

# EMSC Connects

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**Emergency Medical Services for Children  
Utah Bureau of EMS and Preparedness**

## A Word From Our Program Manager

### Special points of interest:

- *Upcoming EMSC performance measures*
- *2017 EMSC workshop*
- *Opioids and pediatrics*
- *Overdose Protocol*

Well, it's Fall and the leaves are changing, the days are growing shorter and the temperatures cooler. Summer seemed to come to an abrupt end. We are also coming to the end of our current EMS for Children (EMSC) grant and will be reapplying for a new state grant within the next month. We know that there are new federal performance measures for the program which we need to introduce you to because your efforts to submit NEMSIS data, coordinate pediatric care in your agency or hospital, and conduct pediatric equipment skills training will help us meet the measures to ensure continued funding to improve pediatric care in Utah. The ultimate goal of the grant and the EMSC program is to reduce pediatric morbidity and mortality from injury and illness.



As previously mentioned, the EMSC program receives federal grant funds to help improve emergency medical services for critically ill and injured children. The new performance measures will help standardize pediatric care across the country and help move us toward reaching a common goal for improving pediatric emergency care. The following three EMSC performance measures are new goals for pre-hospital providers:

### EMSC 01 Performance Measure-Submission of NEMSIS Compliant Version 3.x-Data

By 2021, 80 percent of EMS agencies in the state or territory submit NEMSIS version 3.x-compliant patient-care data to the State EMS Office for all 911-initiated EMS activations.

*Why is this important?* We need to collect uniform data in order to analyze, interpret, and assess the pediatric care provided. With quality data we can find our strengths, gaps, and track outcomes to develop new policies, guidelines and procedures.

*Where are we at?* Utah Administrative Rule R426-7-200 requires EMS providers to submit patient care reports at the NEMSIS 3.4 standard. Most Utah EMS agencies have already met this performance measure.

### EMSC 02 Performance Measure-Pediatric Emergency Care Coordinator (PECC)

By 2020, 30 percent of EMS agencies in the state or territory have a designated individual who coordinates pediatric emergency care.

*Why is this important?* The presence of an individual who coordinates pediatric emergency care at EMS agencies results in better organized care for sick or injured children.

*Where are we at?* From the assessment conducted in late Spring of 2017, 40 of the 104 (38.5%) Utah EMS Agencies surveyed stated they have a PECC at their agency. While we have met this performance measure, all Utah EMS Agencies need to be able to identify a local or regional PECC for their agency.

### EMSC 03 Performance Measure-Use of pediatric-specific equipment

By 2020, 30 percent of EMS agencies will have a process that requires EMS providers to physically demonstrate the correct use of pediatric specific equipment, which is equal to a score of 6 or more on a 0-12 scale.

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## From Our Program Manager

	Two or more times per year	At least once per year	At least once every two years	Less frequency than once every two years
How often are your providers required to demonstrate skills via a SKILL STATION?	4	2	1	0
How often are your providers required to demonstrate skills via a SIMULATED EVENT?	4	2	1	0
How often are your providers required to demonstrate skills via a FIELD ENCOUNTER?	4	2	1	0

*Why is this important?* When EMS providers rarely treat seriously ill or injured pediatric patients, keeping up the necessary skills to care for these patients is difficult. More frequent practice of pediatric skills ensures readiness to care for pediatric patients when there are infrequent pediatric calls.

**DID YOU KNOW THAT COUNTY EMSC COORDINATORS CAN ALSO SERVE AS THE PECCS FOR EMS AGENCIES THAT DO NOT HAVE PECCS?**

*Where are we at?* 38 of the 104 (36.5%) Utah EMS agencies surveyed frequently require their staff to physically demonstrate the correct use of pediatric-specific equipment (based on the statewide EMS agency survey conducted in late Spring of 2017). While many EMS agencies require demonstrations of skills using Pediatric equipment, the frequency of these demonstrations needs to be increased as well as the number of agencies requiring skill proficiency demonstrations.

