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Transcript of an interview with

Dr Sumit SINHA-ROY

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NOTE TO READER

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Transcription

This interview session with Dr Sumit Sinha-Roy is being conducted by Julia Wallis for a dual project between the State Library of Western Australia and the Royal Perth Hospital Museum. The interview is taking place at the State Library and today's date is Thursday 16th September 2021.

The focus of the interview will be Dr Sinha-Roy's COVID-19[1] experience and his role in preventing the virus from spreading into the Western Australian community.

It is anticipated that the interview audio, transcript and any photographs, documents and materials will be added to the Royal Perth Hospital Museum and the State Library of Western Australia's oral history collections.

Dr Sinha-Roy studied and graduated as a doctor in the United Kingdom before moving to Western Australia in 2013. In 2016 he took up an opportunity to work for the Department of Health, as both a public manager and a practicing clinician. He loves the challenge of combining the two roles and using his clinical experience to improve the way the WA health system works.

In November 2020, he completed an Executive Master of Public Administration through the Australia and New Zealand School of Government.

Dr Sinha-Roy has recently served as East Metropolitan Health Service (EMHS) Vaccination Lead, overseeing part of the WA Health Department's vaccine rollout.

[00:01:39]

Wallis Julia (JW) **So, thank you for coming here today for the interview. As I said to you off the audio, I thought it might be good to start off with a bit of family background and are you happy to give me the date of birth?**

Dr Sumit Sinha-Roy (SSR) Yes. I was born in London, in South London in Saint George's Hospital on the 15th of January 1985. It happens to also be the place where my mum spent thirty-five years working for the NHS[2]. My childhood was in South London – the place is called Streatham and I pretty much did all of my original sort of schooling, so my infant, primary schooling all around in the suburbs nearly. Then for secondary school I went to Wilson's Grammar School which was a significant way from my family home before embarking on a medical degree at Manchester University. I took a year out to do a sport medicine degree as well at Bart's and London Hospital School of Medicine. So I came out with a medical and a sports medicine degree and entered the NHS in 2009. 2008 or 2009.

[1] https://www.who.int/health-topics/coronavirus#tab=tab_1

[2] National Health Service.

(JW) So was your mum the reason why you wanted to pursue that path?

(SSR) Not really. So my mum worked in procurement for finance and my great grandad on my mum's side was an army doctor so very different. All throughout my childhood I liked trying to understand how things worked, how processes work and when things aren't working, understand why they are not working and try and fix them. I thought, "What's the most important thing we can fix?"

And it's like, "Well, us as humans."

That was probably my reason for pursuing a career in medicine. I might sound a bit altruistic but I had this compulsion almost, to just want to help and thought medicine is quite a vocational degree; you get an opportunity to learn; you get five to six years of being a student which is probably the greatest job that doesn't pay. But it's a great opportunity and the find that you become a doctor at the end of it is great. But I never saw myself as doing, as being a doctor for the rest of my life in a pure clinical role. I wanted to explore other opportunities and a medical degree absolutely sets you up for not just management or things within the public sector but you learn how to interact, communicate with people. You learn to problem solve and complex problem solve as well. You almost see the world in 4D rather than just three dimensional. You understand how one particular consequence or rather solution that you might put forward has knock on ramifications, almost like the butterfly effect. So it was, yes. And I am where I am because I just have a curious mind. I'm inquisitive by nature.

(JW) Okay, so you started with the NHS in 2009?

(SSR) Yes.

(JW) Correct? Did you say that was in London?

(SSR) That's correct. In London. I spent my first couple of years in the UK you have a training programme called the Foundation Training Programme. So every doctor that will - or rather every medical

graduate enrols in the foundation training programme and get allocated a Deanery. So an area where you work.

[00:05:03]

So my first year was in a small London hospital called The Whittington. It was almost like my second home. I loved that place. It was .. it worked well for me because it was very close to the London Underground so you could commute very easily to it and it just had a nice family feel to it. Everybody knew each other. Everyone was so polite. Everyone just wanted to help each other. It was a really good work environment.

I moved on to work at Watford General Hospital which was busy.

[*Interruption by telephone ringtone*]

(JW) **So we just got interrupted there by some music on the phone.**

(SSR) Yes. So my experience of Watford General Hospital really opened my eyes as to how to deliver really complex care rapidly. I worked in a really busy Emergency Department, and the acute medical unit. There was over a hundred beds in this acute medical unit. I remember vividly one night shift we were handed over twenty-five, thirty patients to see and you felt like when you get to the morning shift, I'm handing over twenty-five and thirty patients that still need to be seen. Like it was almost interminable, the churn of patients that were continuing to come through the door and it was a trauma hospital as well. Where the hospital was situated was right next to the M25 which is a big ring road around London and unfortunately we used to see a lot of road related traumas.

