

Transcript: Webinar - COVID-19 challenges and solutions

12 months of COVID – what have we learned? Part 2 | 5 May 2021

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

Panel members:

- **Colin Brown** - Consultant in Infectious Diseases and Medical Microbiology, Public Health England
- **Evonne Curran** - Independent Infection Prevention Nurse Consultant, Honorary Senior Research Fellow School of Health and Life Sciences Glasgow Caledonian University
- **Will Hamilton** - Clinical Academic in Infectious Diseases and Microbiology
- **Martin Kiernan** - Infection Prevention and Control, Nightingale Hospital London and Visiting Clinical Fellow, University of West London

Chair: Jasmin Islam - Consultant Infectious Diseases & Microbiology, Surrey & Sussex NHS Trust

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Jasmin Islam 0:00

Okay, great. So thank you everyone who's managed to dial in. I'd like to welcome you all to the next part in our webinar series from HIS on COVID-19 challenges and solutions.

Today's webinar is going to focus on 12 months of COVID - what have we learned and this is the second part of this webinar series. This particular one is going to be focusing on IPC management, patients and staff. So before the webinar, we've asked people to submit questions as per the previous webinars to the panel and we've selected the eight most popular questions to discuss today amongst the panel, who I'll let them introduce themselves shortly. So we're going to do that for the first 40 minutes of the webinar. During the last 15 minutes of the webinar, there'll be an opportunity for live questions and so if I can ask you to submit your questions to Slido throughout the event. You can also use that to express your opinions in terms of voting, we have a couple of polls during the session which you can vote on. So to participate in the polls and questions you just need to open Slido our app, and then enter the code hashtag is. Okay, so before we start, I'm just gonna basically pass on to the panel for them to introduce themselves, one by one and then and then we'll kick off so if we start with Evonne.

Evonne Curran 1:20

Hello, my name is Evonne Curran, and I'm an independent infection control nurse consultant.

Jasmin Islam 1:28

Lovely. Moving on to Will Hamilton.

Will Hamilton 1:30

So I'm Will Hamilton I'm an academic clinical fellow in infectious disease and microbiology, I've been working a lot on COVID genomics over the last year or so with COG UK and applying it to infection control in Addenbrooke's Hospital in Cambridge,

Jasmin Islam 1:43

Thanks Will, and Martin

Martin Kiernan 1:45

Martin Kiernan and I'm an infection control nurse, I work with the University of West London now having left the NHS, years ago, back in again recently and also with GAMA Healthcare as clinical director, that's my declaration.

Jasmin Islam 1:58

Right. And last but not least, Colin.

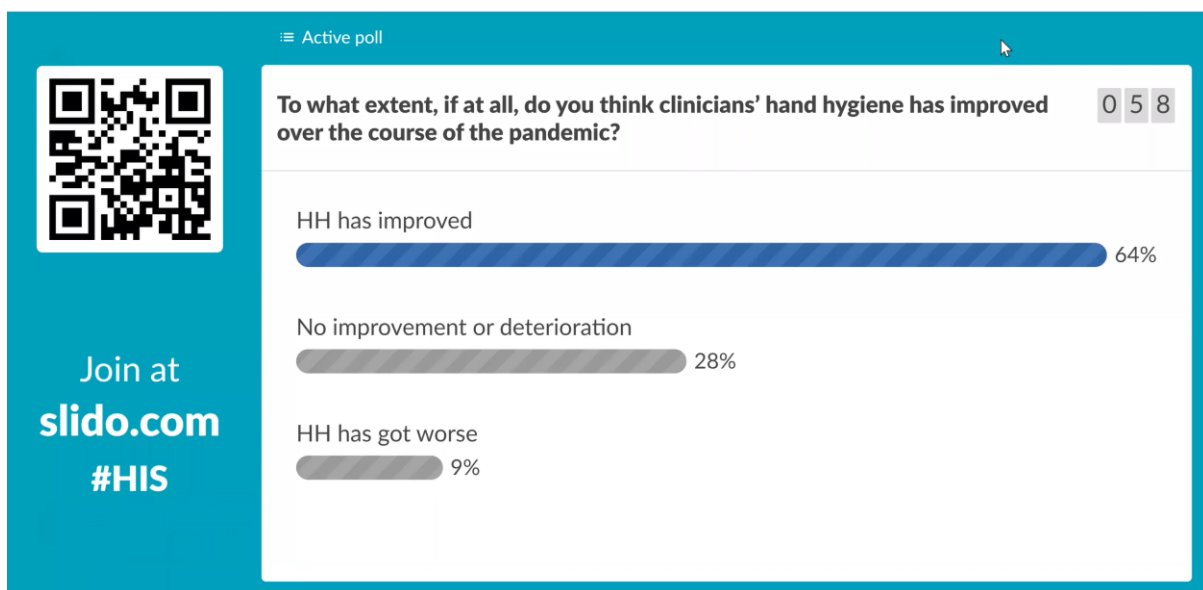
Colin Brown 2:03

Thanks, Colin Brown, I'm a consultant in infectious disease, and medical microbiology, work with PHE in the antimicrobial resistance and healthcare associated infection division.

Jasmin Islam 2:11

Great and actually I forgot to introduce myself, such is the excitement of the webinar. My name is Jasmin Islam and I'm a consultant in infectious diseases and microbiology, working in the NHS and also working part time with Colin at PHE. Great. So if we move on I think we're going to kick off actually initially with a poll.

So over the course of the pandemic, relationships, whoops, sorry, to what extent if at all do you think clinicians hand hygiene has improved over the course of the pandemic, given that today is World hand hygiene day, So if I can ask you to vote now.



Okay, great. So I think we'll probably just, just pause it there. I know a few people are still possibly voting, but I think we can see that perhaps reassuringly, you know, two thirds feel that hand hygiene has improved, worryingly 10% think that it's got worse. I don't know if any of the panel wants to comment on that briefly at this stage. Martin yep.

