

## **Blood on Board: The New Standard of Care Panel**

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Administrator Jonathan Morrison: Good morning, everyone, and welcome to today's FICEMS Blood on Board discussion. We appreciate all of our federal partners, EMS leaders, state and local officials, blood banks, transfusion services, and blood donor center representatives joining us in person and online.

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00:00:31.570 --> 00:00:36.720

Administrator Jonathan Morrison: which is being livestreamed as part of NHTSA's EMS Focus webinar series.

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Administrator Jonathan Morrison: So this is EMS week, and I hope you've had a chance to see the banner hanging over the building's front entrance when you arrived. We are so proud of our EMS community, and we want to be... we want to very publicly recognize the incredible work that you do to help others during some of the worst moments of their lives.

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Administrator Jonathan Morrison: Whether responding to a crash, or helping patients at home, at work, or at school, you are their best chance at survival.

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Administrator Jonathan Morrison: President Ford first authorized this National Week of Recognition 52 years ago to celebrate the vital, life-saving contributions of the EMS community to our nation.

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Administrator Jonathan Morrison: On behalf of Secretary Duffy and the entire United States Department of Transportation, thank you. You are truly American heroes.

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Administrator Jonathan Morrison: Over the five decades since EMS Week was established, so many critical innovations in emergency response has transformed survival rates.

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Administrator Jonathan Morrison: Today's EMS Week event is Save a Life Day, which promotes public awareness of Stop the Bleed, CPR, and other programs.

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Administrator Jonathan Morrison: And this day gives us an enormously appropriate opportunity to highlight one of those transformative innovations: an emerging program that is saving lives in the field, prehospital blood transfusion.

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Administrator Jonathan Morrison: FICEMS has helped educate the EMS community about this exciting innovation.

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Administrator Jonathan Morrison: FICEMS held a prehospital blood transfusion summit about a year ago in DC, which brought together nearly 900 people.

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Administrator Jonathan Morrison: We had leaders in EMS, 911, and public health at the state, local, and federal levels in attendance, as well as scientists, researchers, and clinicians, blood banks and centers, accrediting agencies, and more.

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Administrator Jonathan Morrison: Support from organizations like FICEMS and so many others have helped rapidly establish prehospital blood transfusion programs across the country.

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Administrator Jonathan Morrison: We've seen the number of programs jump from 100 to over 370 in just 2 years.

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Administrator Jonathan Morrison: But with 15,000 EMS agencies nationwide, we are just getting started.

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Administrator Jonathan Morrison: NHTSA is all in on prehospital blood, and I am spreading the word about this at every single event and to every group that I can, because the life-saving potential is incredible.

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Administrator Jonathan Morrison: In fact, it's one of the key parts of NHTSA's new Pathway to Safer Streets initiative, which is our roadmap to saving lives on our nation's roads.

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Administrator Jonathan Morrison: This is the most extensive and comprehensive behavioral safety initiative in NHTSA's history, and I'm proud that post-crash care, and specifically prehospital blood, is one of the eight key strategies.

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Administrator Jonathan Morrison: NHTSA and USDOT are harnessing every tool we have to support new programs and find new funding.

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Administrator Jonathan Morrison: Last year, we partnered with the Department of War's Uniformed Services University to invest \$30 million in setting up at least 25 demonstration projects nationwide within the next two years.

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Administrator Jonathan Morrison: A key focus of these pilots will be researching and collecting data to show the impact of prehospital blood for trauma cases, like those from motor vehicle crashes.

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Administrator Jonathan Morrison: Just before Christmas, we released another \$50 million for transfusion programs as part of the Safer Streets and Roads for All grant program.

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Administrator Jonathan Morrison: Secretary Duffy recently posted the fiscal year 26 Safe Streets and Roads for All Notice of Funding Opportunity. It's now open and closes on May 26, just a few days away. This year, applications that include prehospital blood transfusion capabilities will be more competitive.

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Administrator Jonathan Morrison: We want to see your agencies win this funding, so please take a look at the application process and get yours in soon.

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Administrator Jonathan Morrison: With that, I am honored to welcome the experts joining us today.

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Administrator Jonathan Morrison: Dr. Matthew Levy is a Johns Hopkins School of Medicine emergency medicine professor with first-hand experience implementing blood programs across multiple systems. He is a medical director of the Howard County Fire and Rescue in Maryland, and started his career as an EMS clinician.

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00:04:58.090 --> 00:05:04.690

Administrator Jonathan Morrison: Next, we have Dr. Emily Coberly, the Divisional Chief Medical Officer at the American Red Cross.

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Administrator Jonathan Morrison: She's also the laboratory director of the CTS St. Louis Donor Testing Laboratory, and her interests include prehospital transfusion and O-negative stewardship.

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Administrator Jonathan Morrison: And finally, we have David Long, the Executive Director of the Tidewater EMS Council in Chesapeake, Virginia.

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Administrator Jonathan Morrison: He's responsible for making sure local public safety agencies are all on the same page.

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00:05:28.650 --> 00:05:37.040

Administrator Jonathan Morrison: Whether it's a single ambulance responding to an individual in need, or implementing a successful prehospital blood transfusion program.

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00:05:37.700 --> 00:05:43.670

Administrator Jonathan Morrison: Now, before I ask our first question, I would like to recognize someone special in our audience.

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Administrator Jonathan Morrison: We are joined by Angela Johnson, an Indiana DOT employee who credits Newcastle-Henry County's EMS prehospital blood program with saving her life.