Utah EMS agencies are teaching specialized pediatric training and carry pediatric equipment, medications and supplies. To build on these successes, Utah EMS agencies are encouraged to have PECCs to ensure the focus, training, and experience in emergency medical care for children. When EMS agencies increase testing of pediatric skills, then this ensures pediatric readiness to our most precious resource, our children. Did you know that County EMSC Coordinators can also serve as the PECCs for EMS agencies that do not have PECCs? We currently have 45 County EMSC

Coordinators located throughout the state that can assist agencies with PEPP courses, Stop the Bleed, Bike Rodeos and Buckle Tough program, specific training modules, and other injury prevention programs. Also, Tia Dickson, RN, our Clinical Nurse Consultant, is currently working on Pediatric Toolboxes and Modules to assist EMS agencies with pediatric skills testing.

Through incremental changes, we can improve pediatric care at the agency level and statewide. We look forward to working with the agencies to improve pediatric care and to provide resources to you to meet the goal of reducing death and disability of sick or injured children in Utah. You make the difference. Thank you for all you do and your continued support for the program and in meeting our mutual goal to improve pediatric care.

Prepared by Allan Liu, MBA EMSC Program Coordinator

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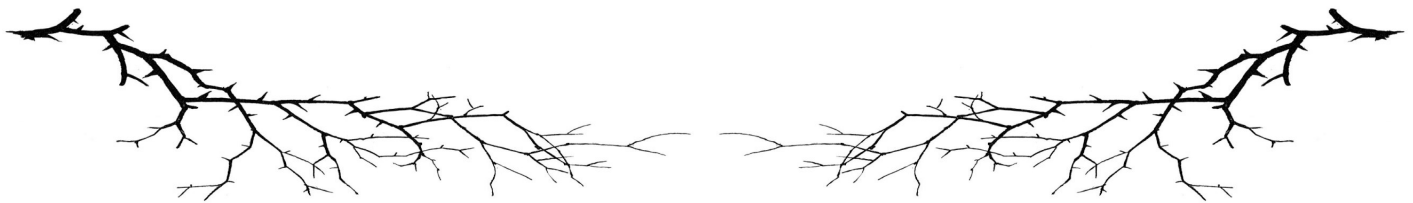
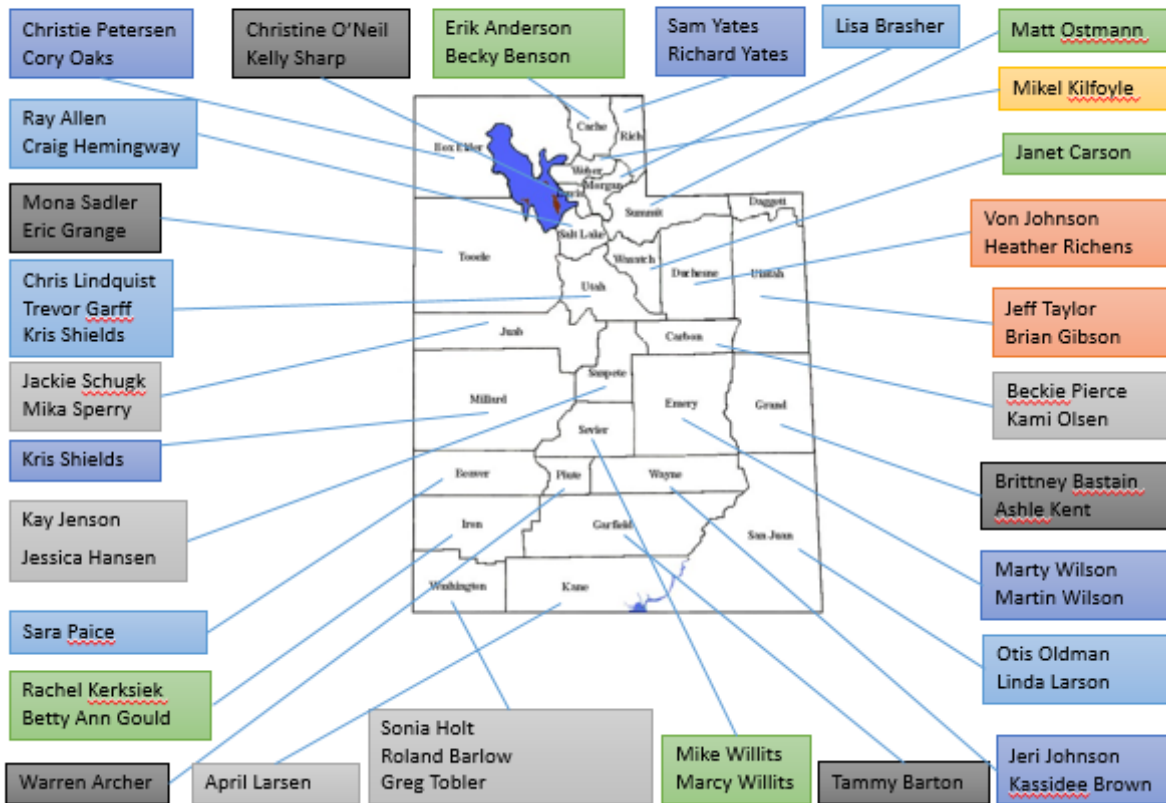


