



# MACEP Pediatric Committee Newsletter

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## Ongoing work of supporting our MA Pediatric Emergency Care Coordinator Network

As reported in our previous newsletter, we have now succeeded at establishing PECCs in **100% of Massachusetts EDs, the highest percentage in the country** according to Emergency Medicine Network ([EMNet](#)) data.

We continue to offer many resources to PECCs, with the goal of both improving pediatric emergency care, and making it as easy as possible for PECCs to provide support for their EDs in achieving this goal. These resources include our support website [www.MassPediatricToolkit.com](http://www.MassPediatricToolkit.com), as well as monthly emails with pearls and information on improving pediatric care. A list of all EDs in the state, along with their PECC status (yes/no), can be found [here](#).

Serving as the Chair of the PECC Network, Dr. Ashley Foster has been leading our quality improvement program, with an

ongoing focus on looking at whether EDs are obtaining and documenting pediatric weight in kilograms. We have collected information from **88% of the PECCs that shows only 52% of Massachusetts EDs currently obtain and document pediatric weight in kilograms**. Our goal is for all Massachusetts EDs to obtain and document pediatric weight in exclusively kilograms.

Our work has received national recognition as well. We were asked to share our process and challenges in an upcoming webinar on pediatric emergency readiness, sponsored by the National Pediatric Readiness Project (NPRP) Special Interest Group of the American Academy of Pediatrics (March 28, 2PM, [LINK](#)). We also were invited to participate in an EMSC

Continued on next page

Innovation and Improvement Center (EMS-IIC) webinar in support of the Prehospital PECC Learning Collaborative that consists of 9 states working to increase the number of Prehospital PECCs within their states. Our presentation was very well received and will hopefully lead to improvements in care in the pre-hospital arena.

While the news is overall good, we have had some challenges as well. Most notably, as PECC physicians and nurses may transition to new positions and leave their emergency departments, we are not always notified, resulting in loss of identified PECCs. It is challenging to maintain our PECC database at 100%, and we are exploring methods to address this concern. We are very excited to begin discussion on collaboration with the MA Emergency Nurses Association (ENA) chapter, to see where our missions and interests overlap.



#### **Community Outreach Mobile Education Training:**

*Bringing a robust, pediatric acute care simulation training program to your ED— anytime, anywhere for all providers to train together as a unified team*

1. 4 standard medical scenarios are run in the resuscitation bay
2. Typical "resuscitation team" should run the scenarios – based on your unit's typical shift staffing model (1-2 MD, 2-3 RN, 1-2 tech, 1 RRT etc.
3. Cases are common pediatric diagnoses with an infant/child presenting in a critical state requiring resuscitation ..... and more ....

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## **Websites to check out!**

Every month we'll share some websites that may be of interest

Mass Pediatric Toolkit- Resources to improve pediatric care: [LINK](#)

EMS-C Pulse Newsletter: [LINK](#)

EMSC Resources/ Toolkit to improve pediatric readiness in your ED: [LINK](#)

EMS-C Webinars: [LINK](#)

National Pediatric Readiness Project: [LINK](#)

PEM Playbook (excellent and lively podcast on PEM topics): [LINK](#)

Webinar on Pediatric Airway Management by EMSWorld (free, requires registration): [LINK](#)

## **Upcoming Events**

- **Pediatric Academic Societies Meeting**, April 24- May 1, Baltimore, [LINK](#)
- **MACEP Annual Meeting**, May 1, Waltham, MA, [LINK](#)
- **SAEM Annual Conference**, May 14-17, Las Vegas: [LINK](#)
- **Prehospital Care of Children: Review of Evidence-Based Guidelines**, May 22, WEBINAR, [LINK](#)
- **AAP National Conference, Pediatric Emergency Section**, Oct 25-29, New Orleans: [LINK](#)
- **ACEP Scientific Assembly**, Oct 27-30, Denver: [LINK](#)



# MA Emergency Medical Services for Children

The Massachusetts Emergency Medical Services (EMS) for Children program is a state partnership grant with the Human Resources and Services Administration (HRSA) specifically focused on addressing the distinct needs of children in prehospital and hospital emergency medical systems. The EMS for Children program works to ensure that seriously sick or injured children have access to the same high-quality pediatric emergency healthcare, no matter where they live in the United States. The state partnership works to expand and improve Massachusetts' capacity and capabilities for delivery of evidence-based, effective pediatric emergency care in alignment with best practice standards.<sup>1</sup>

The Massachusetts EMS for Children program has an advisory board comprised of individuals from the Department of Public Health, Emergency Nurses Association, Massachusetts College of Emergency Physicians, Regional EMS Offices, and physicians from each of the pediatric academic hospitals in the state.

