ZEBRA

Zebra Your Edge Podcast

Host:

- **Lorna Hopkin, International Marketing Manager, Zebra**

Guests:

- **Oliver (Olly) Ledgard, EMEA Government and Aviation Director, Zebra**
- **Matt Wroughton, Government, Healthcare, and Field Services Manager, Zebra**

Transcript

00:00:00:00 - 00:00:38:10
Lorna
Hello everybody. Today I'm joined on Your Edge podcast by Matt Wroughton. He's government and field service manager, UK and Ireland, and Oliver Ledgard, government and aviation vertical lead, both from Zebra Technologies. And we're going to be talking about responding to emergency medical technicians' calls for help in Europe. So when an ambulance is dispatched to a call, the assumption is that it will be fully stocked with the right equipment and medicines for emergency medical technicians, EMTs for short, to stabilize patients or perform lifesaving measures in the field.

00:00:38:13 - 00:01:24:26
Lorna
But with the increased number of calls for services in many parts of the world, it's becoming more difficult for EMTs to maintain proper stock in their ambulances. And that has patient care implications. Why is such a fundamental task so hard to manage? That's one of the questions I've asked my to guests today to answer. Another question: Is there anything that can be done to reduce the wait times for ambulance services in the UK, or really anywhere in the world where the calls for service are exceeding EMTs' capacity? Between standard population growth and a rapid aging of our population, there's no doubt that every ambulance service can stand to hire more people, invest in more

00:01:24:26 - 00:01:51:29
Lorna
vehicles and scale that service capacity. There are going to be more people who need paramedic services, especially as beds fill up and wait times increase, hospitals and urgent care centers. But it's not easy to train and hire more people or expand the ambulance fleet even when there is funding available. So what can be done? Or can anything be done to make the current first responder force act bigger than it is?

00:01:52:02 - 00:02:27:10
Lorna
How do we speed up response times, help paramedics reach more patients each day, and avoid situations where paramedics and the ambulance staff arrive at the scene, only to realize they don't have what they need to treat patients because they didn't stock enough. Items are expired and so on. So, Matt Wroughton, you've been a first responder before. Oliver Ledgard, you've spent the better part of 20 years working with government service providers such as ambulance crews, police and firefighters to find ways technology can make their jobs easier.

00:02:27:10 - 00:03:11:26
Lorna
And I know you've both spent every day the past few years working side by side with first responders to understand the outside forces, those things happening in society that are unfortunately making their jobs increasingly difficult and frustrating. I understand you are starting to get to the root causes of many issues being reported by ambulance service providers across Europe, and working through solutions, since some of these same issues are also popping up in other regions of the world. I think it would be good if you share how you're personally responding to their calls for help, and how you're essentially triaging and treating some acute and chronic issues

00:03:11:29 - 00:03:17:28
Lorna
these first responders are dealing with across our operations. Is that okay?

00:03:18:01 - 00:03:50:15
Olly
Yeah, sure. That's quite the introduction. Yeah, thanks, Lorna. So I've been doing this role now for two to three years. and my role covers EMEA. And obviously Matt is really focused on the UK, but we're seeing these issues and challenges across EMEA. Okay. So we're trying to drive efficiencies for these frontline workers. And there's multiple multi-faceted challenges, right?

00:03:50:15 - 00:04:07:11
Olly
And there's lots of things that can be done. Zebra can help with certain aspects of it. But there's, yeah, this this could be a very a long winded, podcast. Matt, anything to say before we start now?

00:04:07:12 - 00:04:29:04
Matt
Well, I totally agree. I think you have to look at all of these things in the whole system and where they sit. So the ambulance service plays a vital role in all communities around the world where they operate. But they're a very critical jigsaw piece in terms of that overall community care and service response.

00:04:29:07 - 00:05:00:15
Matt
And I think it's the knock-on effect to where they join into other parts of the jigsaw, which is where a lot of the pressure points come from. But, also, I think we've seen that, as we all know, we've been living through some pretty unprecedented times in the last few years with Covid and with some of the other challenges around the world now. And then, you know, economic challenges around the world in terms of budgets and how do we support people with the cost of living, getting standards up there and making sure the culture is right. And there's organizations making sure they're equipped in the right way, and that

00:05:00:15 - 00:05:15:00
Matt
we actually understand the dynamics of the ever-changing kind of profile of response that is expected from this jigsaw piece. So it's a big question.

00:05:15:03 - 00:05:40:09
Lorna
So perhaps we can start by discussing the state of the ambulance service within the UK, because the hours-long wait times have made global headlines. There's great concern about patient care in emergency situations and that can be life or death situations. I know that neither of you can speak to the inner workings of the NHS, and I don't think this is a problem faced exclusively by the NHS.