Martin Kiernan 4:20

I mean it's interesting, isn't it, it's, it's actually, it's a pretty static throughout that as well. Two thirds think it's got better, I think it has got better, I'd really like to know why it's got better exactly why it's got better is this out of self-interest or have we finally managed to convince people that they actually need to do it, or has our education got better. So I think there's a really nice qualitative studies to be done here to actually talk to staff about their hand hygiene behaviour and see if they've actually changed their mind, or if they just change their habit temporarily during the pandemic, will they revert because it'd be very nice to think that this would be a little bit more sustainable. I do wonder if the public's hand hygiene may get better because you do see them decontaminate in their hands and whether that will spill over into future generations as well and maybe hand hygiene in children is possibly a little bit more embedded than it used to be. So there's a potential there for that to spill over into future generations, I'd really like to know why because I'm certain. That's right, I'm sure it has improved. And I know from speaking to Didier Pittet earlier on. They've tripled the amount of alcohol handwash they've used in university hospitals Geneva and that wasn't an organisation that wasn't washing their hands or decontaminating their hands quite a lot already. And so, there could be some interesting studies coming out of this when people get time.

Jasmin Islam 5:35

Great okay in the interests of time we'll move on to the first question so surface just segwaying nicely from from the hand hygiene topic surface transmission is now seen as being much less important than airborne. Would this have altered your advice if you'd have known this in the first wave? So I'm gonna actually pass on to Martin, to answer this question.

Question 1:

Surface transmission is now seen as being much less important than airborne. Would this have altered your advice if you'd known this in the first wave?



Martin Kiernan 5:57

Yeah, it's been interesting watching the change of opinion over the last year. At the beginning we thought it was all droplet and and surface and hand hygiene will be important. And that has definitely changed over the year. WHO sorry CDC have recently come out with a statement saying it's really very low risk and they're quoting one in 10,000 from a contaminated surface. There are a number of factors that will depend on of course how many people around actually have the virus and how much is actually being spread into the environment and how quickly people touch the surface and then touch something important that you know we now we know it's really airborne, it's probably not as important. Well I would say though is other organisms can be spread by the by the environment and funnily enough, I was giving a talk for the HIS foundation course last week when I had to look at the latest norovirus statistics and that's almost completely disappeared. So we don't know whether actually, all this extra surface disinfectants had a knock on in any other infection. It would be fascinating to look at that because certainly outbreaks of norovirus are down 95% over the last year, which unfortunately means we probably got a tsunami heading towards us over the next winter so would I really change my advice? I'm not entirely sure I would because infection prevention is always about multimodal strategies, but I don't think I would, I would be panicking people about decontaminating the environment.

Jasmin Islam 7:18

Great. Anybody else like to comment on the panel? Yeah, Evonne, and then Colin.

Evonne Curran 7:25

I also wouldn't have changed my advice with regard to surface decontamination. I agree about the Norovirus going away, but we know that other places have had some outbreaks, where contamination of surfaces could have been involved, so we haven't got everything right, with regard to, I think service decontamination. And I think we're still a work in progress there.

Jasmin Islam 7:50

And Colin, do you want to comment.

Colin Brown 7:53

Yeah, I mean, I very much agree, it's, it's tricky because you go back to the very start, and the degree to which surface contamination played a role, not just within healthcare environments within the wider population, groceries, and packages arriving through the mail. I mean, there was, there was a lot of emphasis put on that, you know, and perhaps, in retrospect, you know, slightly too much or diverted a little bit of attention away from, you know, focusing on other things. There were lots of unknowns at the time and it's difficult really to know knowing what we know now to kind of retrospectively look back over 15 months to all the unknowns that were there. It is very difficult to get epidemiological information from, from contamination, because by definition you've got to contact trace those people. So there is I think a degree to which, you know, there's always going to be an unknown around that and I definitely therefore wouldn't recommend lessening reliance or

cessation and thinking of that as a, as a route completely, because you'll never know. And anecdotally, some kind of hospital colleagues' opinion is that you know they think that that's partially responsible for, for a number of infections. So, the weight of evidence may have changed slightly, but I think we can't know when we probably will never completely know the actual degree to which it takes place and certainly there has been quite a lot of work on the virology side, looking at survival times, on you know steel surfaces and other things that shows that there is potential for quite a long lived remaining viable virus in the environment.

Jasmin Islam 9:34

Great, thank you. and Martin Do you want to comment?

Martin Kiernan 9:37

I just wanted to make the point that at the beginning, we weren't wearing masks and the one thing a mask does also do is stop you contacting your mucous membranes so it potentially interrupts your transmission from a contaminated surface. And as we wore masks more often that will also interrupt that that potential form of transmission as well. So, as usual, infection prevention isn't only one thing it's bits of everything.

Jasmin Islam 9:59

Yep. Right, okay. Brilliant. So I think we're just coming up to five minutes so I think we'll move on to the next question so thanks for that. So do you think the guidance on social distancing so two metres in hospitals and mask wearing for all staff clinical and non-clinical will change in the coming months? If yes how and when might it change in the next year? what is the future hospitals in this regard? Quite a weighty question there, and I'm going to hand that on to Evonne to answer please.

Question 2:

Do you think the guidance on social distancing (2m) in hospitals and mask (FRSM) wearing for all staff clinical and non-clinical will change in the coming months? If yes, how and when might it change in the next year? What is the future for hospitals in this regard?



Evonne Curran 10:30

Yes somebody sneaked in three questions without really anyone noticing there. Yeah, I'm gonna start with two quotes in a statement, and the first quote is that these are opinions, and as AB Christi said you can be wrong in your opinions but not, not in your facts. And the other one is from Dan Quayle, and because this, whoever it is, is asking about predictions. And as he said, predictions are difficult, especially when they're about the future. And my last statement is that outbreak management is decision making during uncertainty, and that's why we have all made mistakes during this pandemic, but will social distancing and masks change and I think yes they will change, of course, the data is going to change. And the news at the minute is that it's good, but it's not necessarily good everywhere, and I'm not in the, 'we're out of the woods and this is done' camp yet. I don't think we're safe until the world's safe. But in that context, if we continue to have good data, the way we have tiers for the community, we could have tiers in hospitals because some hospitals will be at much less risk than others so we can perhaps start to think about some of the criteria that we could use that could say well if these things are met, maybe we can come down and go back to standard precautions in general. So one obviously would be the incidence in the community would have to remain low. And that level would have to be specified. And I think the community itself, it's not going to be right next to one of the airports, you know, the population has to be slightly reduced because this will be the lowest risk hospitals, I think will go first, and the screening on admission has to be 100%. The prevalence in hospitals will be small confined areas and perhaps, away from, from other areas. We'd have to have nosocomial incidents, getting to zero and staying at zero for maybe a time period. What would the staff vaccination rate have to be? I don't know. We all want good ventilation, and my problem with good ventilation is good is not a number. We need to have something that's that actually gives us a sign that we've got a good ventilation, and then we've got it just not when engineers set it up, but ongoing. The occupancy in terms of how many people are in rooms. We need to have evidence that adherence to sepsis is excellent, and we need to have constant monitoring of the local data, and a policy for a major reversal. So these are things which you could set up as a kind of what would that look like what would we all be comfortable with. It's not going to happen tomorrow, but it's likely that it will happen. I can also see it going back and being reversed so it's important to say that. I don't think it's going to be a single day. I think it will be gently gently but just the way that we test in other things, this is something that we will test. So in summary, I think it will change. When will it change, I think that's a finger in the air, but I think for hospitals, it could mean everyone could start to look at what criteria would we feel safe with in our patch to allow that to happen? And I'll stop there.

