

Transcript:

Webinar – Infection prevention challenges and solutions 2022

Surgical site infections – how can we do better? | 12 January 2022

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During this webinar our audience submitted their COVID-19 IPC questions to our expert panel:

- Lillian Chiwera, Infection Control Surveillance Team Leader, Guy's and St Thomas' NHS Foundation Trust
- Jon Otter, Director of Infection Prevention and Control at Guy's and St Thomas' NHS Foundation Trust
- Giovanni Satta, Consultant in Medical Microbiology and Infectious Diseases, University College Hospitals London NHS Foundation Trust –
- Peter Wilson, Consultant Microbiologist, University College London Hospitals

Chair: Jincy Jerry, Assistant Director of Nursing in Infection Prevention & Control at Mater Misericordiae University Hospital, Dublin, Ireland. Member of HIS Professional Development Committee.

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Jincy Jerry 0:03

Thank you all for joining our IPC challenges and solutions audience live webinar series hosted by Healthcare Infection Society. In today's webinar, we will be discussing on surgical site infection as it remains a serious cost of healthcare associated infections worldwide. And I think it goes without saying because not to talk about COVID for an hour, which I'm sure every one of you will be happy about it. So let's talk about reducing surgical site infection. How can we do better? My name is Jincy Jerry. I'm the Assistant Director of Nursing and Infection Prevention and Control at Mater University Hospital, Dublin, Ireland. I'm also a member of HIS Professional Development Committee. As always, we have a fantastic panel of experts here to share their thoughts on a broad range of topics related to surgical site infection. So I'm inviting them to introduce themselves. So if we could start with you, Lillian.

Lillian Chiwera 1:09

Good evening, everyone. My name is Lillian Chiwera, Guys and St Thomas' surgical site infection surveillance team leader at Guys and St. Thomas's NHS Foundation Trust, helping coordinating the collection of SSI data and feedback to clinical teams for almost 18 years now. Thank you HIS for inviting me to participate in this webinar today.

Jincy Jerry 1:36

Thank you, Lillian, and welcome. Can we move to Giovanni.

Giovanni Satta 1:42

Hello, everyone. My name is Giovanni Satta, and I'm the Infection Control Doctor for a University College London Hospital. Again, thanks again to HIS for this invitation. And I was part of the NICE guidelines on SSI that are the most recent ones.

Jincy Jerry 1:59

Thank you, over to you Peter.

Peter Wilson 2:04

So I'm Peter Wilson, recently retired Consultant Microbiologist at UCH and I've been doing wound surveillance goodness since 1986. Can you imagine? So a very long time in surveillance.

Jincy Jerry 2:19

Thank you, Peter. Very welcome. And last but no means least we have Jon.

Jon Otter 2:25

Hi, everybody. My name is Jon, Director of Infection Control at guys and St. Thomas's. It's so good to be here today. I am both invigorated and frustrated by surgical site infection. I'll say more about that later.

Jincy Jerry 2:40

Thank you, John. And thank you everybody for volunteering your time, we are looking forward to listening from you. So most of you will be very familiar with our webinars, but for those of you who aren't, during the first 40 minutes of the webinar, our panel are going to be discussing eight most popular questions submitted by you by Slido. So during the last 15 minutes of the webinar, we will answer live questions that you can submit via slido. Throughout the event, you will be also able to use Slido to express your opinion and interact and ask those live questions. So for so for anyone who hasn't done that, please download the slido app. We'll post the link to that in the chat now. And when you're open the app, you can enter #HIS. And that will put you through the live streaming. The webinar is going to be recorded and will be available afterwards for anyone that couldn't make it today. So please feel free to pass on the word. So let's move on to our first question.

How can we engage ward staff in SSI surveillance to help ward staff to take ownership? What's the simplest, most effective route scoring system that can give consistency of assessment? I'm going to ask Giovanni to take the lead on this.

Question 1:

How can we engage ward staff in SSI surveillance?
To help ward staff to take ownership, what's the simplest, most objective wound scoring system than can give consistency of assessment?

Giovanni Satta 4:09

Thanks Jincy. And I believe I got the entire hour for this, yes? It is a very complex question. And I will split in two; first with how to engage with staff in surgical site infection surveillance, and then also the scoring system and profit we will mention the date in 1996 for scoring system and everyone will understand in a second. So in terms of how to engage staff and I don't think there is a right answer here because the real answer is you need to tailor how to engage with staff depending on your hospital and also within your hospital how to engage with the different surgical teams. So everything's is different. And I've worked in many different hospitals by now. And I can tell you I got kind of the good

