SECOND QUARTER 2013

EMS Patient Safety Event Report

E.V.E.N.T.
EMS Voluntary Event Notification Tool
An EMS Culture of Safety Initiative

Welcome!

Welcome to the EMS Voluntary Event Notification Tool (E.V.E.N.T.)!

This is an aggregate report of the patient safety events reported to E.V.E.N.T. in the second quarter of 2013. We want to thank all of our organizational site partners. For a complete listing of site partners, see page 4.

E.V.E.N.T. is a tool designed to improve the safety, quality and consistent delivery of Emergency Medical Services (EMS). It collects data submitted anonymously by EMS practitioners. The data collected will be used to develop policies, procedures and training programs to improve the safe delivery of EMS. A similar system used by airline pilots has led to important airline system improvements based upon pilot reported "near miss" situations and errors.

Any individual who encounters or recognizes a situation in which an EMS safety event occurred, or could have occurred, is strongly encouraged to submit a report by completing the appropriate E.V.E.N.T. Notification Tool. The confidentiality and anonymity of this reporting tool is designed to encourage EMS practitioners to readily report EMS safety events without fear of repercussion.

"Every additional medication added to the EMS drug bag is an additional opportunity for error from look-alike packaging. In one of this quarter's cases, oral ibuprofen is equivalent to parenteral ketorolac in time to pain relief and amount of pain relief. EMS systems should consider whether the risks of error are worth any advantage of carrying the IV/IM form of this medication." – Patient Safety Expert.

This is the aggregate Patient Safety E.V.E.N.T. summary report for second quarter 2013.

PROVIDED BY:

The Center for Leadership, Innovation, and Research in EMS (CLIR)

IN PARTNERSHIP WITH:

North Central EMS Institute

Paramedic Chiefs of Canada
Chefs Paramédics du Canada

NATIONAL EMS MANAGEMENT ASSOCIATION

NAEMT

NASEMSO

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Patient Safety Event Reports Sorted Quarterly

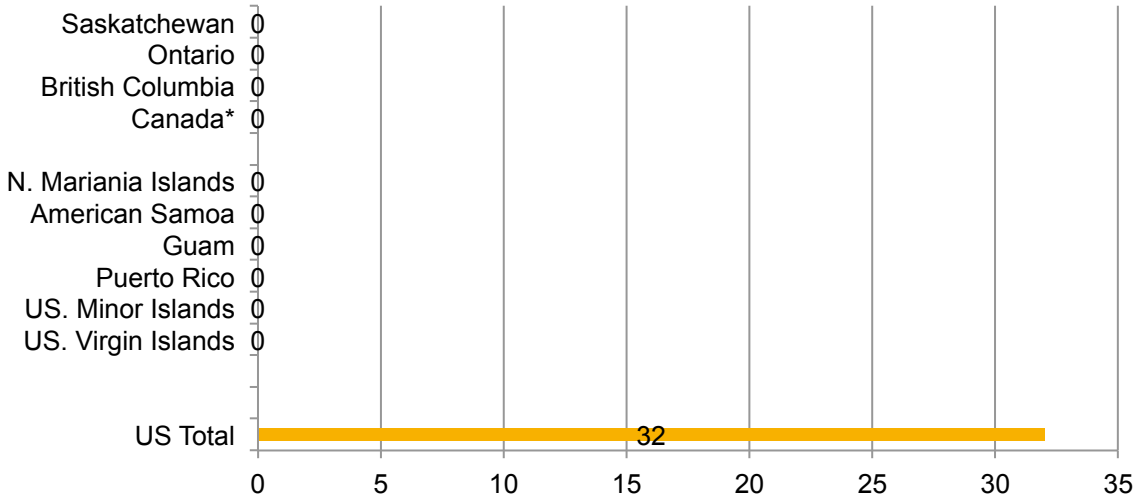
	2012	2013
Jan - Mar	6	30
Apr - Jun	9	32
Jul - Sep	13	
Oct - Dec	6	
Total	34	62

As you review the data contained in this report, please consider helping us advertise the availability of the report by pointing your colleagues to www.emseventreport.com.

EMS Patient Safety Event → E.V.E.N.T. Report Completed Online → CLIR Notified of EMS Error → Quarterly/Annual Reports Generated

When an anonymous EVENT report is submitted, our team is notified by email. In the United States, the anonymous patient safety event report is shared with the state EMS office of the state in which the event was reported to have occurred. The state name in the report is then removed and the record is shared through our Google Group and kept for this summary report. Canadian records have the Province name removed, and then the reports are shared through the Paramedic Chiefs of Canada, and kept for inclusion in aggregate reports.

