EMS Focus Webinar FAQ: EMS Trends in Trauma Care with a Focus on Crash Injuries & Post-Crash Care

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The following answers are provided by:

- **Gam Wijetunge,** Director, NHTSA's Office of EMS (moderator)
- **Matthew Levy,** D.O., M.Sc., FACEP, FAEMS, Deputy Director of Operational Medicine Associate Professor of Emergency Medicine, Johns Hopkins University
- **Otis Oldman,** EMS Director, Utah Navajo Health System EMS
- **Assistant Chief Robbie MacCue,** Town of Colonie EMS

1. Dr. Levy, regarding pediatric patients, hypotension is a late sign of decompensation. Is there any concern that awaiting true age related hypotension may be waiting too late. Have you considered using the lowest 10% of normal BP for age to catch patients prior to decompensation.

You bring out a great point. I think in time we will be able to enhance and possibly broaden this criteria in a thoughtful way such as you've suggested. Let's connect offline.

2. If I'm interpreting Dr. Levy's slides right - Why was the decision made to not use Life Flow for pediatric patients and use push pull instead?

Yes, you can certainly use a push-pull as you've suggested, in fact, that's in essence what's being done. We elected to use that product as it streamlines the process for both adult and pediatric patients. For us it was a matter of task saturation during often complex prehospital resuscitation.

3. What is the population of the area you cover?

Howard County has approximately 330,000 people.

4. Great work, Dr. Levy. Thank you. Two "Devil's Advocate" questions: 1) EBM supporting TXA now seems weak at best (PATCH-Trauma and Brain-Protect). Is it still justified

empirically? 2) Data are impressive but, as with most/all such series, are anecdotal. A RCT is likely not feasible, but have you looked at historical/case controls to demonstrate REAL benefit using this precious, expensive, scarce resource? Thank you for your work.

Great questions. Re TXA, From a risk/benefit perspective, we have more data to suggest that it's safe from a thromboembolic perspective. There's also data to suggest that those patients who are the most critically ill and who get TXA very early (within the first hour) benefit the most. So, IMO, I think the benefit outweighs the risk. Regarding your second question, I agree that an RCT isn't feasible, yes, we've looked at historical controls but we have to be careful with that interpretation without doing propensity matching, which is being studied now. Re: scarce resource, there's data showing that early blood administration can decrease overall blood utilization. But that said, the bottom line is that these programs can't be wasteful, must be carefully planned, closely overseen and thoughtfully implemented.

5. Dr. Levy, sorry if I missed this, what is the call volume? Impressive coverage area.

I didn't specify too much system criteria due to time, but we do approx 25,000 calls per year.

6. Dr. Levy, Do you make your training available to other agencies?

Yes, we've shared it with others, though it's tailored to our protocols in Maryland.

7. How can we get outcome information to the front line providers?

Exiting ePCR systems / NEMSIS framework and approved partners. Feel free to reach out maccuer@colonie.org and I'm happy to connect with you.

8. For Dr. Levy, a concern often voiced against EMS use of Ultrasound, is prolonged scene time. Do you have any data refuting this concern?

Very insightful question, tough answer. I think it comes down to timing of intervention, distance to definitive care and the clinical question to be answered.

9. How do we improve rural and frontier emergency health care when it is based upon reimbursements? No increase of cellular towers and thus technology access in the field or even calling 911 when you don't have customers in that area. Why place ground and air medical services in areas where the volume doesn't justify them? Our nation's healthcare is based upon payers. How does anything break out of the mold when healthcare is funded like this?

My opinion is that there are funding opportunities, such as SS4A and SMART grants that can see EMS as infrastructure.

*10. Dr. Levy, can we start a conversation (here, or if not here, then soon) about the compelling "hiding in plain sight" risk of a Type-O blood shortage that is already being reported? My suggestion: use a range of patient-centric data resources (beyond the scope of this specific conversation today, perhaps) to identify the patient's **specific blood type** and associated needs. For example, to provide Mobile Medical professionals a heads up if the patient is hemophiliac (etc.) and requires clotting factors and/or if they have the Advance Directive or POLST that you referenced."*

Happy to discuss more offline, the short answer is there is lots of complexity.

11. Dr. Levy, can you provide the links from your presentation.

- https://onlinelibrary.wiley.com/doi/10.1002/emp2.13142
- https://www.howardcountymd.gov/fire-and-rescue-services/whole-blood-program

12. Do you foresee paramedics receiving similar training as mid level providers, such as a PA, to utilize interventions in very rural areas where hospitals are 1-2 hours plus away?

To some degree this is already happening, particularly with the implementation of Mobile Integrated Health Community Paramedicine Programs. Regarding an even broader scope of practice, some agencies have had success with prehospital PAs or Nurse Practitioners. There is value to both strategies and it really must meet the needs of a given EMS agency and the community it serves.

13. Instructing FONA/cric in a refined paradigm at an international level since 2022, the development of pressure-tested deep neural learning & facilitated motor pathway is the key to HALO success.

I believe that readiness, currency and competency in “HALO” High Acuity Low Occurrence procedures and skills requires a commitment from both the agency as well as the individual EMS clinician. This includes agency investment in ongoing training, skills simulations, ensuring clinical opportunities, and a clinician workforce committed to life-long-learning, ongoing skills practice and maintaining awareness of best practices and emerging trends.

14. Are there ceu's for this?

Some state offices of EMS will give credit but we do not have a way yet to do so.

15. *Will this webinar be available later to review?*

Yes, all webinar materials, including the webinar recording, will be available on ems.gov.