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Administrator Jonathan Morrison: Angela was involved in a very serious crash in July 2024.

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Administrator Jonathan Morrison: And under the guidance of Chief Justin Harrison, she received blood while waiting for Air Medical to land.

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Administrator Jonathan Morrison: We are so grateful that the Newcastle-Henry County EMS had a blood program in place, and we are so happy to have her here today to remind us all of the life-saving potential of each transfusion program.

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Administrator Jonathan Morrison: Thank you, Angela, for joining us today, and for sharing the news about the profound promise these programs have to save lives.

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00:06:34.360 --> 00:06:41.469

Administrator Jonathan Morrison: And we have a short clip to play, for you of the radio traffic from Newcastle-Henry County during Angela's rescue.

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Newcastle-Henry County Radio Recording: We've got a female in her 50s, severe facial trauma ejection. Was semi-responsive, would respond to pain, however, no, purposeful movement.

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Newcastle-Henry County Radio Recording: She is currently intubated with massive facial trauma, pressure is in the 70s, heart rate in the 120s, currently getting 1 unit of whole blood, and we are getting ready to head your way.

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Newcastle-Henry County Radio Recording: Airway secured.

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00:07:16.500 --> 00:07:17.480

Administrator Jonathan Morrison: That's amazing.

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00:07:18.200 --> 00:07:24.940

Newcastle-Henry County Radio Recording: Copy that, we're in the air over Newcastle now, should be less than 5 minutes before our arrival to the scene.

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00:07:33.070 --> 00:07:33.830

Administrator Jonathan Morrison: That's amazing.

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00:07:33.950 --> 00:07:36.460

Administrator Jonathan Morrison: That's the sound of a life being saved.

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00:07:38.910 --> 00:07:48.019

Administrator Jonathan Morrison: Dr. Levy, can you please tell us why it was important for Angela to receive blood from the ground ambulance agency, even though air transport was en route?

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Dr. Matthew Levy: Absolutely. Good morning, and Happy EMS week, and thank you all, and thank you for everything that NHTSA is doing to help make these programs a reality.

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Dr. Matthew Levy: You know, trauma remains the leading cause of death in all age groups. A leading cause in all age groups, and a leading cause for those under the age of 45.

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Dr. Matthew Levy: And when we think about trauma, we think about the preventable cause of death, we think about hemorrhage. And we know a great number of these patients lose their life in that first hour of care, in the prehospital phase, or into their first hour of hospital arrival.

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00:08:16.390 --> 00:08:17.790

Dr. Matthew Levy: And simply put.

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Dr. Matthew Levy: prehospital blood buys us precious time. It buys us time for our EMS and trauma systems to get activated, to get to work,

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00:08:24.920 --> 00:08:40.929

Dr. Matthew Levy: and to keep the body's tissues perfused, alive, and in a state of minimal shock to help prevent worsening of their condition. So, very simply put, it's much more than blood, it's time. And it's giving these patients the time to get to the definitive care they need.

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Administrator Jonathan Morrison: My next question goes out to the full panel: when you think of the prehospital blood transfusion landscape,

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Administrator Jonathan Morrison: what's the most important thing you think our audience should know?

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David Long: Well, thanks for the question, and I guess what I would start with is, when I think about prehospital blood transfusion, I think about it through a very practical lens. Because at a regional level, I live in the gap that's between what's clinically possible and what's financially sustainable.

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David Long: The science is clear, and the outcomes speak for themselves. For patients in hemorrhagic shock, just like Dr. Levy said, time is blood, and blood is time.

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David Long: The earlier we intervene, the better chance the patient makes it to the operating room. But here's the reality. Money is still the biggest barrier. There is no reliable reimbursement for a prehospital blood transfusion.

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David Long: And though an agency can save a life in the field, there's still no clear way for them to get paid for that care, and that is the problem.

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David Long: We've been creative. We've looked at grant opportunities. We were fortunate to receive an Urban Area Security Initiatives grant. We've received a grant from the Commonwealth Transfusion Foundation. We are competing in the SS4A, as well as the Rural Health Transformation grant process.

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David Long: We've received some recognition, so we just received a \$4,000 donation from Antec, who identified some of the work that we're doing, in our community. But those are a bridge; they're not a foundation.

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David Long: So if we're serious about scaling this—and I think you mentioned 15,000 EMS agencies—then we need a sustainable reimbursement model, and that's the conversation we need to have.

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Dr. Emily Coberly: From the blood center perspective, we are seeing that this is a rapidly evolving field. We're seeing lots of growth with new programs that have never used blood products before coming to us, interested in starting blood products for the very first time.

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00:10:43.340 --> 00:10:56.170

Dr. Emily Coberly: And I think what we see is that different programs may have different needs, and it's important to remember that there are different evidence-based options for blood products that could be used.

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Dr. Emily Coberly: There's low-titer O whole blood, red blood cells, plasma, all of which have evidence to support; all of which have different shelf lives, different costs, different flexibility with hospital partners possibly being able to help work with short-date units, and so for each program,

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00:11:13.760 --> 00:11:27.129

Dr. Emily Coberly: it's important that we find the right product, the right amount, and that we get each one set up. These programs have different needs, so we need to be flexible and provide that support to help make sure that we set up each program in a way that's sustainable.

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00:11:29.480 --> 00:11:48.139

Dr. Matthew Levy: I couldn't agree more with my colleagues. You know, I would just add that we know now more in the year 2026 about science and medicine, physiology and resuscitation, than we ever did. EMS has emerged from a you-call, we haul model, nearly 75 years ago, to delivering cutting-edge science and resuscitation care.