practice from all the different hospitals and also the strategies you adopt. So one of the most effective strategies to engage with yourself is to either embedded surgical site infection team within a surgical team. I like in my previous trust, for example, there was, among others, a Surgical Site Infection Nurse for orthopaedic surveillance, and it works really well. So the Surgical Site Infection Nurse was part of the team used to participate in all the different clinics, and again, used to have a great relationship with the Consultant Orthopaedic Surgeon. So it worked really well. The problem is you also have to consider that surveillance has got two components. One is that is the detection of surgical site infection. And one is the reporting, reporting by again is first to Public Health England if you decide, or UK Health Security Agency now, if you decide to do your mandatory or the other reporting you want, and then you probably want us to create a report for your infection control committee. So then another example. So we're talking about the surgical site infection embeddedness. Another example that instead is completely different, for example, is what we are currently using at University College London, where you have, for example, a Surgical Site Infection Analyst and the Infection Control Team that instead does the surgical site infection surveillance for the surgical teams. And then once we got the data, I contact for example, the different surgical team are different consultants. And they are very engaged, for example, in their reply, and also in telling us yes, I agree with this report, or maybe there was also another infection and they contact you also proactively sometimes. So again, that is another way. So you got two completely opposite. But then there is also a third one that I found very useful recently and also engage with, for example, the junior doctors on the ward. And more recently, the two amazing junior doctors that they took ownership of surgical site infection surveillance in one of the surgical ward was colorectal surgery. And they've also created for example, and sort of structure known to for the ward round. That was used all the time. We've even published this recently in one of the Journal of the HIS society. That was for example called ABDOMEN where a was from antibiotics and m for microbiology so there was a clear structure when they went through the review of patient past surgery.

And that's bringing us to the scoring system for surgical site infection if there is a simple one or not. And it is again, is a very tricky question. So in general, I should say we should use that and it was the most commonly used system for in definition for surgical site infection is the CDC one. The CDC one, which is also pretty much identical to UK Health Security Agency. But let's tell the truth from this, the definition of surgical site infection on CDC are incredibly complex. And we cannot expect people on the world to remember all the different criteria and so on. But just to simplify, it is simple three types of surgical site infection better like superficial, deep and organ space. And when we go back then to one of the most popular scoring system have a regard for surgical site infection that was invented in 1986. And I'm sure later on, Prof Wilson will want to comment on this and also there is the asepsis scoring system, where again, it's a score from zero to 40, very simple to adopt, and at the end, you end up again with mild or moderate to severe SSI. And then a third one is also the Southampton one. Just again to give everyone an idea of the different types of scoring system that you can use. The Southampton one has got five different grades, and then you ended up with a minor complication or major complication like hematoma which is again, tends to be much more complex at the end. What I would say in general is definitely I like for example, just asepsis is very nice and not to just because Prof is here! The problem is that if you want to do your reporting to Public Health England, remember, you will have to know when CDC definition so unfortunately, you may risk to double your work if you use a very simple scoring system. And then you decide actually to do the mandatory reporting or even the voluntary reporting. So again, you need to consider that. So also some of the scoring system has been created, for example for sternal wound infection originally, and they may need validation for other type of wound infection. So again, I would have loved to give like a really direct answer: 'This is the solution to engage the clinical team. And this is the scoring system you should use'. But I think I've

probably given a sort of a fair balance, but I'm very happy to have the opinion of the other panellists, and particularly from Prof, considering he's got a great experience on this. Thank you.

Jincy Jerry 10:10

And thank you so much. I think Jon's hand is up there. He has some points to make.

Jon Otter 10:16

Well, let's go to Prof. Wilson first and then me afterwards?

Peter Wilson 10:22

Well, yes, I mean, of course, I'm a bit biased for asepsis, but it the whole point of it is that any health worker down to the most junior healthcare assistant can use it is very simple from that point of view. And we know it is reproducible because we actually did that work. If you're worried about doing extra work, so you don't need to worry, you just need to make sure that the computer database that you're collecting the data on has fields for both asepsis and CDC. And the reason that I'm really quite concerned about CDC is it's never actually been validated, which is surprising. But it's not been validated because so many people use it. And it is very complicated. And if you use the full definition, you've got a whole page of prepositions. So expecting people to give completely reproducible results using it, I think is just very hard.

Jincy Jerry 11:35

Thank you so much, Jon, over to you.

Jon Otter 11:38

Just to comment briefly on the engagement of frontline staff. And to turn the question on its head, I can think of a really good way to disengage frontline clinical teams about SSI. And that's to tell them they have a really high rate of SSI. So I think any model that includes the identification of surgical site infection as part of the routine operation of the clinical team gets my vote, because that way, you won't have that tension where you're telling them they have a high rate of SSI and then begins the seven stages of grief.

Jincy Jerry 12:11

Thank you so much. And in your spare time, we'll go to the next question, Adel. So our second question is how do we support known infection specialist in diagnosing SSI? And this question goes to Lilian.

Question 2:

How do we support non-infection specialists in diagnosing SSIs?



