#09 How to prevent, identify & manage infectious complications

Transcript:

00:00:00 **Servane Pelle-Lombardy**

Hello, and welcome back to the BD IV News podcast and more specifically to our special series, Vascular Access Insights.

This is where science meets purpose and where every strategy and story brings us one step closer to safer, smarter vascular access care.

We're here to support and empower your practice one episode at a time.

So please grab a coffee, your status cup or your notepad, whatever you need, and let's get into it.

In today's episode, we'll tackle catheter-associated infectious complications, how to prevent them, catch them early, and manage them effectively.

These disruptive complications can arise in basically any setting, from the hospitals to home care, and significantly compromise patient safety, prolong recovery, escalate healthcare costs, and fuel antimicrobial resistance.

I'm Servane Pelle-Lombardy, Associate Director of Medical Affairs for BD Medication Delivery Solution in EMEA.

And joining me today are two dynamic voices in the field, bringing deep expertise and real-world insights to the conversation.

I'm so glad to welcome Dr. Rick Van Loon.

Hello, Rick.

How are you doing today?

00:01:23 **Dr. Rick van Loon**

Hello, Servane.

Hello, everybody.

00:01:25 **Servane Pelle-Lombardy**

Welcome.

Rick, you are anesthesia nurse and PhD from Eindhoven University of Technology, currently fellow researcher at Fontys University of Applied Sciences in the Netherlands.

And I'm very happy also to welcome Gema, Gema Muñoz-Mosas.

Hi, Gema, how are you doing?

00:01:46 **Gema Muñoz**

I'm good, Servane

Hello, Servane.

Hello, Rick.

Hello, everyone.

00:01:49 **Servane Pelle-Lombardy**

Welcome, Gema.

Thanks for joining.

You are an advanced nurse, practitioner, and currently the lead nurse in vascular access at the Royal Marsden NHS Foundation Trust in the UK.

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So, catheter-associated infectious complication still affects more than 4.3 million patients each year in European hospitals, leading to 16 million additional hospital days and over 37,000 deaths across Europe.

So Rick and Gema, starting with this big picture across the region, why do you think are catheter-associated infections still such a big challenge?

And could you share with all of us today key insights or lessons you've learned from preventing and managing these in your daily practice.

00:02:48 **Dr. Rick van Loon**

Of course, Servane.

Very interesting and huge numbers you mentioned in your introduction.

And we all know intravenous catheters, vascular access devices, most commonly inserted devices in patients, but still not without complications in every patient.

And that makes it difficult also.

So we can see it as a patient's lifeline, but not always act in those ways or in that way due to the complications.

So we should prevent the complications rather than treating them.

So yeah, let's share with you how we can prevent complications.

Gema, what are you doing in your hospital?

00:03:31 **Gema Muñoz**

Well, as you just said, Rick, prevention is key, but sometimes there might be still a little variation in practice.

And this variation in practice sometimes may be the beginning of a complication.

So it is always good to involve patients in the care and make them aware of those potentially early signs of complications, so we can have early detection if necessary, and make the patients aware that their catheters could potentially develop an infection, and that they can have local signs of systemic signs, make them aware of what those signs are, so they can make us aware that something is not what it was.

And there's different ways that we can do, we do that.

But I think the patient is key as well.

00:04:42 **Dr. Rick van Loon**

Yeah, patient education is very important, especially when patients are treated with a vascular access device outside the hospital when they are at home, when there is not a healthcare professional with the patient at all times.

So to educate the patient in looking at the insertion side of the vascular access device for signs and symptoms, which can lead to complications, very important, but also to educate the patient and when they should contact the healthcare professional.

I think that's important.

But also in the hospital, we have a lot of, we do a lot on identifying and detecting signs and symptoms of infections of vascular access devices based on very easy, easy things like clinical observations, patient reported symptoms and testing diagnosis, which also very, yeah, which should be performed by healthcare professionals in the hospitals in a good way.

00:05:47 **Gema Muñoz**

Yeah, definitely, so daily visual checks, documentation tools, potentially the use of bundles.

If we understand the bundle is that a small set of evidence practice, but when they're performed together, they help to reduce infection and other complications.

So it is good to have different bundles or care plans so everybody knows what to do and follows the same steps to have a standardized practice.

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00:06:25 **Dr. Rick van Loon**

Vascular access bundles, I see them as a collection of standardized interventions or procedures that when implemented together and in a correct sequence significantly can improve patient outcomes.

So the ID is that the combined effect of these practices is greater than the sum of their parts alone.

So the use of bundles is very helpful.

We use bundles for the insertion, the maintenance and the removal of the vascular device.

But what do you do in your hospital?

00:06:57 **Gema Muñoz**

We do have an insertion bundle and we have a maintenance bundle and that is integrated in our electronic recording system.