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Dr. Matthew Levy: And in that evolution that EMS has undergone,

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Dr. Matthew Levy: one of the things that we realized is that, all of a sudden, the model of,

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Dr. Matthew Levy: we have to get these people quickly to definitive care, which we must do; we now have an opportunity to provide temporizing care to deliver a much more stabilized patient. So, as my colleagues have alluded to, there's financial barriers, there's logistical and implementation barriers. These are solvable when we all come together and work together.

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Dr. Matthew Levy: But the biggest thing as a scientist, as a clinician, as a researcher, as a medical director, and as a dad who wants to know that I'm making the world better for my kids and the next generation, is that we have to continue to study this. We have to continue to study what's working, what's not working,

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00:12:30.310 --> 00:12:40.209

Dr. Matthew Levy: and to learn from what we're doing. Because what we do now is invariably going to look different in 10, 15, 20 years, just like it does from 10, 15, 20 years ago.

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00:12:40.410 --> 00:12:41.180

Dr. Matthew Levy: Thank you.

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00:12:43.320 --> 00:12:47.959

Administrator Jonathan Morrison: I'd like to discuss what prehospital blood transfusion looks like in action.

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00:12:48.560 --> 00:12:51.860

Administrator Jonathan Morrison: Mr. Long and Dr. Levy, you both work for EMS agencies.

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Administrator Jonathan Morrison: Can you tell us about how your agency's prehospital blood transfusion programs?

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00:12:59.270 --> 00:13:13.230

David Long: So, for us, our story started in 2019, and it started with data. And that was a hard look. We saw patients dying from hemorrhagic shock before they ever reached definitive care, and we knew that we needed to do better.

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David Long: We had strong clinical leadership in the region. Dr. Joseph Couture was over at Naval Medical Center Portsmouth, who had background and history of establishing a blood program in North Carolina at Camp Lejeune.

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David Long: We brought the right people in. They were EMS leaders from our community, trauma surgeons. We brought in blood suppliers. But these were not easy conversations to have.

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David Long: This wasn't just a protocol issue; this was a cultural change from how business would have been done, you know, previously.

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David Long: And so while there was skepticism, concerns about logistics, as mentioned, and liability, and support.

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David Long: We got smacked with COVID, and COVID interrupted our momentum, and put us back a year. But when we came back, we still hit the biggest wall, and that was partners we expected to say yes, said no.

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David Long: So, we pivoted, and we found the right partner. And for us, that was the Blood Connection out of South Carolina. They became our blood supplier that helped us identify the yes.

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David Long: So we launched in October of 2022 with a crawl, walk, run model. One agency, one vehicle, and adult trauma only. And at the time, as the science was evolving,

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David Long: we were taking a little bit of a cautious approach. But as we learned rapidly, within the first 6 months, we added a second jurisdiction. Within a year, we expanded to 4 jurisdictions, we included pediatric patients, and then we, also incorporated medical etiology. So,

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David Long: with that, we were watching what our colleagues were doing across the country, and then we quickly added in TXA and calcium, and we chose calcium gluconate as a device that we use. So today, we're currently in 6 jurisdictions, 13 units of blood being carried on the street. We're getting ready to add a seventh

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David Long: in the City of Hampton

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David Long: with an additional 2 units, will put us at 15. And then we have 4 jurisdictions in our rural communities that we are looking to start liquid plasma programs within the next

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David Long: 3 to 6 months.

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00:15:26.520 --> 00:15:44.049

Dr. Matthew Levy: For those not familiar with our EMS system just up the road in Maryland, Maryland's EMS and trauma system really was built out of a trauma model with a definitive process in place to get patients to the best care as quickly as possible using a combination of ground and air medical assets.

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00:15:44.050 --> 00:15:53.549

Dr. Matthew Levy: My community, in particular, where I'm the medical director of—we have a unique, opportunity and challenge in that about half of our community is functionally

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00:15:53.780 --> 00:15:56.030

Dr. Matthew Levy: close enough to drive to a trauma center.

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Dr. Matthew Levy: Whereas we have to think about the time-distance equation, about, will the helicopter coming to the scene take longer or less time to transport the patient?

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Dr. Matthew Levy: And so, when we began thinking in the state of Maryland, from a whole state perspective about how do we provide this life-saving care, blood was initially deployed on our aircraft, through our state police program. But then we realized that from a ground-based EMS perspective, there were patients that still needed this life-saving resource that wouldn't get it because of the time, distance, logistical

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Dr. Matthew Levy: realities of real-world, real-time EMS. So we set forth in Howard County. We chose to use a model where we have 3 EMS supervisors on the road, and we're able to cover the entire county.

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Dr. Matthew Levy: And have that supervisor at any scene within 15 minutes, oftentimes sooner.

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Dr. Matthew Levy: So we use that model for other life-saving interventions as well, advanced specialty airway training and some other cutting-edge procedures. In that context, it was a natural fit that we would deploy our blood program through that model, and that's worked exceptionally well, and has become a template for pretty much the rest of the state's EMS system. I'm very proud to announce that as of

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Dr. Matthew Levy: This week, we have now 10 EMS programs in the state of Maryland at the ground level that are delivering blood products and more following. So the answer is, very simply put, it's an amalgamation, as you heard my colleagues say, of applying the right solution set

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00:17:19.369 --> 00:17:37.080

Dr. Matthew Levy: to the right resource at the right time. Not every ambulance should have blood on it. That's just not logistically possible. There is not enough blood to go around. Blood is the most... one of the most precious commodities we have. So we have to be very thoughtful about how we do this. We have to be evidence-informed, data-driven, and we have to... we have to work

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Dr. Matthew Levy: I think both collaboratively, but also we have to solve... we have to keep our eye on the problem we're trying to solve.