So that was my first exposure to trauma related casualties. I learnt a lot through just being thrown into difficult situations. I reflect now that's almost more than ten years ago. It is more than a decade ago now since I had my placement there and that kind of cemented my reason for wanting to move out of just doing pure clinical work because I thought there was different ways we could deliver our services and maybe lean up our services and improve things for

general patient care. But I guess my medical career was forged through my experiences there.

I also spent some time in the community. I worked in a GP practice for a few months as well to see the other side of medicine as well because there is a notion that medicine is all based on the hospital. It's not. Most of our medicine is actually delivered outside in community places. So that was a really good balancing act. Not a balancing act as such but a good balance for me because it opened my eyes to see what is available out in the community and how wonderful our community workforce is as well.

(JW) So where was that GP practice?

(SSR) That was in St Albans. A beautiful part of the world. Lots of old Roman structures still available there and a small town centre, very quaint, good coffee shops.

(JW) But that didn't make you think, Oh well, I'd like to do this now? This was just something you wanted to do for experience.

(SSR) Yes. I think it's …. I look back on my time and how my career's gone and up until the point of moving out to WA, my career has always been like, literally just go through school, go through university, get a job, go through a training programme. So after leaving Watford I got into a medical training programme. Did all my exams, got my Fellowships and I never really had an opportunity to kind of just stop to think about what it is that I want to do. I guess the good problem I had is that I really enjoyed a bit of everything and I knew that I wanted to keep that generalism going if I was to continue on in a pure clinical career. I ultimately chose a pathway of doing acute medicine and intensive care. So I started off on that training and did all my acute medical exams. So I am trained in acute medicine and thought I would continue on some elements of intensive care when I moved to WA.

So, in 2013 I took up a position at Sir Charles Gairdner Hospital just working in a medical registrar capacity, so middle grade capacity and I kind of realised that I probably don't want to do intensive care

anymore. I want to stick just to a medical path or a medical stream. But it was the first time I had an opportunity to work in a different system. I had spent some time – I'm jumping around here. I had spent some time working in a sports medical clinic in Melbourne many years ago, in 2008. That was my first taste of Australia. It was the first time I'd been. And I thought, "Hmm. This is an interesting part of the world. Very nice. "

And the four seasons in one day absolutely held true. I thought when I moved back to London that I'm probably not done with my time in Australia. I'd like to move back at some point and just experience either Melbourne again or another part of Australia. And that was the reason for moving in 2013 was to … I had a … there was a natural gap in my career progression.

[00:10:00]

I'd spoken to training directors who said if you want to take time off, now is the time to do it. Your position can be held. You can come back and lo and behold, moving in 2013 with the idea of spending just a year out in WA and eight years later I am here, settled, no immediate desires to go back to the UK and work in the NHS again at this point in time. I am quite happy where I am and would like to continue on in my role in WA Health to contribute.

(JW) **So how easy was it to come over and work at Royal Perth?**

(SSR) So the original move to Sir Charles Gairdner Hospital was relatively straightforward in terms of finding a job I have to say. It's not like that anymore. The hardest part was the visa paperwork. It felt like it was interminable, lots and lots. Reflecting on it again there was so much paperwork involved in these things. We try to be a digital type. I hear that it was the Federal Government wish to remove the landing cards and make it all digital yet from a visa perspective everything we do is so paper driven. I had to take true copies of my degree and post it, literally post it out. This is all a bit strange. That's what took time.

The actual job at Charlies was, like I said was you provide your CV, you provide some information. Yes, you are eligible to apply into our

pool. So then you just do the normal application processes and I was fortunate enough to get that job and I moved out with my then fiancée and we hatched a plan to say we will do six, seven months or work. Work hard, see what we can do to explore around Perth and bits of regional WA close by to Perth and then we would like to take some time off and do a bit of roaming around and see other parts of Australia

It didn't quite happen because I kept getting interested in the different work roles that one could take up here and the opportunities in WA so I just kept moving from one job to another and kept meeting new people and having new experiences. It's quite an interesting health system here. "I think I might get to know a bit more about it and spend some more time in it."

So the notions of holidays went by. We were just taking our normal annual leave and we just kind of started working.

(JW) So, how long were you at Charlies for?

(SSR) Five years. I left in 2018. September 2018 I left. So I joined September 2013 and left September 2018.

(JW) And you say the health system here is interesting. What do you mean by that?