Quarterly Patient Safety Events in Canada and U.S Territories



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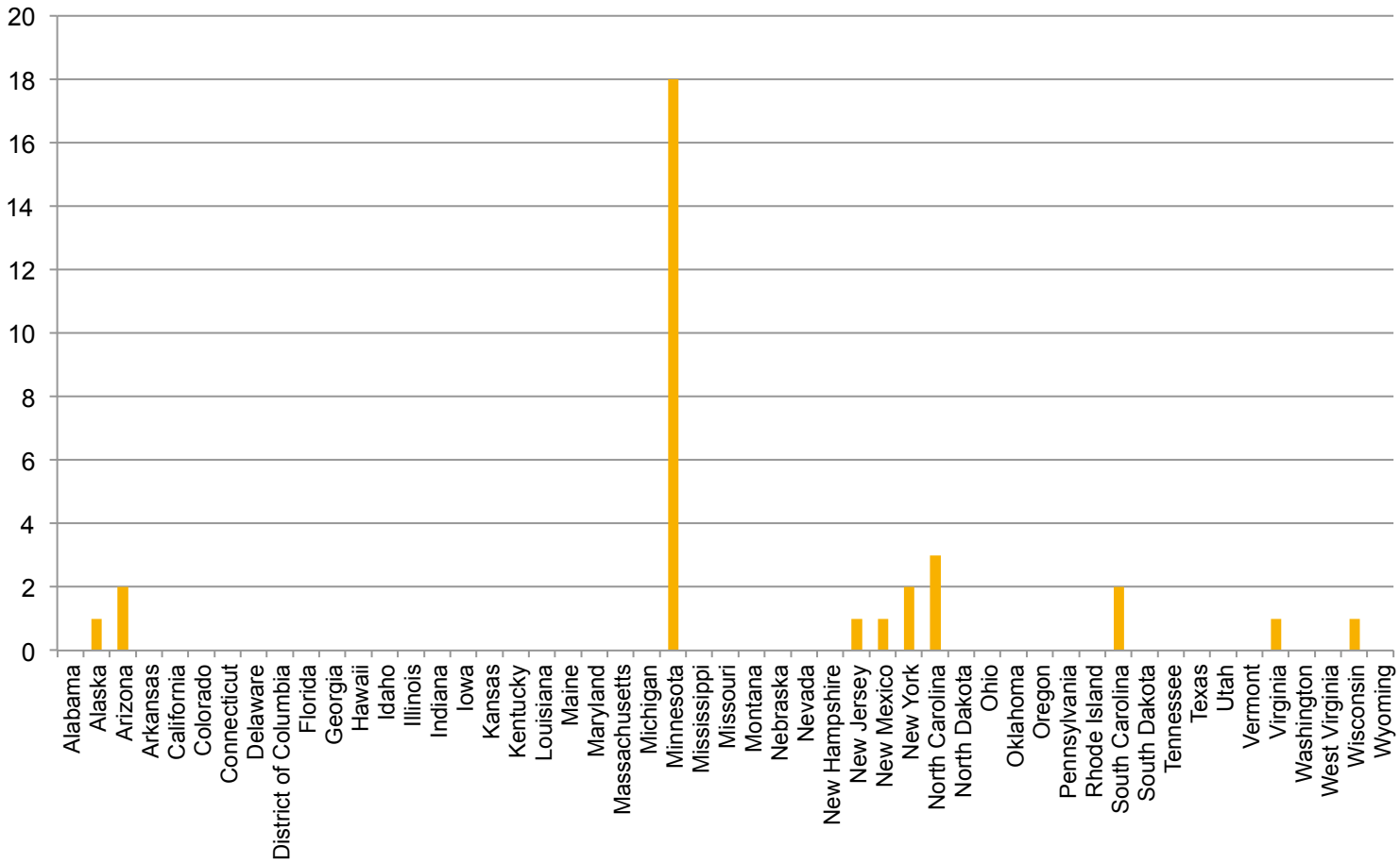
Patient Safety Events Reported by State (United States of America)



Many of our reports this quarter have been generated from Minnesota. Thanks to the Minnesota agencies and practitioners for supporting this body of knowledge! If your EMS agency has an internal reporting system for patient safety events, we encourage you to have your staff member that receives those reports to also enter them into our anonymous system.

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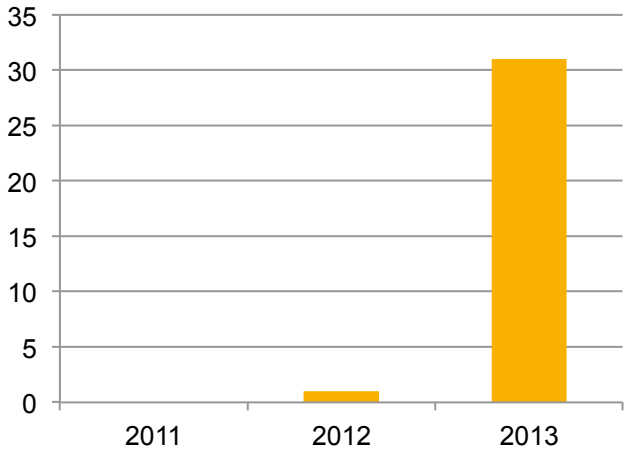
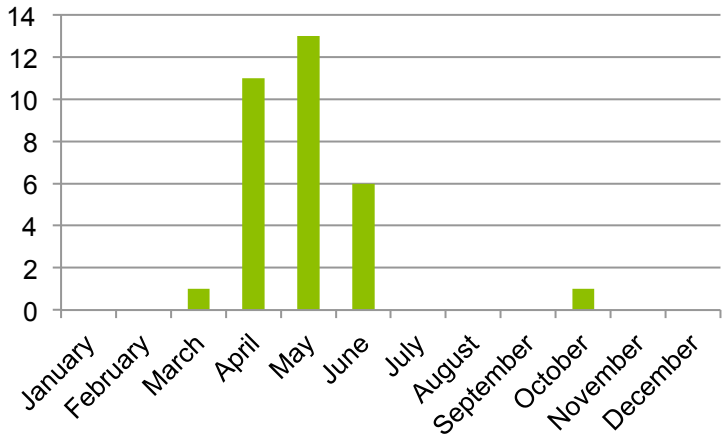
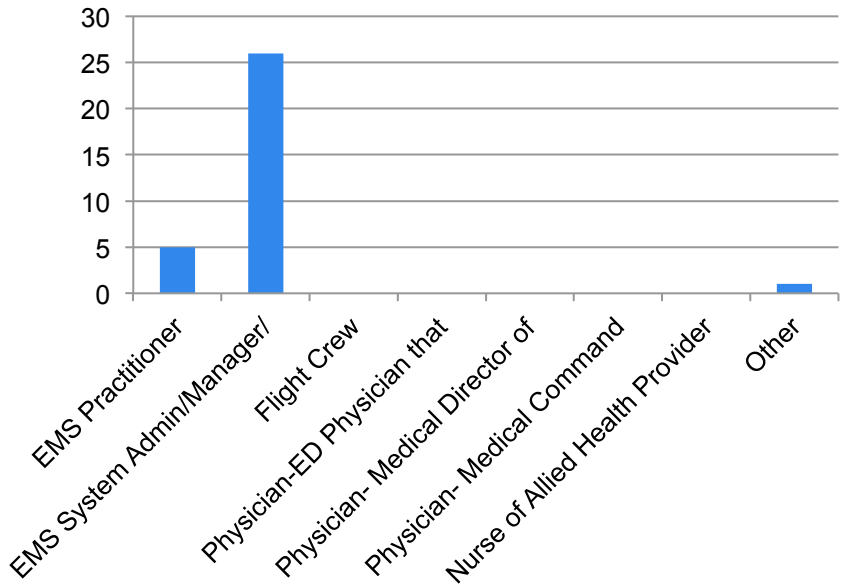
Year Reported Patient Safety Event Occurred