00:05:40:12 - 00:06:15:28
Lorna
But if you look at the number of paramedics on the payroll around the world and you do some math related to service calls, then there just aren't enough people available to respond to emergency calls within a few minutes every time, especially in densely populated areas or when several calls come in at a time. So short of beefing up training programs to get more people into the career field, what do you think ambulance service providers should be doing to ensure they can respond quickly to each call, whether dispatched through the NHS, another government agency in another region or a private service?

00:06:16:05 - 00:06:33:17
Lorna
How can EMT get to patients faster? Are there any fixable issues related to prioritization and routing, on-scene efficiency, patient transport, handoffs, etc. that ambulance service providers should be paying more attention to?

00:06:33:19 - 00:07:19:26
Olly
I think from my side and Zebra's side and the work we're already doing with a number of end users, across EMEA, is that driving those efficiencies. So we want to give the frontline responders more time to do the job that they're paid to do, rather than having such an admin heavy side of it. So whether that be pre-shift in loading an ambulance with the correct consumables, ensuring that defibrillators or certified oxygen tanks are all on board, and cutting down a 45 minute to an hour pre-check down to a matter of minutes, then that's going to that's a huge tick in the box.

00:07:19:26 - 00:08:01:25
Olly
Right. So as you said before, like there's not enough ambulances with the current call out service. So driving the efficiency for the existing estate of vehicles and for crews, that's a huge, huge focus. And then even during shifts. Right. So we're looking at how we can save dollars and minutes out on call. So whether there's been a large incident, a number of different assets are taken off a vehicle, and then it's amazing to see the millions of pounds that are lost through lost equipment over a year.

00:08:01:25 - 00:08:26:21
Olly
So if we've got technology and hardware and working with partners on the software side to be able to track what's been taken out of the vehicle and then ensure it's back on the vehicle, where it's on the ambulance as it leaves the incident. So, and it's things like this, that even though they seem to be fairly simple, but it's not being done across the board at the moment.

00:08:26:24 - 00:08:41:24
Olly
So we can really help drive that time and cost efficiencies for ambulance vehicles ore and during. But, yeah, I mean there's lots of things we can do.

00:08:41:27 - 00:08:49:12
Matt
I think...there's nothing I disagree with what Olly's just said, Lorna, so I can't have an argument.

00:08:49:14 - 00:08:52:25
Olly
Well that makes a change.

00:08:52:28 - 00:09:14:12
Matt
But, well, I think but where there's a few things to say. So, I cover the UK and Ireland and, as you said, I was the first responder. Wasn't in the ambulance service. I was in the fire rescue service. So the first thing I'll say is that UK NHS ambulance service is one of the best ambulance services in the world. Fact. It just is. In terms of the level of training, standards, response times compared to many, many other similar countries, they are fantastic.

00:09:14:14 - 00:09:30:18
Matt
They also, I would say that as a bias, because there are many occasions in my service career where I was absolutely crying out desperate for them to turn up because I'd reached the depths of my trauma management knowledge and, you know, basic life support on patients, and I needed them to get there and back us up, which they did.

00:09:30:18 - 00:09:54:07
Matt
But I think there's no magic bullet to this. You know, I think if you took the NHS and the ambulance service today, if we could put billions of pounds and magic up loads of ambulances tomorrow, loads of trained paramedics tomorrow to, you know, double or let's certainly say extend the capacity they've got in the ambulance trust, in every trust, by let's say 30%, they would all still be flat out.

00:09:54:10 - 00:10:09:29
Matt
And I think that that's a really fundamental point because the diversity of the response that they've had to go to and where the call challenges come in, in terms of the higher levels of calls over the last few years, it's unprecedented. You know, there are just so many calls coming into the ambulance service.

00:10:09:29 - 00:10:31:08
Matt
So they're measured on their response times to calls and measured on how they prioritize what they respond to. And ultimately that pressure points comes down to those paramedics that sat there with a patient that they know they've got there, they're helping them, but then they're hearing calls on the radio where maybe cardiac arrest or trauma patients that maybe are more critical than this particular patient they're with.

00:10:31:08 - 00:10:52:02
Matt
And how do they make those decisions? There is also, I think, admittedly, in the ambulance service, a bit of risk-averseness to step away from patients that are maybe not in urgent need of intervention and care to go and get someone else because you're just not quite sure what's going to happen. But we've seen some really innovative models around how they can change response.

00:10:52:02 - 00:11:29:24
Matt
We've seen things like integration when we talk about jigsaw pieces, start with community response. In looking at how can Paul's response help? How can the fire rescue service go and do some force response or some quick response? How can voluntary community first responders boost and support that? What about if we have dedicated mental health response teams joint with police, you know, running round to different types of calls? And we see it we've seen it as well in some other trusts where they've taken higher level specialists, clinicians that, you know, historically may have been going to the really bad traumatic incidents were actually going out to, the boy who's

00:11:29:24 - 00:11:44:09
Matt

fallen off his skateboard and he's banged his head, because he got a little graze. And actually, they can make an assessment. They've got the clinical expertise to do that. Actually, I could even do a couple of stitches here. I mean, maybe it's not, for example, the head wound. Maybe let's call it a wrist wound or something like that.