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Dr. Matthew Levy: Now, I know we're here to talk about trauma, and we're here to talk about transportation, but I would be remiss if I didn't mention that our experiences locally have been nearly half of the patients we give blood to are for medical conditions as well.

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Dr. Matthew Levy: and those medical conditions, medical emergencies, GI bleeds, obstetrical hemorrhages, a variety of those things. And those conditions, getting these patients as stabilized as possible has a profound impact, not just for the individual patient, but for the system of care, for our trauma readiness, for our mass casualty readiness. The more we do this, the more facile we are at doing it.

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00:18:15.680 --> 00:18:18.979

Dr. Matthew Levy: And the better and more ready we are for any emergency any day.

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00:18:20.860 --> 00:18:22.160

Administrator Jonathan Morrison: Just as every...

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00:18:26.150 --> 00:18:29.410

Administrator Jonathan Morrison: We'll trade. We'll go back and forth. All right.

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00:18:30.190 --> 00:18:39.319

Administrator Jonathan Morrison: Just as every EMS agency is unique, so is each agency's transfusion program. I'd love to hear more about the different types of programs across the country.

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Administrator Jonathan Morrison: For example, do you do blood drives or partner with a local blood bank? Do you work with your police departments and other first responders? And how do programs in rural areas differ from urban or suburban ones?

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00:18:53.660 --> 00:18:59.639

Dr. Emily Coberly: I can jump in on this one. We are seeing, just as you said,

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Dr. Emily Coberly: you know, a lot of different models for the way that these programs are being implemented. We're seeing programs choose different products that are the right product for them.

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Dr. Emily Coberly: There are some programs that are partnering with hospital blood banks and getting blood products through those blood banks; some that are partnering directly with the blood collector and getting blood that way; and, sometimes transferring short-date products to the hospital. There are different

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00:19:26.380 --> 00:19:42.320

Dr. Emily Coberly: needs and different challenges in all the different geographies, and so, there really is not a one-size-fits-all model, I would say, and we need to be flexible to adapt and work with each program to figure out what is the right model, and the right product, and the right

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Dr. Emily Coberly: way to get this program set up so that it can be successful and sustainable.

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David Long: I think for us, the, if you looked at Tidewater, the thing that probably jumps out to most—or at least what I received the most phone calls on—is that our approach was not a single agency model, but as a regional model. So once we established a regional model, we were able to spread that across

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00:20:04.880 --> 00:20:21.359

David Long: the eastern region of Virginia, which is, an area that is just over 5,000 square miles, 26 jurisdictions, 19 hospitals with 7 trauma designated trauma centers, and etc. And, you know, and from that, I think what we see is that

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David Long: our emphasis is that zip codes should not determine access to blood, right? So our rural communities, when we get into our counties that are those 45 minutes or longer in transport times, who might have challenges with air medical transport, things of that nature, we're trying to ensure that

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00:20:41.420 --> 00:20:59.000

David Long: even if we have to step this in the context that a rural agency is able to administer liquid plasma, intercept with an agency that's carrying whole blood, and, you know, again, step them, in a right time sequence. We look at our risk

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00:20:59.000 --> 00:21:15.039

David Long: from a... beyond day to day. Yesterday was an interesting day. We transferred 6 units of blood yesterday within the region, including a double stabbing, right? So we're seeing greater survival from things that used to lead,

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David Long: you know, to homicide, now are just injured patients. Our mass casualty approach is now allowing us to put APRUs, which are a specific type device that'll carry 4 to 6 units of blood, in the prehospital space for mass casualty purposes to improve

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00:21:32.700 --> 00:21:46.549

David Long: our response to those matters. But I think when you talk about this in that holistic sense, we couldn't do this without our hospitals, particularly our trauma centers. We have the Hampton Roads

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David Long: Fire Chiefs Association, as well as the Hampton Roads Chiefs of Police, that come together and have conversations about how to improve access, how to support grant initiatives, things like that.

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David Long: And then we target, with our blood supplier, monthly blood drives. We're currently occupying space in 8 months out of the 12, and our goal is obviously to get, to every 12 months that we're conducting, multiple blood drives.

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Dr. Matthew Levy: To continue that theme, I would just like to focus on how do we not only bolster and ensure stability in our blood supply, because this only works if we have a reliable

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Dr. Matthew Levy: and robust blood supply system in the country.

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Dr. Matthew Levy: EMS systems, nearly every one of those 370 systems that you mentioned, sir, are actively engaged in some form of blood stewardship program; blood supply, blood donation, things like that. Locally, at my level, when we implemented our program in Howard County, it was very important to me that we be models for good stewards of blood supply. We were fortunate enough to work with a blood supplier that would allow us to rotate our blood back at the—

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00:22:55.370 --> 00:23:14.619

Dr. Matthew Levy: very early on, so they can then rotate it through the hospitals. And that's a heavy lift. That doesn't happen easily, and that requires a lot of background discussions and policy to make that happen. So eliminating those policy barriers, those regulatory barriers, and ensuring latitude to do so is very important.

