MedicNEWS

Insight for paramedics in Eastern Ontario

October 2025

The Patient's Voice

A closer look at consent, SDMs, and the human side of decision-making in emergencies

Airway & Trauma Education Days Are Back!

The Heat, the Hurt, and the Hype

Sorting facts from fears about acetaminophen and autism.

Critical Interventions *Critical Thinking*

A new CME season is here, exploring emergency childbirth, medication safety, and the kinds of thinking that drive exceptional care.

Pediatric Anaphylaxis

with CHEO Emerg's Dr. SP Piscopo

QUIZ

Think you were paying attention? Take our new interactive MedicNEWS quiz and put your memory to the test!

In This Issue

🩺 Editorial: The Heat, the Hurt, and the Hype

Acetaminophen is in the spotlight. We unpack the recent misinformation linking it to autism, revisit the real evidence, and share how paramedics can help patients make informed choices. Don't miss our *"Cones & Fins"* visual explainer on correlation vs. causation.

🎓 Continuing Education: Critical Interventions, Critical Thinking

Fall CME is underway! This season's focus — from emergency childbirth to medication safety — brings new opportunities to refine your clinical skills and strengthen critical thinking. Nearly 400 paramedics are already on board.

💡 Elective CME

Airway Day is back, and Trauma Days return with Eric Gagnon. See what's coming up in RPPEO's education lineup and register early for credit.

📰 News Nuggets: Quick reads, deep insights

- "Faster Ambulances" — what Ontario's funding boost *really* means for patient care.
- International Paramedic Exchange — Australia to U.S. pathways open.

⚕️ Medical Direction

Regional Measles Watch: A few cases, no clusters — stay alert and check your MMR status.

Methoxyflurane Update: Research complete; future use under review pending approvals and audit capacity.

👩 ⚕️ BHP Corner: Managing Anaphylaxis — Pediatric Focus

When every second counts, know the difference between improvement and danger. Dr. Sara-Pier Piscopo explores why epinephrine remains the cornerstone of anaphylaxis management.

💔 Quality & Patient Safety: Who Speaks for the Patient?

In emergencies, conflicting voices can make decision-making complex. Charlene Vacon explores substitute decision makers (SDMs), consent, and the legal hierarchy guiding patient-centered care.

🔬 Research Science: Ten Studies That Matter

From 12-lead ECG use in ACS to airway success rates and trauma line feasibility — ten recent studies every paramedic should know. Concise, relevant, and ready for practice.

As always, if you've come across clinical insights or stories worth sharing, send them to **info@RPPEO.ca** with "MedicNEWS" in the subject line. We love hearing from you. Enjoy the issue!

MedicNEWS Quiz

We're excited to introduce a brand-new feature in this issue of *MedicNEWS:* the **MedicNEWS Quiz**! This interactive section is designed to help readers **test their knowledge** on key clinical, ethical, legal, and research topics covered in each edition.

Whether you're brushing up on best practices, exploring new ideas, or reflecting on decision-making scenarios, the quiz offers a fun and engaging way to reinforce what you've learned. Each question is crafted to spark thought, discussion, and confidence in your role as a care provider.

So grab a coffee, dive into the issue, and come back to this quiz to see how well you know this month's MedicNEWS updates. Access the quiz >>>

The Heat, the Hurt, and the Hype

Acetaminophen in the Spotlight

When the MedicNEWS team first discussed whether to address recent misinformation about acetaminophen, we hesitated. The story began outside Canada, and paramedics here already practise in a system firmly grounded in scientific evidence. Still, we asked ourselves: *Is this something we should comment on?*

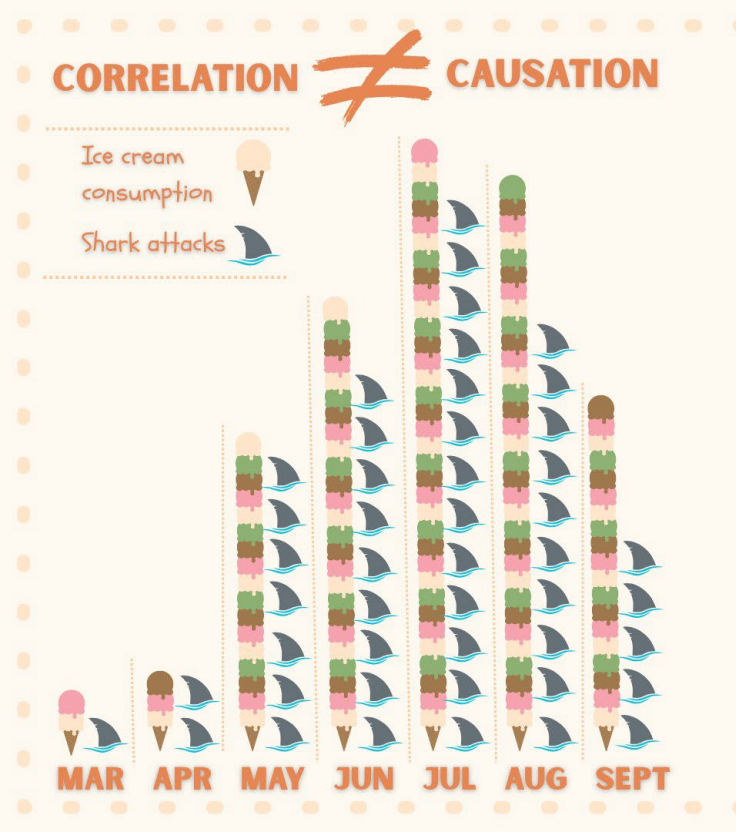
We decided **yes,** because misinformation doesn't respect borders, and because **informed consent** depends on accurate, comprehensible information. Patients can only give meaningful consent when they understand both the benefits *and* the risks of treatment and non-treatment.

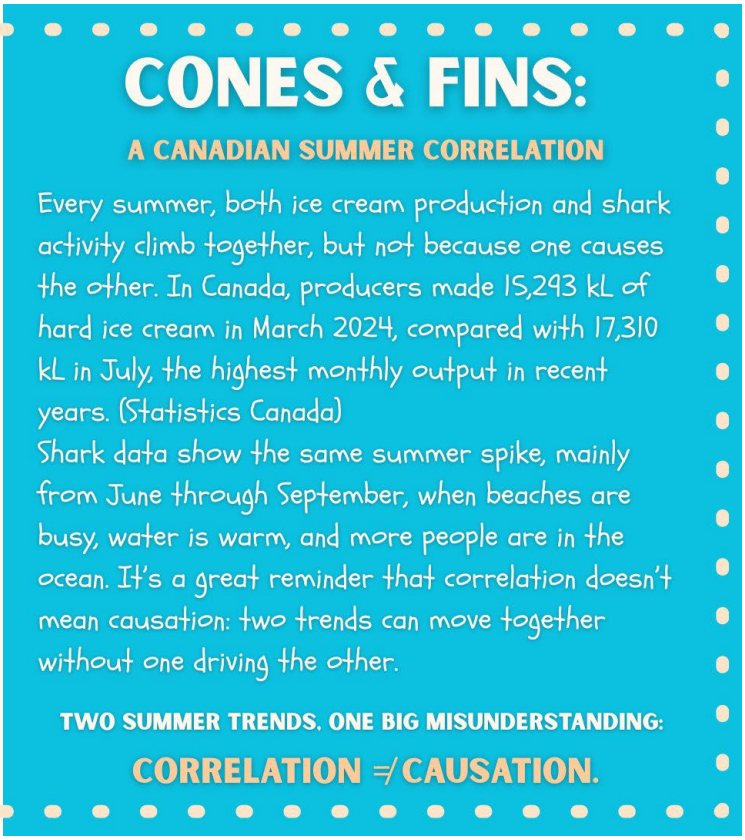
If a patient's understanding is shaken by misinformation, it becomes our job to help re-anchor that conversation in evidence — respectfully, calmly, and with compassion.

The Evidence

Both **Health Canada** and the **Canadian Association of Emergency Physicians (CAEP)** have reaffirmed that **acetaminophen remains the safest first-line option** for pain and fever in pregnancy when used as directed. There is no conclusive evidence linking it to autism or other neurodevelopmental disorders.

- Health Canada statement
- CAEP statement (PDF)





It's also important to note that **untreated fever during pregnancy** is associated with **increased risk of complications**, including neural tube defects and other developmental issues in the fetus. Severe or prolonged pain can elevate maternal stress hormones, disrupt sleep, and affect overall well-being — all factors that can influence pregnancy outcomes. Managing pain and fever appropriately is part of protecting both patient and fetus.

Why This Matters

Even when misinformation begins elsewhere, it can influence Canadian patients who see it online or hear it from friends. When patients ask questions, it isn't resistance — it's participation. It's a chance to support **shared decision-making**, build trust, and reinforce that their voice is essential to their care.

The **"Cones & Fins"** graphic in this issue illustrates the key principle: correlation isn't causation. Just as ice cream consumption and shark sightings rise together in summer without one causing the other, acetaminophen and autism are associated in some studies but not proven to be causally linked.

WHAT TO SAY WHEN PATIENTS ASK

Here are some examples of patient questions or statements you might hear and calm, evidence-based ways to respond.

