EMSC Connects

Volume 6, Issue 3 March 2017

Emergency Medical Services for Children
Utah Bureau of EMS and Preparedness

Special points of interest:

- Changes Coming
- Toxic Ingestion
- Toxic Exposure

Inside this issue:

A Word From Our Program Manager

Changes Coming to the EMSC Program

There are some significant changes coming for the EMSC program. We think it important to briefly outline those changes for you in this newsletter. We will discuss a performance measure in each subsequent newsletter to inform you of the expectations and where Utah EMSC, EMS agencies and hospitals stand in meeting the standards.

The First Change: New and Updated Performance Measures

EMSC 01	**New**	**N/A**	**Using NEMSIS Data to Identify Pediatric Patient Care Needs**
EMSC 02	**New**	**N/A**	**Pediatric Emergency Care Coordination**
EMSC 03	**New**	**N/A**	**Use of pediatric-specific equipment**
EMSC 04	Unchanged	74	Pediatric medical emergencies
EMSC 05	Unchanged	75	Pediatric traumatic emergencies
EMSC 06	Unchanged	76	Written inter-facility transfer guidelines that contain all the components as per the implementation manual.
EMSC 07	Unchanged	77	Written inter-facility transfer agreements that covers pediatric patients.
EMSC 08	Unchanged	79	Established permanence of EMSC
EMSC 09	Updated	80	Established permanence of EMSC by integrating EMSC priorities into statutes/ regulations (EMSC 01-08).

The Second Change: EMS Program Staff

I am pleased to announce the addition of Allan Liu, MBA, CPM, as our full time EMSC program coordinator. He will be responsible for tracking our progress in meeting the performance measures, conducting injury prevention activities, assisting hospitals and EMS agencies with national surveys and assessments, assisting with the pediatric readiness project, working with our data analyst to produce fact sheets, and assisting with the CHIRP program.

I am equally pleased to announce the addition of Yukiko Yoneoka, MS, as our new Data Analyst. She will be working with our trauma registry, emergency department and prehospital data to produce reports and to assist us with our patient care performance improvement efforts; she will produce regular reports, fact sheets, ad hoc reports and assist us with identifying gaps in pediatric care and healthcare provider readiness.

Finally, I am pleased to welcome Jill Speth, Bureau Executive Secretary. She will be working with the Specialty Care program and providing administrative support for our EMSC program activities. She will also serve as the secretary to our bureau director and provide administrative support to various statutory and advisory committees.

The Third Change: EMSC Innovation and Improvement Center (EIIC)

Additional resources will be available to state EMSC program managers through the EIIC. As stated on their new website: "The Emergency Medical Services for Children (EMSC) Innovation and Improvement Center (EIIC) is housed at Texas

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Word From Our Program Manager -cont

Children's Hospital (TCH) and Baylor College of Medicine (BCM) in Houston, TX. Collaborating partner organizations include the Emergency Nurses Association, the National Association of State EMS Officials, the American Academy of Pediatrics, and the American College of Emergency Physicians. The EIIC will utilize a clinical systems integration framework to provide the emergency care community with training, support, and tools to use quality improvement methodology in order to reduce morbidity and mortality in children.
The EIIC focuses on accelerating improvements in quality of care and outcomes for children who are in need of urgent or emergency care through an infrastructure that ensures routine, integrated coordination of quality improvement activities between key stakeholder organizations and their champions. Through its efforts, the EIIC hopes to demonstrate how leveraging quality improvement science, the experiential knowledge at TCH and BCM, and the expertise of multiple professional societies and federal organizations, can improve and transform health care outcomes for children in the United States."