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Dr. Matthew Levy: We set forth to build a zero-waste program. So, in fact, we consider our relationship with our blood suppliers more like a long-term loan supplier, right? So that we are borrowing the blood.

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00:23:28.960 --> 00:23:39.670

Dr. Matthew Levy: And if we give it back, and it can get used so that we are taking possession of something that isn't ours, but belongs to humankind.

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00:23:39.670 --> 00:23:58.689

Dr. Matthew Levy: Right? And so with that comes a responsibility to preserve it, to maintain it in a robust cold storage chain, and to return it in a condition that others can use it. And that mantra has really, really resonated in building that model of a zero-waste system. Not all systems have the ability to do that. That's a whole other panel discussion.

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00:23:58.690 --> 00:24:14.680

Dr. Matthew Levy: But what I would say is it is important, as we look at how we take these things to scale, that we look at ways to ensure that the blood supply can be strengthened. I'm proud to say that the EMS systems in Maryland that have transfused blood have, on orders of magnitude,

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00:24:14.680 --> 00:24:27.119

Dr. Matthew Levy: participated in blood drives that have donated and generated more blood product, by orders of magnitude, than they have used. And I think that's an important step, an important way that we look towards taking this to scale.

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00:24:27.120 --> 00:24:42.339

Dr. Matthew Levy: There are models around the country, our colleagues in San Antonio, who pioneered much of this work, had come up with the Heroes in Arms model, using members of the public safety community, to help them, to decrease barriers and allow them to donate blood.

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00:24:42.340 --> 00:24:48.760

Dr. Matthew Levy: So blood donation is absolutely important, and it's super awesome to walk past the hallway here and see a blood drive right outside this room today.

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00:24:48.760 --> 00:25:00.450

Dr. Matthew Levy: So that's one thing I would say. The other thing that I would say is that, you know, you heard David mention this earlier, which is that, you know, we look to see what others are doing and how we can improve.

133

00:25:00.450 --> 00:25:11.859

Dr. Matthew Levy: So this is a journey, it's an evolution. I've learned things from David's program, he's learned things from my program. Emily and I talk about national data and models and things like that. We're all in this together.

134

00:25:11.880 --> 00:25:27.309

Dr. Matthew Levy: And that concept, that theme, is so important, because EMS is really, at the national level, it's a patchwork quilt of best practices, best evidence, and science, stitched together by local implementation and local

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00:25:27.330 --> 00:25:36.320

Dr. Matthew Levy: variables. And so, we need to take that, and we need to empower our communities in order to do this, and do it at scale.

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00:25:37.690 --> 00:25:56.839

Dr. Emily Coberly: Can I just add, too, thank you so much to all your programs for supporting blood drives and giving back to the blood community. I think that is so very important, and EMS programs have generally very strong ties to the local community, and so when you sponsor a blood drive and ask the community to

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00:25:57.200 --> 00:26:13.579

Dr. Emily Coberly: come in and make that donation, it means a lot. And you have a way of having the message really resonate with the community that is very powerful. So, I think that's really, on behalf of all blood suppliers, I'll just say that that's so important, and thank you so much for your efforts on that.

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00:26:14.050 --> 00:26:21.460

David Long: And if I can, I'll jump on Dr. Levy's comment. So, I think behind money, probably one of the...

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00:26:22.820 --> 00:26:25.939

David Long: it may not be the second most, but I'll call it that.

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00:26:26.050 --> 00:26:31.510

David Long: A common reason that people, don't implement programs is

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00:26:31.710 --> 00:26:37.439

David Long: because of concern of wasting blood, and not having a solution to what happens, you know, with the blood.

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00:26:37.640 --> 00:26:47.080

David Long: And I think that's an important consideration, right? And so we were very fortunate. We established a very special relationship with Naval Medical Center Portsmouth.

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00:26:47.080 --> 00:27:05.250

David Long: who agreed to take our short-dated blood, so on day 14, they get anything that we haven't used. And we were able to confirm just recently at a regional trauma advisory committee meeting with our trauma centers that they use all the blood that we give them, and that nothing's been wasted. So, when you think about, nearly a 4-year relationship.

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00:27:05.430 --> 00:27:09.870

David Long: We've been able to put that back into the community and still affect outcome.

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00:27:09.870 --> 00:27:30.169

Administrator Jonathan Morrison: That's fantastic. It is something we hear quite a bit about, the concern with wasted blood, and to know that you've had zero-waste programs implemented. It's something we'll make sure to pass on. And I was very excited to see that, you know, we were able to put on a blood drive that I am pleased to announce was oversubscribed, which is fantastic. I hope we'll do more of this at USDOT.

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00:27:31.690 --> 00:27:38.269

Administrator Jonathan Morrison: Dr. Long, Dr. Levy, could you speak about any setbacks or challenges you've had to overcome to successfully launch your blood programs?

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00:27:42.680 --> 00:27:59.700

Dr. Matthew Levy: You know, what was fascinating to me is, as we began to plan the implementation of the program, was not a lack of confidence in necessarily people wondering about, is the idea of value? Everyone was like, oh, that makes a lot of sense, we should do this.

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00:27:59.950 --> 00:28:11.420

Dr. Matthew Levy: But there was a lot of question about the details. And the details really do matter. And there were a variety of conversations and...

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00:28:11.420 --> 00:28:22.929

Dr. Matthew Levy: I would say discussions that happened to ensure that the community had the... I mean the healthcare community had the confidence in our ability to do this from a logistical and operational perspective.