Lillian Chiwera 12:35

Thank you for that. So when I looked at this question, the first question I asked myself was, who are the non-infection specialists? And I had quite a few people come to mind and, and I think, certainly we thinking about our frontline staff. So the nurses and the doctors, we don't have much knowledge on SSI or infection control, the physiotherapy, so anyone who is actually coming into contact with the patients, we also thinking about our midwives, in certainly, you know, this group of, you know, staff who usually, according to reports, don't get enough training on how to manage surgical wounds, so very, very important that we actually come up with very good strategies to engage them. And, you know, we shouldn't forget our patients and those who care for them, certainly after surgery. So when we are coming up with mechanisms to support, you know, all our staff, our patients and our carers, I think, you know, one thing we should be thinking before we even think 'how can we support them to manage an infection' is, what should we be doing to get it right the first time so these patients don't get infections in the first place in. And we all know that prevention is better than cure. So I think I'd say to anyone, you know, when you are actually thinking about how do we report surgical site infections, first of all, think about how can we prevent this surgical site infection? Okay. So make it easy for people to do the right things, and certainly we've fought nice. That is what you know, evidence based SSI prevention recommendations, we've bought in recommendations from the CDC and from the WHO that was published in 2016. So, again, within those guidelines, we are really wanting to make sure that we design ways of making sure that they are being applied consistently. When it comes to SSI prevention, it's all about making sure that that SSI prevention bundle, you know, compliance is good for you to actually achieve optimum effect. So, again, you know, if we then don't manage to prevent that infection, of course, we are then thinking of how can we be supporting our staff in our patients to have objective wound assessment tools that will enable them to pick up any potential signs of infection early and, then escalate. So action can be taken to prevent further deterioration. I quite like the Bluebell wound healing questionnaire that they designed for post-op community wound assessment, especially after the patient has left hospital. And why I like it is, you know, they've really tried to simplify the language that is used to ask the questions about whether someone has got surgical site infection or not. So so they are using things like 'Do you have any redness? Not at all? A

little bit? Quite a bit, a lot of it'. Okay. So when you are a patient, and you're looking at those kinds of criteria and you're not an infection, you know, specialist for example, then that's probably kind of, you know, triggering your thinking around well, actually, if this redness is quite a lot compared to not at all, or does that mean that potentially I've got a problem. And this applies to all the other criteria, ie pass will break down and things like that. So so this is a really, really good, you know, tool that you can use, either to educate, you know, those who don't have much knowledge about infections. And of course, I, I think when we've looked at the assessment, you know, our scoring systems, that has been just discussed, we need to be thinking about our SSI definition. So how, what do we say is a surgical site infection, we've got heat, redness, swelling, puss coming out and things like that. And certainly, what we've done in our organisation, is to just do a one page document, you know, for all the staff across the organisation saying: What is the superficial incisional infection? Deep incisional infection, organ spacing? What are the criteria? So criteria one, when there is puss, I want you to get worried. When the wound is breaking down, I want you to get worried. When you've got two of heat, redness or swelling, I want you to get worried and seek help. Okay, we'll get somebody else to have a look at the wounds so when you hear you know, that information, you know, that is very objective is clear to everyone. It really does help those who don't have, you know, specialism within infection control to do the right things. Okay. And certainly Jon will know that you know, a Guy's and St Thomas' we've adopted the Public Health England, or UK Health Security Agency as it's called now, the data collection tools and with those, we are actually able to get our staff to give us objective information about that wound. So rather than people just writing the wound id oozing, and I'm thinking what's oozing, it is puss or serous ooze? So we are saying tell us you know: Is it yellow or green puss coming out? Is a wound breaking down? Is it red? Is there any swelling? Did you give antibiotics, for what? And the like.

So, you have to make sure that the information is very clear to those who are not in the you know, in the specialty and of course, you know, every now and then when you can provide the support to educate them. And the other thing that we can do for non- infection specialist is to actually do maybe SSI overviews where we giving as much information about the background of what surgical site infections are, the assessment tools and how we try to standardise our data collection methods. And when you're working with staff, you know, we acknowledged human factors as well, you know, especially given you know, the pandemic, people will be tired sometimes and we want to be able to work with them, identify the gaps in knowledge around SSIs, and be able to then educate them accordingly. Undertaking local campaigns for example, in this already mentioned standardising both data collection tools and also the definitions according so it's really, you know, working with everyone in identifying their costs that work well for them in with the aim of actually collecting that SSI data that which we can use to inform and improve clinical practice. I will stop there.

Jincy Jerry 20:24

Thanks, Lilian. And actually, this is bringing nicely into our third question. How can we efficiently and robustly track SSI in the community? And is there any evidence that feedback from surveillance leads to improvement - especially in the community? So I'm going to ask Giovanni, would you like to answer this one?

Question 3:

How can we efficiently and robustly track SSI in the community? Is there any evidence that feedback from surveillance leads to improvement – especially in community?



Giovanni Satta 20:49

Thanks, Jincy. So, this is an exciting topic, actually, because it's something that will develop more and more in the next few years.

