

# EMSC Connects

Volume 4, Issue 11

November 2015

Emergency Medical Services for Children  
Utah Bureau of EMS and Preparedness

## A Word From Our Program Manager

I was surfing the web for inspiration for the next newsletter article and stopped on the informative [Safe Kids website](#). Since the topic of this month's newsletter is on infants, the resources on car seats caught my eye. I thought sharing some information on this topic might be helpful and a good reminder for parents and our EMSC educators.

I was very surprised when I read that SEVENTY THREE percent of car seats are not installed or used properly; that's 3 out of 4! The hard facts stated were, "Road injuries are the leading cause of preventable deaths and injuries to children in the United States. Correctly used child safety seats can reduce the risk of death by as much as 71 percent." Wow!

The Safe Kids website provides [a quick car seat checklist](#) and [a car seat tip list](#) that helps parents pick the right car seat for their children. Did you know you could register the car seat so parents can be notified immediately, if the seats are recalled or repair instructions are needed? It's quick and easy to do. You can even take a photo of your car seat label and save it to the smart phone so its handy if needed.

The [Safe Kids website](#) provides many resources regarding car seats such as videos, tips, research reports, infographics, interactive videos, and links to other websites. I would encourage anyone who wants more information or

might be interested in a [nationally certified child passenger safety technician course](#), to search the Safe Kids website for details. The course cost is \$85 and a successful candidate is certified for two years. What a difference you could make in your community with this training.

An ounce of prevention can save lives. I encourage you to learn more about the proper placement of car

seats and getting the right sized seats for young children and sharing that information with your friends, neighbors and colleagues. Also, get signed up for the Zero Fatalities Safety Summit coming up in April of 2016. For more information about the conference, including scholarships, award nominations, hotel accommodations, visit [ZeroFatalities.com/summit](#).

As always, be safe and thank you for your continued dedication and commitment in saving the lives of children in Utah.

*Jolene Whitney*  
[jrwhitney@utah.gov](mailto:jrwhitney@utah.gov)



### Special points of interest:

- Infant issues and considerations
- Pediatric Education

### Inside this issue:

Pedi Points	2
Did You Know?	5
News from National	5
Calendar	6
Happenings	7

To submit or subscribe to this newsletter

Email: [Dalrymple@utah.gov](mailto:Dalrymple@utah.gov)



## Pedi Points

Tia Dickson RN, BSN

### Infants 0-2yrs seen in the Primary Children's ER 2014

Primary Diagnosis (0-2yrs of age)	Encounters
Acute Upper Respiratory Infx	1,233
Fever	1,063
Bronchiolitis	658
Vomiting Alone	432
Croup	384
Otitis Media	373
Head Injury	305
VIRAL INFECTION, NONSPECIFIED	293
Noninfx Gastroenteritis (NEC)	283
Viral Enteritis	186
Dehydration	178
Diarrhea	147
Other Specific Perinatal Conditions	126
Cough	120
Laceration	112
Urinary tract infection	105
Viral Exanthemata	98
Hand, Foot, and mouth Dz	97
Unspecified Constipation	95
Fussy	89
Acute Pharyngitis	82
Rash	80
Febrile Convulsions	79
Observation	76

In 4 years of putting this newsletter out, we have only had one issue dedicated solely to infants and yet this population frequently terrifies providers. Infants are helpless, nonverbal, susceptible to everything, and they have really small veins. So let's discuss our babies...

## Respiratory Distress

With the respiratory season fast approaching we will get an increased number of calls on infants with respiratory distress. Babies have small airways making them very susceptible to respiratory illness. In 2014, Utah's EMS received more than 1,500 calls related to respiratory distress in children (<18yrs) and a large number of those were infants (POLARIS). This complaint is also the number one reason parents bring their infants to Primary Children's (PCH) Emergency Room for evaluation and the number one reason they are admitted to the hospital. Many of our previous issues have been dedicated to management of the [pediatric airway](#) and there are things that Utah's EMS do particularly well with this population.

- We are great at recognizing it. Sounds simple but knowing how to distinguish upper from lower airway distress and knowing the difference in treatment is challenging. We do it well.
- We know the numbers and educate. Because respiratory distress is the number one medical complaint in pediatrics, we focus a lot of our time teaching and reviewing it.
- Bagging, we rock! Intubating an infant is a difficult thing to do correctly. PALS and PCH encourage bagging over intubation for short transports and when the child is bagging well. In fact, a good bagging technique is the most valuable skill you can acquire in your care of the pediatric patient.