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00:28:23.050 --> 00:28:32.990

Dr. Matthew Levy: One of the best-kept secrets about EMS is nobody does health logistics the way we do in EMS. We do logistics really, really well.

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00:28:32.990 --> 00:28:56.130

Dr. Matthew Levy: And so the logistics wasn't the barrier. Establishing and maintaining a cold chain, once we had the right tools in place, the rest fell in. We do mobile implementations for controlled substances and a variety of other life-saving resources. So that wasn't the challenge. The challenge is really more so ensuring precision and accuracy. See, prehospital blood programs are resuscitation programs by default.

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00:28:56.130 --> 00:29:15.359

Dr. Matthew Levy: By design. And we have to think about them as resuscitation programs, right? And so when we think about them that way, we have to ensure that we are applying the right resuscitation resource at the right time. And it turns out that that took a little bit of a frame shift, right? So what historically many of the EMTs and the paramedics listening had learned about

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00:29:15.360 --> 00:29:29.049

Dr. Matthew Levy: airway being the very first thing we have to fix on a severely traumatized patient, and there are times when airway has to be fixed immediately. What we then learned is that, wait a minute, if we control that life-threatening bleeding first, and we restore perfusion,

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00:29:29.620 --> 00:29:39.810

Dr. Matthew Levy: the airway takes care of itself, because the patient starts to perfuse their brain better, and they can protect their own airway. So there was... there were both inward and outward challenges, but above all, it was a philosophical shift.

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00:29:40.010 --> 00:29:54.610

Dr. Matthew Levy: Alright? Just like the answer of, well, we're 5 minutes from the hospital, we're just gonna get to the hospital, and they'll get blood there. Well, as someone who has worked in a hospital for over a quarter of a century, I can tell you that you're never 5 minutes from the blood.

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00:29:55.010 --> 00:30:04.660

Dr. Matthew Levy: And so we had to frame shift that. That adjustment took some time. So... so while there are big picture barriers, we have to think about that

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00:30:04.700 --> 00:30:12.839

Dr. Matthew Levy: final stage of, from a human factors perspective, of how do we empower our EMS clinicians to utilize this resource properly?

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00:30:12.840 --> 00:30:37.259

Dr. Matthew Levy: And to get it. And, you know, the other thing I would say, having started off as a BLS person who then became a paramedic, who then became, obviously, a medical director, is that we can't forget about the important roles that our EMTs have in this process. Our BLS clinicians are absolutely the backbone of our EMS system. You mentioned it being Stop the Bleed Day as well, that's incredibly, incredibly important. But we have to not only stop the bleed, but now we have to fill the tank, and that's

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00:30:37.260 --> 00:30:39.190

Dr. Matthew Levy: That's really what we're talking about. So, thank you.

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00:30:40.470 --> 00:30:45.210

David Long: Yeah, not a lot to add to that. I think the

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00:30:45.300 --> 00:31:05.170

David Long: issue that we talked about earlier, again, about that change in culture is a—it can be a substantial thing to overcome. You know, a lot of our providers have 20-plus years' history of doing things a particular way, and now the science is indicating that, hey, there's a change, and you need to, you know, essentially accept that change.

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00:31:05.170 --> 00:31:16.349

David Long: And then that leads, you know, to the conversation that I think is most important, and that's the leadership that you have available to you, you know, to manage some of those difficult conversations, because

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00:31:16.360 --> 00:31:27.010

David Long: any program that attempts to establish is going to run into challenges that have to be...and or obstacles that have to be overcome, and those are going to vary.

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00:31:27.010 --> 00:31:39.829

David Long: One may be, you know, again, out front financially: we just don't have the financial capacity to do it. The second may be, again, that moral and ethical concern about, do... is this blood product wasted?

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00:31:39.890 --> 00:31:45.329

David Long: But I can guarantee you this, that once you effectively implement an effective program,

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00:31:45.440 --> 00:31:53.469

David Long: it won't take you, but maybe the first or second administration to hear feedback, not only from the providers

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00:31:53.600 --> 00:32:04.740

David Long: who saw how that affected and impacted, that patient. But as you start tracking your data and see that 73-78% of the folks are surviving to discharge.

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00:32:04.840 --> 00:32:15.949

David Long: Our data over the 4 years basically indicates that if you survived the first 24 hours, you know, from the point that transfusion was given by EMS, 92%, survived a discharge.

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00:32:16.100 --> 00:32:32.810

David Long: Those are pretty, remarkable, you know, numbers. But they're consistent across the country, right? I think that's the message that we want to convey, that it isn't a, what did we do here, or what did they do there? It is, the science has indicated that this is the change, this is what's coming.

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00:32:33.300 --> 00:32:45.199

David Long: And for us, I think what, going forward, it's gonna look at the continued impacts, things like artificial intelligence and what role that's going to play. Drones.

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00:32:45.270 --> 00:33:00.000

David Long: Well, a lot of people don't want to talk about drones in the medical space. Drones delivering blood product, pharmaceuticals, you know, AEDs, whatever that may look like, has a role. How do we get there, and how do we get there faster?

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00:33:01.060 --> 00:33:13.589

Administrator Jonathan Morrison: That's fantastic. Dr. Coberly, what are some of the biggest challenges that blood partners are seeing in this movement to deliver blood sooner, to the point of injury, and how can public safety and the blood community best collaborate?