Jasmin Islam 13:51

Okay great so there's quite a lot to kind of process there, and then any of the other panel wants to comment on Evonne's answer or add, add in anything else, yep Colin.

Colin Brown 14:04

So I think Evonne's exactly right. I mean it's quite a live area at the moment, you know, and as you can imagine there's lots of ongoing discussions. In some ways, it will reflect, I imagine some of the broader trends, and what happens in community settings. And that's largely a political decision, it'll

be informed by modelling and by, you know, epidemiology and all of the things Evonne mentioned that you know it is ultimately going to be based on decisions that the government will take based on the you know the advices put to them. I think hospitals will be further along in that process, because they're more risky environments where if you get something wrong, you know the potential for harm is that much higher. So, you know, I think it'll be a more cautious version exactly as Evonne says it will be, you know, depending on a multitude of factors including probably kind of case mix, and looking at where kind of international kind of repatriations for medical reasons, or, you know, health seeking behaviours. And so I think it might be you know clearly dependent on where you are, and there will be absolutely the need for you know vigilance for robust monitoring to ensure that there aren't you know unintended consequences rather as harms, and there will be the need to rapidly reinforce things, should there be any signals that are picked up that suggest otherwise. So, I think it probably will be a slow, slow, kind of change and much slower than than what you might see in other parts of the community and general social environment. And I think as IPC practitioners within our own trusts in hospital settings, we should be thinking of, you know exactly what would be the metrics that we want to look at. And do we have kind of robust ways in place to, you know, to think about how we would monitor trends to see if there was any changes, we wanted to find out.

Jasmin Islam 16:06

Great, okay, I think, times already drawing to a close, for that question. So thank you thank you Evonne, and Colin very comprehensive answer. If we move on to the next question. Great. When a problem like COVID-19 comes along, very little is known at the outset, I think we can all agree with that, what are the most important questions to answer in such a scenario and what experiments in service data should be collected to answer these? Really, really great question. Thank you, whoever submitted that and I'll pass on to Colin, I think he's going to take this.

Question 3:

When a problem like COVID-19 comes along, very little is known at the outset. What are the most important questions to answer in such a scenario and what experiments in service data should be collected to answer these?

Colin Brown 16:41

Yes I think it's a great question and clearly there are multiple things that are unknown. You know, they range from, you know, the clinical through to the epidemiological through to the treatments, you know, from, from an infection prevention control, what are we most interested in well incubation period, you know, and that was very unknown at the start. There was lots and lots of supposition, you know, based on kind of reasonable similar options so a lot was taken from SARS and MERS and real world data took a long while to come I mean partially was because the diagnostic tests weren't there or at least weren't there in the sort of volume, that was needed at the start to answer those questions effectively; by having robust protocols in place to do serial monitoring, you know, of people, both in an exposed period, and then in a symptomatic period. For how long people stayed infectious because that was a sort of second issue. You know, once someone contracts clinical disease, how long do they remain infectious for and what kind of CT value for example if you're looking at your PCR results, you know, do you consider infectious viable virus. And you'd want someone to remain in isolation and again it took quite a while for that evidence to emerge and it emerged, somewhat piecemeal, from a variety of different observational studies or studies that people you know, kept hold of a certain patient group, and whilst they were in hospital, did daily tests on them but then once they were discharged, you didn't have the follow up answer for you know, did they remain positive or not. So, the clinical management questions, you know, in terms of, you know what is the, we've talked about already what's the root of transmissibility, you know, one of the most effective precaution measures that can be introduced; where best do you focus your attention in clinical management. I think that's one thing, the UK has done incredibly well at I think the recovery trial and several others have really demonstrated the importance of having a Clinical Research Network, that can rapidly draw upon the resources of clinical research nurses in hospitals and principal investigators who have already primed, for example International SPHERE Respiratory Consortium to take on these questions I think that's something we've done particularly well on. The only other sort of prolonged piece of positivity that we've seen, you know, how important is that, how long does that kind of represent continued non infectious material, or when do you need to start thinking about reinfection. You know, how long does immunity last for, you know, when can people be assumed to be unlikely to get kind of repeat infection, thinking particularly about PPE, what type of trials do we need to get proper prospective evidence for what precautions are best, you know, the problem with the IPC world, as we all know is that a lot of the evidence is observational, poor quality multimodal and therefore difficult to disentangle. So thinking of prospective trial designs there are things that we might want to randomise to really get you know answers in near real time at the start, as things develop. So, I mean that's a bit kind of rambling a bit and broad but, but essentially the many many kind of unanswered questions and unknowns at the start, what we need to think about going forward is, what are the protocols that we can have off the shelf in place to be able to answer things like you know, infectivity, incubation period, you know, even things like the R-naught was unclear at the start, you know, and maybe we, you know, have really, really solid contact tracing, you know, within healthcare environments for example, we can follow up with exposures, you know, is there an asymptomatic period, which was a clear unknown at the start, I mean there's, there's a myriad of unknowns and I think we just need to think through what are the things that we can have ready to go with it can be rolled out across multiple different hospital sites at once to get us the best chance of answering those in as near to real time as possible.

Jasmin Islam 20:48

Great. Yeah so I think Colin's you know again answered that really well I think it is important sometimes after the after the event as we move out of this, the second wave of the pandemic, it is easy to kind of, you know, have to now focus on things getting back to normal but I think it's clearly going to be very important that that we try to now get ahead of any future efforts and making sure that things are properly resourced and we really strengthen the networks that have come out of pandemic. You know, so the COG sequencing network networks. Some of the research networks that that Colin's talked about but also some of the channels of communication between NHS Trusts, Pathology Institute, BIA, HIS, some of the other big organisations to just try and make sure that we keep doing the work that we're doing now, going forward. Great, so I think we're gonna move on to the next question. So, learning from COVID-19, how can we improve the workforce in hospital infection control so particularly looking at not just within hospital but postgraduate medical trainee level to incorporate skills, attitudes, relevant to the prevention of hospital acquired infections or healthcare acquired infections, I should say, I'm going to pass this one on to Evonne.