00:11:44:11 - 00:12:04:01
Matt

I can make an intervention that doesn't require this individual to be conveyed into a hospital and then impacting on the hospital waiting times. I think then the other jigsaw piece, which is emergency departments in A&E is, when they're arriving in there, there's a different measure in the UK, you know, the four-hour target waiting time within emergency departments.

00:12:04:03 - 00:12:22:02
Matt

But if they're busy and you've now got loads of ambulances flooding in as well, there is an element of management control of that where you want to actually make sure that you've got enough clinicians and medically-trained staff with the amount of people that you've got. And, actually, if you've got a trained clinician on an ambulance outside that can help with that.

00:12:22:02 - 00:12:52:03
Matt

But and then you've got other challenges where you've got mixed electronic patient record systems, you've got mixed ways and varieties by way of where clinicians in the field, if you like, EMTs or paramedics, access patient data. And I think that then adds on to that data capture, that data record, and then the data transfer when there's a handover done into the next gateway of that patient's care pathway.

00:12:52:05 - 00:13:18:13
Matt

That's certainly where we can help out. You know, if you take what we've done across things like GS1 standards, wristband patients and EPRs in hospitals, well actually why not take that step further? If every paramedic or community first responder can access a spine data and patient records on that individual once they've identified them outside in the street, and they can see a lot of their medical history, they could generate a wristband at that point of care immediately.

00:13:18:16 - 00:13:42:24
Matt

They can use things like Zebra handsets, which are, you know, 4G/5G rugged devices equipped with barcode scanners - in there GS1, you know, 2D barcodes. And as you're then giving medication to this patient, you can literally scan the medication, scan the patient wristband. So I did speak to one - a trauma clinician - who actually to me said what's even better....

00:13:43:01 - 00:14:01:26
Matt

We just put a sticker on the patient's head. Just a barcode. Regular barcode. Because they're unconscious, put it on their head. And as we're doing all the bits we scan that then scan the head. You know, it sounds funny when you talk about it like that, but it's practical. What you're doing is getting real time live data of who's doing what when.

00:14:01:28 - 00:14:20:06
Matt

You can also have some of the, you know, the latest diagnostics from the systems that they're using for medical intervention to feed that data back in. So then you can start to get one very live feed and picture from that patient care as to what's actually happening. That's at the one end of the spectrum where it's complete trauma care

00:14:20:07 - 00:14:43:24
Matt

and, you know, critical incidents. At the other end, we've got ambulance crews responding heavily to mental health patients, which could be, you know, a patient who is feeling suicidal and, you know, showing signs of depression. It's Saturday night, and they just need somebody to talk to and that they're threatening that they feel like they want to end their life.

00:14:43:26 - 00:15:18:02
Matt

And once you get clinicians in that environment, who in their right mind wants to walk away from that individual. You're going to do everything we can to try and help them out. And I think this is where that jigsaw piece fits into, "What other community things can we do?" Where do virtual wards play into this, and where do we get into a position where actually there are other other entities within the community that can come and support in those situations so that the green and yellow bus outside with blue lights and millions of pounds worth of stock on it, and heavily trained clinicians, can get on to the most critical ones

00:15:18:02 - 00:15:36:01
Matt

and make sure we keep the system moving? But then it goes back to what we're doing in hospital. And these things link, which is what I talk about as a jigsaw piece, because we as teams are always looking in Zebra at how can we have an impact there? What's the impact there, and there and there? And, actually, if we join all them together...

00:15:36:01 - 00:15:50:26
Matt
I'm passionate about this with what we've done and where we're supporting it in key hospital settings. We can bring that into that paramedic EMT environment, which is what we're starting to do now, it's fundamental changes.

00:15:50:28 - 00:16:12:16
Lorna
Yeah. So I can hear a lot about efficiency, better patient outcomes, and then getting that right level of care for the right people. So lots of efficiencies that you can support with. So, I can imagine that there's nothing more frustrating for an ambulance crew to get to a patient and realize that they don't have the equipment, supplies or medicine needed to provide the proper care.

00:16:12:18 - 00:16:43:04
Lorna
I know this is something that you've been helping some EMTs address with technology, and I've heard stories out of the US with the first responders, such as firefighters, turning to inventory tracking typically used in retail or manufacturing warehouses to help them be prepared when it hit the road. So can you tell us a bit more about the types of changes you're helping agencies make to ensure first responders have everything they need to treat, stabilize, or save patients?