What patients might say	How you might respond
I don't want to take acetaminophen. I heard it causes autism.	**"Health Canada and Canadian emergency physicians have reviewed the evidence and confirmed that acetaminophen is safe when taken as directed. The studies people are talking about do not prove acetaminophen causes autism."**
I'd rather not take anything while I'm pregnant.	**"I understand. Acetaminophen is one of the most studied medicines in the world, and it's recommended in pregnancy because of its strong safety record. Let's look at all your options together."**
Isn't it better to wait and see if the pain goes away on its own?	**"That's completely your choice. It's also important to know that untreated fever or significant pain can affect both you and your baby. Acetaminophen is the safest first line option."**
What if they're wrong?	**"That's a fair question. Science keeps testing its own ideas. Right now, after decades of use and careful study, acetaminophen remains the safest choice we have in pregnancy."**

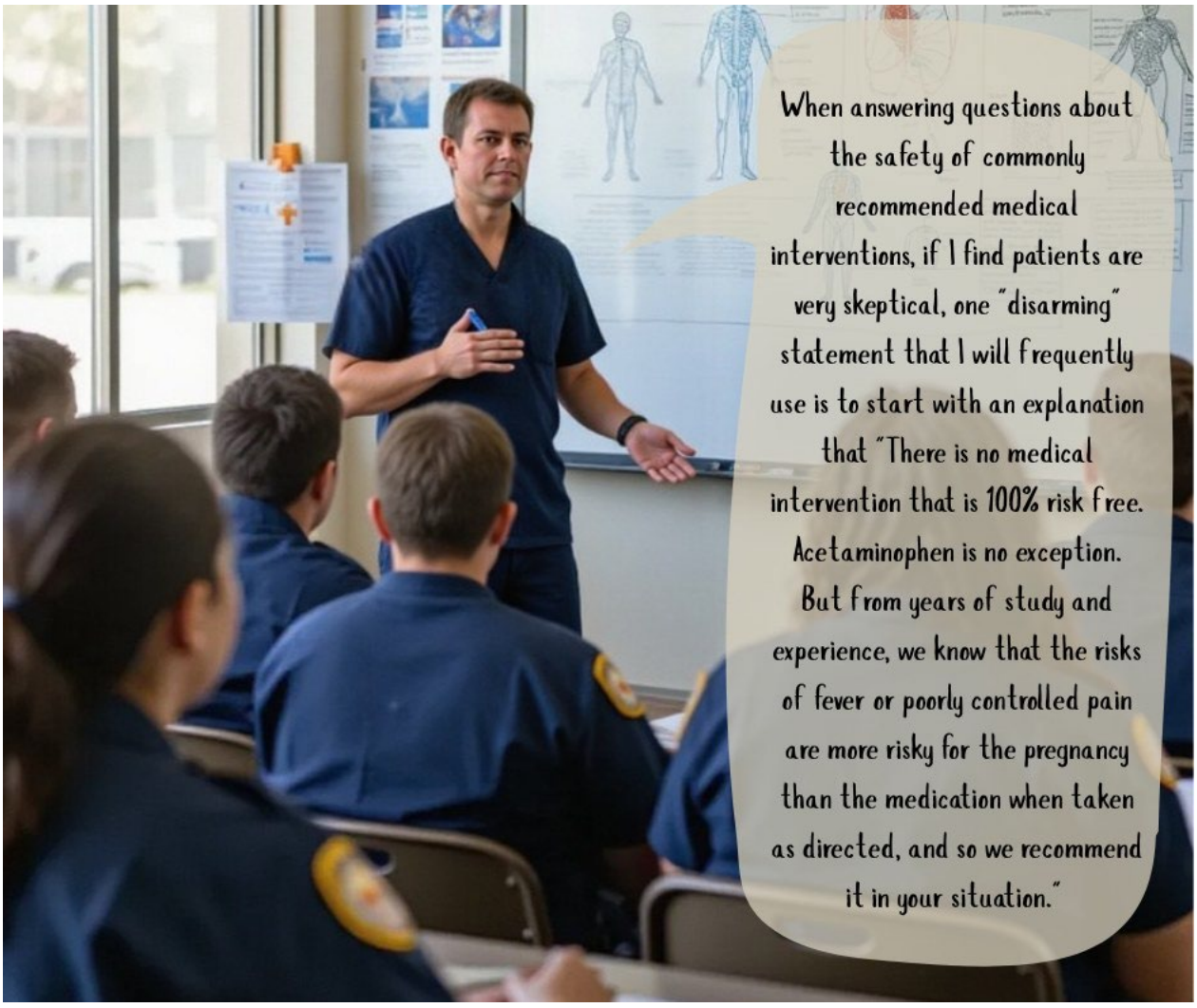
REMEMBER: These conversations aren't about persuading; they ARE about INFORMING. Patients can make better decisions when they understand the issues.

Fun Fact: *In the 1970s and 80s, researchers noticed people with butane lighters seemed more likely to develop lung cancer. The lighters weren't the problem, we know now, it was the cigarettes they were lighting.*

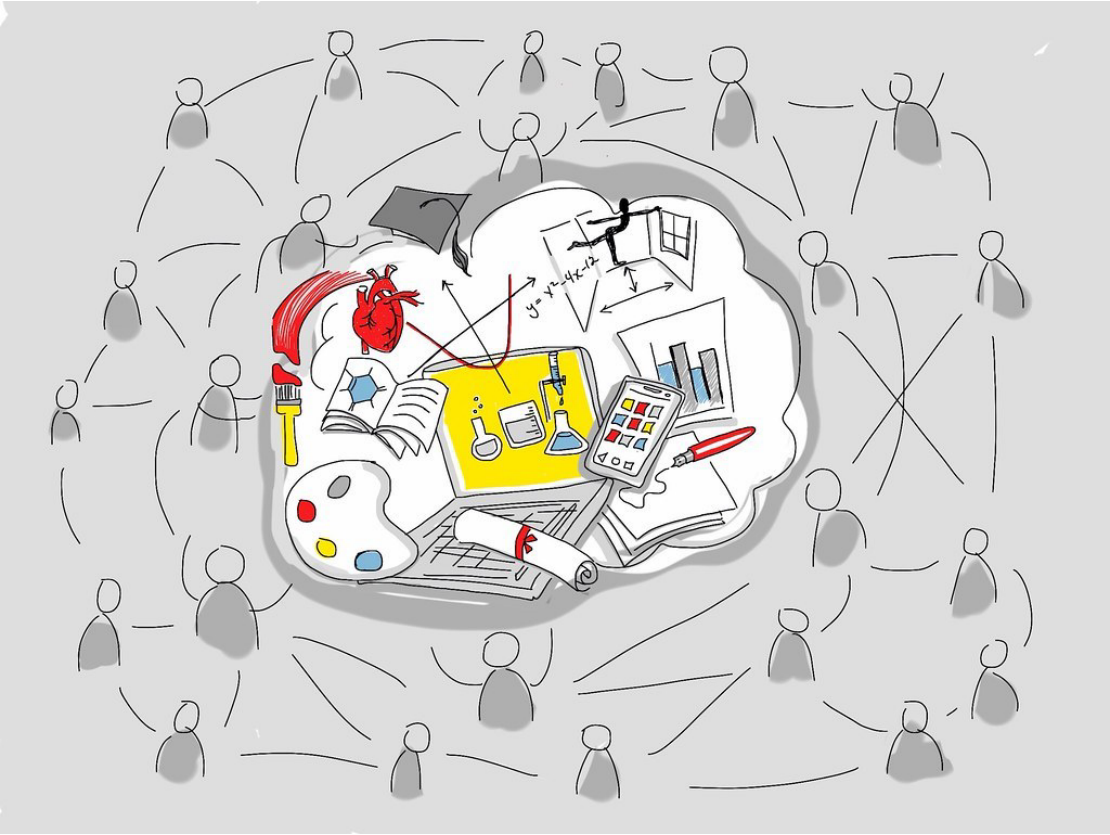
Need Help Framing a Conversation?

If you're hearing questions or concerns from patients and aren't sure how to approach the conversation, **MedicASK** can help. Send us your question — we'll help you find both the evidence and the language to support patient understanding and consent.

Helping patients make informed choices isn't just part of good communication; it's the foundation of consent and the heart of paramedicine.



1 - Ideas from experience: risk is inherent but unequal



Continuing Education

Fall 2025 CME: **Critical Interventions, Critical Thinking**

The Regional Paramedic Program for Eastern Ontario (RPPEO) is pleased to introduce the Fall 2025 Continuing Medical Education (CME) course *Critical Interventions, Critical Thinking: From Emergency Childbirth to Medication Safety.*

Starting on **Tuesday, September 2, 2025**, paramedics will have access to the Fall 2025 CME online module via MedicLEARN. This hybrid CME session is designed to enhance your critical thinking and skill mastery in essential areas of paramedic practice.

The Fall CME session is for both Advanced Care Paramedics (ACPs) and Primary Care Paramedics (PCPs).

What You'll Learn

This Fall, we begin an educational series on patient history-taking as part of a broader focus on advancing paramedic assessment skills. In Fall 2025 CME, you will be digging into two of the twelve different themes: medication history and past medical history. These are essential components of both advanced patient assessment and our ongoing commitment to medication safety.

Paramedics will gain a deeper understanding of how accurate and comprehensive history-taking contributes to clinical decision-making, patient safety, and effective care in the field.

Main Topics

- Emergency Childbirth: Gain comprehensive knowledge and practical skills in managing emergency childbirth, including handling complications such as nuchal cord, cord prolapse, shoulder dystocia, and more.
- Newborn Resuscitation: Learn and practice life-saving techniques for newborn resuscitation, including CPR, airway management, and positive pressure ventilation.
- Medication Safety: Focus on safe medication administration, correct dosing practices, and minimizing errors to ensure patient safety.
- Advanced Patient Assessment: Develop advanced skills in taking the best possible past medical history, which improves clinical decision-making and patient safety in both complex and critical situations.