(SSR) When you move from the National Health Service which is an integrated health service between primary and secondary and tertiary care, I guess I took it for granted that from a patient perspective most people access either hospital based care or primary care. But what they don't realise is that both from a funding perspective and I guess the way investigations or your patient journey itself in theory is a bit more, on paper, the NHS should be more seamless.

Whereas you move to here and it doesn't matter where you are, which State or Territory you are at, the Federal Government manage the community and primary health care and the State Government's responsibility is the hospital itself. So on paper it might seem it's fragmented yet the ease in which people can move between … You

are not locked into one postcode area, GP, you can move around. You really do have more freedom of choice as to where you go, who you see. I'd never experienced working in the private sector as well and hadn't seen how that private health care interplays with how we deliver public health as well. I see how the two can mutually be beneficial and it's quite needed. You actually need a good private sector to make sure that those who can afford and have got private cover in the private sector and those that can't come to the public. Whereas in the UK primary and everything was done and dusted through the NHS. So it was just interesting.

Also I guess it is just volume of people. I don't know what the current census data has shown for WA but the population is what, 2.5 million, 2.6 million? London back then had a population of greater than 11 million people. So it is dealing with less people here.

(JW) **Okay. So where did you go from there? So you said you were there for what, five years?**

(SSR) Five years. Moved around between different medical departments and then from 2016 onwards started to reduce my clinical time by doing more service re-design.

[00:15:06]

Design, looking at processes that work within the hospital to see what's working well, what can we do differently and that was all inspired through some time spent at the Department of Health for a few months initially in 2016. They had a job called the Medical Leadership Advisor Role and what you would do is you'd go there and actually - it came under about ten or twelve different service improvement projects across the health system. Fiona Stanley back then had just opened up so Fiona Stanley and Charlies, Royal Perth, you probably had a good overview of what is happening. So you get an understanding as to a lot of the issues that we had. They are not isolated to a single pocket or a single hospital department. They are quite shared in the problems that we have. So it was interesting for me to see how we can try and connect the dots. To see could there

be like a system level and solution to some of the problems that we have.

Then pretty much from – I would probably say from late 2017 onwards I split my time working on the Orthogeriatrics team. So these were people who primarily look after patients who unfortunately may have broken a hip or were elderly and in hospital but needed an orthopaedic procedure as part of our team. That allowed me to balance keeping my clinical skills up to date whilst also taking on service redesign opportunities within Sir Charles Gairdner and Osborne Park Health Care Group.

Then an opportunity came knocking in 2018. There was an expression of interest for my current position that I'm in as the Deputy Director of Clinical Services for Royal Perth Bentley Group and after being almost five years at one place I thought I would try something different; try something new. I looked around the place, met a few people and thought there is lots of different things happening here for Royal Perth Hospital and Bentley Group. I thought, take the plunge. See what happens. I don't regret it. Here I am three years later still in that role.

(JW) **Is there a rivalry between the hospitals do you think?**

(SSR) Yes and no. Yes in the sense that we all – ultimately we all want to provide high-quality, excellent, world-leading patient care. So that drives some rivalry. Yes. But rivalry for taking patients? Not really. Because as public hospital sites we're managed by the governance around your catchment areas and postcode and we also have clinicians who work across quite a few of the different sites as well. So, I'd say probably a healthy rivalry particularly if we've seen an initiative that's working well in one hospital. We go, "That's great. Why don't we consider that for our place as well?"

So I think the rivalry is a good rivalry that we have.

(JW) **So, the communication between them all is quite open by the sounds of things?**

(SSR) Yes. I mean when we move on to talk about COVID absolutely. Because COVID isn't an isolated problem to a single person or a single unit. It's a global pandemic and critically sharing information in a timely manner was actually the way that we were going to keep on top of things.

(JW) Yes. We will talk a bit later on. I am just interested in just sketching out a bit more background. So you didn't get any pushback from anybody since coming here with, "Who are you?" and "Why are you here?"

(SSR) No. No. No. In fact it's been quite the opposite. It's been … One thing I will always say, no matter where I've worked and who I've met is just how friendly everyone has been. Even when I was working just purely in a clinical capacity whether I happened to have a conversation with various department physicians, radiology positions or surgical colleagues, everyone has been really nice and friendly. That's not to say in the NHS they weren't because they were. But I have never had a barrier put up to say, "Who are you?"

I have reined in slightly saying, "Back in NHS we did this". Because that's a bit of a habit. You utilise things from your brain bank that you know and back then my training was on the NHS. But I have now spent more time in WA than I have in the UK. So really, my brain bank is now talking about the things that I've done here and seen what things have changed to draw on that rather than kind of going to a default setting as previously. Saying, "When I was in the NHS, this is what we did."