00:16:43:06 - 00:17:06:14
Olly
Well, yeah. I mean, traditionally Zebra plays in that retail space, right? That's one of our original verticals. And RFID has been talked about for many years. But seeing it play out in a public safety environment, whether that be through fire, ambulance, it makes it so, so much more impactful because you can see the minutes it's giving back.

00:17:06:17 - 00:17:34:08
Olly
Now obviously Matt used to be a firefighter. And some of the work we're doing with the fire services there replicates a lot of what we do with the ambulances. So, I talked previously about pre shift. There's also on-shift, but there's also after you finish that incident, you can effectively tell your stores warehouse what you need to be replenished with just by a touch of a button.

00:17:34:10 - 00:18:00:12
Olly
So again you're not having to stay there for half an hour, 45 minutes waiting for a replenishment to come or to be cleaned or need new consumables being delivered to you. You can get that instantly. So it's just getting the guys out on the job again but alleviating them from that admin heavy roles which which no one wants to do.

00:18:00:12 - 00:18:24:28
Olly
Right? These guys are the frontline responders. They're challenged enough as it is from their day to day job, seeing the types of things they see. And they're struggling, as Matt, highlighted on their own actual mental health. Right. So they're seeing some pretty traumatic things. They're being overworked because there's not enough of them.

00:18:25:01 - 00:18:54:04
Olly
And there's constant pressures. And a lot of that, some of the time they're being sent out to jobs that doesn't need their expertise and skills. They could go off to someone else within that community. So, it's just trying to take away admin burdens, help them, whether it be through telemedicine - so for consultation with our mobile computing prior to the hospital so they can help the hospital understand what they've got coming in.

00:18:54:06 - 00:19:16:22
Olly
But, yeah, I think there's lots of things we can do and there are a lot of things we are doing, but it's just trying to help the customers understand it. We're not just selling them a particular hardware, it's looking at how we can help them with their challenges and alleviate some time pressures and cost pressures as well.

00:19:16:24 - 00:19:37:16
Matt
So yeah, I agree. I think you're right. We started during Covid in the UK with a few ambulance trusts who said they basically need to strip down the make-ready process. They needed to make it quicker. They needed to make the supply chain better because they couldn't have as many people working in a warehouse. They had higher levels of sickness because of Covid and therefore they were understaffed in the warehouse to restock the ambulances.

00:19:37:18 - 00:20:05:09
Matt
And they wanted to prioritize that make-ready turnaround time to restock super fast and spend the time cleaning and doing the maintenance checks, get them back out on the road and all ready for the crew. By automating the process via Zebra's RFID technology, you know they will shut the door on the bus, as they call them in North America, or in the ambulance in the UK and the Zebra tablet upfront will tell you things are ready to go or things are missing, or you've used this, and you can approve that.

00:20:05:09 - 00:20:22:29
Matt
Say, "Yes, I have that." Or, "Actually no, it should be there. But I might have left it. Actually, I better go back and get it because..." So, these little things are helpful. And then it's also giving you really good analytics and data as to what to use with different incident types, who used what when, where, and giving you that data.

00:20:22:29 - 00:20:59:07
Matt
But I think that the bigger picture that I'm quite keen on is actually not only, "Can we track the assets?" but we can also track the interaction with the patient. If we start that point of wristbanding at the point of meeting, you can then track all the interactions with the clinician and the patient. And we can support with technology now across the portfolio where instead of having to have a body worn camera, which unfortunately they also now need to carry because of attacks, as well as having to have a radio for critical communications, as well as having to have one or two tablets knocking around for EPR for data entry,

00:20:59:09 - 00:21:19:14
Matt
the beauty of what we're offering here is that actually, we can automate the tracking in the ambulance. We can give you a device that is a clinical healthcare plastic, so it can be wiped down, with dedicated buttons and red emergency buttons that can be a critical communications device, but can also be used for scanning and tracking and doing all those bits.

00:21:19:17 - 00:21:43:17
Matt
But you're wearing it up here like you would a radio. You also press a button now with, you know, a digital evidence management system that's body worn in and stream it and record it and have that for evidence as well. So rather than have all these extra things around you, you can make, you can become, a really connected worker, you know, connected clinician that's able to interact with these things if you then need to utilize these devices and this connectivity.

00:21:43:19 - 00:21:59:16
Matt
Yeah. Like, Olly mentioned to speak out to consultants or specialists that you want to engage with and start that virtual ward engagement. You can do that. You know, we can bring all these bits together, which is where technology can certainly help and drive efficiencies for them.

00:21:59:18 - 00:22:21:00
Lorna
Yeah, it's very interesting. So, if ambulance crews are so busy that they don't have time to make a restocking run during the day, and they can't predict what type of calls they're going to receive or which supplies and medications they're going to churn through more quickly, how can they know the quantities of items to stock each day to avoid running out?

