



Prehospital Pediatric Partners



February 2026, Volume 4

Coordinator's Corner

Our department has expanded!

Dayton Children's has expanded its EMS and Trauma Outreach department!

Sarah Pearson is now the EMS and trauma outreach supervisor.

Terry Weldon and Lindsey Thomas are EMS and trauma outreach and education coordinators. Contact information on Page 3.

Coming soon!

Project Austin

Individualized emergency care plans for pediatric patients with complex medical needs.

Mathile Center hours expansion

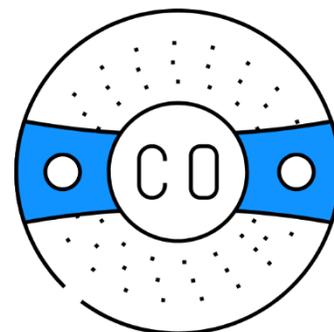
Beginning February 2, the crisis center located at the Mathile Center will be open from 0800 to 0100 for EMS and police arrivals.

CO poisoning: A winter danger you can't see coming

As temperatures drop and heating systems switch into full gear, the risk of **carbon monoxide (CO) poisoning** rises sharply. Known as the "silent killer," carbon monoxide is a colorless, odorless gas that can quickly become deadly when fuel-burning appliances malfunction or are used improperly. Other sources of exposure include but are not limited to: wood stove, blocked exterior vent from snow buildup, vehicle with engine running.

CO binds to hemoglobin 200–250 times more strongly than oxygen, preventing the body from getting the oxygen it needs. High levels can cause permanent neurological damage or death within minutes. Because CO poisoning is often mistaken for viral illness, it's crucial to consider environmental clues — such as multiple family members feeling sick at once or presenting with similar symptoms. Symptoms can be mild from headache, nausea, dizziness to chest pain and/or syncope. Children are especially vulnerable because they have higher metabolic rates and smaller oxygen reserves.

CO toxicity can be diagnosed by pulse co-oximetry if available. Normal is <3% in children. Standard pulse oximeters read falsely normal because they cannot distinguish COHgb from oxyhemoglobin. Treatment includes removing patient from the exposure and to fresh air immediately. Key is placing 100% oxygen via non-rebreather which reduces CO half-life from 4-6 hours to 40-90 minutes. If inadequate respirations are noted, bag mask ventilation with 100% O₂ can be used. IV should be established with initiation of fluids if needed. Glucose should be checked if patient is altered. Hyperbaric oxygen therapy is considered for patients with loss of consciousness, neurological deficit, pregnant patients, severe metabolic acidosis, or cardiac arrhythmia.



Treatment considerations

Oxygen 100% via nonrebreather

BVM with 100% oxygen

Glucose

IV fluids

Do not get tricked by normal pulse oximetry



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Claim CE here!

This newsletter is not only a communication tool between prehospital and Dayton Children's Hospital, but also a CE opportunity! Read the content, take the quiz, get 0.5 hours of pediatric CE! Link expires March 31, 2026. Certificates are processed every 2-3 weeks.



[Newsletter evaluation link](#)

Upcoming Events

Pediatric readiness & disaster preparedness for EMS

This free presentation will be held virtually Feb. 12 from noon to 1 p.m.



Key recommendations include transporting all pediatric patients, even if their symptoms are mild as they can worsen. Transport is recommended for any symptomatic person, even if symptoms improve with oxygen. Winter significantly elevates CO risk. Rapid identification, immediate high-flow oxygen, and awareness in pediatrics is key. Treat aggressively even when symptoms seem mild — carbon monoxide poisoning is deceptive, fast-progressing, and entirely preventable.

 Greater Miami Valley EMS Council	Trauma Protocol	3006
Subject: Carbon Monoxide Poisoning	Effective: June 1, 2021	Last modified: Jan. 19, 2025

3006.1 Clinical Management

Assessment		
Pediatric Considerations <ul style="list-style-type: none"> None 	Signs & Symptoms <ul style="list-style-type: none"> Malaise, fatigue, drowsiness Flu like symptoms Headache Dyspnea Nausea/vomiting Diarrhea Abdominal pain Syncope Seizures 	Differential Diagnosis <ul style="list-style-type: none"> Flu/Severe cold Chronic fatigue Myocardial infarction Diabetic crisis Altitude sickness Ingested toxins Hypothyroidism
Treatment Algorithm		
<ul style="list-style-type: none"> Remove patients from the environment. Provide high flow O₂ to all suspected carbon monoxide poisonings. Pulse oximeter will give false readings and should not be utilized. If not already on scene, consider requesting an apparatus with equipment to test for CO in the atmosphere {CO oximeter} 		EMR
<ul style="list-style-type: none"> Contact MCP to discuss transport considerations. 		EMT
<ul style="list-style-type: none"> No additional orders at this level. 		AEMT
<ul style="list-style-type: none"> No additional orders at this level. 		Paramedic

Hold the intubation – BVM and supraglottic use improves epi administration times

Some hold the theory that intubation is the gold standard in prehospital airway management. It's a high-level skill ... so it must be superior... right? Regionally, however, it has been found to be a hinderance in pediatric resuscitations. Intubation attempts lead to longer scene times, and more importantly, delays in epinephrine administration.

Remember, in the pediatric resuscitation, epi administration is the gold standard. The former PALS guideline for epi administration was 5 minutes from the start of CPR in the



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Ohio EMS for Children Conference

Friday, March 6, 7 a.m. to 5 p.m. in Columbus.



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prehospital setting. With the latest update from the American Heart Association, it is now recommended to get the epi on board “as soon as possible” because literature points toward more favorable outcomes when administered within 3 minutes of cardiovascular collapse.

Regionally, DCH has been providing education on the GMVEMSC advanced airway management protocol outlining the primary airway for pediatric patients is the supraglottic airway. In cases of extreme airway edema, providers can utilize the BVM. The initial education push was meant only to improve scene times and decrease multiple attempts at intubation. The outcome, however, showed some very interesting data. For all patients coming in to one of the Dayton Children’s emergency departments from the region, the arrival on scene to first dose of epinephrine administration time went from an average of 12 minutes to 6!

Other interesting outcomes:

- All positive resuscitations by ground EMS were either BVM or SGA.
- Video laryngoscopy isn’t helpful when using uncuffed tubes as tubes still displace easily during transport

Moral of the story – hold the intubation and utilize a BVM or supraglottic airway for more positive outcomes.