The Fourth Change: Decreased Funding

We received reduced federal funding for the EMSC program for 2017 which means we will not be able to conduct as many PEPP classes as we have in the past. We will try to work with you on some alternatives. We are hopeful that additional funding will be restored, however, there are no guarantees. This funding will also affect our work with updating the CHIRP registry. However, the Red Packs are still available and we will be working on a new system for parents to access the Red Packs for their children. Our other continued funding priorities include support for the cadre of 50 EMSC coordinators, EMSC advisory committee, partnership with Primary Children's Hospital and the ASPR Hospital Preparedness program, and our dedicated and committed EMSC program staff.
As the new measures are rolled out, we will try to keep you informed of their impact and garner your input and support in improving our pediatric emergency care system. We remain fully committed to ensuring that the EMS personnel and hospitals have the training and equipment needed to build an emergency healthcare system that meets the needs of one of our most vulnerable of populations. Thank you for your continued dedication and efforts to provide healthcare to the children of Utah. Please feel free to contact me with questions or concerns.

Jolene Whitney
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Children exhibit hand to mouth behavior nearly 10 times an hour. This makes them susceptible to toxic ingestion

The Doc Spot
Review Article From Jennifer Plumb, MD, MPH

Toddler Toxicity, Death in a Dose

Poisoning in children most commonly peaks during the toddler and teen years. The toddler population (ages 1-3 years) is at risk for many reasons. They are attracted to color and appearance of the agent or container. They are more willing to taste dangerous substances as they exhibit hand-mouth behavior nearly 10 times an hour. This is how they explore their environment. Most ingestions of a toxic substance by this age group are in small amounts and they result in nontoxic or minimally toxic outcomes. However, there are several substances found is the average home that pose a great risk in small amounts. Ingestion of these substances can lead to death in a single dose.

Ointments

Camphor: Found in over-the-counter medications like Vicks Vapor Rub, Tiger Balm, and Ben gay. As little as 7 grams can be fatal.

Methyl salicylate: Also known as Oil of Wintergreen, it is found in items like Ben gay, Listerine, various candy and gum, and in essential oils used for burners. A single teaspoon is equivalent to 90 baby aspirin, four times the toxic dose for a 10kg child.

Podophyllin: This is used to treat genital warts and is in some herbal medicines. Ingested in pure form, 1ml could be a fatal dose.

Pills, Tablets, and Capsules

Antimalarials: Quinine and Chloroquine can cause arrhythmias and cardiac arrest in one dose

The Doc Spot -cont

and within the first hour of ingestion.

Clonidine: Children can mistake clondine patches for band aides . It is important to examine the skin when overdose is suspected.

Tricyclic Antidepressants (TCAs): Can cause Status Epileticus or cardio toxicity.

Calcium channel blockers: Can have immediate effects or toxic symptoms lasting greater than 24 hrs since capsules are often sustained released.

Oral hypoglycemics: Glipizide is commonly found in the homes of diabetic adults, this and other oral hypoglycemic can lower a child's blood glucose profoundly.

Narcotics: Opioids are the number one cause of pediatric poisoning fatalities in the United States.

These substances should raise as a red flag for the EMS provider. They warrant rapid transportation and treatment. For acute stabilization refer to the Utah Pediatric Off-line Medical Direction Protocol Guidelines; Toxic Exposure and/or Altered Mental Status

Protocols in Practice
Toxic Exposures

Definition: Pediatric toxic exposure is the ingestion, inhalation, contact, or intravenous administration of a potentially toxic substance. The most common products children ingest are cosmetics and personal care products, cleaning substances, analgesics, plants, foreign bodies, topical medications, and cough and cold preparations. **Fewer than 20 types of drugs are involved in 90% of all pediatric ingestions**. *

Clinical Presentation: Mental status changes, respiratory depression, hypo/hypertension, seizures and arrhythmias (tachycardia/bradycardia). A large majority (78%) of reported poisonings are managed safely at home but when EMS is called it is extremely important to stabilize and transports according to agency policy. Even the asymptomatic child must be monitored closely for delayed affects.