00:22:21:03 - 00:22:40:22
Matt
Then that goes back to the last point in the sense of, if you think...it's the same with fire rescue service, you know, they don't know what sorts of equipment they're going to need. So everything's equipped with lots of equipment in there. So you've got a bit of something for everything. They turn up rapid fire with all their road traffic collision stuff on there as well. They are not necessary to the fire, but they've got it with them.

00:22:40:24 - 00:22:48:18
Matt
I think what the benefit that we gain here is that actually you get much deeper insights into asset use. Yeah.

00:22:48:20 - 00:22:52:23
Olly
You get better asset visibility, isn't? That complete understanding. Yeah.

00:22:52:23 - 00:23:08:04
Matt
If you review back for the last three months, every time we've gone to these types of incidents, what have we used that can then feed into. Actually probably for these types of instance, we want to change the model and have a whether it be a mental health response car or motorbikes or push bikes in the city for example. What's the bare minimum?

00:23:08:04 - 00:23:13:28
Matt
We should equip them with what they equipped to go to with this, you know, to maintain life support, etc.

00:23:14:01 - 00:23:35:13
Olly
And they could also look at all those different assets and consumables. You'll get a pattern of play as well, right. Over 3 to 6 months, what's being utilized? And also, in different depots, actually you're overstocked in one particular consumable. You don't need to buy a whole load in here. You can just you can share the resources around and you can manage it far more effectively.

00:23:35:15 - 00:23:36:22
Matt
And also...

00:23:37:06 - 00:23:52:09
Matt
What they've left at the hospital, which hospital, because they could you know, they can go to any hospital in the country. They've got mapping on their devices that say, "You need to convey this patient from London to Glasgow," and off they go. So they could have the mapping that do it. Well, what if they get up there and they're really quite tired from that drive?

00:23:52:09 - 00:24:05:14
Matt
Obviously, they're going to have a break at some point. But they've left some oxygen cylinders up there and some of the bits that they haven't actually thought to bring back. Where has that equipment gone that we're paying maintenance on, you know, if I'm down in London?

00:24:05:16 - 00:24:28:13
Lorna
So, shifting gears a bit, I heard that in the NHS, one third of calls for emergency services - and we're talking sometimes about life or death situations here - when answered by a paramedic in 2022 to 2023, an ambulance would show up, a crew member assisted the patient, but it wasn't a certified paramedic. It was someone with less experience or fewer skills.

00:24:28:18 - 00:24:47:22
Lorna
So while some argue that at least the call for help was answered, the expectation again is that it's going to be someone who can do the same thing as a nurse or a doctor in terms of caring for the patient in the field so they don't have to risk declining while they're transported to hospital or queued in an even longer line in the emergency room.

00:24:47:24 - 00:25:03:07
Lorna
So the next question, how can technology help make these less experienced first responders as skilled and effective as paramedics? Can they become the hands on the ground while a paramedic, doctor or nurse sitting elsewhere consults?

00:25:03:09 - 00:25:31:19
Olly
Well, I think that's a tough question. I don't ever replace a fully qualified paramedic, but technology can certainly help those that aren't as qualified to the same level. You could, as I said before, you can look at telemedicine and bring in specialists via mobile computing devices, and you can look at real-time consultation and virtual triage.

00:25:31:21 - 00:26:02:19
Olly
But I think it goes back to probably the original question is obviously we understand the ambulance service is under huge strain with the amount of calls again and the lack of new recruits they're getting and the lack of additional vehicles. So we can do what we can in terms of a technology standpoint and giving devices, giving them tools to drive efficiencies, within the service.

00:26:02:21 - 00:26:23:23
Olly
But I think it's a dangerous time when you're the statement you said around sending not qualified paramedics out there and just giving them a hand. So I think there needs to be that level of expertise. We can certainly help them and aid them.

00:26:23:26 - 00:26:44:27
Matt
I think, one thing that I think is quite interesting is when you look at the evolution of ambulances. So in this country, I'm sure you know, we're not that young. We can remember those kind of old ambulances back in the day, the white ones, and you get a mixed bag of things from essentially they were conveying you to hospitals.

00:26:44:27 - 00:27:19:06
Matt
So an ambulance would turn up. They weren't doing anything for you other than loading you onto a trolley, onto a gurney, and getting you off into that. And then driving as fast as they could to get you to a hospital. And actually, when they realized the basic life support, trauma management and some of the things that a trained driver of those ambulances could do and the impact that would have, the mortality rate massively improved and, you know, ridiculously so, it just as soon as you start deploying it. I think that one of the biggest challenges the ambulance service is they're it's not just capacity on their end users day in, day out, but the capacity in organizations to actually trial technology properly and then embed it. You know, we see lots of trials that happen aren't necessarily managed properly, get a bit of data out of the back of it. But actually we can see there's going to be huge benefit for patients if we could then build a business case and deploy that. And I think that if you think about that history and that evolution, we don't want untrained people turning up, you know, we want trained paramedics.