Question 4:

Learning from COVID-19, how can we improve the workforce in hospital infection control (esp. at the postgraduate medical trainee level) to incorporate skills and attitudes relevant to prevention of HAIs?

**Evonne Curran 22:10**

Thank you. I started work on this question this afternoon, and I realised when I got to page five, I've gone too far in, but it's another very important question. I want to take us back, if anyone can remember pre COVID. Because pre COVID the word coming down from those on high, was that infection prevention and control has had its day in the sun. We had conquered MRSA and C diff and anything else that would get thrown at us, we would manage that and we were effectively being downsized. I know people who I met at conference one year after the other had lost staff and were continually losing staff, and it is one thing of all the things that shows what false thought that was, and we have got better and better at saving infection but if we look over the slightly longer term, there hasn't been a period in history where we haven't been faced with a new challenge or another new challenge. And one thing has always been I think we've always been behind the curve with the

structure of our hospitals. When Martin and I started, we were begging to get sinks into Victorian hospitals we just didn't have wash hand basins. And then we got wash hand and basins and we got new hospitals and we got more wash hand basins than we could ever want and we got *Pseudomonas* and the horrible and sink type organisms, causing problems. And we're where were with that with regard to ventilation now - we're all talking about this new ventilation- I've said it already but new ventilation's not a number. And I don't know if anyone's been to Vesuvius but Vesuvius is a live volcano, but all up the sides of every side of it, are people living and there's a hospital halfway up and when you ask the guy 'why are you building buildings, halfway up the volcano', the answer is 'we forget it's a volcano'. And we must never forget that we're sitting on an epicentre of a volcano that's live, and will throw us out another pandemic from time to time, so we must never go back. There is your question here is about workforce and it's about preparedness for next time but it's not. We can't talk about people and training until we actually talk about purpose, and Colin listed a whole load of things there that people want for their microbiologist and their infection control doctor, all that critical information, but we also need disaster management, and to sum it up we need outbreak, prevention, preparedness, detection and management of the whole thing and if we have that as build our programme around that, I think that's it. But we have to get the goal out there, before we get on to workforce planning and workforce planning is about the people and capability in terms of do they have the skills, but I think you have to look at it wider. In terms of, do we have the structure and the systems to enable the education to work if people are well trained to do something but the system is poor and we, we don't have the ventilation, we don't have the isolation cubicles, we've not learned anything from what this, we are going to be nowhere. So I think it's a whole package it is about prevention, it's certainly about never going back to pre COVID. We've had our day in the sun. We've never to come out of the sun, because we have to be prepared for what for what's going on. And I think one key thing if you want to take a look at what one key skill set is about disaster management, it's about understanding how systems fail, and that's never been. I mean, what microbiologist have to know is already vast. But if we're going to have infection control doctors, it's going to have to be even bigger or we are really gonna have to seriously, split up and get that resource. So that's a rambling answer and I'm sorry, I'm sorry for that. But I think understanding systems before we get to what we need with regard to people is vital. I'll stop there.

Jasmin Islam 26:16

Okay, great. Thanks Evonne for that. I think we're probably out of time to in terms of commenting so if we move on to the next question, please. So, a positive PCR within 90 days of the first positive infection could mean old infection. Is there a practical or quick way to differentiate between old infection and asymptomatic reinfection with for example a new variant within those 90 days? It would be important to know the difference from an IPC perspective. So I'm going to pass this question on to Will.

Question 5:

A positive PCR within 90 days of a first positive infection could mean old infection. Is there a practical/quick way to differentiate between an old infection and asymptomatic re-infection with a new variant within those 90 days? It would be important to know the difference from IPC perspective.



Will Hamilton 26:53

Great, thanks. So, I mean, the short answer is you could sequence the virus at time point A and time point B and then the more different, the virus was at time point B from time point A, the more likely it would be to be a new infection with a different lineage of SARS-Cov-2. And the more similar, it was the original one, the more likely it is that it's the same virus that's just hung around. There's a lot of complexity that comes in there, because there was a little bit of ambiguity in what I said of how different does it have to be for you to cut off and say, this is, you know, definitely a different virus than it was at the start, and also the question implies, is there a quick and practical way of doing it. And my answer would hinge on sequencing being quick and practical. And sequencing can be quick and practical and you can get very fast turnarounds for whole genome viral sequencing now using things like Nanopore, which is very fast you can get 24 to 48 hour turnarounds, but you need the lab infrastructure and the analytical infrastructure to then turn that into actionable information in a quick timeframe. Very doable, it just needs to have the infrastructure and the funding and so on, which COG UK has been working very hard to put in place. And you need good communication between the sequencers, and the infection control or virology teams. So speaking to personal experience at Addenbrooke's, you know, just the virology registrars on call would see that there was a new positive and a patient who previously had had a positive, that would get flagged up to myself or to other colleagues working on the sequencing side to prioritise the repeat sample for sequencing, and then we could just quickly check, how different is that sequence from the original. And then just let the virology on-call know, you know, it's one single nucleotide polymorphism or snip different, so, you know, that would be consistent with it being the same virus as they originally had. You can never say for sure, it's not an, you know, a repeat infection with a virus that happens to be very similar to the original, but it's consistent with it being the same virus. There are nuances, like I said that come into it, you know what about two snips or three snips and I'm talking about consensus FASTA file so that's, you know, just taking one genome for from for a virus from a person when there might be a diversity within the host, and that makes things a little bit more complicated so you know there are sort of statistical nuances, but the, the fundamentals is you need to be able to sequence, efficiently, and in a way that generates the information quickly and can be fed back to the Infection Control and Prevention teams. And I think that making sequencing, getting the jump from

being a thing that researchers do and then publish in the timescale of months and years to getting it to something that is useful for infection control which needs to be done on the timescale of days to short weeks has been a real challenge, which I think actually COG UK has done relatively well at over the last year. And we're definitely sort of linking back to one of the earlier questions be something that hopefully we would carry through. If we're ever in a situation of having this pandemic again is having a sort of genomic surveillance system set up with publicly available, sort of genomic data and plugging that genomic data into infection control use cases. So if people are interested I could talk more about some of those nuances of how you might tell those two viruses apart but that's, that's the basic gist of it.