I always say, I'm a very practical person. And if you wanted to develop a surgical site infection in the community, you need to use something that is already available in the community. You don't want to duplicate your work. So, what you've already got in the community – you've got midwives, and (this will be specifically related to C-section) you've got the district nurses, but more importantly, you've actually got the patient with their mobile phone. Now pretty much everyone's got a phone with a camera and connected to the internet, and we will talk about Athena in a second.

In terms of midwives, there are already trials in some different trusts, I'm pretty sure in the audience that you're already doing that, is the surgical site surveillance of C-sections in the community with midwives. Of course, you need to consider how many appointments with the midwives you get. In general, it's at least three or even up to ten, depending on your local geography. And they can easily do a follow up for up to 30 days. So it's very easy, you already got a robust system in place, and you already got everything there to report back to the hospital in case. And this is again with the midwife system that has been done in UK, that has been done in Italy, it's been done in different parts of the world.

But again, if you don't have the midwives, you can then use, for example, the district nurses instead. Because as you know, a lot of patients, they get discharged from hospital and then they have the follow up in the community with district nurses. And I'm pretty sure some people in the audience will work very closely with district nurses, even if they have, for example, no path service, for example, in the community, and so on. So there is that close relationship with them that again is essential if you want to develop your surgical search surveillance roles in the community.

Let's go back on the patient then, with the mobile phone, because that is the data I find very exciting, and also brings you the ownership and the partnership with patients. And one of the typical examples is actually in the UK, here in London, from Melissa Rochon at Royal Brompton and Harefield, where they've done the photo discharge for surgical site surveillance, for example, for patients after cardiac

surgery, where they can take a picture on discharge, and then you've got the picture all over – so you can actually compare constantly, also combined with advice on how to manage it.

And then, some typical examples of it, they've also been done in many other countries, like in Canada to track for example, after C-section when ladies can take a picture and so on. And then this links us, for example, to what is the evidence to support that. And then actually the evidence is coming out – again, you need to appreciate there has been a pandemic, as everyone has noticed, in the last two years. So now more people are directly coming out with the data on surgical operation and so on. And one paper that I would point out to everyone that was recently published in November 2021 by our colleague in Scotland, McLean in Edinburgh, is actually about the use of, for example, this mobile phone app to track for example, surgical site infection post-emergency abdominal surgery.

So we're not talking any more about C-section, we're talking about abdominal surgery, and even emergency, and then they literally randomised patients – half of them using their app and half of them instead doing the routine follow up. And they actually show that when you use actually the app and the patient can take the picture and send it back and so on, you actually have a higher likelihood... first of all a higher likelihood of early detection of surgical site infection in the community, and then you've got less community appointments for the patient, and then you got overall a much better patient experience, and also the care that we provide for the patient, so actually the evidence is coming out for all of us. And again, as I say... and again, probably one of the only positive things coming out of COVID is our use of telemedicine more and more. In surgical site infection, we probably use this more and more in the community. And I'm sure more evidence will come out from that.

Jincy Jerry 25:23

Thank you, Giovanni, I think telemedicine is something that we all should look into. Any other panel members would like to add to that point?

Peter Wilson 25:35

Yeah, I mean, I think it's really important when you're dealing with patients that they're actually quite accurate in whether they can determine an infection or not. So a phone app is an ideal way to engage them. But if you can't, you can still do it with a series of six or seven questions. And it can be quite accurate. So it's well worth trying to engage the patient in their own self-help.

Jincy Jerry 26:04

Thank you, Peter. And looking at the time, I think we are best to go to our fourth question. In relation to post-discharge surveillance, has any work been done with patients using wound scores to identify infection or to monitor their own wounds?

Peter Wilson 26:26

So, we did quite a few papers on this subject, dating back quite a long way to 2006. And we've followed this method for many years at UCH: we gave the patient a questionnaire when they were leaving. If we didn't get a response from them at one month, we sent them another copy of it in the post with a

replied envelope. And that comprised a series of nine very simple yes/no questions. It's almost – the photographs are almost as good, that have been described. The trouble with the photographs is you can't see what the discharge is. So, you can't tell if the discharge is serious or pus. So you do need to supplement the photograph, if you're doing it that way, by a direct question from the patient. So we did this, and we got around 85% response from the patients, and 75% of them correctly identified their wound was infected or not. So it's actually quite a realistic way to do it. We did try to get post-discharge surveillance through the GPs. But that just proved almost impossible. GPs were very scattered, they didn't necessarily know who the patient was, we couldn't get information released from them. It was just a nonstarter. So, patients are much easier.

Now, we did try for a while phoning the patients, and we did that for a few years. It was very efficient in terms of getting data, but very labour-intensive because the patients would want to tell you their life story. And so the nurses were tied up for 20 or 30 minutes on the phone asking questions which should have taken five minutes. It was great, but it wasn't really an effective use of the time. However, what information you do gather, it is really important to get it fed back to the surgeon. And the surgeon we found, at least two thirds of the time, was unaware of the problems with the wound in that particular patient, because either these had occurred before their outpatient appointment, or they hadn't been mentioned at the outpatient appointment.