Evaluation

This Fall, you will once again complete evaluation components during both online and in-class CME. This evaluation is formative and supportive, designed to reinforce skill retention and offer constructive feedback.

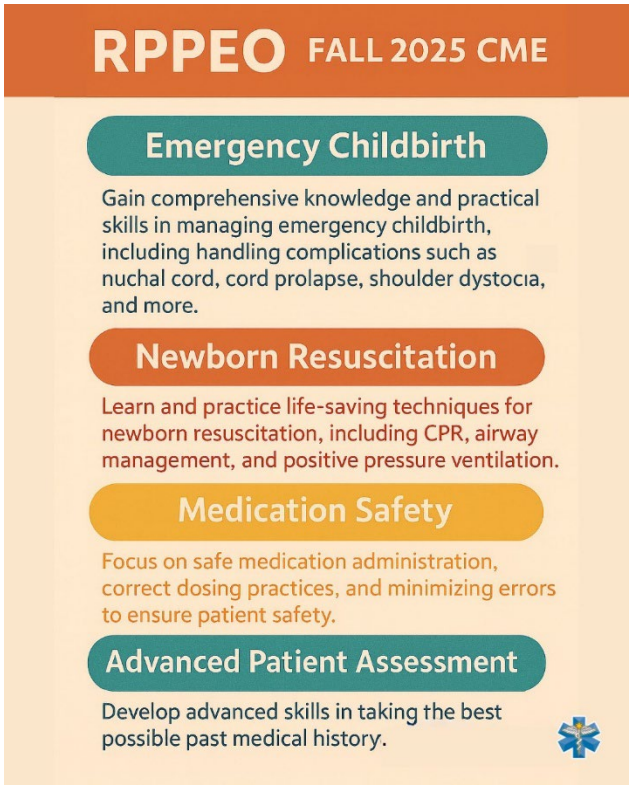
Why?

- Ongoing Competency: RPPEO provides training, feedback, and medical advisories to help paramedics maintain competency across the full scope of clinical practice. We want to create an opportunity for paramedics to refresh their skills, receive feedback, and continue to grow in a structured, supportive environment.
- Professional Accountability: While RPPEO facilitates training, paramedics must take an active role in maintaining proficiency in all areas of practice as a healthcare professional.
- Medical Oversight: Medical Directors delegate controlled medical acts only to paramedics they believe to be competent. This underscores the importance of maintaining proficiency in all areas.

How?

- Pharmacology and Medical Safety Assessment: As part of the Fall 2025 CME, you will complete a Pharmacology/Medical Safety Knowledge Assessment. This assessment is not designed to be pass/fail but to highlight the level of pharmacological understanding that RPPEO, our Medical Director, and our patients expect from paramedics. It is an opportunity for self-reflection, helping you identify areas of

strength and areas for further development in pharmacology knowledge. The questions will cover critical topics, including pharmacokinetics, autonomic and CNS pharmacology, cardiovascular and respiratory medications, and much more. Our goal is to build confidence and competence in paramedic decision-making, providing safe, informed, and patient-centered medication practices. By understanding the "poisons" we use - their mechanisms, benefits, and risks - paramedics will be better equipped to provide exceptional care. This tool will reinforce your professional responsibilities in understanding the pharmacology of medications you carry, challenge your clinical thinking, and promote continuous self-directed learning expected of a health professional.



- Formative Evaluation: The CME evaluation is not punitive but a helpful tool for skill development, reinforcing learning and giving you a clearer sense of areas for improvement no matter what your scope of practice.

Completion and Certification

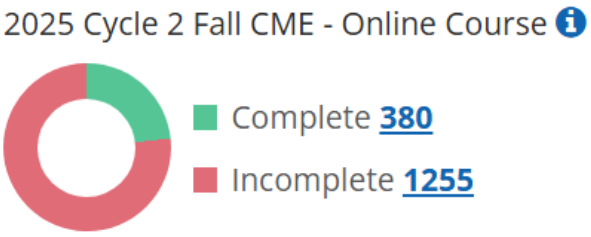
Participation in both the online and in-class components of Fall 2025 CME is mandatory for both ACPs and PCPs and contributes to your annual Maintenance of Certification requirements.

Online Module launched on Tuesday, September 2, 2025

In-Class Sessions Began on Monday, September 15, 2025 – your service will provide your CME schedule

IMPORTANT NOTICE: All participants must complete the online module before attending the in-person practical component to fully prepare for hands-on practice and discussion.

For certification and continuing education requirements, please visit RPPEO.ca for more information. You are encouraged to check your status in MedicNET from time to time so that you may verify your progress toward annual Maintenance of Certification requirements. MedicNET now automatically emails you when you complete a milestone (such as Fall CME) to help remind you of your progress toward maintenance of certification



We look forward to your participation in this engaging CME experience, designed to build critical skills and help paramedics continue to provide safe and effective care for your patients.

Elective CME

See RPPEO's Education Events listings for pre-approved elective CME courses, workshops, seminars, and more! Here are a few upcoming events you'll find are available for credit. Visit RPPEO.ca for registration details and more info!

After a long hiatus, Airway Day is back at the RPPEO!

Airway Day is an elective CME event focused on airway management training, skill practice, and maintenance. Using evidence-based methods as the content basis, RPPEO facilitators will challenge you with your airway knowledge and management. Visit RPPEO.ca for the details and to register.

November 12, 2025
RPPEO Ottawa
2475 Don Reid Dr.

November 28, 2025
RPPEO Kingston
400-1471 John Counter Blvd.

For more information visit RPPEO.ca

The Regional Paramedic Program for Eastern Ontario (RPPEO) is excited to announce 2 newly added Trauma Days to the Fall CME lineup.

Following successful Spring 2025 Trauma Days, Eric Gagnon is back to deliver his popular and informative Trauma Day Continuing Medical Education (CME) sessions. Visit RPPEO.ca for the details and to register.

Prescott Russell

TRAUMA DAY

2 SESSIONS/DAY:

DECEMBER 9, 2025 - LEVEL 2
(RPPEO-KINGSTON)
DECEMBER 16, 2025 - LEVEL 2
(CORNWALL SDG PARAMEDIC SERVICE)

FOR MORE INFORMATION VISIT:
WWW.RPPEO.CA

News **Nuggets**

Easily digestible short summaries of news impacting paramedic clinical care, from the region, the country and around the globe.

Beyond "faster": What provincial funding increase actually means for patient care

You've heard by now that the province is increasing base land ambulance funding across Ontario this year, aiming to reduce ambulance offload delays and speed turnaround to the next call.

Some MPPs and news coverage frames Ontario's funding as a promise of "faster ambulance response times."

- **Ontario Connecting More People to Faster Emergency Care (Simcoe County)** Brian Saunderson, MPP
- **Ontario Connecting More People to Faster Emergency Care (Kenora & Rainy River)** Greg Rickford
- **"Faster ambulance response times promised" after funding boost from Ontario government** INsauga | Ontario Local News Network

"Faster ambulance response times" makes for a strong headline, but it's not the whole picture. Paramedicine succeeds when we match resources to needs in a timely way, and measure results beyond a stopwatch.

For a small share of calls (e.g., out-of-hospital cardiac arrest, severe trauma), speed is crucial. For most calls, availability and appropriateness drive outcomes: Are ambulances tied up at offload? Did dispatch prioritize correctly? Could this patient be safely treated in place or supported through alternate care pathways rather than taken to a crowded ED?

Funding that reduces offload delays (e.g., dedicated offload staff), expands priority-based dispatch, and supports community/alternate pathways often yields greater system benefit than chasing across-the-board response-time targets. This approach improves equity (rural/remote included), quality (pain relief, adverse-

event reduction), and patient experience—while keeping advanced resources available for the calls where seconds truly matter.

So yes, **speed matters, when it matters**. But for the health systeme, the real gains come from capacity, appropriateness... and **outcomes**.

What should we measure?

- **Availability**: fewer level-zero periods; shorter hospital offload times
- **Appropriateness**: correct dispatch and return priority; right destination; right resource (ALS/BLS/community)
- **Quality & safety**: pain control, adverse events, safe non-transport rates
- **Equity**: comparable access for rural/urban and priority populations
- **Patient experience**: clarity, dignity, effective follow-up, and health outcomes

EMS Workforce Mobility: Australia → USA pathway

Priority Ambulance (Australia) launched an **International EMS Workforce Initiative** offering Australian paramedics a pathway to U.S. certification and employment, including field internships with U.S. ambulance operations. Priority Ambulance 2025

A JEMS article profiles one Australian paramedic's transition, outlining required certification (NREMT-P), training differences, and regulatory hurdles. jems.com

Also, more broadly, Ambulance company AMR is recruiting Australian paramedics (via visas) to address U.S. staffing gaps in Oregon / Multnomah County. opb

Send your bite-sized news items to MedicNEWS! If you find interesting news relative for the clinical practice of paramedicine, send it along to info@RPPEO.ca for consideration in an upcoming issue of MedicNEWS. Please include the link to the original story (if there is one) and mention "MedicNEWS" in the subject line of your message.