BLS

- Scene assessment and possible decontamination.
- General pediatric assessment
- History
  - Other potential toxic substances
  - Past Medical History
  - Quantity
  - Route of ingestion
  - Substance
  - Time ingested/duration of exposure
- Check blood glucose for decreased LOC
- Unstable: transport, stable: call poison control
- Contact medical control and consider administration of activated charcoal if within 1 hour of ingestion, transport time >30 minutes, and patient is awake and alert. Do NOT administer for any of the following ingestions.
  - Minerals/electrolytes
  - Alcohols
  - Cyanide
  - Caustics (lye)
  - Solvents (cleaning solutions)
  - Heavy Metals (Iron, lithium, fluoride)
  - Hydrocarbons
- Transport for medical evaluation

ALS

- Follow BLS procedures
- Cardiac monitor (assess for arrhythmias and hypotension)
- Consider treatment with Naloxone (0.1mg/kg up to 2mg IV) for respiratory depression and suspected opiate over-dose/ingestion.
- Consider intubation for airway protection or respiratory support
- Consider antidotes in consultation with Poison/Medical Control
- Transport for medical evaluation

March 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 PGR	3	4
5	6	7	8	9 PGR	10	11
12 Daylight Savings	13	14 EGR	15	16 PEL PGR	17 PEPP in Mapleton ▶	18
19	20	21	22	23 PGR	24	25 PEPP skills in Loa
26	27	28	29	30 PGR	31	

Pediatric Education Around the State

Pediatric Grand Rounds (PGR) are educational/CME offerings webcast weekly (Sept-May) you can watch live or archived presentations. It is geared towards hospital personnel. But will qualify for BEMSP CME Access at https://intermountainhealthcare.org/locations/primary-childrens-hospital/for-referring-physicians/pediatric-grand-rounds/

EMS Grand Rounds (EGR) This offering alternates with Trauma Grand Rounds every other month, it is geared towards EMS. Live viewings qualify for CME credit.

March 14th, 2pm *Traumatic Arrest*, Charity Coe PA-C

There are 2 ways to watch

1. Live real time viewing via the internet at: www.emsgrandrounds.com If you would like to receive CME for viewing this presentation live, email Zach Robinson (Zachary.robinson@hsc.utah.edu)
2. Delayed viewing at your personal convenience, a week after the presentation at: www.emsgroundrounds.com

Peds EMS Lecture Series (PEL) Free monthly pediatric CME/CEU presentations from Primary Children's Emergency Department Attending Physicians to Utah's EMS. Offered every 3rd Thursday. Contact Lynsey.Cooper@imail.org for info

March 16th 3:30 pm *Child Abuse* Murray Fire Station 81

Project ECHO Burn and Soft Tissue Injury (ECHO) has a pediatric and adult component. CME/CEU and MD CME available https://crisisstandardsofcare.utah.edu click request access and follow instructions.

Upcoming Peds Classes, 2016

For PEPP and PALS classes throughout the state contact Andy Ostler Aostler@utah.gov

For PALS and ENPC classes in Filmore, Delta and MVH contact Kris Shields at shields57@gmail.com

Emergency Medical Services for Children

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The Emergency Medical Services for Children (EMSC) Program aims to ensure that emergency medical care for the ill and injured child or adolescent is well integrated into an emergency medical service system. We work to ensure that the system is backed by optimal resources and that the entire spectrum of emergency services (prevention, acute care, and rehabilitation) is provided to children and adolescents, no matter where they live, attend school or travel.

Follow us on the web
http://health.utah.gov/ems/emsc/
and on Twitter: EMSCUtah

Did you Know?

The Attending ER Physicians at Primary Children's are lecturing to EMS on current Pediatric issues

These lectures are FREE, good for pediatric CME, and a great way to get facetime with Primary Children's Attending Physicians

contact EMS liaison Lynsey Cooper at (801) 662-1234 or lynsey.cooper@imail.org

Come Join Us

March 16, 2017	Child Abuse	Murray Fire Department, Station 81 40 East 4800 South
April 20, 2017	Trauma Resuscitation	South Jordan Fire Department, Station 62 4022 West 10400 South
May 18, 2017	Concussions & Sports Injuries	South Salt Lake Fire Department, Station 42 3265 South 900 West
June 16, 2017	Fever	West Valley Fire Department, Station 73 2834 South 2700 West
July 20, 2017	TBA	TBA