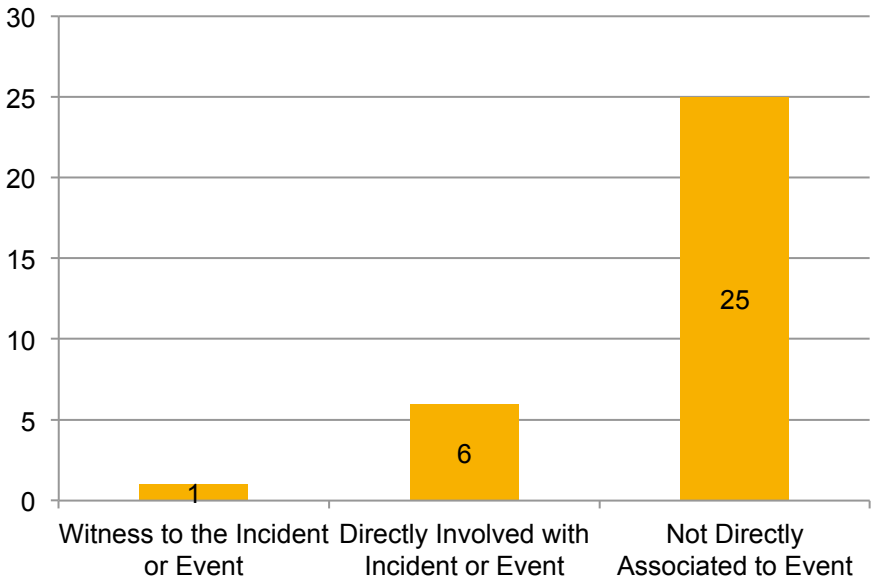
Month of Reported Patient Safety Event



Role of Person Reporting Incident

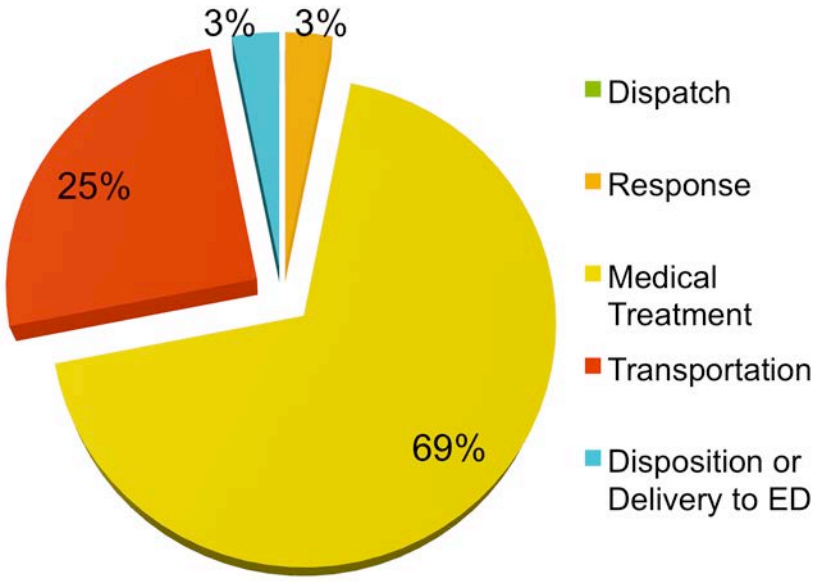


Involvement in Safety Event



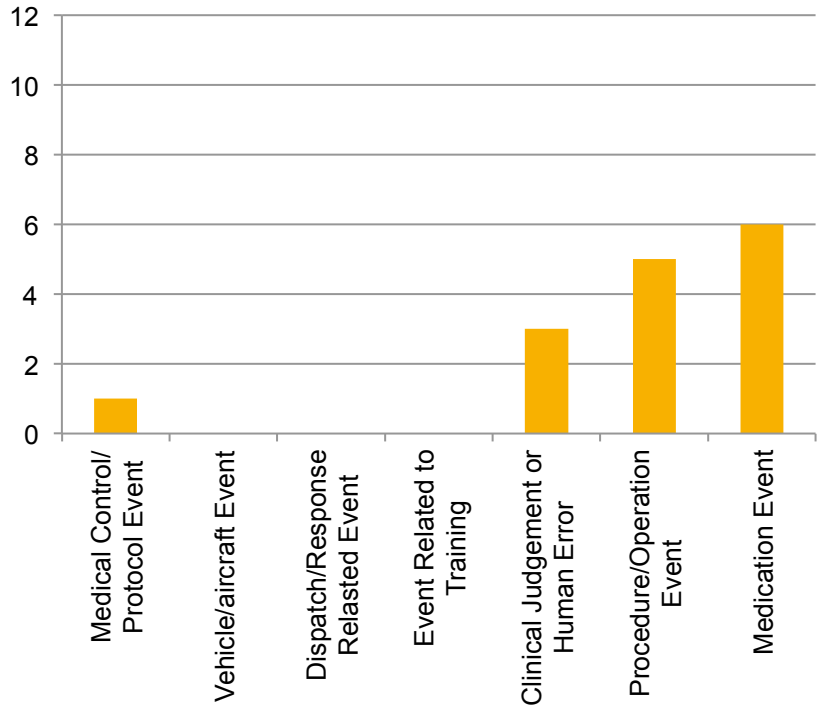
The reporters from this period are generally “not directly associated to the event”. The EMS system administrator dominates the “not directly associated” group.

Category of Event



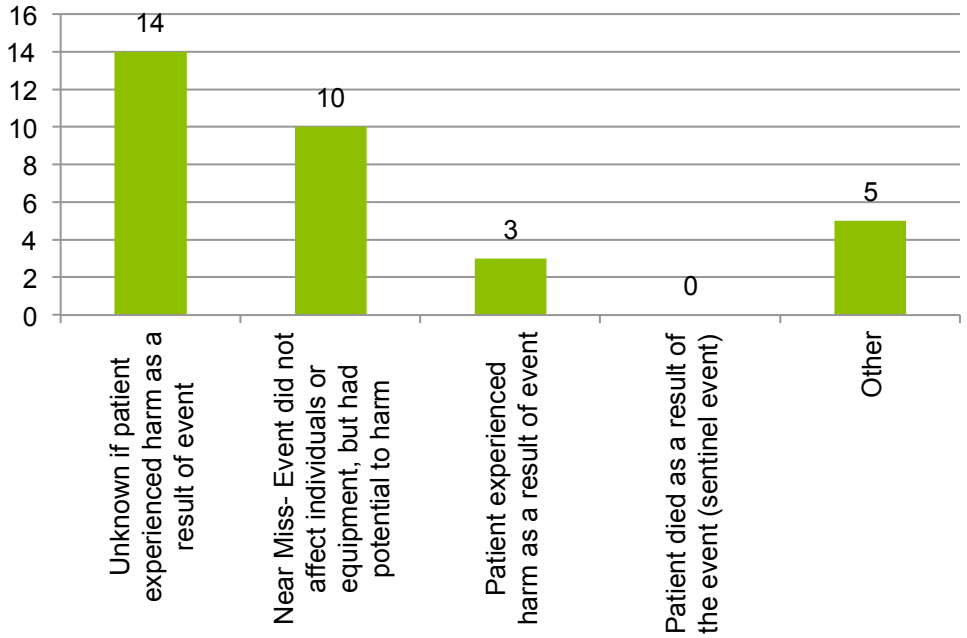
The vast majority of the events reported this period occurred in the medical treatment phase. Transportation is the second most category reported, with response and disposition or ED delivery being equally balanced. There were no dispatch related events reported this period.

Type of Patient Safety Event



Medication errors dominated the type of event, followed closely by clinical judgment or human error, then procedure or operations and medical control. There were no vehicle, training or dispatch reports this period.