There has been more work done since we did our work and it's already been mentioned – the Bluebell study, which was Professor Blazeby at Bristol, and she used our wound questionnaire that we'd used for asepsis and built upon it. And they were looking at three different types of wound dressing. And they also used some psychologists to make the language, as you've heard, very simple and easy for the patients to deal with. And that too has been quite successful.

So definitely I think it's worth trying to do wound-scoring with patient data. You'll find, however, that if you rely on the Public Health England one, only half the hospitals actually do any post-discharge surveillance at all. And what they do does tend to be not terribly accurate. And so you'll often find that surgeons are only relying on the in-house public health and health security data, not the data gathered from the patient questionnaires.

Jincy Jerry 30:34

Thank you, Peter, for that summary, very useful. And certainly, I think you're right, we need to get the information from the patient. Giovanni, your hand is up?

Giovanni Satta 30:42

Yeah, thank you. Thank you, Prof., great.

I would link again, I'll mention to everyone now, what Lillian was mentioning before – the wound healing questionnaire for patients, because what is being done in some clinical trials, for example, where your Patient Management System can send an automatic message to your patient, let's say for example, 30 days post-op, and then they get the link to the wound questionnaire. And that is very easy to be filled by TAs, for example, a kind of a semi-automatic way, where actually it's very easy to do post-surgical surveillance and again, like involving the patient on that.

Jincy Jerry 31:21

Thank you. Would any other panel members like to add anything?

Jon Otter 31:30

Just a quick comment on post-discharge surveillance, I think there's a sense that post-discharge surveillance should be free and easy. And I don't think it's either I think we can talk about models, we can talk about engaging the patient, we should do all those things, but it needs to be resourced in order for it to happen.

Jincy Jerry 31:48

Thank you. Very valid point, Jon, that I totally agree with that. And let's move on to our next question.

For most impact, how often should surveillance data be being fed back to the teams? Weekly, monthly, or quarterly?

And I would ask Lillian to take on this question.

Lillian Chiwera 32:14

Thank you for that, it is quite a tricky question, isn't it? When – now, tomorrow, after a week?

So, I think if you look at a lot of places like, you know, publications really, what you will find is, you know, a lot of the authors or the majority of the authors, you know, highlighting how useful fitting big data to clinical teams was as a driver to actually achieving improvement in SSI incidences so, so how often you do it, I think, you know, is something that I'm just going to try and break down but we all can agree that feeding data back to clinical teams, is very, very important. Otherwise, there's no point you even collecting that data, okay? If it's just going to stay with the infection control teams, and you fulfil your monthly requirements, for example, but the clinicians don't have the information that they can use to trigger them to make changes to practice where required. Okay.

It is important to note that most of the SSIs are preventable. And certainly, in my experience, when we've done you know, SSI prevention work in some specialties, initially, I was told that we couldn't do anything to prevent these infections because the patients were high risk anyway. The procedures were too complicated – high BMI, diabetes – but I can tell you that they use one specialty we worked on within paediatric spinal, who managed to reduce their SSI incidences from about 9% to zero – we achieved zero SSIs in 2016. And we've kind of kept it there or one or two after that.

So again, just to say, you know, more severe SSIs are preventable. So we want to collect that data and feedback. So, when I look at the PHE SSI reporting system, I think Peter, you know, touched on that a while back, we used to get our outlier notification letters, for example, if your SSI incidences are higher than everybody else out there six months down the line, and I'm thinking, well, you're sending me the letter now, what do you want me to do? You know, if there was a problem, surely, you know, many other patients have suffered, you know, down the line. So what we don't want to do is to collect data and delay the feedback by, you know, that length of time, so that wouldn't be good enough, but of

course, in terms of, you know, overall, you know, kind of data analysis and kind of coming up with themes, then you may want to be able to still do that, but again, you know, what I'd say for, you know, for any local organisation, come up with, you know, feedback mechanisms that are agreed by the local teams.

In our trust, we are very lucky to have an SSI committee, where we actually discuss all the SSI surveillance strategies, how we want to collect our data, how we standardise our data and also discussing how we take that data in that forum. And before we even get to that, where we have those meetings quarterly, we are feeding back the data monthly to every specialty that is undertaking or participating in our SSI surveillance programme. Okay, so monthly is fine, because I can say you've done so many procedures this month, you know, you had two patients with developed infections and these are the details so, so very important, again, to think about what you are feeding back. So if you're just going to feed back that you had 2%, and then next month you have 4%, without providing the details of the patients who developed infections, then that may not be as useful for the frontline staff. And again, just to mention that in our trust, we do have an SSI Investigation Protocol, so according to that, each time when I'm in SSI surveillance and if I identify an infection, I send an email out to the Directorate on the day and say to them, 'you've got this patient who has developed a potential surgical site infection, can you look at it?'. When it comes to us investigating those infections, then again, I'm expecting the clinical teams to lead the investigations, because infection control teams, if you want to take ownership of SSI, it doesn't work – you know, you're giving the data but what you want is to use the data to inform and improve. So yes, some collecting the data, but the people who need to make the changes need to have that data, you know, as soon as possible.