I'm not saying that anyone has pulled me up on it but they've given me a little wry smile occasionally.

[00:20:00]

(JW) So, can we talk a bit more about the Bentley SAFE team, is it?

(SSR) Yes. So that actually all came about for a Medical Service Improvement project. So when I alluded to the fact that I'd worked at the Department of Health in this team called the Institute of Health Leadership and they run the Medical Service Improvement programmes. It is now called the Clinical Service Improvement

Programme. So it's an opportunity. It's a bit of background for that. So in 2013 I think it was started. It was for junior medical doctors to spend some time outside the clinical environment to learn about service redesign and hospital processes to come up with some solutions to problems that they were seeing. That's now morphed into the Clinical Service Improvement Programme and that is now open to medical nursing and allied health which is fantastic because it is not just … It is very much not medics who run the hospital, it is a collective.

But the Bentley SAFE team came about because at Royal Perth Hospital they had successfully and won awards for it, and run an after-hours team called the SAFE team, safety for everyone after-hours. The notion being that when they looked at data and this wasn't just data from Royal Perth Hospital but data from around the world, there did seem to be some correlation between patient outcomes between day time and after hours. What we are saying is that as a 24/7 hospital, no. Everybody gets the same care no matter what time of day they come and what day of the week it is.

So they did some data analysis to work out what they can do to kind of improve that. So they came up with a concept of the SAFE team which is a multi-disciplinary team made up of a clinical lead. So there is a very senior nurse and medical doctors, a middle grade and a junior doctor who proactively ensure during the day time hours that they are aware of any patients of concern and they proactively manage them throughout the day collaboratively. The teams are looking after them and then after hours when the home team have gone home, yes we have an on-call component, they're the team that are looking after the patient. They're the boots on the ground but they already know about these patients. They have already been part of their care and we have seen a demonstrable improvement in our hospital standardised mortality rates. In fact, Royal Perth Hospital has the best hospital standardised mortality rate according to the latest data within Australia. I have no doubt that they SAFE team plays a big, big, big role in that.

So we knew it works in one hospital site so, again, most things in health and probably in the world over, nothing is ever an original idea. What's best is to actually work with a really good idea and tailor it to the area that you are working in. So Bentley Health Campus is quite big actually. It is mixed between general, so there are general wards that offer rehab medical and surgical area. There was maternity up until COVID hit and we've got a very large mental health footprint from youth mental health all up to older age mental health. What we wanted to do was to learn more about how that off the campus functions to see how the SAFE team or the ethos of the SAFE team at Royal Perth could be embedded within Bentley. They are different and as I mentioned because there is such a large mental health component.

But mental health, it isn't all about mental health. A lot of our mental health patients have physical health conditions as well that do require management. So that already felt like a natural segue into why the SAFE team could provide some assistance with working with the mental health clinic to the experts managing mental health. The SAFE team could provide some additional assistance from a physical health perspective.

So after quite considerable consultation and lots and lots and lots of hours of just following them around to see what teams are doing. So pretty much doing time in motion studies and time and motion studies, to determine in a 24/7 period how does the hospital day look like. Because that's the thing about hospitals. People kind of have this notion of the hospital is just there for visiting hours and things. But the hospital is still a living and breathing entity in the after-hours space as well.

Then, lo and behold, we kind of came up with some roles and we went out and recruited to those positions similar to what we had at Royal Perth. So a senior clinical nurse to take clinical lead, some junior doctor presence as well. What we wanted to do, because

there is a relationship between – because Bentley is about 10 kilometres from Royal Perth Hospital.

[00:25:02]

What we wanted to do was limit patient movement between the two if we could avoid it and manage patients at Bentley Hospital and not require them to come to Royal Perth Hospital. What the SAFE team has already done has demonstrated a reduction in transfers between the sites. Crucially when we do need to transfer patients to Royal Perth Hospital they now go directly into one team and only one team only. So the direct admission pathway is supposed to happen to prevent transfer to our Emergency Department before determining where they go.

That was probably … I guess it's one of those things … I've not really had an opportunity and this is why I was very interested about this. I've not really had the chance to come and sit down and just reflect the things that have happened in the last few years because certainly when we go on to talk about COVID related work for the last twelve to fifteen months this has been pretty much a blur. But the Bentley SAFE team was a quite large fundamental change in the way that our campus worked. So I'm actually quite proud of the team and how it was set up. Crucially, looking back on it now, I don't think the Bentley doctors and nurses could envisage a time working without that Bentley SAFE team now. So I take, not me, personally, taking credit for it, but I think the Bentley SAFE team should take a huge amount of credit that now they are pretty much the fabric of that health campus and people don't see the health campus functioning in the way it does if that team wasn't there.