Patient Result of Patient Safety Event



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#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
1	Patient was suffering anaphylaxis. The crew was comprised of a Paramedic and an EMT-B. While the Paramedic was obtaining IV access and starting the patient on a Nebulizer, the EMT-B partner was getting the next medications to be administered. A carpuject of Toradol was mistakenly loaded into the carpuject syringe. The mistake was caught when medication and dosage are verbally and visually confirmed between crewmembers. No patient harm was experienced.	In the recent past Benadryl was packaged in carpuject and Toradol was packaged in vials. With recent drug shortages and multiple vendors packaging is constantly changing. In this case the Toradol and Benadryl were both in new packaging and occupied each other's previous slots in the medication bag. It was easy to pick up the incorrect medication especially for an EMT-B that is only trained to assist with ALS skills and not to be completely familiar. Purchasing of sufficient quantities of medication from vendor to prevent frequent packaging changes. Highlighted alert tabs in the medication bag to identify new packaging for a period of time until all crews have been able to adjust.
2	Lidocaine administered in place of Naloxone	Failure to check medication by 2 paramedics. Change medication storage practices, add process check to verify medications.
3	Stretcher was being unloaded with a 433 lb. pt. on the [manufacturer] accessory. The height control handle would not release to drop the wheeled carriage as it was supported between the load wheels on the ambulance floor and supported by operator at foot end. After multiple tries, stretcher with pt. was able to be unloaded safely and wheels deployed using extra people lifting on top frame near middle to compensate for bowing of mechanisms under the mattress.	Exact cause of failure(s) still unknown. Stretcher was in good repair and receives regular preventative maintenance. Extreme weight of patient and other equipment on stretcher did not exceed weight rating by manufacturer. However, stretcher frame was obviously bowing and contributed to failure of the wheeled carriage release mechanism. Appears that bariatric patients can cause stretcher mechanism failures even below the weight ratings of the equipment, especially when in the load and unload configurations.
4	While moving the patient on the stretcher from a multistory facility, the automatic door (hinged one side) at the entrance closed when the patient was 1/2 way through the door frame causing the "panic bar" on the door to strike the patient's knee.	The crew had stopped briefly to talk with staff while the door was open and did not pay attention to the time the door had been open misjudging the time they had to exit before the door closed. Use of door blocks while moving the stretcher through automatic doors to prevent them from closing on the patient or crew.
5	Patient was a 70-year-old female having an acute MI. She was receiving TPA, nitro, and heparin. Patient was being admitted directly to the cardiovascular ICU and during handoff it was noted that a bag of Hespan was prepared for the patient but had not been administered. Paramedic asked hospital nurse why Hespan was ready to be given instead of heparin. Nurse quickly corrected error.	Exact cause was unknown, but it was determined that the heparin and hespan labels are similar and both are stored near each other in the hospital's Pyxis system. Change labeling and separate in Pyxis.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
6	Patient had been suffering from dizziness, nausea and vomiting for approximately 30 minutes when EMS was notified. Patient was evaluated and prepared for transport to the ER. While loading the stretcher into the ambulance, the crew failed to communicate and the stretcher was not locked into the ambulance before the wheels were raised. This caused the stretcher to roll down the back of the truck, strike the bumper and tilt. The patient was partially dislodged from the stretcher as she put her arm out in anticipation of striking the ground. In doing so, she scraped her elbow witch caused a minor skin tear. The wound was dressed and the injury identified when the patient arrived at the ER.	Failure of the crew to communicate on the readiness for raising the legs of the stretcher. More communication between crewmembers.
7	Cardiac Monitor Dead	The monitor was not put back to together correctly and was left on and unplugged from its charging connector. We did not run another call for 6 to 7 hours. The battery went dead. Could not follow treatment protocols for a suspected stroke patient and monitor his heart or do a 12 lead. Making sure that all equipment is back in it correct ready position after the call is over.
8	While moving a supine 130 lb. patient from our stretcher to a nursing home bed, some of the multiple sheets under the patient slipped away & the patient dropped about 10 inches onto bed. Pt. & family witnessing were startled yet no injury to patient who landed on pillows and mattress.	Contributors: 1. Far side of bed against wall in tight room; 2. Too many layers of linen under pt.; 3. Ten-inch drop to bed; 4. Attempted move with too few people (3) and who were not ideally positioned for good body mechanics. Crew self-identified prevention strategies for future: 1. Remove extra linen that may interfere; 2. Place stretcher closer to height of bed; 3. Use slider, no-lift assist devices usually available; 4. Move bed to obtain access to all sides & create safer lifting mechanics; 5. Recruit & employ enough people or devices to make move safely.