Jasmin Islam 30:25

Great, thanks Will. Anybody else want to comment? Great thanks Colin and then Martin.

Colin Brown 30:33

So I think there's also some simple things you can do before sequencing, it's you know, it's looking at are there new symptoms? Did the person zero convert previously or at least they were negative? Maybe if there were infections looking at the CT values, to get a sense of, you know, are they on a downward trend or an upward trend. So, I think you can, you can have the recently been given any new immunosuppressive treatment or anything in that might have, you know tail end the virus and made them more likely to get infection, are they part of contact tracing? Have they had any recent exposures? So, I think there's a framework that you can you can you can kind of use to assess whether it's likely to be at new one or not depending on the previous results you've got.

Martin Kiernan 31:20

Yeah, I was more thinking along the lines of the practicalities of ensuring that both tests were actually done in the same organisation in which to be able to compare because if you've got London and somebody has been admitted to one hospital, had a positive test in the community you would, you wouldn't have the specimen to do the first comparison with so, I mean, you know, Nirvana would be everything gets sequenced and, you know, infection control is completely changed from what I knew, which is big guess followed by enormous guess. But the practicalities of trying to sequence absolutely everybody I think it would be enormous, but very good for good for labs, and good for infection control.

Colin Brown 31:56

And just the you know the, the ideal of being able to check community you know results no matter where they were taken, you know, in which hospital, you know, so useful for any number of different things.

Will Hamilton 32:08

Just echo what Colin said I mean in general all genomics, you know, has to be put into its epidemiological context and clinical context and that's definitely true with any other genomic data that we get and so yeah, you integrate it all, and the genomics is just one of the strands that you would use to make the assessment.

Jasmin Islam 32:27

Great. Okay, so I think just in the interest of time, moving on to the next question. So this sort of is linked to previous ones. Do we know of any of the risk factors implication transmission and acquisition of COVID for patients who are transferred from a community setting to hospitals, including in an outbreak setting.

Question 6:

Do we know any of the risk factors implicated in transmission and acquisition of COVID for patients transferred from community settings to hospitals, including in an outbreak setting?



I'm going to pass this on to Will to answer initially and I'm going to pass this on to Colin to contribute.

Will Hamilton 32:53

So I can speak to some of the work on genomic epidemiology that we've done in the Cambridge and East of England area, there's a few components to the question so it asks about outbreaks in hospitals and so we've looked at some of the biggest outbreaks of healthcare associated infection that we've had in Addenbrooke's Hospital. This is not yet peer reviewed but it is a preprint. And what we found was that of those largest outbreaks, this is wards which had a large number of patients that were green so assigned for non COVID-19 where then a large number ended up getting COVID-19. Those were driven by Super spreaders. So, so around 20% of individuals caused 80% of the infections for those large outbreaks. And if you look at who infected who, which we do by integrating genomic with lots of other epidemiological data about patient movements and when people tested positive and so on then patients mostly infect other patients and healthcare workers

are mostly infected by a mixture of patients and other health care workers, we didn't see much evidence of healthcare workers infecting patients.

So that's sort of hospital-based outbreaks in terms of links with the community we've looked at care homes in some detail. And that has been published now in *New Life*. And we see examples of clusters. Well first of all we see large clusters of virus in care homes consistent with transmission in care homes, although, again, we see this pattern where a small number of introductions into each care home causes most of the most of the transmission. And some of those viral clusters include health care workers both based in the community and in hospitals so we see examples where a very similar virus has caused infection in multiple care homes, some of which are geographically right next to each other, and involves paramedics and involve frontline acute medical staff both nursing and doctors, you know, treating patients in the front door, and sometimes you can see a very clear transmission chain where three four or five patients from the same care home with identical virus come in, and then healthcare workers in the front door and Addenbrookes came down with the same viral lineage with no snip differences at all. So, again you can never say for sure but that is entirely consistent with the infection being brought in from the care home into the hospital. So I think there is certainly opportunity for COVID-19 to shuttle between the community and hospital that was also supported by looking at the hospital admissions of COVID-19 Positive care home residents. This is often the first wave in which 60% ish, of our care home residents in that study were admitted to hospital, around the time that they tested positive for COVID-19, and about a third were discharged from hospital within seven days of testing positive for the first time, i.e. when we'd expect them to still be infectious. So, so there's certainly opportunity for COVID to pass between care homes, community-based health care workers like paramedics, care home staff, which can shuttle between different care homes, and a separate study has identified agency staff working in care homes as a risk factor, and between frontline medics and other staff working in hospitals, trying to pick apart, exactly the directionality of whether that's going from hospitals to care home or to care home into the hospital is quite difficult. If you just have identical virus then that in itself doesn't tell you what direction the transmission was taking place in. But we can say that there is opportunity for virus to you know to pass between those and we have seen, you know vignettes, where at a very detailed sequence level we can see plausible transmission chains of virus coming from care home to paramedics and into the hospital. So now if Colin wants to jump in there?

Colin Brown 36:36

I mean I don't think I can add very much that I mean Public Health Wales have done a very good kind of looked back that suggested that there wasn't transmission, particularly from discharges from hospitals to take care homes and Public Health Scotland has done a very nice review both of which you can identify the variety of, you know, overall risk factors you know size of care home., being one of the four kind of risks, but it's probably not that useful to think of these things in isolation, I mean, nursing homes also provide a lot of health care. Now there's peripatetic services that go between the two and I think, going forward, you know, what we need to be doing is looking at best practices of infection prevention control all things we've talked about already about training and upskilling staff a lot of which has already happened and how do we embed that in the future and ensure that you know that that continues on. And, you know, looking at a sort of a holistic approach to the sort of health and social care sector in provision of infection prevention control, expertise, and facilities.

Jasmin Islam 37:46

Okay. Thanks, Colin thanks well as well so that concise answer, if we can move on to the next question. So, there's been suggestions of vaccine hesitancy in healthcare workers in both hospitals and the community. Why do you think this is given everyone's experience with COVID and what can we do to try and address it?

Question 7:

There has been suggestions of vaccine hesitancy in HCW in both hospitals and the community. Why do you think this is (given everyone's experience with COVID), and what can we do to address it?



And I think this question is going to go to Martin. Oh your on mute Martin.