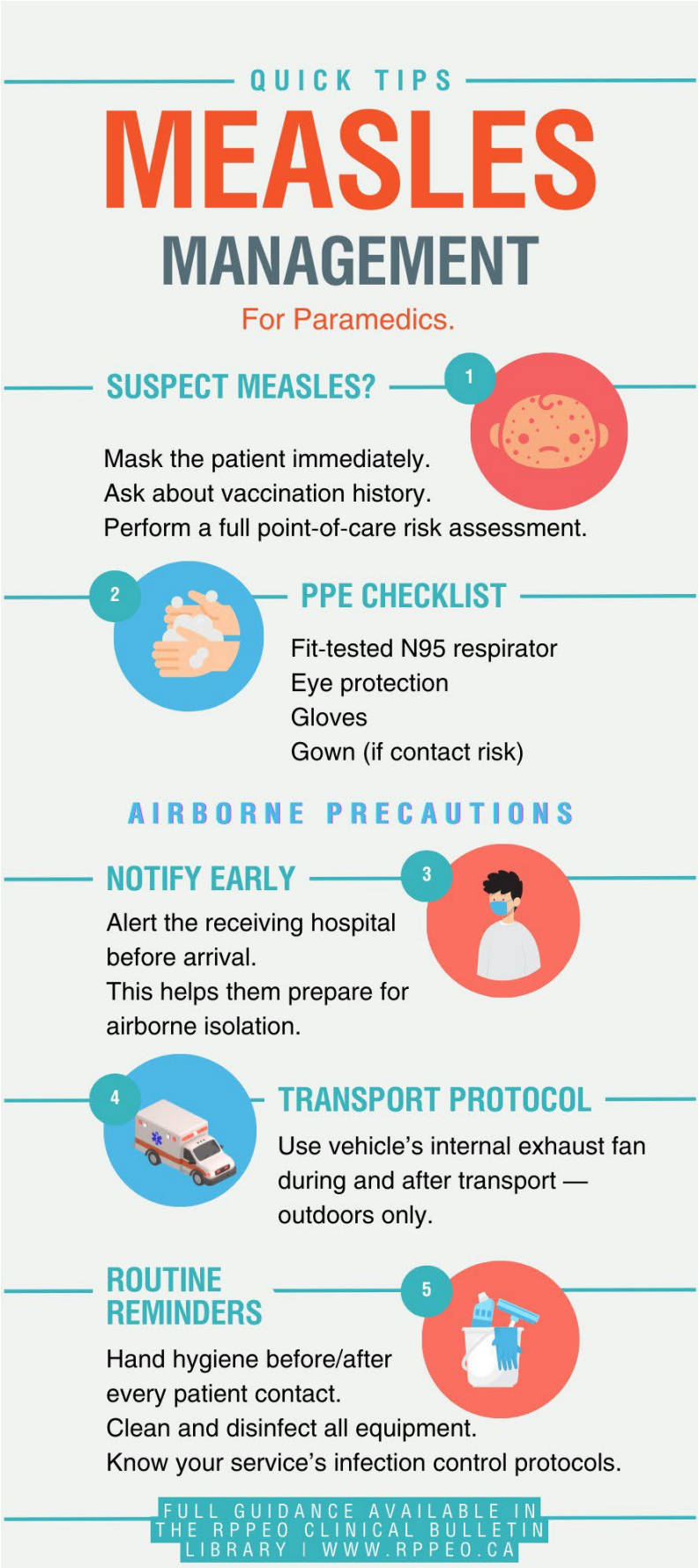
Medical **Direction**

Regional Measles Watch: Stay Alert, Stay Protected

Key Points:

- A few **measles cases have occurred in Eastern Ontario,** notably, some travel-linked cases in EOHU and several in Ottawa. Overall **risk to the public remains low**, but vigilance is warranted.
- **No current outbreaks in Kingston or surrounding areas**, and Leeds-Grenville-Lanark has no reported clusters.
- **Ontario remains in an active province-wide outbreak**, with over 2,200 cases reported. Some regions, mostly in Southern Ontario, continue to report exposure sites and follow-up guidance.

What Paramedics Should Do:



1. Maintain a **high index of suspicion** when encountering patients with fever, cough, rash, or Koplik spots. Initiate appropriate precautions and notify your receiving hospital before arrival.

2. **Inform the ED** when transporting a patient suspected of having measles. The risk is this virus is so contagious that it would spread through the department quickly and potentially even shut down the emergency department.

3. **Check your own vaccination status**—be certain you've had two valid doses of MMR, and follow up on exposure protocols if needed.

4. **Stay aware of potential exposure locations** by regularly checking your local health unit updates and Ontario's "Measles Exposures in Ontario" webpage.

Need more guidance? The **RPPEO Clinical Bulletin on Measles Management** provides in-depth guidance:

🔗 Access the Bulletin in the RPPEO Library

Let's stay informed and ready to respond safely. Your vigilance makes a difference.

Methoxyflurane: **On Hold**

The **methoxyflurane research study is now complete**, and RPPEO has begun evaluating the feasibility of making this analgesic option available again in Eastern Ontario.

At this time, it's important to note that **methoxyflurane is not authorized for use**. With the conclusion of the study, there is currently **no medical directive in place, neither research-based nor MAC-approved,** permitting administration.

RPPEO supports continuing access to methoxyflurane, but several steps are required before it can be reinstated, including:

- Ministry of Health approval, as there is no provincial directive,
- clear Medical Advisory Committee endorsement, and
- sufficient capacity for 100% case audit, which RPPEO is addressing by expanding its ALS audit team.

Recruitment for additional reviewers is underway. Once resources and approvals are in place, RPPEO hopes to reinitiate methoxyflurane use with the same strong oversight that supported its safe administration during the study.

We'll share updates as this work progresses.

BHP Corner: **Where Science Meets Practice**

Bringing you the evolving state of emergency health care, BHP Corner is where RPPEO's Base Hospital Physicians share the clinical science, emerging trends, and real-world challenges shaping paramedic practice across our region.

Managing Anaphylaxis: Pediatric Focus

by Sara-Pier Piscopo

Case Study

You're working on a beautiful Monday afternoon in September and you receive a call that a 5-year-old who just started school may be having an allergic reaction after the class snack period. He is an otherwise healthy child with no home medications other than a PRN Epipen for a peanut allergy. Benadryl was given by the school nurse prior to your arrival and the previously reported hives have now resolved. On your exam the patient looks relatively well with some residual perioral angioedema and is slightly wheezy to auscultation, but all his vital signs are within normal limits. He looks scared and is begging you to not give him any needles. You are 20 minutes away from CHEO and you wonder whether epinephrine is necessary given that his symptoms are improving, or if you can just give him Ventolin for the wheeze.

Two definitions for anaphylaxis:

Definition 1

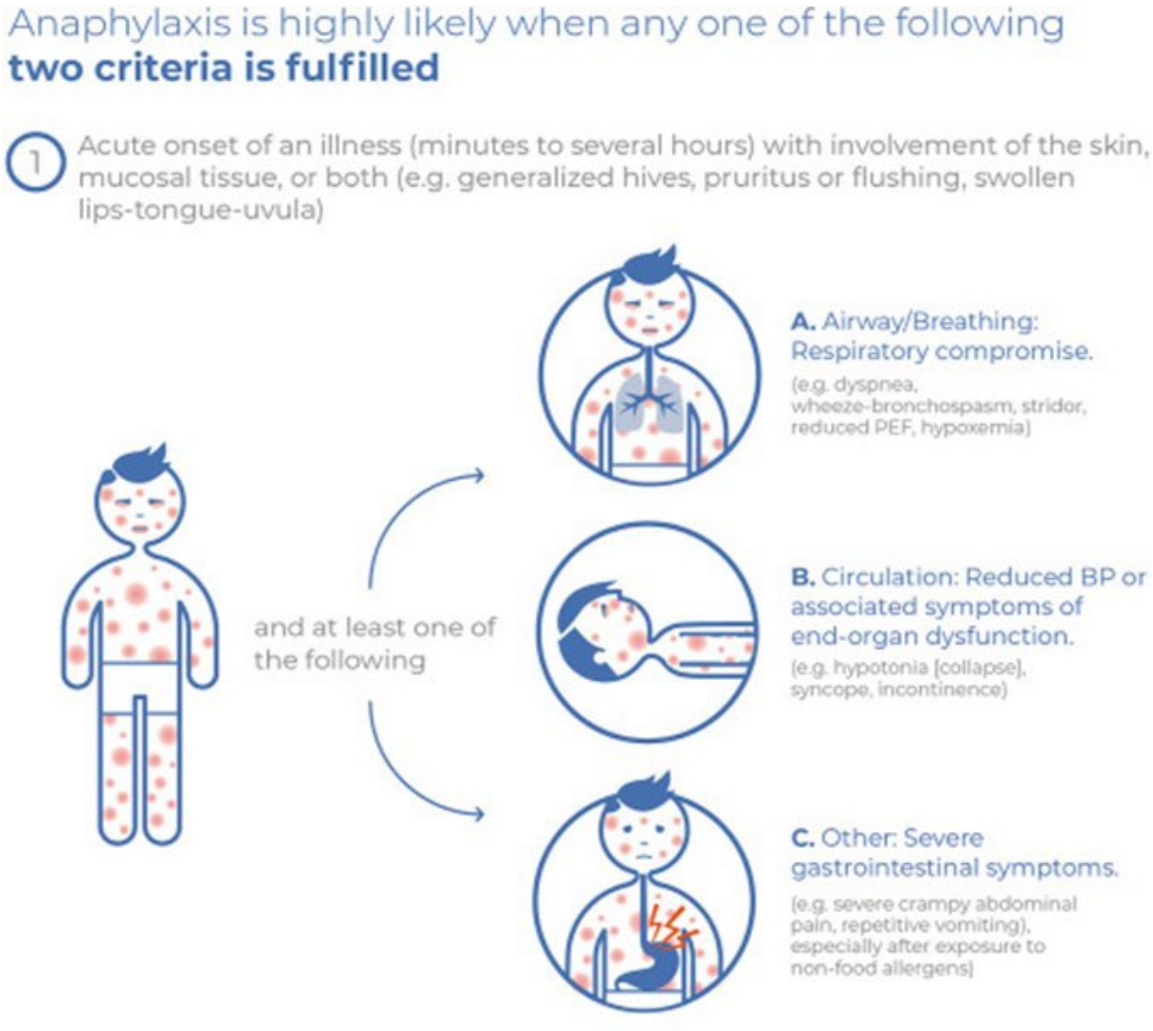
Acute onset of an illness (minutes to several hours) with involvement of the skin, mucosal tissue, or both (e.g. generalized hives, pruritus or flushing, swollen lips/tongue/uvula) and at least one of the following:

- **A. Airway/Breathing: Respiratory compromise** Dyspnea, Wheeze/bronchospasm, Stridor, Reduced peak expiratory flow, Hypoxemia
- **B. Circulation: Reduced blood pressure or associated symptoms of end-organ dysfunction** Hypotonia (collapse), Syncope, Incontinence
- **C. Other: Severe gastrointestinal symptoms** Severe crampy abdominal pain, Repetitive vomiting *(especially after exposure to non-food allergens)*

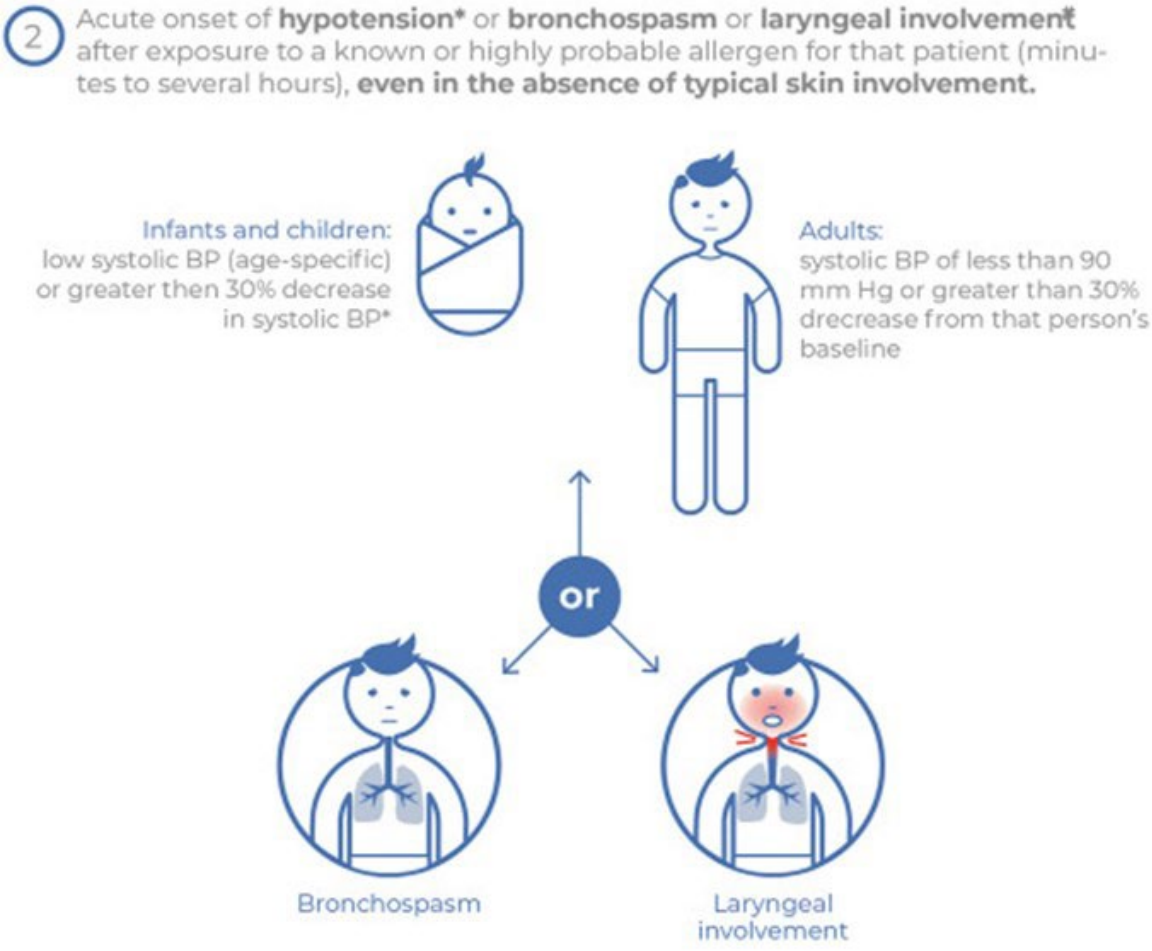
Definition 2

Acute onset of hypotension, or bronchospasm, or laryngeal involvement† after exposure to a known or highly probable allergen for that patient (minutes to several hours), even in the absence of typical skin involvement.

- **Hypotension** is defined as: For **infants and children**: low systolic BP (age-specific) or a decrease of more than 30% from baseline. For **adults**: systolic BP less than 90 mm Hg or a greater than 30% decrease from baseline.
- **Laryngeal involvement†** includes: Stridor, Vocal changes, Painful swallowing (odynophagia)



2 - World Allergy Organization Anaphylaxis Guidance 2020. Cardona, Victoria et al. World Allergy Organization Journal, Volume 13, Issue 10, 100472



PEF, Peak expiratory flow; BP blood presure.

*Hypotension defined as a decrease in systolic BP greater than 30% from that person's baseline, OR
i. Infants and children under 10 years: systolic BP less than (70mmHg + [2 x age in years])
ii. Adults: systolic BP les than < 90 mmHg

Laryngeal symptoms include: stridor, vocal changes, odynophagia.

3 - World Allergy Organization Anaphylaxis Guidance 2020. Cardona, Victoria et al. World Allergy Organization Journal, Volume 13, Issue 10, 100472

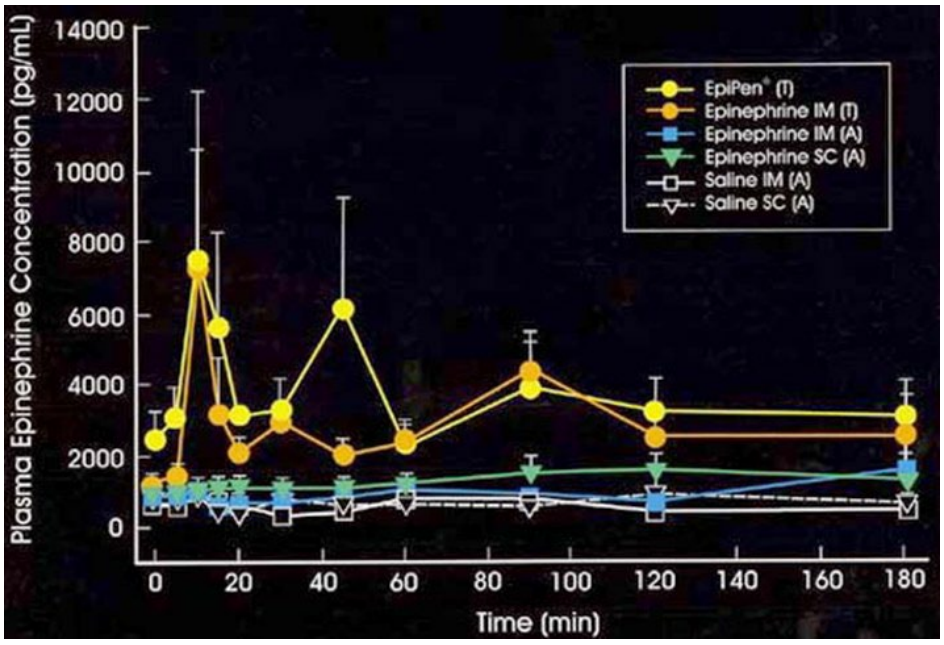
Importance of IM Epinephrine

Currently in Ontario, medical directives for the prehospital management of anaphylaxis list IM epinephrine, IV/IM diphenhyDRAMINE, IV fluids and Salbutamol as the treatments available[i]. It its most recent version of anaphylaxis guidance, the World Allergy Organization continues to emphasize the importance of early treatment with IM epinephrine (0.01mg/kg to a maximum of 0.5mg q5-15min PRN) to help reduce the risk of progression to refractory or biphasic reaction and death. The IV route is *not* recommended due to the risk of induction of fatal arrhythmias[ii,vi].

Epinephrine is the only medication that alters the course of anaphylaxis and can be lifesaving, even if the patient initially appears stable. In addition to vasopressive effects which support blood pressure and relieve laryngeal edema and B2 smooth muscle relaxation effects that treat bronchoconstriction, it suppresses the release of chemical mediators of inflammation from mast cells and basophils which play a role in the progression of anaphylactic symptoms with a concentration dependent effect[i].

"Epinephrine is the only medication that alters the course of anaphylaxis and can be lifesaving, even if the patient initially appears stable."

The preference for intramuscular (IM) administration of epinephrine in the anterolateral thigh is supported by pharmacokinetic studies. IM injections result in significantly faster absorption compared to subcutaneous (SC) administration. In a study by Simons, FE et al., the mean time to reach peak plasma epinephrine concentration in children with anaphylaxis was 8 minutes with IM injection, compared to 34 minutes with SC injection. Furthermore, IM administration produced higher maximal concentrations [iii]. In a subsequent study with adult subjects, Simons, FE et al., reported that IM injection in the anterolateral thigh resulted in a fivefold higher plasma epinephrine concentration compared to IM injection in the deltoid. This difference is likely attributable to the greater vascularity of the vastus lateralis muscle. Notably, neither SC administration nor IM injection in the deltoid produced a significant rise in plasma epinephrine levels compared to placebo (saline) injections[ii]. This is particularly important when we consider the fact that the mast cell stabilization is dose dependent.