00:27:44:23 - 00:28:17:11
Matt
You've got to have a degree in this country in the UK, you've got to go to university and qualified to become a qualified paramedic. And that's obviously a barrier to getting that training. It takes longer, and you also have to maintain your skills. But I do think being in technology, you would expect me to say this, but I do think there is a future, you know, where actually when we look at all of the diagnostics that are running and pumping out either via Bluetooth or connected devices and so forth from defibs, from machines that are monitoring the patient at the roadside or in the field or wherever you found them.

00:28:17:14 - 00:28:38:03
Matt
If this data is feeding into an AI engine, there can be guidance on things for clinicians out there that, you know, over and above, maybe you think about doing this now and supportive of that. And I think, as Olly said, really probably quite a crass example, but I like cooking. But if I go and watch a Marco Pierre White YouTube video on how to knock something up, I have to keep pausing

00:28:38:06 - 00:28:58:02
Matt
and do it again and pause it and do it again. Now that's because I'm not bad at cooking. But then, you know, if you're asking a clinician to go and do some extreme things, that's that risk-averseness. You know, who's responsible? But if it was me lying there and there's no one else around, I was conscious, and I would say, I'd say, just give it a go, please, because it's going to save my life.

00:28:58:04 - 00:29:08:07
Matt
But then there's always this balance of risk that they have to take into account. And I think that if we can find a way for technology to support all of these things, there's only good things that can come from that.

00:29:08:09 - 00:29:28:25
Lorna
Yeah. Now, interesting to think about the evolution and where we could be and, you know, five, ten years from now. So, let's say everything goes smoothly in the field. The ambulance crew responds to the patient's call for help in a matter of minutes. Everything's stocked so they can apply the proper interventions immediately upon arriving and assessing the situation.

00:29:28:28 - 00:29:54:17
Lorna
And it's determined that the patient needs the care at the hospital. I know that many hospitals in Europe, and even in the U.S., have been diverting ambulances lately because of capacity issues. And even if there isn't a diversion, sometimes there's a delay in patient transfers because of an emergency situation at the hospital that calls staff away. So how do we smooth patient transfers?

00:29:54:19 - 00:30:03:16
Lorna
How can we improve advance coordination between EMTs and hospital staff to ensure continuity of care without delay? I think we might have touched on this already.

00:30:03:19 - 00:30:28:27
Olly
Yeah. We been looking for resource management there, right? So like a real time dashboard. You're looking at dynamic diversion policies, understanding what that looks like at each hospital. understanding what's coming in. You're prioritizing actually do they need to go to hospital or do they need to go to somewhere primary care? And it's maybe not a critical situation to be submitted into hospital.

00:30:29:00 - 00:30:58:16
Olly
I think there's just there's communication tools, there's CAD tools, RMS tools. There's lots of technology to help you. But I think where you're trying to combine it all and give greater visibility to let them know what they're walking into. So there's talks about that video triage prior to going to hospital, but if it's not critical, then we need to be making decisions that we shouldn't be looking at taking up a bed in a hospital.

00:30:58:16 - 00:31:23:13
Olly
So again, I mean, look, there's multiple things we need to be looking at. But, for me, the key thing is that that dynamic diversion policies, of understanding where the free beds are, how critical the incident is, and if the patient needs to be submitted to hospital or it needs to go to primary care.

00:31:23:15 - 00:31:53:18
Matt
Yeah, I think there's a lot of good practice in different areas. But I do agree with Olly. And I think that the synergy of technology and technology talking to each other. Yeah. Simple thing is we've all got, in this country, an NHS number. There's a GS1 Standard, which means we can all be identified. And then you can allocate that as the spine number from whether you meet me in a GP surgery, whether you meet me in my home in a virtual ward, if you meet me unconscious in an ambulance. We can start that data collection and then feed that through as a golden thread through type of thing.

00:31:53:20 - 00:32:11:23
Matt
One thing I hear quite often is about overmedication of patients. So because of that data transfer from when they come from, you think about the pressures in that emergency department environment, you know, somebody may have had X amount of morphine or whatever on the way into the hospital. And if that isn't...there's a lot of data to take it in for a clinician

00:32:11:26 - 00:32:28:13
Matt
that's taking over from someone else. And if they haven't had the time to because the ambulance needs to get on, then sometimes that data can be lost. I think there's a lot that can be done with that. Can we wristband patients at scene? We collect that data. We make sure that the APIs will feed into the whatever the host EPR is.