Martin Kiernan 38:19

Probably my answer would have been better if I were on mute anyway. It is a tricky one isn't it because I'm not sure we have hard data I've seen figures suggesting that hospital staff uptake is high and care home staff is actually quite low in some areas. That's possibly because hospital staff are maybe getting better information than the care home staff and they're getting the information from people they may trust like their own infection prevention and control team, and possibly the whole, the health care staff and the community, and the nursing home staff and not getting the same sort of level of information and when you don't get good quality information from people you trust, then misinformation is far more likely to spread. And rumour and anecdote, and it seems often that every single side effect got over reported well not over reported they were correctly reported but I think we probably get similar from most vaccine programmes anyway especially with the number that we're getting. So, I think, providing information to people from people they trust would have made a big difference but I really quite like to see some solid data on what actually uptake is because I've felt that it's actually pretty high amongst healthcare staff, given that their experiences and there, you know, at the sharp end they're seeing the most sick patients which may be means they're more likely to take the vaccine, but care homes of course are seeing huge mortality in some cases, so that you know, I'd like to do again some qualitative work interviewing people as to find out exactly why they didn't want to take the vaccine because only once you've got that sort of fit can you can you

start to work in those areas in and just shouting people louder and louder you must take the vaccine I don't think will have any effect at all.

Jasmin Islam 40:00

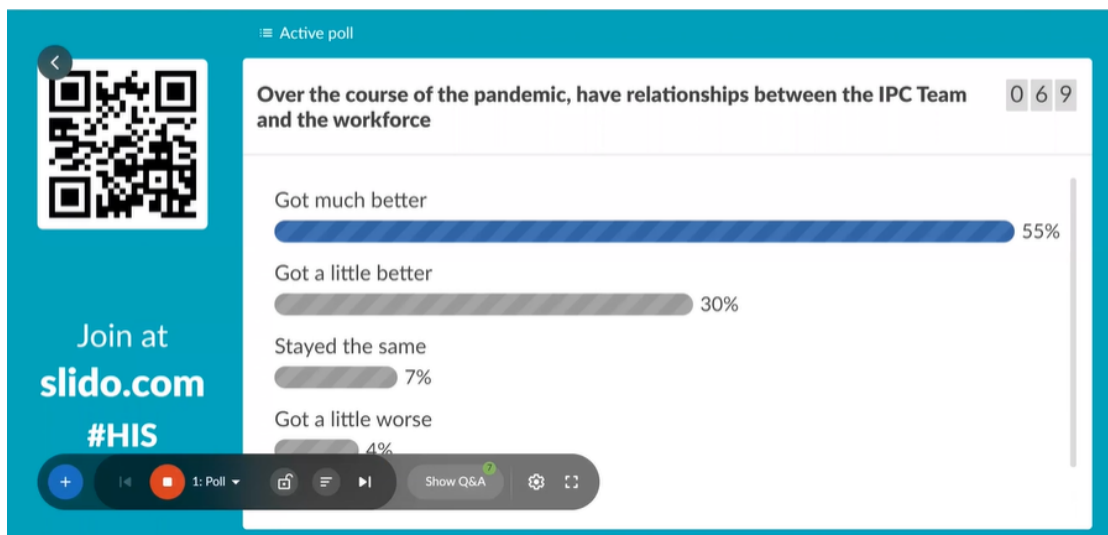
Great thanks Martin, And I know that we certainly have seen within the SIREN cohort, quite a high uptake of vaccines, but obviously that's you know that's healthcare based but we have seen certain groups, you know, certain ethnic groups where we have we've had a lower uptake and I think that comes back to your point about lack of information or miscommunication, and I'm trying to explore people's concerns around, around that. Colin did you want to comment at all?

Colin Brown 40:36

I mean, I think, I think that we do, you know anecdotally see, and within SIREN, that the uptake is very very high among healthcare staff. And there is that sort of discrepancy between healthcare and many other occupations and kind of tease apart and particularly looking in detail, you know, there is a lot of work going on but I'm not necessarily, you know, very in favour of it but looking at vaccine hesitancy in certain groups and trying to tease apart exactly what you know what the underlying reasons for that are they may well be very different from different groups.

Jasmin Islam 41:12

Anyone else on the panel want to comment? Okay. All right, great. So time for our last poll now if we put that up. So, think that that is the question but it seems to have already been answered, is that correct? Yeah so over the course of the pandemic relationships between the IPC team and the workforce, got much better, got a little better stayed the same, got a little worse, got a lot worse. Can I ask you to vote now?



Great. So that's reassuring that overall we feel that it's either gotten much better or got a little better. You know, disappointing that 3% feel it has got a little worse, so be interesting to try and understand why that's the case. But yeah, if any of the panel want to comment on this.

Martin Kiernan 42:33

Yeah I mean this is, this is a never waste a crisis, opportunity, I think. Yeah, another plug for qualitative research, I'd love to know why the relationships have got better, are in Infection Control Teams trusted more, I mean I had a small amount of personal experience at the London Nightingale where Annette Jeanes, and I and colleagues from UCL, were working, and others were working with the staff and the feedback we got from the staff was they were, they were so grateful for us being there because it made them feel safe. And I'd like to know if that was an experience shared outside of that very small environment to be honest because I think if staff see the value of infection control in protecting them as well as protecting the patients, maybe they will be more willing to listen to messages when we're trying to talk to them about protecting other patients, you know, did they trust our advice, you know, because often, to be honest it was confusing and they did change very rapidly normally at about half past five on a Friday afternoon, and you've got to sell somebody a different new message. So, I am really reassured what was that nearly 90% felt it got either a little bit better or got much better. And I think this is an opportunity that really shouldn't be wasted going forward because if things have got better. Now's our chance to talk to people while they are interested in listening to what we have to say.

Jasmin Islam 43:51

I completely agree with that, actually, we'll move on to the final question now actually. So what is the most important thing that you've learned in the last year about managing staff and is there anything you would have done differently.

Question 8:

What is the most important thing you have learned in the last year about managing staff? Is there anything you would have done differently?



So that's question again for Martin, but then for the rest, rest of the panel to contribute to.