So, weekly, monthly, quarterly, you know – I would say yes to all of them. But don't delay feeding back the data, you know, especially when you identify that there are potential things not going quite right. And I'll give you an example, if I had a patient who had cardiac surgery, they have got E. coli bacteraemia, within 48 hours of surgery, and then two, three days down the line, they've got E. coli isolated from, you know, pouring pus, okay, then again, I'm thinking 'what's happened in the operating room? Was there a break in sterile technique? I really want to get back to the theatre to attempt to feed that data back. But also what I'm thinking about is, did this patient actually have a good wash before they went to theatre, maybe they weren't given a good wash. So again, you're wanting to engage your ward teams and theatre teams to the tissue viability they'll need to manage that patient. So, it is to the rest of the team.

So, to when you do it, I think you have to agree locally. But I'd say there's no need for you to delay that feedback when you've got that information. Because if you just want to collect data for the sake of it, then please don't do it. Use that data to inform and improve practice and have that continual dialogue, develop good rapport in relationships with the clinical teams.

I think I will stop there. And certainly I could say a lot more, but I'll leave it if anyone wants to come in also.

Jincy Jerry 39:08

Thank you, Lillian. I think in the interest of the time we have to move into the next question, and you've covered it very well. In terms of SSI, have there been any lessons from the pandemic (staffing, patient pathways, workload, IPC practice, etc?)

I think it is a difficult question. I'd like Jon to lead on this one.

Question 6:

In terms of SSI, have there been any lessons from the pandemic (staffing, patient pathways, workload, IPC practice etc)?



Jon Otter 39:31

Yeah, thanks, Jincy. It's a very good and important question. I think we've learned a lot about an awful lot of things to do with infection generally, during the pandemic, there's been a great and rather dramatic shift of our priorities imposed upon us. When the pandemic first landed in March 2020, or thereabouts things change very rapidly. Elective surgery, more or less shut down emergency surgery, of course carried on and the risk of SSI remained. But through necessity fell down our priority list. And there's been some poor patient outcomes related to that. But the bigger need was the patients with a rather nasty respiratory infection that that we had to focus our attentions on. And I know that many people involved in SSI prevention were redeployed at that stage and moved to other roles, some of which were very difficult and outside of their experience and expertise.

So I think there's people out there who are still struggling with the with the impact of that a couple of years on, and it's worth recognising that. But equally, you know, they picked up new skills and they can bring that back to the SSI prevention world.

In terms of staffing, we went to our rather dry business continuity planning, and actually looked at what we'd said what our minimum staffing would be. And that's probably quite helpful when it comes to picking things back up in terms of SSI prevention. And I think, now, again, as we move away from the Omicron wave, at least in London, is a really good time to press reset, Ctrl, Alt Delete, and reassess where we are with SSI prevention.

I think it's useful to go back to basics. And reaffirm that SSI is really important. It has terrible outcomes for patients and it costs a lot of money, it drives antimicrobial resistance, and it's no good for hospital reputation and patient choice. And then look at what is our model for surveillance, we've talked about a couple of different models. And as I said earlier, I think the best way is to embed surveillance within the surgical pathway so we have a continual flow of surveillance data. What we haven't talked so much about is the breadth of surveillance in an organisation. A large number of organisations only know about surgical site infections in a very small proportion of the procedures that they do. And that doesn't feel a good place to be, I think we should all aspire to having some oversight of, of SSI rates in all of our procedures that we undertake, and use that as a trigger for improvement work.

And related to that post discharge surveillance, something like 50% or more of SSIs occur when a patient is discharged. And yes, many maybe superficial and won't require readmission. But they're still important, and we should, we should know about them and help to prevent them. And finally, when we're talking about models of surveillance, we need to embrace the latest tools at our disposal in a digital age, and really get to grips with semi-automated surveillance and even fully automated surveillance, and how that can help us and supercharge the programme in freeing up time to get the improvement work done.

Jincy Jerry 42:59

Thank you, John, for that insight into the pandemic learning. Would any other panel members like to add? Yes, Peter.

Peter Wilson 43:08

Yes, I think for those hospitals where they've actually moved to electronic patient record (and I know that's quite a small minority at the moment), but it is in proving there is the possibility of doing surveillance on everybody all of the time. And that would be absolutely amazing. I don't underestimate the difficulties in getting that done. And the packages that come with these electronic surveillance are so fiendishly expensive, that I don't know how many of us in this country will be able to afford them. But let's hope the price comes down, because that would be the dream situation.

I suspect, even if you are doing that, you will still need to physically monitor a proportion of those wounds. Because you need to quality check the information that's coming into the electronic patient record. But for a very long time, we have tried to do all types of surgery, even if it's only for three months of each year. Not just try to limit to the 12 or 18 categories in the Public Health England.

Jincy Jerry 44:28

Thank you so much. Any other panel members would like to add?