4 - Mean plasma epinephrine concentrations versus time are shown after administration of an identical 0.3-mg (0.3-mL) dose of epinephrine by IM or SC injection in 2 different sites. T, Thigh; A, upper arm. Mean endogenous plasma epinephrine concentrations are shown after IM or SC injection of 0.9% saline solution (0.3 mL) in the upper arm. The plasma epinephrine concentrations shown were calculated by averaging (mean ± SEM) the epinephrine concentrations at each sampling time for each route and each site of injection. -F.Estelle, R. Simons, et al. (2001)

What about diphenhydramine's safety?

In 2019, the Canadian Society of Allergy Clinical Immunology (CSACI) published a position statement recommending that newer generation H1-antihistamines should be preferred over first-generation antihistamines due to a superior safety profile as well as evidence for improved potency and efficacy. Common reported adverse events with first-generation antihistamines include sedation, impaired cognitive function, poor quality sleep, dry mouth, dizziness and orthostatic hypotension. They have also been found responsible for fatalities related to accidental or intentional overdoses as well as sudden cardiac death[i]. In addition, there is concern that the use of antihistamines alone may mask symptoms and delay the diagnosis and appropriate management of anaphylaxis. Unfortunately, this shift in antihistamine recommendations is not yet reflected in the Ontario medical directives – for the time being some of your base hospital physicians would advocate against the use of diphenhydramine on route to the hospital so newer, safer antihistamines can be given on arrival to the ED.

Case resolution

In reviewing the symptoms of your patient, you correctly identify that he is suffering from anaphylaxis. You suspect he exchanged snacks with a classmate leading to peanut contamination. You administer a dose of IM epinephrine as well as salbutamol MDI for his wheeze before transporting him to CHEO. On arrival the patient's symptoms have resolved, and he is kept for observation for 2 hours, per the latest TREKK (Translating Emergency Knowledge for Kids) guidelines[ii].

References

[i] Advanced Life Support Patient Care Standards. Version 5.4 EHRAB. Ontario Ministry of Health

[ii] World Allergy Organization Anaphylaxis Guidance 2020. Cardona, Victoria et al. World Allergy Organization Journal, Volume 13, Issue 10, 100472

[iii] F.Estelle R. Simons, et al. Epinephrine absorption in children with a history of anaphylaxis, Journal of Allergy and Clinical Immunology,101:1 (1998); p.33-37

[iv] F.Estelle R. Simons et al. Epinephrine absorption in adults: Intramuscular versus subcutaneous injection, Journal of Allergy and Clinical Immunology,101:5 (2001); p.871-87

[v]Fein, MN et al. CSACI position statement: Newer generation H1-antihistamines are safer than first-generation H1-antihistamines and should be first-line antihistamines for the treatment of allergic rhinitis and urticaria. *Allergy Asthma Clin Immunol* 15:61 (2019)

[vi] 2021-05-27_Anaphylaxis_v_2.1.pdf (trekk.ca)

Dr. Sara-Pier Piscopo is an RPPEO Associate Medical Director and an Emergency Physician at the Children's Hospital of Eastern Ontario (CHEO). She brings deep experience in pediatric emergency medicine and a passion for supporting paramedics in caring for children and families in high-stress situations.

Online Medical Consultation

OMC

Enhancing Collaborative Care

OMC is Growing!

IN OCTOBER, WE WELCOME NORTHWEST REGION PREHOSPITAL CARE PROGRAM PARAMEDIC SERVICES TO OMC

NWRPCP JOINS CPER, HSNCPC and RPPEO to provide telephone support to paramedics in the field

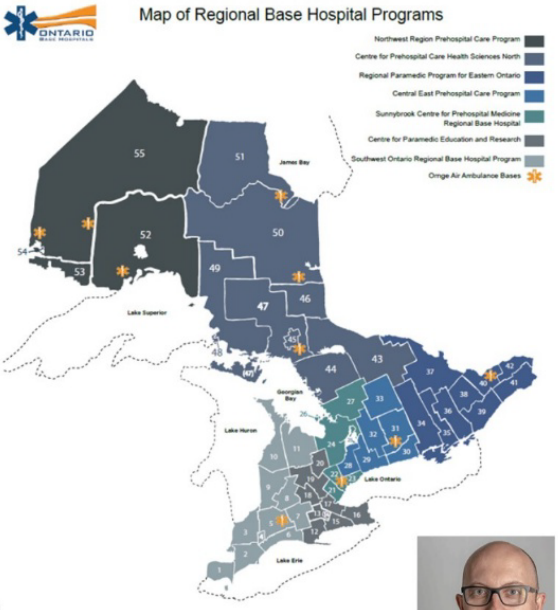
Q: What does Northwest's addition to OMC mean for me as a paramedic?
A: Day-to-day, you will continue to access OMC medical consultation the same way you always have.

Q: Will there be changes to protocols or directives?
A: No. Paramedics continue to follow their region's applicable directives.

Q: Will call wait times increase with more paramedics using OMC?
A: Our commitment to responsive, high-quality consultation remains the same.

Q: Do paramedic services need to establish new contacts with Northwest leadership?
A: No. For operational issues, services continue to work through their base hospital. Northwest leadership will be integrated into existing OMC forums and communications.

Q: Does this mean OMC will continue to expand?
A: We continue to work with other partner base hospitals to explore opportunities for expansion to meet our collective goal of patient centered care and paramedic support.



Please Welcome Dr. David Savage to OMC

As the Medical Director for NWRPCP, Dave will be joining the OMC physician team

Dr. David Savage is an assistant professor at NOSM University, an emergency physician and research director at the Thunder Bay Regional Health Sciences Centre. He is also the site director at ICES North. He is a graduate of NOSM University having completed his MD, family medicine and emergency medicine training in northern Ontario. David also has a PhD from the University of Toronto where he trained in systems modelling and decision making. David's research is focused on emergency department flow, health human resource planning and rural health.

OMC Enhancing Collaborative Care

***"Here to Listen, Ready to Help"* - your partner in patient care.**
Patch anytime —
about your patient, or any clinical question.

Quality & **Patient Safety**

Who Speaks for the Patient?

Why Substitute Decision Makers Matter

by Charlene Vacon

On scene, paramedics often face conflicting voices: a police officer insisting *"we're taking him in,"* a long-term care nurse saying *"she wouldn't want hospital,"* and a family member saying the opposite. In moments like these, who actually speaks for the patient?

Case Study: **Police on Scene**

Paramedics are dispatched to a late-night call outside a bar. A 40-year-old man is sitting on the curb, surrounded by police officers. He has a cut above his eye, smells of alcohol, and appears disoriented but responsive. Police are preparing to take him into custody.

An officer says, *"We're taking him in. You can check him out before we get going."*

In the chaos, it can be tempting to accept the officer's assessment and subtle indication that there won't be ambulance transport. But the law is clear: police cannot refuse care on behalf of a patient. Paramedics must complete a full history and assessment. If the patient is capable, their choice about transport must be respected (1). If the patient is incapable, the paramedics must move to the Substitute Decision Maker (SDM) hierarchy,(2, 3) not defer to police instruction. And, if no SDM is available, paramedics are the advocates who act in the patient's best interest.

Takeaway: Police may enforce the law, but only the capable patient or their SDM can control care decisions. In the absence of an SDM, paramedics act in the best interest of the patient's health if they are incapable of decision-making.

Case Study: **Long-Term Care Facility**

Paramedics are called to a long-term care home for an 87-year-old woman with advanced heart failure who is increasingly short of breath. She is conscious but struggling to speak. Staff gather quickly, and a nurse says, *"She wouldn't want to go to hospital. We'll manage her here."*

Though the nurse knows the patient well, staff are paid caregivers and cannot act as SDMs (2). Paramedics must check the patient's capacity. If she is incapable, the correct SDM, often a spouse or adult child, must be contacted for health decisions. Staff input is valuable, but it is not consent.

Takeaway: Long-term care (LTC) staff may know the patient well, but unless formally appointed, they are not the health decision maker. In Ontario, legislation clearly sets out who can and cannot act as an SDM. Yet in practice, it's often confusing for those of us providing care, and for our patients.

Some paramedics mistakenly believe police can act as SDMs. In LTC settings, staff are sometimes assumed to hold that authority. Both are incorrect, and the consequences can directly affect patient autonomy and dignity. For Ontario, there are methods for recognizing an SDM and a hierarchy when the patient has not appointed someone specific.

The SDM Hierarchy in Ontario

This hierarchy is set out in the *Health Care Consent Act* (HCCA), with the role of "guardian of the person" coming from the *Substitute Decisions Act* (SDA). It provides a strict order of who can act as an SDM when a patient is incapable:

1. **Guardian of the person** (appointed by court under the SDA) (3)
2. **Attorney for personal care** (named in a Power of Attorney document)(3)
3. **Representative appointed by the Consent and Capacity Board (CCB)** (2)

4. **Spouse or partner** (2)
5. **Child (16+) or parent** (2)
6. **Parent with right of access only** (2)
7. **Brother or sister** (2)
8. **Any other relative** (2)
9. **Public Guardian and Trustee (if no one else is available) (4)**

Notably absent from this list: police, healthcare staff, or "the most confident voice on scene."[

If a person has not formally documented their preference for who should act as their SDM, paramedics and other health providers must rely on this legal hierarchy. This is why, when discussing care options, paramedics may ask questions about the nature of a person's relationship to the patient. Clarifying whether someone is a spouse, adult child, sibling, or other relative is not about prying into family dynamics; it is about ensuring that any decision-maker has the legal authority to act.