9	While moving a patient from our stretcher to hospital ED bed, the sheet in use ripped and the patient landed "hard" on the bed and in an "unintended position" (on their right side & not centered on bed). No apparent injury & no reaction noted by patient who was being transferred for urinary catheter pain.	Sheet tore in multiple places & literally shredded in the hands of the 2 movers on the hospital bed side of pt. Destination hospital ED usually does not use slider boards under sheet but have available a slippery green plastic film on a roll to used for difficult bed transfers. Hospital RN director states our crews should encourage ED staff to use all of the many pt. movement assist devices available. This hospital, like many others, has moved to "no lift" policy yet old habits still remain. Slider boards and rolls of "Maxi One" green slippery plastic should always be available for use at this hospital system. If rigid plastic slider boards are available at hospitals and nursing homes, EMS and receiving facility staff should use these in conjunction with using the linen to move patients across.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
10	(Reporter is a ride-along EMT student at time of event) Dispatched and responded to an early-morning fall/syncopal episode in a parking lot. Patient was standing and had no altered mental status (GCS 15). There was notable cranial bleeding, but when the police asked the patient to show where he fell, the paramedics on scene allowed the patient to walk a block or more away and out of view. The patient was escorted by one police officer. After returning, the patient was treated well and promptly and was properly delivered to the appropriate ER with no notable problems in treatment.	The patient was said to be a frequent caller to 911, and the paramedics may have assumed (rightly, even) that the call was simply a bid to get pain medications. Protocol would possibly classify this as abandonment, because the patient was allowed out of the caregivers' area without an equal or better provider, and without declining aid. Still, updating protocol to specify that simply knowingly allowing the patient out of the view and area of the officers is abandonment would be good. Further, police and fire agencies should be strongly reminded of what basic EMS protocol dictates, so that they do not continue to pressure medical officers to break protocol.
11	[Manufacturer] IV pump on a hospital transfer with a pediatric patient constantly alarmed and displayed "downstream occlusion." Crew attempted to test 22 ga. (?) IV catheter site with saline flush & could not confirm patency. Contacted pts. MD who indicated NS maintenance line was not critical during patient transfer and to continue transport without IV running.	Because IV site was used successfully at sending hospital on their IV pump, investigation will include discovering if [ambulance agency] pump program settings were the cause of the alarms and failure to infuse. The pediatric care areas of the pump are programmed in the drug library to default to "low" DS pressure limits. Pump tested OK & returned to service. 1. Unable to determine if cause was pt's. IV site patency. 2. Pharmacy has agreed to change pump default alarm setting in Pediatric care areas from "Low" to "Med." This many decrease DS occlusion alarm frequency. 3. Awareness & education for pump users will be developed related to option of changing DS occlusion alarm level.
12	Stretcher fell out back of ambulance with patient while unloading at hospital. Patient was picked up at airport & also resting on flight crew liter device secured on top of ground crew's stretcher. Safety catch bar did not engage floor hook & stretcher came to rest upright in lowest position on garage floor. Flight crew's monitor case zipper pull also caught in wheel mechanism & prevented lower carriage from dropping. Poss. CVA pt. was not injured.	1. Unable to determine why catch bar did not engage floor hook. Extra equipment on stretcher from flight crew may have contributed to mechanism failure. 2. Crew states they did not stop during removal to confirm that catch bar would engage. 3. Flight crew monitor case impaired wheeled carriage from dropping before load wheels cleared end of floor. Coaching of crews to prevent similar events should acknowledge that adding to stretcher load or hanging misc. equipment from stretcher increases risk.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
13	[Manufacturer] cardiac monitor failed to obtain 12-lead with error message displaying "V-5 lead off." Pt. c/o chest pain with history cardiac related angina. Unable to remedy ECG problem or determine if STEMI alert should be activated and resulting transport was routine with crew monitoring lead 2. At hospital, 12-lead did not show MI. Monitor was tested and continued to fail displaying V-5 lead off. Crew replaced v-lead cables yet did not test again or remove from service. QA requested site to locate & conduct complete testing with ECG simulator to determine if monitor should be removed from service and isolate what failed.	Break in wire problem discovered 1 week after event in main ECG cable at common failure area near plug. Faulty main ECG cable replaced. The [Manufacturer] patient cable retainer clip has caused wire damage in past. Assure that cable retainer clips are removed to prevent this potential damage.
14	Cardiac monitor failed on ALS intercept with BLS crew. Attempted to obtain 12-lead with error message displaying "V-4 lead off." Pt. c/o chest pain with stable VS and Lead 2 ECG of sinus rhythm. No ST elevation in other V-leads. Unable to remedy ECG problem and resulting transport was routine with crew monitoring Lead 2.	Patient cable tested and found faulty V-lead cable set. New cable set tested OK and monitor returned to service. Frequent cable failure events have been reported to manufacturer. 1. Frequent cable failures noted by this service with equipment in service for 18 months and frequent use. Cables provided by manufacturer are not durable enough for field EMS. Biomedical engineers have found breakdown of wire mesh of coaxial type cable at bend points, which damages smaller lead wires. 2. More frequent schedule for testing of cables on simulators may prevent some failures from reaching patient.