Giovanni Satta 44:36

So yeah, I agree with Professor Wilson and Jon with their semi-automated system. However, yes, the main problem is that you still need to validate all of that. So there will still be that period where you have to validate the system we are using, and also all the different types of surgery you may want to include. So realistically, even if you are in a like a highly University Research Hospital, it will still take probably at least a couple of years before we're really on the phase where you can have that automated system up and running and validated. Unfortunately, maybe I'm too pessimistic, Jincy.

Jincy Jerry 45: 22

Thank you, Giovanni. Let's move to our next question.

Question 7:

Have there been any recent innovations in postoperative wound care that have impacted on SSI rates?



Have there been any recent innovations in postoperative wound care that have impacted on our SSI rate, Peter, if you would like to take this question on?

Peter Wilson 45:42

Yes. Well, I think the first point is to, before you even approach innovations, make sure that the already known procedures are being fulfilled. For example, a normal thermic patient during surgery is very badly done, still, there are a lot of hypothermic patients there. Diabetes control, making sure that you have 2%, chlorhexidine wound prep, these are all things that have been around for a very long time.

If you can get on top of that, then there are a number of things now that are attracting attention. One of them are negative pressure wound dressings, which already have been validated in three or four different types of surgical wound. And these encourage drainage of the wound and are associated with a lower infection rate. The disadvantages of course, they are expensive, and much more expensive than many of the wound dressings we have. The advantage is that they have got some reasonable trials to back them up. The vast majority of the wound dressings that we have - even so called advanced wound dressings, have very little scientific backup. They're not subject to the scientific rigour that we see in other areas.

Another issue is whether you should use triclosan impregnated sutures. There are now three meta analyses suggesting that you will reduce at least superficial infection rates using these, they are about a pound per patient per operation. So not expensive, except if you're doing it in all patients, I suppose. But interestingly, they've only captured the imagination of a proportion of surgeons. And I think you could, you could certainly have a good cost-effective means of reducing wound infection if you use them.

So I think there are a number of things that we can deal with. The other one and the most, probably the most controversial one that's come out of late is colorectal surgery, and the use of mechanical bowel prep and oral antibiotics. Microbiologists generally tremble with fear when they talk about oral

antibiotics for prophylaxis, because of the modification of the emergence of resistance in the bowel flora. However, there is relatively good data now suggesting that this does reduce the wound infection rate in colorectal surgery, and interestingly harks back to many years ago when we were quite routinely using mechanical bowel prep. So that's something that you need to address with your colorectal surgeons. They probably themselves will not be agreed upon it, but the evidence is relatively good now.

Jincy Jerry 49:18

Thank you so much, Peter. We have loads of live questions waiting. Sorry, Giovanni, I can see your hand up there.

Giovanni Satta 49:26

No, sorry. Just to add a couple of things from also the most recent NICE guidelines we wrote because people may have missed that.

So completely agree with the antimicrobial sutures that are actually now part of the NICE guideline so it is suggested to switch to antimicrobial sutures. And theoretical again shouldn't be an increasing price for your patient. The other thing that is also suggesting the NICE guidelines that is again may be quite new for people is what are called antimicrobials sponges. So we do have for example, antimicrobial sponges, for example with gentamicin. And actually the NICE guidelines there is quite strong evidence for example, they are effective before cardiothoracic surgery. So again, if you have the chance to read the NICE guidelines, so you will also find that the antimicrobial sponges on there.

Jincy Jerry 50:17

Thank you so much. Just to get into our live questions and we are going straight into our last or audience-led question.

Question 8:

What are the most important factors in pre/intra/post-operative management that influence the development of surgical site infection? Is there any new evidence that has changed the thinking on this?

What are the most important factors in pre/intra/post operative management that influence the development of surgical site infection? Is there any new evidence that has changed the thinking on this? I would ask Jon to take on this question.

Jon Otter 50:45

Okay, thanks, Jincy. See, so this is what frustrates me about SSI prevention. Unlike so many other areas that we work in, there's really no dispute that we have good solid evidence-based interventions to reduce the risk of SSI really, rather dramatically. So I feel that that we have more than enough evidence to justify a significant investment, intellectual and otherwise, in SSI prevention.

I think it's quite difficult to say which of the evidence-based measures is most important because it would depend on which patient we're talking about, what we're doing to them, and to a degree where we're doing it. But I think if I had to choose, it would be probably somewhere between antimicrobial prophylaxis or taking care of the wound as the as the most common root causes of surgical site infection.

In terms of breaking news, we've talked about the main ones, there's also new recommendations around universal mupirocin for nasal decolonization to prevent *Staphylococcal aureus* SSI in some categories for us to work out what that means in our different areas.

Jincy Jerry 52:00

Thank you, Jon. And let's move on to our live question as our audience is eagerly waiting to hear from you.

So the first question

How do we make sure that investigations into SSI incident investigations result in actionable learning, and how can we best create a culture where theatre teams and surgical ward staff take joint ownership and work on these actions together?