**Pedi Points**  
**Tia Dickson RN, BSN**

EMS for Children (EMSC) works hard to serve the entire state of Utah. The best way we do this is by maintaining a “force” of EMSC Coordinators that represent the counties in our state. These Coordinators work in the county they represent. They are an excellent resource for current pediatric education and they have a direct line to EMSC resources. Once a year this group of amazing people get together at a workshop where we cover interesting trends in pediatrics. We also hear from these folks what YOU need to effectively manage pediatrics your county. Does it sound like these are people you should know? YES, especially in light of the new performance measures previously discussed! See your representative below. Our next few newsletters will recap a few of the subjects we touched on during our workshop. The EMSC Medical Director Hilary Hewes covered two hot button topics, head injuries and opioid abuse. Our guest speaker Kimball Gardner, J.D. gave us a presentation on suicide prevention. Our Bureau Data Analyst Yukiko Yoneoka, gave us an in-depth look at the type of pediatric calls we are encountering by region. If you are interested in joining our team of [EMSC Coordinators](#), follow this link to further explanation of the role.

**Who is my EMSC Coordinator?**

Current EMSC Coordinators



## Emergency Medical Services for Children

### Opiate Substance Use Disorder and Pediatrics

Adapted from the presentation by Hilary Hewes, MD

Research has shown that people generally take drugs to either feel good (i.e., sensation seekers or anyone wanting to experiment with feeling high or different) or to feel better (i.e., self-medicators or individuals who take drugs in an attempt to cope with difficult problems or situations, including stress, trauma, and symptoms of mental disorders). Nearly all drugs of abuse directly or indirectly increase dopamine in the pleasure and motivation pathways and in so doing, alter the normal communication between neurons.

#### Scope of the Problem, Utah Statistics

- Drug poisoning deaths have outpaced deaths due to firearms, falls, and motor vehicle crashes in Utah
- Most Utahns who die from a drug-related death suffer from chronic pain and take prescribed medications
- Every month in Utah, 23 individuals die from prescription drug overdoses.
- Among Utah's local health districts, Southeast Utah (Carbon, Emery, and Grand Counties) had a significantly higher prescription opioid death rate compared to the state.

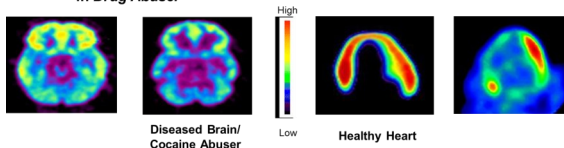
#### Pediatrics and Opiates

- In 2015, 2.9% of Utah youth in grades 8-12 reported that they had used a prescription drug not prescribed to them by a doctor within the past 30 days
- Nationally, 1 in 6 parents believe that using prescription drugs to get high is safer than using street drugs. More than 1 in 4 teens (27%) share the same belief
- Almost half (47%) of teens reported that it is easy to get prescription drugs from a parent's medicine cabinet
- Teens are abusing everything from pain medicines to stimulants, sedatives, and tranquilizers

The following are considered opioid misuse; taking someone else's prescription even for a specific purpose like relieving pain, taking an opioid medication in a way not prescribed (taking more of the medication, taking it more often, or via a different route), taking the prescription to get high, mixing opioids with other substances.