Martin Kiernan 44:09

Yeah, I think communication is one of the key things really. Because at the beginning we don't know very much. And so we go with what we think we know and what our past experiences were and I spent a little bit of time working in the local hospital here before I went to Nightingale, you know, all you have to go on and you have to be honest with people in saying this is all we've got to go on, but then you've got to give you know when you're not certain, you have to give a rationale. And you have to spend a lot of time doing myth busting and explaining why something they've read on Facebook; it really isn't quite correct. I think having a really high profile and being seen to be supportive and as I mentioned what feedback we got was staff made me feel that they were, they were being made safe, which is important. I think giving people confidence that you are a trusted source for information and having some leadership is really important because, you know at the end of the day, other people in the organisation maybe have a managerial title, but actually you are the experts and you are the leader so to make sure staff know that you are actually leading from the front, and providing them with things like good reliable education. I think also a strength when you're managing staff is to say, you know what we were wrong there, and that's not necessarily a sign of weakness, and I really enjoyed the JHI paper from Stephanie Dancer and Julian Tamm and colleagues who were, you know, looking at the myths because I said a few of those things at the beginning oh the R naught, only at such and such a level really can't be with measles, of course, you know, where we ever write about the R naught because now, now we know what we now know about asymptomatic spread. Working out an R naught relies on you picking up as many cases as possible and if we were missing so many maybe we were always under estimating that so I don't personally think saying, we were wrong, and we would do something maybe differently next time, because it is an opportunity to learn for next time that would really help so I think for managing staff having really good open relationships, fantastic lines of communication being seen to be supportive to them is really one of the key things I would do differently well as much as possible anyway.

Jasmin Islam 46:22

Oh, yeah. Evonne quickly and then we'll probably move on just only got 10 minutes to just to get some of the other Q and A's in.


Evonne Curran 46:28

It was just to say I found the honesty, just being absolutely frankly honest. They can tell if you're telling them, Porky pies or you're winging it same we can tell with anyone else. So just being honest and saying I don't know that I'm going to go out, away and find that and coming back, that that was putting that extra bit of effort in to make sure you were meeting their needs, whatever their needs or their anxieties were, I thought that was the best thing that was most helpful in terms of their response you got back.

Jasmin Islam 47:01

Great, okay. Brilliant, well thank you very much to the panel for fielding the questions that we've had, I think we're going to move on now I'm conscious of time to the live questions that you've been submitting throughout the session. Okay so the first one. Do you feel that there have been enough engagement between PHE in terms of IPC policy and the key IPC bodies HIS an IPS, if not, how can this be improved? Colin, do you want to take that?

Highlighted question



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Do you feel that there has been enough engagement between PHE in terms of IPC policy, and the key IPC bodies (HIS and IPS)? If not, how can this be improved?

Anonymous

Colin Brown 47:37

Sure, I mean so PHE don't write the IPC policy. It's written by the foreign nations IPC cell, of which PHE contribute to. I think engagement with professional societies across a variety of guidance standards, not just, you know from the, from the IPC cell, you know, at the start maybe suffered from lack of mechanisms and clear ways to do that in a timely manner. So, I think going forward, you know, one of the things that, that I think we will all be looking to do is to try and, you know, figure out what the best route of engagement to different professional societies and key bodies is. I mean I can't speak for the IPC cell because you know I'm not a member of it. But I know that, you know, certainly with any other bits of guidance that are written within our division one of the things that we will be looking to strengthen, is finding ways to target and get feedback where we're needed from appropriate professional societies to carry on AMR and other, you know activities that maybe don't rely completely on long, you know, kind of six weeks to three months, consultation periods but where things are needed for more rapid turnaround what you know how best we can utilise the expertise of different organisations is.

Martin Kiernan 48:59

Yeah, I'd like to look at the Australia model, where they have living guidelines and they have 33 professional societies with an interest in the area of COVID management, and they were turning out new guidelines every week, now that was funded that they had a group they're looking for, for new evidence every week but each professional society did undertake to turn out a decision so every week, the guidelines were updated with living guidelines and I'm not aware that there was much interaction, I certainly haven't heard of it personally, between the professional societies here, and the guidelines, you know, in the advice given groups. I may be wrong, but I'm not aware that there was much and the Australians I think did an exemplary job of this.

Jasmin Islam 49:42

Yeah so I think I'll just say on that much, I think yeah I agree I think moving to that sort of model, you know, it'd be great I guess in the context of COVID, potentially one of the benefits the Australian set up has is they didn't actually have that much COVID. In terms of if you think about the people that involved, you know, on a day-to-day basis. A lot of the people who work on the guidelines, you know, being a BIA, HIS, IPS they're often jobbing clinicians, nurses, infection control, so I think having to work out how we could do that in a timely fashion, while still trying to manage. You know, the demands of delivering to patients and supporting the COVID pandemic. I think would be really interesting to look at, but, but certainly taking from other models is a really good idea. Sure. Evonne, did you want to comment?

Evonne Curran 50:29

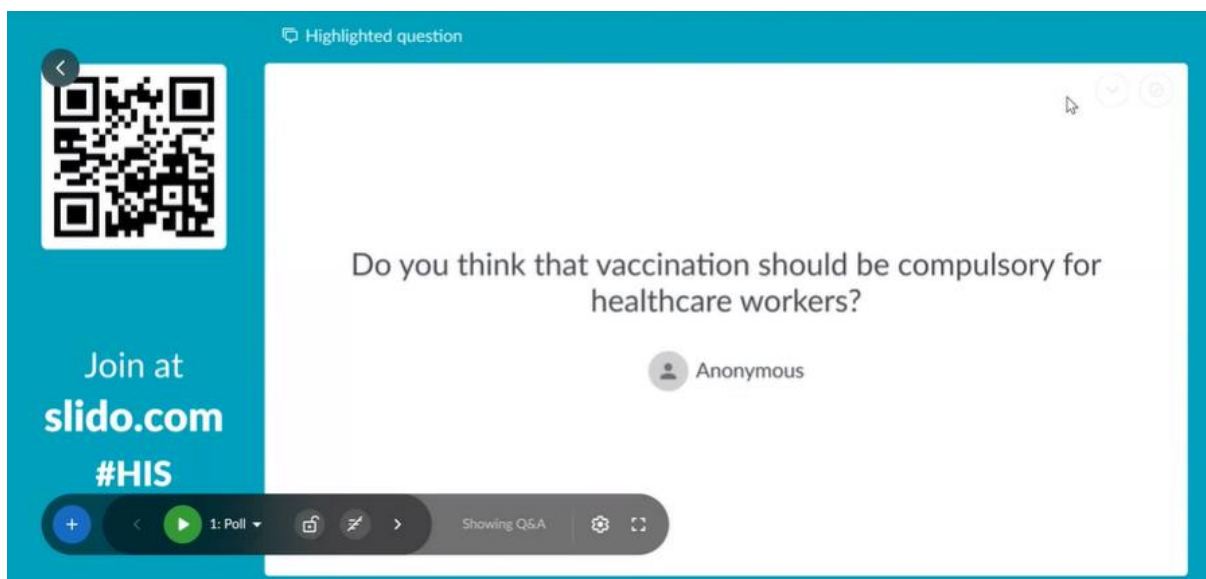
Yeah I'm sure this question was in the last time that I was on, so a bit of a Deja vu but I still think, clinical testing centres should be, you know, you get all the professional societies around the table that you want. Does it work in practice, or more, what are the issues in practice? There are one or two Sentinel hospitals with a direct feed line back, say no that doesn't work, or we found another way to do it that's better than somebody who writes guidelines and sits in an office to do it. That's not how you write guideline you have to see it working at the coalface so these centres for all that you know, you know that 100 professional societies great does it work on the ground is the question that you have to ask, and that involves everyone.