And I think the success of the bundle, it allies with consistency and teamwork, not just ticking boxes.

So we work all together, looking for the same goal.

And there's the evidence there to show that the good application and the correct bundle compliance has a significant reduction in bloodstream infections.

We did have a trend in the UK where there was a rate in I would say bacteremias in the early 2000s and then there were different interventions.

We had saving lives with the implementation of insertion and maintenance bundles.

And that helped reducing those rates quite a lot.

Do you have any projects like that in the Netherlands?

00:08:09 **Dr. Rick van Loon**

Yeah, we have the same in the Netherlands.

We have nationwide, we use guidelines based on evidence.

And I think every hospital and every healthcare institution in the Netherlands has their own bundles based on those national but also international guidelines.

And they include easy things like hygiene, hand hygiene, the use of aseptic techniques like ANTT, for instance, proper skin preparation, device acumen, all things like that to prevent patients for complications and infections like CAPSI, for instance, catheter-associated bloodstream infections, not only for central venous catheters, but also for the peripheral IVs, because I think we most forget those catheters, but that are the most commonly inserted devices in patients.

00:08:58 **Gema Muñoz**

I agree with that.

One of the last MRSA bacteremias I was involved in the last couple of years, it was for peripheral cannula.

It wasn't a central venous catheter, It was a peripheral cannula and the patient had to stay over 2 weeks in hospital to be treated for that.

So we can see the cost of infection and how sometimes a peripheral cannula is the poor relative of the vascular access device, but as important and with risks as well.

00:09:34 **Dr. Rick van Loon**

We see the peripheral IVs mostly as just a device.

And we don't think about complications when inserting a peripheral IV.

But in the example you mentioned, there are risks for complications as well, also for peripheral IVs.

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00:09:51 **Gema Muñoz**

Yeah, so I agree.

I think we don't need to ignore the small issues, the small device, the temporary device.

And again, keep the bundles alive.

We can use them in training, audit, and we can improve practice implementing bundles.

00:10:15 **Dr. Rick van Loon**

I completely agree with you.

00:10:17 **Gema Muñoz**

Back to you, Servane

00:10:19 **Servane Pelle-Lombardy**

Thanks A lot.

Thanks a lot so much, Rick and Gema.

I'm sure our listeners are walking away with practical strategies and early warning signs to watch for, as well as real-world tips to improve outcomes and protect their patients.

So let's quickly recap some of the key takeaways from your discussion.

Clearly ensuring that healthcare professionals maintain a high standard in catheter care through regular education and assessment is key.

And you've been highlighting that very clearly, as well as the adherence, but that goes hand in hand, right?

I mean, the knowledge, the awareness, the education, but also then from a practical perspective, the adherence to the infection prevention evidence-based best practices, including all those elements, which is not an exhaustive list here, obviously, but such as ANTT, septic insertion and maintenance techniques, the catheter and insertion and care bundles.

So you've been highlighting those, and I would be interested to learn more about the bundles, actually, that you have put in place and actively implemented in your hospitals, the timely catheter removal and so on.

So those are also clearly paramount to achieving reduced infection.

Monitoring and reporting, you've highlighted that.

It's important in the hospital as well as out of the hospital for the patients that are treated at home, which is not always easy, but monitoring and reporting is key so as to make sure that there is a real improvement when it comes to the patient safety and the guiding of targeted interventions, and what to monitor.

So you've been referring to local signs of infection, local infections, as well as BSIs.

And I just wanted to highlight that here in 2024, the INS has been coming with a new definition of BSIs, which is not replacing CRBSI, but it's a combination.

It's a consolidation, if I may say, which is called CABSI, catheter-associated BSIs, and that's any bloodstream infection basically that originates from a vascular access device.

So it's including both peripheral PIVCs, peripheral IV catheters, as well as central venous catheters.

And I believe it's important because monitoring should include those local infections, but also CAPSIs, so the ones originated from peripheral or central.

Moving forward, that's how to support and decrease the infectious complication burden across the region.

So I think you highlighted that very clearly. Early detection is very critical.

It helps prevent not only the complication, but it helps to have a timely intervention.

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So you've been referring to that hotline that you have in place in your hospital, Gema, that could be a one way to manage that.

It saves clearly patients' lives and reduce moving forward the burden on healthcare systems.

So that's the key takeaways from your discussion, both of you.

I want to thank again everyone for hanging out with us.

This may be the end of this podcast series actually, but it's just the beginning of the impact we hope to make.

And thanks for tuning in and being part of this community that take care of patients and take care and foster a culture of excellence when it comes to vascular access.

Keep pushing boundaries, keep asking questions, and keep showing up.

You're the VAMbassadors, and better access truly saves lives.

So stay connected, stay curious, take care, and talk soon.