15	[Manufacturer] brand Rainbow cable on [manufacturer] monitor failed to provide any SpO2 reading when applied to respiratory distress patient. Crew could not complete usual assessment. No adverse impact on patient and routine transport for chronic lung condition.	Tested plug on Rainbow cable & found to be faulty. Plug anchoring mechanism was noted to be loose and cord also appeared stretched. Replaced cable and unit back in service. This seems to be a common point of cord/plug failure which is a [manufacturer] product supplied with a [different manufacturer and model]. Keeping area near plugs clear of other items stored in the [manufacturer] case will reduce damage to this cable end.
16	While loading patient on a stretcher into ambulance, the wheeled carriage would not release & fold up using foot-end handle. Other responders assisted & had to reach under into mechanism & manually moved ratchet bar to release carriage. Pt. was not harmed with only slight delay to starting transport.	Repair report indicates screws & bolt loosened on handle mechanism to cause failure. Repaired & returned to service.
17	Crew administered 0.5 mg increments of narcan x2 to narcotic OD pt. when current Guideline titration dose is 0.2 mg. Total dose given was 1 mg and within maximum allowed range of 4 mg. Pt. LOC was improved with desired medication response achieved. Concern raised by crew partner that attending medic was unsure of protocol and administered dose.	Lack of verification of appropriate medication dose among the providers before administration. Implementation of a specific and routine process of meds verification and requiring its use for all administrations would prevent this error and many others.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
18	An [manufacturer] intraosseous needle set placed in an unresponsive patient was later found to be leaking IV fluid around the plastic catheter hub. The IO hub appeared to be cracked so needle was removed at the receiving hospital. No harm to patient & fluids & medication was successfully infused earlier.	1. Unknown at what point device became damaged. Leak first noted on scene with push of medication dose after pt. had been moved to ambulance. 2. [Manufacturer] contacted by QA & required FDA reporting initiated. Device parts and packaging were saved by crew & will be shipped to [manufacturer] for analysis. This same hub cracking problem has been acknowledged in past by [manufacturer]. [Manufacturer] has changed their manufacturing process to help avoid this problem. Care providers must never attach anything other than the 90-degree angle extension set to the needle set hub to avoid this.
19	While administering IN versed to a seizing pt., the wrong concentration, 5 mg/5 mL, was placed into a 12 mL syringe & the MAD atomized device attached resulting in an under-dose. Correct dose, using 10 mg/2 mL concentration, would be 10 mg. Pt. actually given 2 mg. No patient harm from IN Versed as seizure subsided, likely on its own, immediately after IN administration of only 2 mg.	Contributors to dose error: inadequate and flawed communication & verification process among providers; lack of clearly identifying lead care provider to coordinate multiple interventions done almost simultaneously; failure to control rushed & anxious environment created by unclear roles of the 5 crew members/care providers present. Implementation a specific and mandatory verification process before administration of any medication could have prevented this under dose.
20	While attempting to obtain a 12 lead ECG on a prior cardiac patient, the crew was unable to obtain a good tracing. Multiple attempts including the replacement of the electrodes finally resulted in a good tracing.	It appears that this was due to electrodes being placed on the leads following the last use of the equipment. In addition, multiple open multipacks of electrodes were found on the responding unit. It appears that the gel had dried out to the point where they were not making a good contact. Since we do not run a high volume of calls, it would appear that placing leads after each call is incorrect. In addition, crew failure to use an open package and opening a second package contributed to multiple electrodes drying out. We are investigating the cost of individual packages that would be opened at the time electrodes were needed is the best solution.
21	Our policy requires the use of the [manufacturer] CPR device during cardiac arrests. It was realized that that this device had been neglected at least halfway through working the code. All other procedures were done correctly.	This call was during the last hour of a 24-hour shift and I believe that fatigue is a direct cause of this error. At the time of this call I had been able to achieve no more than 2 hours of rest throughout the shift. The cessation of 24-hour shifts to allow for adequate rest of employees is critical to prevent this error and more serious errors in the future.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
22	My EMS partner placed an [manufacturer] IO device into a profoundly hypotensive patient on MC orders. After successfully installing the IO he attempted to remove the trocar. Unable to do so, he asked for assistance. We were unable to do so. On arrival at the ED we found that the trocar was the only part of the [device] in the patient's leg. There was no needle on the device, or in the package. As the packaging for the [device] is not transparent it is impossible to look into it ahead of time to determine all the parts are not there.	The [device] when properly packaged looks like one piece. In the rapid movement to place the device and manage the patient it was not obvious that the needle portion was missing. This is an infrequently used tool. All providers should inspect all devices prior to insertion. If the IO needle part were a color (like they normally are) but the trocar base was a contrasting color it would be more obvious when the needle was not present.
23	Chest Decompression. Needle was inserted then both needle and catheter were pulled not allowing any air to escape.	Poor quality of care. Training.