Decades of research have revealed addiction to be a disease that alters the brain. We now know that while the initial decision to use drugs is voluntary, drug addiction is a disease of the brain that compels a person to become singularly obsessed with obtaining and abusing drugs despite their many adverse health and life consequences.

#### Decreased Brain Metabolism in Drug Abuser

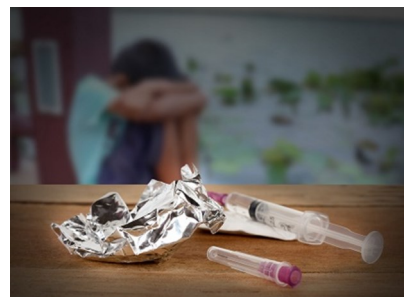


Addiction is similar to other chronic diseases. Using imaging technology to measure metabolism (in this case, glucose uptake) in the brain and heart, one can see that both addiction and heart disease produce observable changes in organ function. In each pair of images shown above, the healthy organ shows greater activity (reds and yellows) than the diseased organ. In drug addiction, the frontal cortex,

which is a part of the brain associated with judgment and decision-making, is significantly affected. Like heart disease, drug addiction can be prevented and treated successfully. If left untreated, however, its effects can last a lifetime.

#### What Can We Do About It?

- \* Teens that had learned about the dangers of misusing prescription drugs from their parents or grandparents were 42% less likely to abuse prescription drugs than teens that did not talk to their parents or grandparents about this issue.
- \* See the parent toolkit for tips on talking to your kids! [http://medicineabuseproject.org/assets/documents/parent\\_talk\\_kit.pdf](http://medicineabuseproject.org/assets/documents/parent_talk_kit.pdf)
- \* Speak to your teen about prescription medicines — do not presume that illegal drugs are the only threat
- \* Remind them that taking someone else's prescription or sharing theirs with others is illegal
- \* Encourage your teen to ask you or a doctor about the negative side effects of a prescribed medicine, how to watch for them, and what to do if a negative effect is suspected
- \* Alert your family physician that you are concerned and ask him or her to speak to your teen about the importance of proper use of prescription medicines
- \* Keep prescription medicines in a safe place and avoid stockpiling them
- \* Promptly and properly dispose of any unused prescription medicines
- \* Provide a safe and open environment for your teen to talk about abuse issues
- \* Monitor your teen's use of the Internet, especially for any illegal online purchases



#### Medical Providers (especially those that prescribe)

- \* Should check the Utah Controlled Substance Database (<http://www.dopl.utah.gov/programs/csd/>)
- \* Reach out for help to treat addiction—need a comprehensive approach including psychosocial support
- \* National Suicide Prevention Lifeline: **1-800-273-TALK** (not just for suicide)
- \* Substance Abuse Treatment Facility Locator ([findtreatment.samhsa.gov](http://findtreatment.samhsa.gov))

The Utah State Legislature passed two laws in 2014 to help reduce drug overdose deaths.

#### Good Samaritan Law (House Bill 11)

This law enables bystanders to report an overdose without fear of criminal prosecution for illegal possession of a controlled substance or illicit drug.

#### Naloxone Law (House Bill 119)

This law permits physicians to prescribe naloxone to third parties (someone who is usually a caregiver or a potential bystander to a person at risk for an overdose) and permits individuals to administer naloxone without legal liability.