 Anonymous

Do you feel there is enough guidance nationally to centralise the NHS approach towards SSI surveillance?

Would any panel members would like to take this question? Go ahead Jon

Jon Otter 52:40

If I can just come in briefly on that. I do think some more mandated surveillance will actually be really helpful. Because at the moment only a very small number of categories have a mandatory requirement to submit data nationally. I think it'd be quite helpful if that was expanded it we would drive some investment in programmes locally where I think expert teams are struggling to access the resource to do the surveillance that we need to do.

Jincy Jerry 52:23

Thank you, should we go to the next question?

How do we make sure that investigations into SSI incident investigations result in actionable learning, and how can we best create a culture where theatre teams and surgical ward staff take joint ownership and work on these actions together?

 Anonymous

How do we make sure that investigations into SSI incident investigations are something actionable learning and how can we best create a culture where theatre teams and surgical ward staff take joint ownership and work on these actions together?

A nice question. Yes, Giovanni go ahead.

Giovanni Satta 53:44

So I am happy to start answering this, but I'm sure the other panellists we will have other views or the same view.

I think it is great to have some sort of structure formed when you do like your surgical site infection review, very similar, you treat it as you do, like for example, a root cause analysis like for example for MRSA or C. diff. You do exactly the same for surgical site infection, where you have a clear structure form where first of all, you investigate like pre op or intra open post op finding and of course, we will involve the team as part of the investigation process. So, then you will end up with a process that is pretty much identical to an RCA with actions, to feedback to the teams and so on that can be used as a sort of a shared learning for everyone.

Jincy Jerry 54:40

Thanks, Giovanni. Lillian?

Lillian Chiwera 54:44

Yeah, just to say that we actually have the SSI investigation protocol in our trust in we happy to share that. So, we we bringing together all the teams so from the surgeons tissue viability, clinical governance, say you know, ward nurses, theatre nurses in having each and every one of them, you know, to input into any patient who develops a surgical site infection and then identify whether there are any potential improvement points.

Peter Wilson 55:16

Yeah, from many years of sometimes quite painful experience the the really that you've got to address the surgeons themselves, you've got to go to their surgical meeting. You've got to argue your case. Sometimes they won't accept it. Other times they will. But it's most difficult when you've got one surgeon for doggedly following a particular practice and another surgeon following a different practice, and clearly different infection rates. You've then got to try and use the microbiologist or infection control practitioner, bring them together and get them to agree. It's not easy, but you've got to be persistent. Be persistent.

Jincy Jerry 55:58

That's a great message. I think we can go to one more question.

Who is ideal for SSI clinical roles - IPC nurse, SSI specific facilitator or role of surveillance scientist in SSI surveillance?

 Sinéad Horgan

Who is ideal for SSI clinical roles? IPC nurse, SSA specific facilitator, or role of surveillance scientists in SSI surveillance?

I think every panel member is ready to say the answer. I'll start with Prof there.

Peter Wilson 56:28

Well, yes, I think for it takes resources. And you do not necessarily need a highly qualified infection control practitioner in order to collect the basic data. Get as much from your electronic patient record if you can as possible. But beyond that, as long as you have it in simple yes, no questions, it's quite possible for an unskilled operator to get good, accurate data. It then has to be brought together. So the epidemiologist, the person who's dealing with the data is absolutely critical. And getting them to give you the data back promptly is probably the most difficult step.

Giovanni Satta 57:30

Prof, I agree on those steps. And then when we talk about also the surgical site infection lead and I have to admit I'm very open and flexible on this. Because it can be everyone - can be a nursing staff nursing background can be pharmacy background, can be scientists background, we got a lot of consultant scientists now, consultant nurses, consultant pharmacists, it can be a doctor, for example, an infection control doctor. Everyone – so long as you have the knowledge but most important, also the enthusiasm to do it. I think everyone can absolutely cover the role of surgical site infection lead in the Trust.

Jincy Jerry 58:07

Thank you, and Jon?

Jon Otter 58:09

Yeah, I mean, SSI prevention is really cross cutting, and we absolutely need a multidisciplinary team. So we need a bit of nursing, bit of doctor, bit of scientist, bit of antimicrobial pharmacist, and a bit of support and admin, I think, in varying measures depending on what we're trying to achieve.

Jincy Jerry 58:

Thank you, and thank you so much. It's great to listen to such a clear and insightful panellists.

So as the webinar draws to a close, we would like to say a big thank you to all our panellists, Giovanni, Lillian, Jon and Peter, for sharing your time and expertise with us today.

We would also like to thank Gamma healthcare for supporting this webinar with an educational grant. Also, I would like to thank Healthcare Infection Society for hosting this lovely webinar, and all our audience for participating.

For your information. certificates of attendance will be sent out after the event and a recording and a transcript will be available on the HIS website.

Also the past webinars are available on his website and please stay tuned for our next webinar. Thank you for watching and have a good evening.