00:32:28:15 - 00:33:04:00
Matt
And sometimes an ambulance in this country can go to obviously multiple hospitals and that can fall into different ICBs or different regions. And they could have a completely different EPR in those different areas. So, the ambulance has their own EPR. That means that responders may have a completely separate EPR. They try and get those thoughts to each other. But when they turn up with all this patient data that they've digitally allocated, either by data entry onto a tablet or something, they then either have to get that printed out at the host hospital, because they haven't got a way of segueing that, crossing that data, into their own EPR.

00:33:04:03 - 00:33:42:03
Matt
Or they have but then there's a convoluted way of doing it, and sometimes there isn't a way of that critical data being presented. I think there's a lot more we can do with this. and yeah, we've actually got some pretty good virtual reality now, Lorna, as you know, which is available for us to take on the road into any ambulance trust, fire rescue service, or hospital or health organization. And literally we'll bring it to you and you can actually experience what that feels and looks like when you do all that together, doing the whole the ambulance piece, the intervention, the restart, the automation, and then what the handover process could look like in the process.

00:33:43:18 - 00:34:13:12
Lorna
Yeah. No, interesting how you talked about the interoperability of those systems. So do you think some of these practices and technologies can also help with proper follow up when patients are treated at home but need further evaluation or care? So, perhaps someone was ill but not critical enough to warrant an ambulance trip? And how do we ensure providers are alerted and these patients don't fall off the radar or have to fight for further attention?

00:34:13:15 - 00:34:26:22
Matt
I'm just, I'm going to put my hand up there and say that's not that's in our expertise. This is a data EPR/NHS challenge. It's something that we're all passionate about.

00:34:26:24 - 00:34:53:26
Olly
I think, you're right Matt. But I think the only thing we can link it is with is that tracking of visits, tracking of what has been taken, understanding the patient history. But once that patient's back at home, that's where there's nothing we can impact there aside from obviously all the different data points we've taken.

00:34:53:26 - 00:34:58:17
Olly
We've seen that, patient. Yeah. That's a challenging one.

00:34:58:24 - 00:35:09:02
Lorna
That's right. I guess is that if you're talking about this single device for your clinician, if they can then take that into the home, then I guess that that whole hospital environment take itself out into the community.

00:35:09:02 - 00:35:17:06
Olly
You could you could play it like that. But then also you're looking at the follow up appointments and I mean, yeah.

00:35:17:08 - 00:35:35:06
Matt
I think you're right, Lorna, to bring that up. If I think about what we've done, our team, is we've now got community nurses using the same devices that we'd recommend into paramedics, where it's giving them, you know, what we call Workcloud communications. So they've got, they're being tracked to where they are, so that they're in safety.

00:35:35:08 - 00:35:56:27
Matt
You've got body worn video capability on the device as well, in case there's, you know, a threat in the home. They have barcode scanners on them and they can scan the medication and they can access the electronic patient records in the home environment or outside, which then does feed back into the the NHS, the medical records of the individual to the right level of clinician to see it.

00:35:56:27 - 00:36:19:08
Matt
And I think that's the problem. A paramedic hasn't got time to sit and read or and piece about what you've had over the last 20 years. They need to see the critical bits, they know, but they often don't get that on the first hit when they're first doing interventions on your. There's a bit of a time lag before that stamp comes through. Once you get into a hospital, it's easier for them to then access all records on you.

00:36:19:11 - 00:36:34:05
Matt
And I think it's about making sure that when we're capturing data, it can feed into those records, whether it be in home, GP surgery, whether it be wherever it is, whatever service is being provided. And we have solutions for that.

00:36:34:07 - 00:37:00:19
Lorna
Yeah. And I think that whole like decentralization that adds to the kind of argument for efficiency. If we can do more outside of the hospital, it takes away the pressure that limits the amount of beds and staff within them. So some really good advice so far. I hope that decision makers within these agencies are hearing what you're saying and picking up the phone to call you if they aren't already working with you both.

00:37:00:21 - 00:37:22:16
Lorna
It sounds like many things can be done right now. There are incremental but impactful changes that can be made if we acknowledge that some of the bigger issues are resulting from a lot of little inefficiencies. You may not be able to find more people to staff more ambulances, but you can help the people who are on the clock be able to help more people without burning out.

00:37:22:18 - 00:37:29:29
Lorna
Have you got anything to talk about how we can prevent this staff stress and reduce it down.