" the decision-maker must be able to understand the information relevant to the decision and appreciate the reasonably foreseeable consequences " - HCCA test for capacity

The ethical and legal rationale is that a willing SDM must make decisions consistent with the patient's wishes if the patient were capable. The rank-order list is the law's attempt to codify who is most likely to know those wishes. If you suddenly could not speak for yourself, the person best placed to decide would likely be someone closest to you: someone who knows your values, beliefs, and preferences, or someone you appointed in advance. That is why the law includes family and appointed representatives, but not health care providers or police officers.

In practice, the most common SDM's paramedics will identify are a spouse, child, parent, or sibling.

Why Confusion Happens

Paramedics often find themselves balancing two pressures:

1. **Supporting the patient** by finding someone who speaks for them when they cannot.
2. **Getting a clear, authoritative answer quickly,** because time is critical and care decisions can't always wait. In that rush, people who look like authority, such as police officers or LTC staff, may be assumed to have the legal right to decide, even though they do not. A key role of an SDM is to provide **informed consent** (or refusal) for health care when a patient cannot. Obtaining informed consent is a pivotal part of paramedic practice, whether it comes from a patient who is capable or their SDM when they are not.

Informed Consent in Paramedic Practice

In Ontario, valid consent isn't just saying "yes" or "no." Capacity and consent are two distinct requirements:

- **Capacity**: the patient's *ability* to make the decision (can they understand and appreciate the information?). It's the willingness of the patient to go along with the proposed plan. It is only valid if the patient has capacity, it is informed, voluntary, and specific to the treatment. Even the willingness to go along with a plan may not be consent (i.e. not valid) if these factors are not met. The HCCA provides a "test" for assessing capacity: the decision-maker must be able to understand the information relevant to the decision and appreciate the reasonably foreseeable consequences (1).
- **Consent**: the *validity* of the decision (is it informed, voluntary, and specific to the treatment?).

Consent itself must also meet legal requirements. Under the HCCA, it must:

- **Relate to the treatment**: for example, a child can help decide whether they want a cast or a splint if the outcomes are similar, but they shouldn't have the right to decline an IV if they need it just because they're scared
- **Be informed**, which is usually satisfied when the provider explains the nature of the proposed treatment plan, the risks and benefits, including the expected results, and also explains the alternatives, their risks and benefits, including the alternative and risks of no treatment at all.
- **Be given voluntarily**: for example, someone might refuse to go to the hospital under threat of long wait times in the ER - that could be coercive; and
- **Not be obtained through misrepresentation or fraud** (5).

This consent requirement is reinforced in the **Advanced Life Support Patient Care Standards (ALS PCS)**, which state that paramedics must obtain patient consent in accordance with the HCCA before providing care (6).

When No SDM Is Present

Sometimes, an incapable patient has no SDM available, just police, staff, or other authority figures pressing for action. In these moments, the test is simple: *what would be done if those people weren't there?*

- If the patient is capable → their choices stand (1).
- If incapable and no SDM is present → paramedics provide the standard of care in the patient's best interests until one can be contacted (4).
- Police directives or staff preferences cannot override patient rights or paramedic obligations.

What Paramedics Can Do in Practice

1. Reinforce patient autonomy If the patient meets the HCCA test for capacity, their decision must be respected (1). Practical language that's firm and professional:

- *"I hear your concerns, but the patient is capable of making this decision. Our role is to respect their choice."*

2. Manage conflicts with authority figures Remain calm and clear about professional obligations. Practical language:

- *"I am required under Ontario law to follow the patient's decision if they are capable, or the legally identified substitute decision maker if they are not."*
- *"I'll need to complete my assessment and determine capacity before considering any direction."*

3. Follow the SDM pathway when the patient is incapable

- Apply the HCCA test for capacity (1).
- If incapable, seek the legally recognized SDM in the order set out by law (2, 3).
- If no SDM is available, provide care in the patient's best interests until one can be contacted (4).

4. Support the patient and caregiver circle Paramedics can reinforce the value of advance care planning by gently saying things like:

- *"It helps when families know who the legal decision maker is; that makes situations like this clearer."*
- *"Advance care planning means these decisions don't fall to us in the moment."*

The Heart of the Matter: Autonomy and Support

At its core, an SDM respects the patient's values, wishes, and best interests. This, combined with the legal framework in Ontario, means that SDMs are the appropriate decision makers when a patient does not have capacity. Having the right decision maker isn't about bureaucracy; it's about honouring the person's autonomy. Providing the patient or the SDM with adequate information about the treatment, risks, and alternatives creates a fully informed consent discussion.

As a former paramedic working now as an end-of-life doula, I've seen how fragile these moments can be. Paramedics want to do the right thing, but without clear understanding of SDMs, we may mistake authority for consent. The decisions made when a patient cannot speak ripple outward shaping the quality of care, the experience of the care team, and the integrity of the healthcare system itself.

Getting SDMs right is not a technicality. It is about protecting the dignity and humanity of people at their most vulnerable moments.

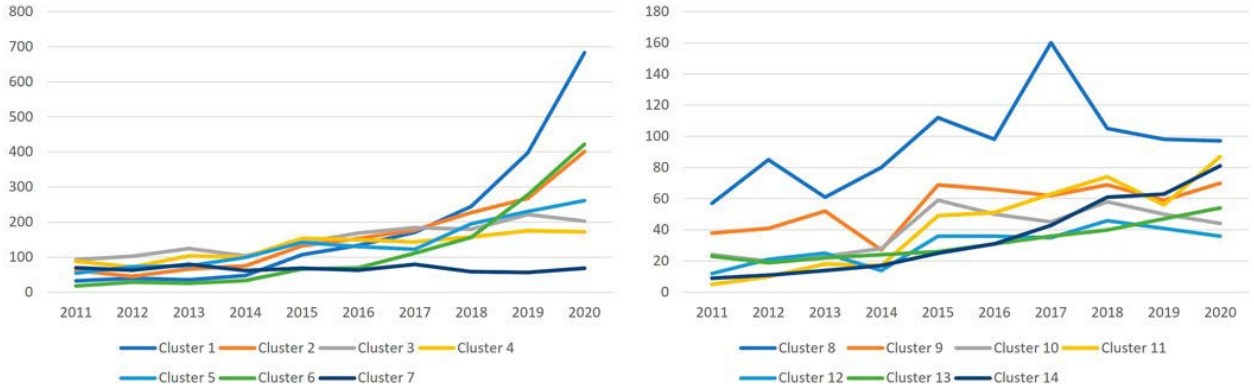
In the paramedic practice setting, where decisions often must be made quickly and under pressure, applying the SDM hierarchy and informed consent rules keeps care both lawful and patient-centered.

References

1. Government of Ontario. *Health Care Consent Act, 1996, S.O. 1996, c.2, Sched. A*, §4 (Capacity definition). Available at: https://www.ontario.ca/laws/statute/96h02
2. Government of Ontario. *Health Care Consent Act, 1996*, §20(1) (Hierarchy of substitute decision makers). Available at: https://www.ontario.ca/laws/statute/96h02
3. Government of Ontario. *Substitute Decisions Act, 1992, S.O. 1992, c.30*, Part II (Guardianship of the Person; Powers of Attorney for Personal Care). Available at: https://www.ontario.ca/laws/statute/92s30
4. Office of the Public Guardian and Trustee (Ontario). Guidance on role when no SDM is available. Available at: https://www.ontario.ca/page/public-guardian-and-trustee
5. Government of Ontario. *Health Care Consent Act, 1996*, §11 (Elements of Consent: must relate to the treatment, be informed, be voluntary, and not obtained through misrepresentation or fraud). Available at: https://www.ontario.ca/laws/statute/96h02
6. Ontario Ministry of Health. *Advanced Life Support Patient Care Standards (ALS PCS), Version 5.3*, March 28, 2024, General Standards, Consent requirements: “Paramedics must obtain patient consent for patient care as per the Health Care Consent Act.” Available at: https://www.ontario.ca/files/2024-03/moh-advanced-life-support-als-patient-care-standards-pcs-5.3-en-2024-03-28.pdf

Charlene Vacon, BA(H), MA, PhD, AEMCA is an RPPEO EMS Specialist focused on culture and communication, and a practising end-of-life doula. She brings together her paramedic training and doula practice to advocate for patient autonomy and compassionate care at all stages of life.

Research **Science**



Paramedic-relevant studies you can use at the bedside and in the bay: clinical care, operations/systems, and professional practice. Canadian context when possible.

You may see some evidence for practises not consistent with our current practice here in Ontario. The purpose of reviewing research is to provoke thoughtfulness, awareness, and exchange of new (and old) ideas. It's also to provide exposure to the process of scientific inquiry and how it can inform current and future practice to improve patient safety and effective care. Where there is any discordance or disagreement with our current practice, the standards in Ontario prevail.

Ten recent research studies to know about!