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00:33:13.970 --> 00:33:24.379

Dr. Emily Coberly: Yeah, so I would say, starting new partnerships can be a challenge. This is a culture change, and it's new for

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00:33:24.380 --> 00:33:34.270

Dr. Emily Coberly: hospital blood banks to be in this role. These are new relationships, and so that sometimes does come with challenges, and it can take time to build trust.

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00:33:34.280 --> 00:33:47.870

Dr. Emily Coberly: Hospital transfusion medicine services, blood banks, have valid worries about safety and properly storing the blood products at the right temperature and handoffs

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00:33:47.870 --> 00:34:00.810

Dr. Emily Coberly: between EMS and to the hospital that are challenges that aren't just, you know, immediately solved. They're things that have to be worked through. But I think it's so important to try

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00:34:00.810 --> 00:34:12.340

Dr. Emily Coberly: and to have those conversations. When we have kind of a partnership with... a three-way partnership with EMS, hospital transfusion services, and blood suppliers,

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00:34:12.340 --> 00:34:21.689

Dr. Emily Coberly: I think there's value and expertise that's added by that hospital partnership when that's something that's available for your geography.

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00:34:21.739 --> 00:34:44.269

Dr. Emily Coberly: And so it's something worth working towards, but it's not automatic and not easy, and so I'd say that has been a challenge. Another challenge is, many hospitals are concerned about how giving blood products in the EMS prehospital setting may impact the larger blood supply, and the blood supply for patients in hospitals specifically.

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00:34:44.270 --> 00:34:51.200

Dr. Emily Coberly: So, our conversation earlier about EMS supporting blood drives is so important, and that helps to reassure hospitals

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00:34:51.199 --> 00:34:58.310

Dr. Emily Coberly: there's a bit more of a nuance there that EMS programs, because we're not doing blood type testing,

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00:34:58.310 --> 00:35:03.090

Dr. Emily Coberly: you're only able to use Group O, universal red blood cell products.

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00:35:03.440 --> 00:35:11.840

Dr. Emily Coberly: And hospitals, also have a high demand for Group O, and so it's beyond, just, collecting general blood

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00:35:11.840 --> 00:35:28.070

Dr. Emily Coberly: units of blood, but there's also a tight mix challenge that we need specifically more Group O products. And, and I think this is something that we need to work more with hospitals on, and to help them understand it from the blood supplier perspective.

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00:35:28.170 --> 00:35:50.329

Dr. Emily Coberly: We are confident that we can meet the needs of prehospital blood programs and hospital programs. We have already implemented operational changes and are continuing to work on ways that we can balance that tight mix and ensure that we've got plenty of blood for all patients that need it in all locations.

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00:35:50.330 --> 00:36:08.280

Dr. Emily Coberly: But I do think there's some work to help get this message across to all of the involved parties, and to continue to share the ways that we are making these changes to make sure that there's plenty of blood for everyone.

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00:36:11.210 --> 00:36:19.930

Administrator Jonathan Morrison: And our last question: let's look to the future. Where are we headed nationally, and what's still needed to expand even further?

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00:36:22.040 --> 00:36:29.229

David Long: Well, I would say that right out of the gate, you have to admit that the future's bright, right?

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00:36:29.410 --> 00:36:32.600

David Long: But, again, going back to that...

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00:36:33.560 --> 00:36:42.920

David Long: almost piercing type of honesty, right? To expand this from 370 to 15,000, there's a lot of work to get done.

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00:36:42.920 --> 00:36:54.179

David Long: And part of that important work is how do we, you know, whether, legislatively or through policy, you know, affect those things that can have that broad, sweeping, you know, impact.

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00:36:54.260 --> 00:36:57.800

David Long: So while we're still early in this journey,

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00:36:58.750 --> 00:37:10.470

David Long: it's in good hands, because there are the right people, like Dr. Levy and Dr. Coberly here, that are making sure that the pieces, the parts, and etc. are accessible, available.

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00:37:10.470 --> 00:37:20.559

David Long: And, the science and the research essentially continues to indicate that we can do better caring for those that are truly suffering from hemorrhagic shock.

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00:37:20.780 --> 00:37:34.410

David Long: So, that policy catch-up, we leave that to you, and we are supporting you, in that process. But I think it's when we look at people like Angela, who's here today, she's exactly why this matters, right?

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00:37:34.830 --> 00:37:47.390

David Long: For every unit of blood, for every program, for every decision, it's a life that gets another chance, right? And we already know that it's just a matter of how we build the system.

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00:37:49.320 --> 00:38:01.520

Dr. Emily Coberly: Yeah, I think, I agree, the future is bright, and I think we are, as I said, confident that these challenges can be overcome. We do all have the same ultimate goal.

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00:38:01.520 --> 00:38:25.759

Dr. Emily Coberly: We want to save patients' lives, and that goes for blood centers, hospital blood banks, EMS programs. So, as long as we remember that we have a shared vision and ultimate outcome, I think we can build the trust and the collaboration and expand these programs in a way that is sustainable and minimizes wastage and costs.

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00:38:25.760 --> 00:38:29.639

Dr. Emily Coberly: And as long as we are all working together, keeping our eye on the end goal.

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00:38:31.620 --> 00:38:33.540

Dr. Matthew Levy: Well, it's hard to top that.