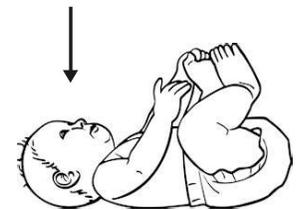
We do many things well, one area we could improve on is the use of suctioning. Infants breathe through their nose and without a clear pathway they can progress quickly from respiratory distress to respiratory failure. Blub and NP suctioning are powerful tools in management of the infant's airway and it underutilized by EMS. Often at PCH we have a baby brought in with severe respiratory distress and our only intervention is deep nasal suctioning. The baby's condition immediately improves. This should be a consideration for all providers, but especially those with long transport times.



### Deep Nasal Suctioning

The proper airway length is figured by the distance from the tip of the nose to the ear lobe. A size 12 Fr will generally fit the nasopharynx of a full-term infant but an 8 Fr does the job in most cases.

Put the baby in the sniffing position on her back and insert the tube perpendicular to baby's body (unlike the angled position you use for adults) the passage is usually midline so it's helpful to angle toward the eye opposite of the naris you are entering. 1-2 drops of saline per nare help loosen secretions.



## Fever/Infection

The next big reason infants are seen at PCH is fever. Infants are susceptible to everything and those under 3 months have an underdeveloped immune system so they are at even greater risk for serious infection. Every infant with a fever should be evaluated for signs of sepsis. It can be difficult to detect. The first step is to treat the fever (Tylenol 15mg/kg or Motrin 10mg/kg for those >6mon), then evaluate the patient closely for...

- Persistent tachycardia even when fever is going down
- Looking more ill than fever and history may suggest
- Altered mental status
- No real preceding viral symptoms

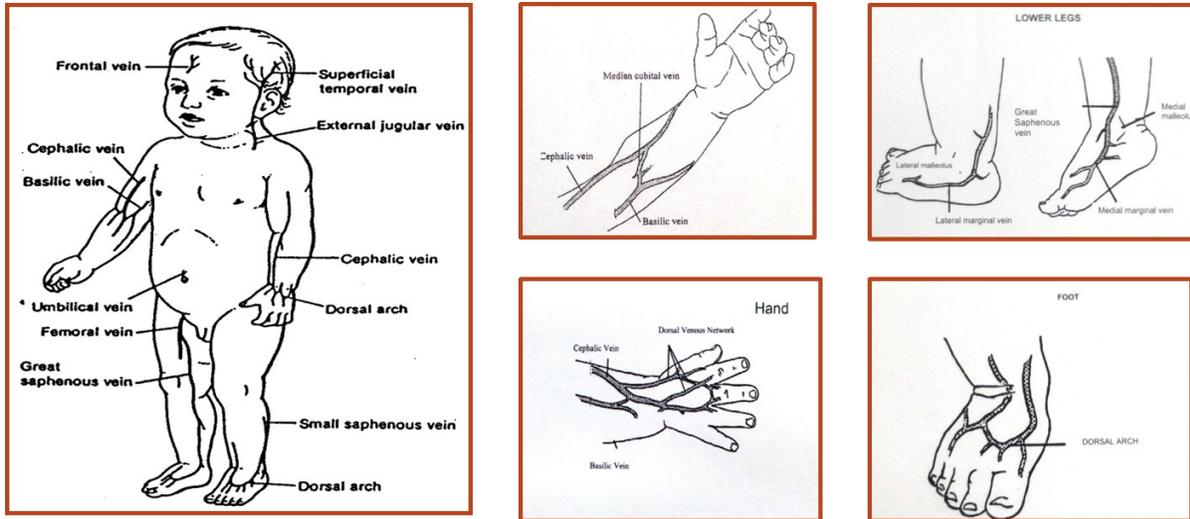
**Pedi Points -continued**

- High risk kids: central lines, receiving chemotherapy, young babies, not immunized

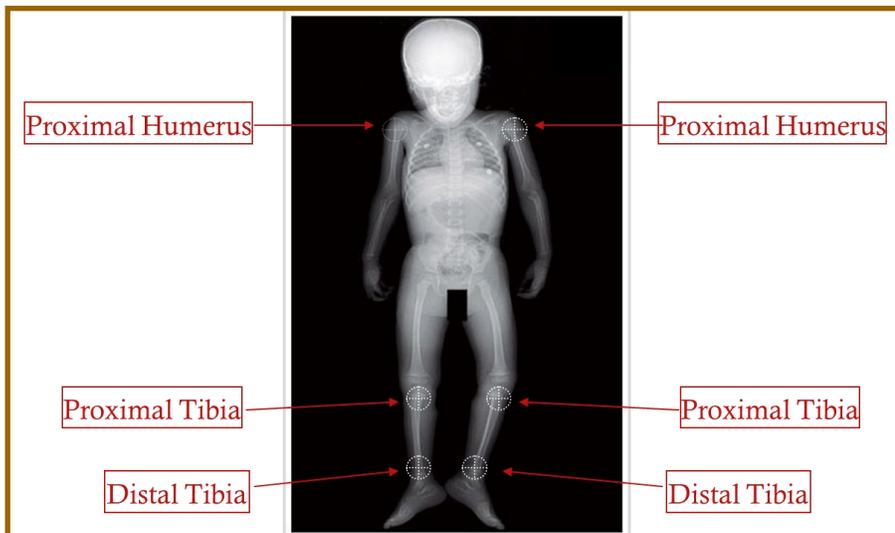
Obtaining a FULL set of vitals signs and comparing them against normal for age will also help you identify early shock and sepsis. <http://youtu.be/v6L8riVCIUg>