24	C.T. exam at hospital found air embolism in right jugular vein and other vascular brain structures that may be the result of air introduced by ambulance IV administration. It was later determined that the I.V. line administration set was not filled completely with fluid before attached to I.V. catheter. This skilled nursing home patient is normally near comatose, has DNR status, and has numerous serious medical conditions. Receiving physicians and ambulance service Medical Director determined that air embolism was an incidental finding and unlikely contributed to the outcome. Patient expired in hospital due to other causes. The crew member spiking I.V. bag did not flush and fill the line before being asked to do other tasks which removed them from patient care area to drive another vehicle. 5 minutes later, a 2nd crewmember attached the line to the I.V. catheter & did not notice tubing empty, although though the drip chamber was filled. IV clamp was turned on by a 3rd care provider also not noticing the line was not flushed. The maximum amount of air possibly introduced venously was around 16 mL.	Contributors: 1. The primary contributor to the error is that 3 different providers handled parts of setting up and initiating IV line and unknowingly introduced the air embolism. An assumption was made that the line had been flushed. 2. The environment in the patient compartment of the ambulance was crowded and rushed while trying to initiate multiple care interventions simultaneously and in a somewhat high-anxiety situation due to the critical nature of this patient's condition. Both led to lack of attention to detail. A primary care coordinator (or lead) should be designated and provided detailed communications about status of each task and intervention provided.
25	Trying to apply a CPAP mask to patient, 2 different head straps broke while stretching them to insert the hole in strap onto the post. The third attempt, with a slightly different, older design of head strap, was successful. No harm to patient other than delay of initiating CPAP to locate another strap. Crew describes the 3rd strap as being thicker and stronger material, although a similar color and basic design as those that broke. Three different crewmembers attempted application of the 3 straps. The head strap design, which broke also, developed a powdery surface residue when stretched. This residue flaked off on to the users hands and became airborne creating a contamination hazard for the patient who was receiving pressurized ventilation assistance thru CPAP.	It was later determined that the most recent lot numbers received was indeed made of slightly different materials. The supplier had slightly changed the product and the new product provided unacceptable performance characteristics. The difference was not appreciated until the package was opened. The product supplier and manufacturer have both been contacted with our findings and are investigating the product changes. Disposable product suppliers should inform customers when a product change or substitution is made so evaluations can be conducted.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
26	The ECG tracing for a chest pain patient appeared to have atrial flutter and VT appearing waveforms throughout. The 12-lead indicated STEMI yet crew saw no ST elevation & did not activate hospital alert. Pt. was treated with IV amiodarone, 150 mg, & the VT seemed to resolve. On arrival at hospital, no arrhythmia like waveforms found & the pre-hospital 12-lead & arrhythmias were dismissed as artifact. The pt. was admitted with sinus bradycardia & stable angina with no adverse outcome resulting from the amiodarone administered. This is a medication error event since pt. received an anti-arrhythmic drug based on ECG artifact.	Review of the [manufacturer] data record confirms that a-flutter and VT like waveforms were present on scene ECG and even resembled Torsade's. Closer interpretation, including review by an electro-physiologist, reveals an underlying sinus rhythm seen throughout which the artifact masked. Investigation to find source of artifact, including interview of patient, found patient to have chronic left arm & hand muscle twitching as the likely source & correlates with the rate of artifact waves. [Manufacturer] [model] tested normal and returned to service. Misinterpretation of 12-lead by monitor was also due to muscle artifact. 1. Discussed with crew strategies for preventing and detecting ECG artifact. 2. Education & training should include the importance of printing and reviewing longer sections of ECG strips rather than just viewing a few seconds of ECG on monitor screen, especially if giving an anti-arrhythmic. 3. Pt. electrodes that have dry gel can produce or exaggerate artifact. Operators need to be cautious about using electrodes from a previously open package. Unknown if this contributed to this events artifact.
27	While unloading patient from ambulance, 1 main transport wheel assembly fell off of the [manufacturer] stretcher before removal completed. Assisted by a 2nd crew, the 300 lb. pt. was moved on to a backboard and then slid patient off stretcher to hospital bed placed at rear doors. No injury to patient or crewmembers.	The bolt that holds wheel broke off at top of wheel assembly. This has occurred before on other stretchers. Repaired and returned to service. Mechanic suggested that this bolt is too thin and [manufacturer] should redesign.
28	Patient given Epi 1:1000 IV as a result of 2-medic miscommunication. The drug was intended to be given IM. Patient received 0.3 Mg of the drug IV. Patient experienced a short run of SVT followed by hypertension. Patient initially presented with absent lung sounds, was altered and urticaria globally; actively spreading and intensifying in severity. Patient also presented with other common signs of uncompensated shock. Although the patient immediately improved as a result, the potential to harm the patient was evident. Patient's lung sounds became audible in all fields as well as a reduction in the urticaria and distress. Patient became more alert and was talking following the event.	The two medics working on the patient did not clearly specify the dosage strength or the route it should be given. The medic stated given 0.3 Mg of this. Clearly identified communication between all providers. The problem was not the drug itself, but the direction that was given from one paramedic to another. If the syringe had labeled this likely would have prevented to error.