# Protocols in Practice

[Utah EMS Protocols Guidelines: Overdose](#)

## OVERDOSE

### ALL PROVIDERS

- ❑ Focused history and physical exam
  - Assess blood glucose, temperature, and oxygen saturation.
  - Assess the time and circumstances of the ingestion.
  - Assess scene for additional information on toxins, poisons, medications or other possible concerns.
- ❑ Cardiac monitor, ETCO<sub>2</sub>, and pulse oximetry monitoring, when available.
- ❑ **Treatment Plan**
  - Consider a 12 lead EKG.
  - Patients who have attempted suicide by overdose CANNOT be released and MAY be taken in against their will. Police may need to assist in ensuring the transport.
- ❑ **Key Considerations**
  - Transport any pill bottles, open containers, or potential chemicals that may have been ingested.
  - Transport suicide notes or other pre-ingestion communications.
  - In cases of pure heroin overdose, patients should be offered ED transport, but they may refuse and be left at scene after naloxone administration.
  - All oral opioid overdoses must be transported, as re-sedation will occur after naloxone administration.

#### ADULT

PEDIATRIC (<15 years of Age)  
NOTE: Pediatric weight based dosing should not exceed Adult dosing.

#### EMT

- ❑ **Naloxone 0.4–2 mg** (per dose) IN (intranasal) / IM (intramuscular) for suspected narcotic overdose. May repeat as necessary to maintain respirations

#### EMT

- ❑ **Naloxone 0.1 mg/kg** (per dose) IN (intranasal) / IM (intramuscular) for suspected narcotic overdose. May repeat as needed to maintain respirations

#### AEMT

- ❑ Advanced airway, vascular access and fluid therapy per *IV/IO Access and Fluid Therapy Guideline*
- ❑ **Naloxone 0.4–2 mg** (per dose) IV/IM/IO/IN (intranasal) for suspected narcotic overdose. May repeat as needed to maintain respirations

#### AEMT

- ❑ Advanced airway, vascular access and fluid therapy per *IV/IO Access and Fluid Therapy Guideline*
- ❑ **Naloxone 0.1 mg/kg** (max 2mg per dose) IV/IM/IO/IN (intranasal) for suspected narcotic overdose. May repeat as needed to maintain respirations

#### PARAMEDIC

- ① **Sodium bicarbonate 1 mEq/kg** slow IV/IO push for tricyclic antidepressant overdose with sustained HR >120 bpm, QRS >0.10, hypotension unresponsive to fluids, or ventricular dysrhythmias
- ① **Epinephrine (1:1000) 2–10 mcg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >100 mmHg

#### PARAMEDIC

- ① **Sodium bicarbonate for tricyclic antidepressant overdose: Contact OLMC**
- ① **Epinephrine (1:1000) 0.1–2 mcg/kg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >70 + (age in years x 2) mmHg

# October 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5 PGR—Research	6	7 PEPP Moab
8	9	10 EGR	11	12 PGR- Drug Discovery	13	14 PEPP Utah County
15	16 PALS renewal -Cassia	17 PALS -Cassia →	18	19	20	21
22	23	24	25	26 PGR- Global Health	27	28
29	30	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.

There are 2 ways to watch

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

October 10th Hillary Hewes, MD "Respiratory Emergencies—Peds"

**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](mailto:Lynsey.Cooper@imail.org) for info. To resume in November.

**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, 2017

For PEPP and PALS classes throughout the state contact Andy Ostler [Aostler@utah.gov](mailto:Aostler@utah.gov)

For PALS and ENPC classes in Filmore, Delta and MVH contact Kris Shields at [shields57@gmail.com](mailto:shields57@gmail.com)

### Save the Date

Oct 15-21, 2017 Teen Driver Safety Week

Oct 16-20, 2017 School Bus Safety Week

April 11-12, 2018 Zero Fatalities Safety Summit



## Emergency Medical Services for Children Utah Bureau of EMS and Preparedness

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WE ARE ON THE WEB

[HTTPS://BEMSP.UTAH.GOV/](https://BEMSP.UTAH.GOV/)

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.

## Happenings

The EMSC Coordinators are hard at work hosting and participating in local events with a pediatric focus. We call these qualifying activities and they are going on all over the state! Kris Shields our current Utah County Coordinator helped with this health fair. Great job Kris !!!