If it is determined that the infant is in shock or has sepsis, then early intervention with oxygen (15 lpm NRB) and fluids (20cc/kg of NS) is important.

**Tips for Infant IV Starts**



- **Go for the vein you can see.** Babies do not have great ACs, the veins of the hands and feet look small but they work well and are usually easy to see.
- **Start shallow.** Instead of that 30 degree angle we use with older folks, start at an angle flush with the skin. Baby skin is thick and punching through the skin at a higher angle increases your risk of also punching through the vein.
- **Use bifurcates.** Babies have not yet developed valves so bifurcates make a bit wider goal to aim for. Going through the skin right below a bifurcate and then flattening out and aiming straight for it increases your chances of success.
- **Know when enough is enough.** The standard rule is “2 pokes or 2 minutes”. This is especially true with infants. If you are not successful and the babies needs fluids, move on to your IO.



The [Teleflex/Arrow EZ IO site](#) has some [great guidelines and online training](#) for the insertion of EZ IO in the pediatric and infant patient. This information should be part of your yearly training.

Per the manufacturer there are six approved sites for pediatric and infant insertion. They are also investigating the distal femur. Primary Children’s currently uses the proximal tibias as the preferred site. The proximal humerus requires special training, positioning, and securing. It should not be used without this training.

Check with your medical directors and agency protocols to be sure that you know your practice guidelines.

**Pedi Points -continued**

**Vomiting and the Belly Stuff**

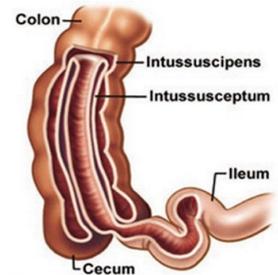
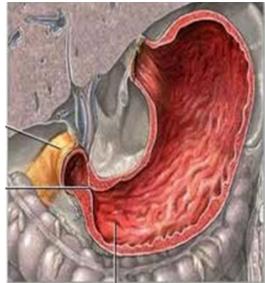
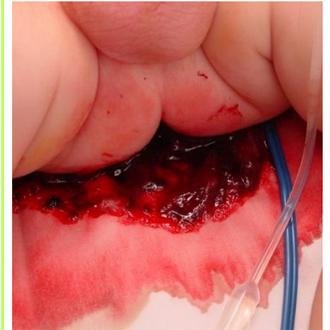
There are many reasons that babies vomit. Some are more common than others. Gastroenteritis (the stomach flu), reflux, allergies, or food poisoning are seen frequently in the PCH ER. The important thing to assess for is signs of dehydration. These things are managed in the acute and outpatient setting and infants usually do well.

There are some stomach conditions that could be emergent. EMS providers should look for the following when evaluating for a baby's belly...



Pyloric Stenosis	Bowel Obstruction	Intussusception
Onset is often 3-5 wks Parents report "projectile vomiting"	Signs include bilious (bile green or bright yellow) vomiting  Abdominal distension  Jaundice	A telescoping of the bowel  Parents report episodes of extreme fussiness that can come and go.  Presence of "current jelly" stools

"There are some stomach conditions that could be emergent"



The infant population is one of our most precious. As people they bring out every protective instinct in us. As providers, even a call to the scene of a infant can get our adrenalin pumping. Focus on the basics. Respiratory complaints far outweigh any other reason that babies are brought to the ER. Know how to bag and suction. Don't fear those tiny veins and train often. Become familiar with emergency stomach conditions so they are not missed. We can work to get these babies back to a happy baseline.