00:37:30:04 - 00:38:23:06
Olly
I think well, I think you actually just summarized it really well. We can help ambulance services with the existing vehicles and people they've got. We can help them saving them minutes. Okay. We can't help with giving you extra resources, but we can help the resources you've already got. So I think any time you're looking at a 10-12 hour shift and you're taking away elements of their job that they don't feel is actually their frontline job, taking away the admin, ensuring they can communicate easily with their colleagues, ensuring they can communicate ahead of time when going to hospital, ensuring they feel safe with utilizing the device that can be used as a body-

00:38:23:06 - 00:38:56:07
Olly
worn camera communication tool to look up electronic patient records. Just making their day to day jobs easier and more efficient. That's what we can do, okay? We can't do some of the big ticket things that we've talked about around government spending around additional vehicles, but we can help services and trusts with the existing people, existing vehicles

00:38:56:07 - 00:39:28:12
Olly
they have to make their work lives easier. And then that would hopefully help them in terms of the morale turning up to work. Hopefully that would reduce mental health challenges, that would reduce sick days where they they're just completely burnt out. So we're just trying to really help those frontline responders on their day to day job.

00:39:28:15 - 00:39:31:09
Matt
Oh, I agree, you summarized it beautifully.

00:39:31:12 - 00:39:33:29
Olly
Did I? Good, thanks.

00:39:34:02 - 00:40:07:22
Matt
The summary, Lorna, that you gave...I think there was two things you said that if people do listen to this and they then please reach out. And also I would say please reach out with challenges as well, because whilst Olly says we can't get a big ticket items - he's right on most of them - but actually as an innovative, technology company, what we do look at is thematic challenges around AI, around operating systems, connectivity, communications, device management, and end user edge computing to see how we can make a difference in the future.

00:40:07:24 - 00:40:21:06
Matt
So we want to hear those thematic challenges and make sure that actually we're talking about the right things and we're thinking about the right things. And I think the other thing I would say I'll probably challenge, because I've got to find some challenge Olly, but he did say we can't help with the government spending. No, we can't.

00:40:21:08 - 00:40:48:02
Matt
But what we can do is save you your investment, because I know some of these ones we can talk to you about if you want to speak to us, is today they may have been buying very expensive, ultra rugged tablets that won't get broken and damaged, as well as standard consumer smartphones as well as expensive critical comms radios. You know, and also they are losing equipment and not managing the supply chain asset management.

00:40:48:04 - 00:41:05:29
Matt
We can actually build out before you even spend any money or think about it any further, a return on investment we'll map out for you, which we will commit to and sit there and say, "Look, if you go this route, these are the savings that you can make." And I think that that's critical because you want to spend the right money on the right things.

00:41:06:01 - 00:41:26:17
Matt
You know, if it's a bit more upfront, but it's a much more sustainable product set, which we have - you know, Zebra's very proud of the fact that all of our devices, we have much, much longer life cycle on these than any consumer products out there. Our security from a cybersecurity perspective is at the highest level. Where we even manufacture the products

00:41:26:17 - 00:41:45:09
Matt
and how we do that for government customers is also critical, certainly in the current global situations that we've got for data privacy, security and supply chain resilience. So we've got answers to all of these things. And yeah, the challenges...please challenge us is the call from me, really.

00:41:45:12 - 00:41:56:28
Olly
I probably have to rephrase it. No, we can't help you get an additional government budget. We can help you drive greater ROI and total cost of ownership through existing budget. That's probably better, isn't it?

00:41:57:01 - 00:41:57:09
Matt
Yeah.

00:41:57:09 - 00:42:16:11
Lorna
I agree. Yeah. No, I think that's really interesting. I think budgets are finite, but we can help people do more with what's available. And with that time that's freed up with the clinicians, then that can be put back into patient care, which can ultimately give better outcomes to patients, which is the you know, that's the overriding goal of everything for the healthcare system.

00:42:16:13 - 00:42:23:23
Lorna
So, any final thoughts, learnings or recommendations you want to share before we wrap up?

00:42:23:25 - 00:42:38:20
Matt
Just want to say thank you to all of the paramedics out there around the world and the EMTs and, yeah, keep doing what you're doing and thank you for that. And please, please think about Zebra. If you're thinking about your digital strategy in the future and looking at these challenges, don't do it alone. We want to come and speak to you.

00:42:38:20 - 00:42:44:05
Matt
And we've got a huge channel partner network around the world that'll work with us to bring great solutions in for you.

00:42:44:08 - 00:42:45:21
Olly
Yeah, agreed.

00:42:45:23 - 00:42:49:07
Lorna
Okay. Any final words, Olly?

00:42:49:10 - 00:43:19:21
Olly
No, just mirror what Matt says. A huge thank you to all of the ambulance services across EMEA. You're doing a fantastic job, understanding your under a lot of pressure from a time perspective and budgetary perspective. But if you've got anything that you want to talk to us about, then please do, and we can come to show some of the things we've been learning across working with other ambulance services across EMEA.

00:43:19:23 - 00:43:32:21
Lorna
Brilliant. Well, thank you both again and keep up the great work. There are a lot of people who are grateful for the help you're providing to outfit frontline heroes. Thank you everybody, and we hope you've enjoyed this today. Goodbye.

00:43:32:23 - 00:43:36:05
Olly
Thank you.