#	Summary of Safety Event Reported	Summary of EMS Provider Opinions on the Cause of the Safety Event and their suggestions for mitigation
29	[Manufacturer] [model] IV pump displayed #105 system error message when attempting to run Alteplace (rt-PA) IV infusion on cardiac patient hospital transfer. After re-positioning & reprogramming, pump resumed working & was successfully used. No patient harm and only a few minutes of delay to transfer. Pump removed from service and will be sent for repairs.	This same system error is a known problem for this pump as discovered in FDA product failure reports and has been found to be related to an electrical connection to the motor or loose internal components. Problem can be intermittent, sometimes dependent on positioning, and pump should be removed from service if system error message #105 appears.
30	A [manufacturer] [model] IV pump displayed system error #105 & failed to run. Pt. was a seriously ill 7 month old on a hospital transfer for hepatic failure. The D5/NS IV had to be placed on a 2nd pump device to run the infusion and no patient harm incurred other than transport delay to correct failure. This is a recurring equipment failure we have seen on multiple devices for this model pump and will be sent for repairs.	#105 system error message is related to PIC motor failure and has been known to be a loose electrical connection. Other similar events have been documented per FDA patient incident records. This system error can be intermittent and can be dependent on position of pump. Pump should be removed from service and sent for repairs.
31	A cardiac monitor failed to display ECG when 4 limb leads were applied at start of hospital transfer. This was a cardiac patient with an intermittent ventricular arrhythmia absolutely needing monitoring & requiring 12-leads en route. No harm to patient and replacement monitor obtained from another ambulance crew for the transfer resulting in slight transport delay waiting on road for 2nd crew to arrive. This same monitor was used on same patient successfully 2 hours earlier during a scene response.	Testing of main patient ECG cable on simulator reveals loss or gain of wire continuity with flexing cable at the proximal end near the plug that insets into the pigtail. Monitor tested OK with new set of main patient ECG cables and returned to service. This is an ECG cable section vulnerable to wire breaks and the exact same cause of other ECG cable failures in past.
32	During routine cardiac monitoring of a patient during transport, the cardiac monitor spontaneously shut down on two occasions. The monitor had received and passed its daily check at the beginning of the shift and no previous instances were reported. Batteries were fully charged. Crew notified EMS Battalion Chief who recovered the cardiac monitor and issued a spare to the unit.	Unsure at this time. Cardiac monitor delivered to agency technicians for further diagnostics and manufacturer will be notified and consulted for further follow up. Unsure at this time as this is a new event not previously encountered with this model.

Notice/disclaimer: all manufacturer and model names are removed from this document because EVENT is an anonymous system. The anonymity of EVENT reports is protected and the reporter cannot be verified as a neutral party trained to provide a fair and unbiased assessment of the events or product usage. For this reason we redact all names, including the manufacturer and model. We operate another reporting system, the Emergency Medical Error Reduction Group (EMERG), which can provide states or individual EMS agencies a non-anonymous error reporting system. As a designated Patient Safety Organization (PSO), EMERG has federal discovery protection for all information entered and analysis completed. EMERG can help identify actual manufacturing issues and partner with industry to correct issues and thereby improve the culture of safety in EMS. For more information please about EMERG, contact Matt Womble, MHA, Paramedic, Acting Director of EMERG (matt.womble@emerg.org). (EMERG is federally designated as PSO # P0133 by the U.S. Department of Health and Human Services, Agency for Healthcare Research & Quality.)