**Did You Know**

**They are changing the way you can watch EMS Grand Rounds**

I'm happy to announce some changes in the way that we deliver our EMS grand rounds. Due to a collaboration with Salt Lake City Fire, starting with our November 10th lecture on Abdominal Trauma (Taught by Amanda Lawrence from AirMed), we will be live streaming our lectures on [www.emsgrandrounds.com](http://www.emsgrandrounds.com). Also, new for our lectures is a way to be interactive using social media. Follow us on Twitter [@uofutrauma](https://twitter.com/uofutrauma) and on [Facebook](https://www.facebook.com/uofutrauma) to submit your questions to our speakers. Also, you can use the hashtag #emsgrandrounds to interact with our speakers as well. Our lectures will be available for one (1.0) hour of Utah BEMS CME as well. Those that cannot watch live, watch archived versions on the website as well!

This change comes from feedback we received from you! Many of you wanted this to be a live streamed event, as well as allow for interaction. The website, [emsgrandrounds.com](http://emsgrandrounds.com) will help to facilitate this requests. If you have any questions, please don't hesitate to email Zach Robinson ([Zachery.robinson@hsc.utah.edu](mailto:Zachery.robinson@hsc.utah.edu)) or Chris Burk ([Christopher.Burk@slcgov.com](mailto:Christopher.Burk@slcgov.com)) with SLC fire.



Zach Robinson MPA, EMT-P  
 Trauma Outreach Coordinator  
 Injury Prevention Coordinator  
 University of Utah Hospital  
 801-585-2991



*Never stop  
 Learning  
 because life  
 never stops  
 teaching.*

**News from National**

**PECC Coordinator Webinar Huge Success**

The enthusiasm of the health care community in pursuing opportunities to improve their emergency department's (ED) pediatric readiness continues to grow with more than 600 individuals viewing the live or archived webinar "[Is Your ED Ready for Children? Pediatric Emergency Care Coordinators Lead the Way to Readiness!](#)" If you have yet to watch the webinar, it is available on the National Pediatric Readiness website. The webinar focused on the need for pediatric emergency care coordinators (PECC), as well as strategies employed to identify and assure availability of PECCs in the ED.

Additional Pediatric Readiness events are planned to continue supporting hospitals as they join in this ED quality improvement project for children. The webinar "[National Pediatric Readiness Project: Preparing the Emergency Department to Provide Psychosocial Support to Children and Families in A Disaster](#)," was held in October and will be available for viewing in November.

**AHA Releases New Guideline Update for CPR and ECC**

The American Heart Association (AHA) has released [guideline updates](#) for cardiopulmonary resuscitation (CPR) and emergency cardiovascular care (ECC). The new guidelines were published in [Circulation](#). Of interest, the new guidelines recommend integrated systems of care, and include practical guidance for bystanders, dispatchers, and communities.

**AAP/CDC Webinar on Pediatric Influenza Prevention and Control Archived**

The American Academy of Pediatrics (AAP) and the Centers for Disease Control and Prevention (CDC) have archived the webinar "[How To Prevent and Control Pediatric Influenza](#)." The webinar featured Henry Bernstein, DO, MHCM, and Lisa Grohskopf, MD, MPH, and focused on strategies that pediatricians and caregivers can use to improve influenza prevention and control in children at highest risk.



# November 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5 PGR	6 PEPP -Moab →	7
8	9	10 EGR	11	12 PGR	13 PEPP-Delta →	14
15	16	17	18	19 PGR	20 PEPP-DXATC → Advanced Neuro Con	21
22	23	24	25	26 	27	28
29	30					

## 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 certify as BEMSP CME Access at <https://intermountainhealthcare.org/locations/primary-childrens-hospital/for-referring-physicians/pediatric-grand-rounds/>

Nov 5 Michael Agus, MD "Tight Glycemic Control in Pediatric Critical Care, Are We There Yet?"

Nov 12 Emily Thorell, MD & Jared Olson, PharmD "Antimicrobial Stewardship 2015: Getting Smarter"

Nov 19 Howard Kadish, MD 7 Seth Andrew "Pediatric Specialty Services: One Year's Experience and Lessons Learned"

**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.

Nov 10 Amanda Lawrence (AirMed RN) "Abdominal Injuries and Trauma"

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)

## Upcoming Peds Classes, 2015

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

November 20th Advanced Neurologic Conference, Protecting the Developing Brain contact [Jamie.nordberg@imail.org](mailto:Jamie.nordberg@imail.org)

April 13-14, 2016 [Zero Fatalities Safety Summit](#) scholarships are available for EMS but you must act quickly.

## Emergency Medical Services for Children

Utah Department of Health  
Emergency Medical Services and Preparedness  
Emergency Medical Services for Children  
3760 S. Highland Drive, Room 545  
Salt Lake City, UT 84106

Phone: 801-707-3763  
Fax: 801-273-4165  
E-mail: [Dalrymple@utah.gov](mailto:Dalrymple@utah.gov)  
Salt Lake City, UT 84114-2004



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

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



# Happy Thanksgiving!