Martin Kiernan 51:18

Completely agree.

Jasmin Islam 51:22

It's just trying to find the mechanism to get that get that setup. Great, okay if we move on to the next question. Do you think that vaccinations should be compulsory for healthcare workers? Who would like to take this question.



Highlighted question

Do you think that vaccination should be compulsory for healthcare workers?

Anonymous

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1: Poll

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Evonne Curran 51:46

Yeah, no, it is just to say no. If we can't produce for our healthcare workers, science, evidence, and a of all sorts, we are lost. You know, if we can't get that message over, of the safety of it and one of the things in the past question that was talking about vaccine. I just wonder whether the health care workers have felt put upon, you know, perhaps claps at the door wasn't, you know, wasn't all that they needed and the offer of a vaccine, early on, might actually have been seen like I'm not testing that I'm not a guinea pig here. You know I wait to somebody else's you know they don't want to be early adopters again. And so I can understand that. So I think it's a work in progress but if we make it compulsory, I think we've lost.

Jasmin Islam 52:38

Martin and then Will.

Martin Kiernan 52:40

I'll just say very quickly, I think we have to have a good understanding as to really why people don't want to take the vaccine, and that means just keeping answering the question, and then coming back but they okay you may not want to do it because of this, but if I could show you that, would you, and keep answering that question until you get to the real reason why, because only when we find out why people really don't want to take the vaccine, will we be able to actually engineer a solution to that.

Will Hamilton 53:10

I just have a slightly different perspective; I mean I definitely agree that you should try and be as persuasive as possible and listen to why people don't want to and you need to address vaccine hesitancy. And you know, as best you can, but it depends what's meant by the word compulsory. Obviously, you can't force someone to do something against their will, but there are professional obligations on health care professionals. There are requirements for hepatitis B vaccination for surgeons. If you look at the mortality of COVID in care homes, which was up to 50% for hospitalised care home residents to Addenbrookes in the first wave, and the potential for asymptomatic transmission through care homes, including by care home staff. I don't think, personally, it would be unreasonable to say, if you want to work in this care home then we require you to be vaccinated, to be honest, that's my view.

Jasmin Islam 54:09

I like a bit of lively debate there so that's good. And I think on that as Will's got his mask on, so you can't really see his expression which is lovely, but if we move on to the next question. Staff know what they should be doing to minimise the risks themselves some other stuff but this frequently gets forgotten in casual settings restaurants etc. What can we do to overcome this?

Highlighted question

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Staff know what they should be doing to minimise the risk to themselves from other staff, but this frequently gets forgotten in casual settings (rest rooms etc). What can we do to overcome this?

Anonymous

1: Poll

Showing Q&A

\$50 million question, we will go to Evonne first.

Evonne Curran 54:40

I think this is the first time we have, we have had to extend control measures beyond the ward and nobody was, nobody was ready for that, and nobody knew how to take that forward we just weren't used to it, there was always a space where you could go to put everything down and forget what was behind you, and you know, people have been changing in the wards manager's office and you know that we've been overcrowded in crap facilities, forever. So there never was the space to get it right from the get-go. And I think now you get into other psychological beliefs that are done it this long for that long, and have not come up, you know, have not come a cropper yet. I'll carry on in, there's a lot of understanding of how people behave in this, in these situations that we need to take on and build in and make sure we don't haven't got good spaces, don't let that drop, and just understanding the whys, as Martin keeps saying what why do you think you can let your guard down now. Social herding is one of the things that could be going on but it's just difficult we've never had to do that before we've always had a space, and this is the first time we've not had a space.

Martin Kiernan 56:01

Yeah at the beginning we weren't really sure we didn't know much about asymptomatic spread. So staff would be together and think we're all fine because none of us got symptoms, and also, we didn't really accept the aerosol and air spread either so if there's nobody symptomatic there's no droplets and we've all cleaned our hands anyway. And to be honest, we're all quite glad to club together and the infection is all out there with the patients and I know maybe we didn't sell those messages early enough, but also as Evonne said we didn't work out, they actually we've got to really restrict these other places as well. You've only got to go to handover on a ward office when eight people are crowded into a room for two maximum. And I dread to think what the number of air changes are in a ward office, or even things like a treatment room where people are mixing up IV

drugs, you know, what are the air changes like in there, or a sluice, or, you know other small spaces, but we didn't really go down that route, early enough, I think.

Colin Brown 57:01

I mean I think we need to take this forward into the built environment and for planned future hospitals because they never built we knew exactly the points that people crammed into small rooms and, you know staffing space consider, you know, are not prominent in the plans, and I think we need to use everything we've learnt now to remedy that.

Martin Kiernan 57:23

I think a phrase that I grew up with was, Space the final frontier, on a TV programme and it's, it's still the final frontier that we haven't reached yet I don't think.

Jasmin Islam 57:36

Okay well on that note from Martin I mean it's tempting to have another question but I feel that that that is a good place to end with Martin's final quote. And so I would just like to start off by thanking all about panel members today so thank you to Evonne, Will, Martin and Colin. And then, thank you to obviously everyone else for joining webinars today, and certificates of attendance will be emailed out to everyone subsequently. A recording and transcript of this webinar will be available on his website, along with lots of other COVID centric resources. Thank you as well to GAMA healthcare for supporting this webinar series. It's been a really great innovation by HIS and I think lots of people have found it really, really helpful. Thank you for his staff for putting this on the next webinar is going to take place on the 16th of June. So topics will be sent out soon so watch this space, and thank you everyone for watching.