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00:38:34.000 --> 00:38:41.270

Dr. Matthew Levy: You know, we stand on the shoulders of giants in EMS: the visionary leaders from

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00:38:41.400 --> 00:38:58.269

Dr. Matthew Levy: 50-plus years ago through those in recent times, who have had an idea, taken a chance, sometimes they're right, sometimes we're not right, and then learned from it and implemented it broadly. So, the future is absolutely bright. We know

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00:38:58.450 --> 00:39:06.940

Dr. Matthew Levy: what people need to survive. We know how to do it now. The 370 plus programs that are doing this around the country have

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00:39:07.370 --> 00:39:13.029

Dr. Matthew Levy: paved that way for us. We don't have to reinvent that wheel. The challenge now is taking this to scale.

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00:39:13.430 --> 00:39:24.700

Dr. Matthew Levy: And you've heard, and Angela, it is an honor to sit in a room with you. We're here because of you, and all the people who we hope to improve outcomes for.

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00:39:26.120 --> 00:39:27.540

Dr. Matthew Levy: But I have to tell you:

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00:39:27.870 --> 00:39:32.759

Dr. Matthew Levy: Blood programs not only save patients. They save EMS clinicians, too.

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00:39:34.010 --> 00:39:35.510

Dr. Matthew Levy: EMS is not easy.

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00:39:35.890 --> 00:39:38.120

Dr. Matthew Levy: It is a very hard profession.

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00:39:38.330 --> 00:39:51.070

Dr. Matthew Levy: It is under-resourced, it is underfunded. They are oftentimes treated differently than other members of the healthcare and even first responder communities. So we have a real challenge there.

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00:39:51.350 --> 00:40:04.010

Dr. Matthew Levy: And these blood programs, by giving our heroes and our lifesavers the resources they need to save lives, it not only resuscitates the patient, but it also resuscitates the EMS system.

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00:40:04.010 --> 00:40:18.100

Dr. Matthew Levy: And it shows what these systems are capable of doing. So to all of our EMS clinicians in the room, not only happy EMS week, but we will continue, whether we are on the blood supplier side, the system administrator side, the medical director side, we will continue to work

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00:40:18.200 --> 00:40:37.470

Dr. Matthew Levy: as hard as we can to provide you with the best information, resources, and research and evidence we have to help you save more lives, because we thank them for what they do every day. This only works because of the people. Chief, you, your colleagues, the people who are answering that call in the middle of the night, in the middle of the rain, in the middle of the snow.

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00:40:37.560 --> 00:40:45.079

Dr. Matthew Levy: And so that's why we're here, and that's what the future is, and doing more of this, and I hope we get to do more of this in the future. So thank you, sir.

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00:40:45.870 --> 00:40:49.320

Administrator Jonathan Morrison: Well, let's give a round of applause for this incredible panel.

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00:40:54.620 --> 00:41:05.190

Administrator Jonathan Morrison: I know I learned quite a bit from these experts. You know, the unique challenges that individual agencies have, and how you have to navigate these, this

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00:41:05.340 --> 00:41:18.079

Administrator Jonathan Morrison: transfer of, you know, initially applying plasma, meeting another, ambulance, en route to apply whole blood product, the need for training, technicians to really

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00:41:18.350 --> 00:41:34.679

Administrator Jonathan Morrison: approach their job differently. That's, you know, those are some very interesting challenges. But it's so heartening to hear how you're already working to overcome those, and how you've already overcome a lot of those things. So, you know, again, kudos to all that you do.

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00:41:34.680 --> 00:41:44.900

Administrator Jonathan Morrison: And you know from NHTSA's perspective, we are going to be... we have your back, we are going to be pushing this. I am going to be pushing this personally, so thank you for everything you do.

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00:41:44.900 --> 00:41:50.240

Administrator Jonathan Morrison: Excellent point about the need for these programs to help

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00:41:50.430 --> 00:42:09.930

Administrator Jonathan Morrison: the morale of the clinicians themselves. Those lives that are saved, that's wind in their sails, and hopefully we'll keep them at it for a long time to come. What's clear here today, as we all know, prehospital blood transfusions save lives, and we have living proof here today with Angela.

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00:42:09.950 --> 00:42:18.220

Administrator Jonathan Morrison: in our audience. What's also clear is that prehospital blood transfusion programs require extensive partnerships and collaboration.

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00:42:18.220 --> 00:42:31.459

Administrator Jonathan Morrison: EMS agencies, state highway safety offices, state leaders, federal partners in the blood community all need to work closely to help make prehospital blood transfusions the standard of care for trauma patients with severe bleeding.

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00:42:31.770 --> 00:42:44.170

Administrator Jonathan Morrison: NHTSA's mission is to save lives on our nation's roads. And with just under 40,000 people dying each and every year, we're embracing every solution available to improve post-crash care.

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00:42:44.400 --> 00:43:04.150

Administrator Jonathan Morrison: When crashes happen, it's critical that we use every resource that we can to give that crash victim the very best chance of survival. And prehospital blood can mean the difference between life and death, and we encourage you all to implement these programs in your communities, and to support other EMS agencies looking to do the same.

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00:43:04.540 --> 00:43:16.300

Administrator Jonathan Morrison: Thank you very much for your time here today, and thank you again very much to our distinguished panelists. This isn't the end of our event today. We have an exciting afternoon planned for you as well.

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00:43:16.430 --> 00:43:38.529

Administrator Jonathan Morrison: Please join us outside in front of the building for our Save a Life Day events. Starting in just a few minutes, we'll have demonstration stations open, and at 12:45 p.m, we'll have a formal program to recognize all of the EMS professionals who save lives day in and day out. Thank you again, enjoy the rest of your day, and happy Save a Life Day.

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00:43:38.890 --> 00:43:39.999

Administrator Jonathan Morrison: Happy EMS week.