This program will be partnering with the following institutions for their subject matter expertise during pediatric high-fidelity simulation and education days for pre-hospital providers (emergency medical technicians (EMTs), Advanced EMTs, and Paramedics) in each of the five EMS regions:

- Baystate Medical Center
- UMass Memorial Medical Center
- Massachusetts General Hospital
- Boston Medical Center
- Boston Children's Hospital

These events will be scheduled over 2019-2020. More exciting updates about the great work of the Massachusetts EMS for Children Advisory Board to come!

<sup>1</sup> HRSA. (2018, September). Child Health. Retrieved from <https://mchb.hrsa.gov/maternal-child-health-topics/child-health>

# Cannabis in Children: What We Can Expect

There is much debate regarding the medical and recreational use of cannabis, but no one can argue the increasing popularity of the substance each passing year. Despite the federal government's listing of marijuana as a schedule 1 controlled substance with no currently accepted medical use and high potential for abuse, over 40 states have passed legislation legalizing medical and/or recreational cannabis for residents. In 2008, Massachusetts decriminalized possession of small amounts of marijuana and in 2012 medical marijuana was legalized. The sale of recreational marijuana in Massachusetts was legalized in 2016 with the passage of ballot question #4, and the Massachusetts Cannabis Control Commission has begun to issue licenses for businesses in selected towns and cities, with openings making front page headlines in the news. However, this increased availability of cannabis, coupled with low perception of risk, has unintended consequences for the health and safety of the pediatric population.

Data from states such as Colorado and Washington, where marijuana has been legal since 2012, and Oregon, Alaska and the District of Columbia (2014) give us indicators of what Massachusetts providers might expect. These states all saw an increase in calls to poison control centers, Emergency Department visits, and hospitalizations. Colorado saw a 210% increase in calls to poison control centers related to Marijuana in the 4 years after legalization, while Washington had a 70% increase in the three years after legalization, with a significant percentage of the calls due to pediatric ingestions and exposures. Colorado had a 35% increase in annual marijuana-related Emergency Department visits between 2011 and 2015; some hospitals in central Oregon saw a 2000% increase.

Due to lack of regulation in packaging, labeling and marketing, cannabis products often come in



colorful packaging and appear similar to non-cannabis infused products, such as lollipops, gummy bears, cookies and brownies. One gummy bear or 1/10th of a brownie may contain an average dose of THC for an adult, (Colorado defines an average adult dose as 10 mg) but as any parent knows, children are unlikely to stop eating after one bite of something so palatable. Given the exploratory nature of young children testing new objects by placing them in their mouths, and the risk-taking nature of adolescents, it is no surprise many emergency department visits are for the pediatric population. Fortunately, the Massachusetts Cannabis Control Commission has set guidelines on the packaging in Massachusetts, but securing the products at home to keep them out of reach from minors will still be necessary.

Numerous studies and case reports document unintentional ingestions in younger children, with lethargy, ataxia, hypotonia, mydriasis, tachycardia and hypoventilation being the most common presenting symptoms. Some children with overdoses have required intubation for ventilatory support. Abnormal EKG changes were seen in 43% of adolescent patients with no cardiac history presenting with chest complaints and a positive urine drug screen in one small study, including ST segment changes, LVH, RVH, 1st degree conduction blocks, atrial fibrillation, and Mobitz type I second-degree AV block. More research is needed to fully understand the effects in younger children.

Emergency physicians should also be mindful of the long term effects of cannabis use in the pediatric population, as any brief intervention could have a significant impact. While the addiction rate for adults is 9%, it is almost double for adolescents and young adults. Chronic adolescent marijuana use is associated with cognitive impairment and a decreased ability to do well in school. The THC potency of cannabis, combined with frequent use, appears to be linked to the development of mental health issues in youth. Data from Colorado toxicology reports of

adolescent suicide victims showed an increase in positive tests for cannabis. Daily use of cannabis before the age of 17 has been shown to increase the risk of suicide attempts.

Cannabis today has a much higher THC content and is available in many more forms than even a decade ago. In the past, the dried flowers and leaves were smoked or the dried plant resin (hash/hashish) was mixed with tobacco or added to foods and baked. Higher THC concentrations- up to 80% -are now found in hash oil concentrates and extracts (dabs, wax, shatter) that are used sparingly, but thought to produce a greater high. However, it is likely the oral ingestions that are seen in children will increase, as vendors produce products with greater creativity.

- Deb Greene, MD, Associate Chair,  
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