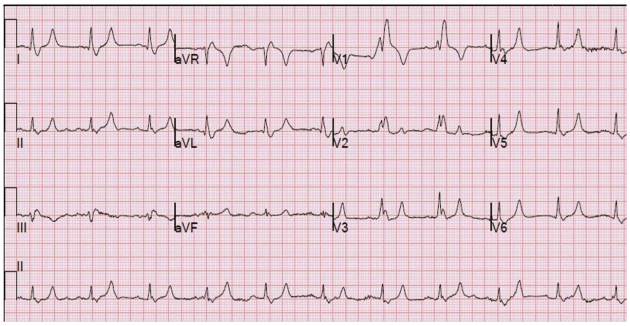
1) Prehospital 12-lead ECG in ACS is linked with lower mortality

Key finding (what the study adds): In a population-level UK cohort of 330,713 EMS-conveyed ACS patients (2010–2017), getting a prehospital 12-lead ECG (PHECG) was associated with lower 30-day mortality (7.1% vs 10.9%, adjusted OR 0.77) and lower 1-year mortality (14.2% vs 23.2%, adjusted OR 0.69). STEMI patients who had PHECG were far more likely to receive reperfusion (adjusted OR 4.37). Despite improvements, ~15% still didn't get a PHECG by 2017.

Paramedic takeaways: Prioritize early 12-lead for any suspected ACS even when busy or in borderline cases. Ensure lead acquisition and transmission workflows are smooth; the gain in timely reperfusion appears substantial. Consider audits for "missed PHECG" cases to close that remaining 15% gap.

Method at a glance: Observational, linked national registry (MINAP) analysis; adjusted comparisons across a very large cohort.

Link: Heart (online first, Sep 10, 2025). PubMed



2) Airway type vs $EtCO_2$ during OHCA: device differences matter for interpretation

Key finding: A secondary analysis of the randomized PART trial found no difference in discrete $EtCO_2$ values between laryngeal tube (LT) and endotracheal intubation (ETI) during OHCA, suggesting ventilation quality may be similar. But the relationship between $EtCO_2$ trajectory and outcomes differed by airway device, meaning $EtCO_2$ trends shouldn't be interpreted the same way for LT vs ETI. ~1,100 cases analyzed.

Paramedic takeaways: Keep using capnography to guide resuscitation, but be cautious about reading the slope/trajectory as a universal prognostic signal: what's "good" or "bad" trend may vary by airway type. Don't assume an $EtCO_2$ rise (or lack thereof) means the same thing with LT as with ETI.

Method at a glance: Secondary analysis of a multi-site randomized trial (PART). JAMA Network Open, Sep 15, 2025.

Link: JAMA Network

3) Admission hypothermia after prehospital RSI: still common, risk factors identified

Key finding: A 15-year, single-centre review of trauma patients intubated prehospital found a substantial prevalence of admission hypothermia (<35 °C) and identified clinical risk factors for arriving cold. Authors highlight intubation as a period of particular thermoregulatory risk.

Paramedic takeaways: Treat normothermia as a critical vital sign during/after RSI: pre-warm, minimize exposure, use heat-retaining covers, warm oxygen/fluids if available, and avoid prolonged scene time with the patient exposed. Document temperature-related findings and interventions proactively.

Method at a glance: Retrospective cohort; level-1 trauma centre; PEC (online first, Sep 11, 2025).

Link: PubMed

4) Invasive arterial lines prehospital: feasible but add ~7.5 minutes on scene

Key finding: In a German EMS implementation study, 108 calls met criteria for invasive BP (IBP); clinicians attempted IBP in 68 (63%) and succeeded 88% of the time. Attempts prolonged on-scene time by ~7.4 minutes, but complication rates were low.

Paramedic takeaways: For carefully selected, critically ill patients (e.g., needing vasopressors/fluids or airway management), a prehospital A-line can meaningfully improve hemodynamic insight—if it won't delay lifesaving care. Build a clear indication checklist and an abort threshold to avoid scene-time creep.

Method at a glance: Prospective, single-center observational implementation over 12 months; SJTREM (published Sep 2, 2025).

Link: BioMed Central

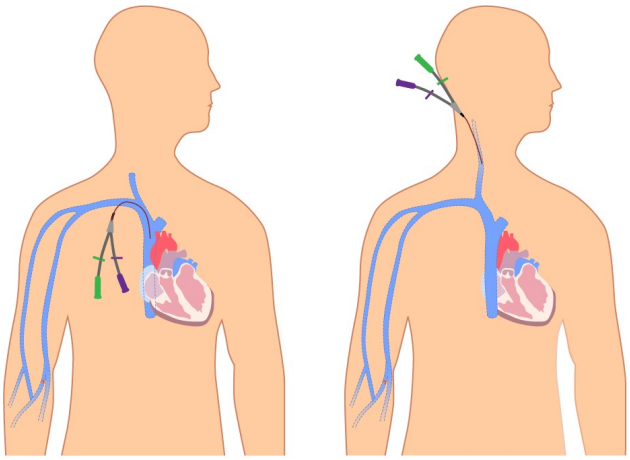
5) "Trauma lines" (large-bore prehospital CVC) in exsanguinating hemorrhage

Key finding: London's Air Ambulance retrospective cohort (2019–2023) reported attempts in 346 patients with exsanguinating trauma; success in 276 (80%). Successful placement enabled more prehospital blood products and was associated with higher survival to ED (54% vs 36%); reported complications were ~4% (malposition, vascular injury, iatrogenic pneumothorax, line colonization).

Paramedic takeaways: For systems with physician/advanced teams, prehospital large-bore central access can be a practical bridge to massive transfusion when peripheral/IO access fails, but it requires tight indications, robust training, and parallel resuscitation to avoid delays.

Method at a glance: Retrospective cohort; Anaesthesia (online ahead of print, Sep 14, 2025).

Link: PubMed



6) Multiple system-wide interventions → faster first compressions & better outcomes

Key finding: In Singapore's national OHCA cohort, six sequential public-health/EMS interventions (e.g., dispatcher-assisted CPR, first-responder apps, PAD expansion, fire-bikers) cut the median time to first chest compression from ~10–11 minutes to ~4–5 minutes across periods and were associated with higher survival to discharge (OR 2.09) and better neuro outcomes (OR 3.06) vs pre-intervention eras.

Paramedic takeaways: Community + dispatch + first-responder programs compound. If your service is weighing "which initiative first," this supports doing many together: bystander training, app-based alerts, dispatcher-coached CPR, PAD density, and high-performance CPR training.

Method at a glance: Secondary analysis of a prospective national registry; Resuscitation (online ahead of print, Sep 12, 2025).

Link: PubMed

7) Willingness to help before EMS arrival is high, but training is rare

Key finding: Along Cameroon's high-injury N3 highway, **~75%** of surveyed adults were willing to render prehospital injury care, but only 5% had any first-aid training; adequate first-aid knowledge (37%) and exposure factors were associated with willingness.

Paramedic takeaways: Community first-responder training fills a real gap. For paramedics or services doing outreach: prioritize high-incidence corridors, pair training with easy reporting numbers/apps, and target adults 30–40 and those with prior exposure since they're especially ready to engage.

Method at a glance: Cross-sectional community survey (n = 449); PLOS ONE (Sep 11, 2025).

Link: PubMed

8) Integrating Community Paramedicine Topics into Degree-Level Paramedic Education

Key finding: A recent study from the *International Journal of Paramedicine* proposes a framework for embedding community paramedicine topics (such as home care, chronic disease management, social determinants) into degree level paramedicine programs. It identifies core competencies, suggested curriculum content, and barriers faculty face. Primary outcome: framework development and expert consensus, not impact on patient outcomes.

Paramedic takeaways:

- Paramedic education programs should assess whether their curricula include community paramedicine content; there may be a need to update syllabi.
- For continuing education or CE hours, consider including modules on chronic care, social determinants, community-health partnerships.

- Faculty and regulators should anticipate resistance or resource constraints (e.g., instructor expertise, placements) and plan accordingly.
- QA metrics might include graduate readiness in non-emergent/community roles.

Method at a glance: Qualitative / framework development; degree programs; international / academic setting.

- Link: internationaljournalofparamedicine.com

9) Paramedic i-gel® Placement and Perception of Use in Prehospital Airway Management

Key finding: In a prospective study of paramedics in LA County, the i-gel® supraglottic airway was successfully placed in ~88% of attempts, with first attempt success ~83%; complications (regurgitation/emesis, hypoxia, dislodgement) occurred in a minority. Paramedics generally rated ease of insertion and ventilation highly. Patient population: adult prehospital respiratory / arrest cases.

Paramedic takeaways:

- Including i-gel® in airway protocols is supported by good success and acceptable complication rates.
- Training should emphasize recognizing and managing potential complications (e.g., regurgitation).
- First attempt success rates are strong; efforts should ensure paramedics maintain skill (simulation, monitoring).
- Document ease, complications, number of attempts.

Method at a glance: Prospective observational study; 102 adult patients, LA County EMS; published recently.

Link: Taylor & Francis Online

10) Comparison of outcomes between successful and failed prehospital advanced airway management (Japanese multicentre registry)

Key finding: Analysis of ~4,474 OHCA patients who underwent advanced airway management showed that failure (SGA or ETI not properly placed) is associated with **lower 30-day survival (2.3% vs 4.4%)**, lower ROSC, and small but statistically significant delays in transport/hospital arrival. However, favourable neurological outcomes at discharge did not differ significantly after matching.

Paramedic takeaways:

- Airway success matters—not only for ROSC and survival, but to avoid delays and complications.
- Protocols, equipment, and training should aim for high reliability in AAM (advanced airway management) success.
- Consider evaluation of decision algorithms for when to attempt ETI vs SGA vs BVM depending on provider skill and case specifics.

- Documentation of success vs failure, times, and outcomes is critical.

Method at a glance: Multicentre retrospective registry; Japan; OHCA patients 2019-21; n=4474.

Link: Lippincott Journals

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