeled cots, and informing management at the facilities where this is an issue.
 8. Filing with the U.S. Food and Drug Administration a "Medical Devices Report" and with DPH/OEMS a "Serious Incident and Accident Reports" when required. See the FDA website, at www.fda.gov and the DPH/OEMS website, at www.mass.gov/dph/oems for forms and details.

At the time of an ambulance service's licensure inspection, the Department will review the policies and procedures the service has in place with regard to these safety measures. EMTs observed operating ambulance cots in violation of the manufacturer's recommendations or without using required safety measures may be cited by Department staff, who will then address the issue with the service and the individual EMTs. If you have any questions, please contact Phil Bonaiuto, Field Supervisor of the Department's Ambulance Regulation Program, at (617) 753-7321.

Thank you for your assistance in improving the safety of EMS patients and EMTs in Massachusetts.

Administrative Check List

1. Institute policies and procedures addressing elevating cot safety practices:
 - Proper operations Inspection Maintenance Inspection Supervision
2. Provide cot safety training:
 - Orientation training Annual refresher training for EMTs and supervisors
3. Documentation of related activities:
 - Training Inspection Maintenance Supervisory activities
4. Institute a maintenance system of cots and related systems.
5. Institute oversight systems to ensure:
 - Proper use of required patient restraining straps,
 - Cot positioned in mid or lower ranges when transporting patients,
 - Limitations on carrying medical equipment on cots.
6. Institute a supervisory system designed to assess and monitor cot safety practices.
7. Institute policies on filing of "Medical Devices Reports" and "Serious Incident and Accident Reports."