(JW) **Okay so next on my list is the VITAL electronic journey board on the Acute Medical Unit. What's all that about?**

(SSR) Well, as we sit here in this room there is a white board behind you and on many, many, many wards that you walk on to there is a white board that holds patient information. Who they are, what they're doing, which nurse is looking after them and we will use magnets that signify who else is looking after them and what else do they

need. Whether they need input from a physiotherapist, an occupational therapist, a dietetics pharmacy. What we wanted to do to say at the very first stage as a minimal viable product is, in a really busy unit, when patients are coming and going quite quickly, it can be quite difficult to keep up with the manual process of updating a white board. Quite literally scrub things out and put things back on. Can we find a way to automate some of those processes for the team. The Acute Medical Unit at Royal Perth Hospital is busy. It's often got fifty plus patients in it. Those patients tend to stay between 24 to 36 hours. It's a short stay area. So constant high turnover.

(JW) **So, "acute", we didn't really define that. That's not as serious as really serious or its ..?**

(SSR) Yes. So it's a good point. So acute medical usually means from a ward perspective these are patients who are coming through the Emergency Department but have conditions that the team feel that they can treat and manage successfully within 24 to 36 hours. The patients are often discharged 48 hours from the time they first presented to the Emergency Department. But they also look after patients who may need ongoing care, but they are like the first home for those patients and then they hand over those patients to other carers. So it might be the geriatrics team. It might be the cardiology team or the respiratory team, for example.

But the model of care for medical patients would be they come to the Emergency Department, go to the Acute Medical Team to make that decision as a branch point then about whether they go home, stay within the Acute Medical Team and go another medical department. That's what acute medicine is, broadly speaking. In terms of the most unwell of our unwell patients, they're the patients who need intensive care. Who may need tubes to help them breathe, may need special medications to keep their blood pressure up, may need to be put on a special machine to manage their kidneys if it is not working as well. So that's a separate entity of patients what we are talking about there. We are talking about the kind of patients that may come in and the team feel like they can treat and get home within 48 hours.

(JW) **So it's a high turnover. So that's why you wanted the -**

[00:30:00]

(SSR) It is. We considered what other area in the hospital and we thought the Acute Medical Unit would be a good place to start. Because its busy. There is lots of people who interact with the patients and there is lots of team interactions between pharmacy, medical, nursing, allied health, social work and patient support services. Lots of people. There is almost as many people as there are patients on that area.

So we thought, "Okay. Let's learn a bit more about the area."

So we spent six weeks with the team quite literally almost like we did with the Bentley SAFE team peers following individuals and understanding their roles and then understanding how they communicate; how they would interact with the white board. Then we designed a product that was essentially designed by the staff of the unit. That was the key thing. It wasn't us as the design team pushing the solution. It was the other way around. The solution was given to us by the team.

So now it's a big electronic whiteboard as it were with a big 60 plus inch screen which has all the patient information which automatically updates as the patient moves and come in. So that's the first part all about kind of not having to constantly scrub things out. Now we are building functionality to allow members of the multi-disciplinary team to interact and say, "Yes. So you've asked me to see this patient."

So that's orange. That means progressing it. Green. I've now seen and cleared that person. It has also helped us with just some things we take for granted. Before we had a paper-based process of knowing what patients' meals are. It is particularly important about whether they've got allergies or whether they've got swallowing impairments that they have to have not a normal diet, a minced diet or a thickened fluids. That information, because it was manually processed, could run the risk of being missed if a patient moved from bed A to now bed B for example. None of that information moves

with that patient because it was all manually done with a bit of paper. So it has assisted our catering team to ensure that the right food types and meals are being delivered to the right patients as well. So that was a positive consequence of doing this.

(JW) So, is it keyboarded in? How does it work?

(SSR) So you can interact with a tablet, a 'phone, a desktop. We are now working with the team again to say what other functionalities can we provide. It was launched pretty much in the middle of when we were expecting things to hit us from a pandemic perspective last year. So it was done really in quite tight timeframes to get things done. Now is the time to go back into the area and figure out what's working well, what things do we need to change. We've mapped out the process for a few other ward areas as well because it is something we think would be valuable in other areas too.

(JW) So, it updates on a whiteboard? Does it update in different departments that are involved with the patient as well?

(SSR) Not yet. Because the tool is primarily only used in the Acute Medical Unit at present. But absolutely that is the hope that if we were to roll out in other ward areas then what you see on one board will then and update and reflect in other area if that patient is then moving to that ward. Yes. It has the capabilities to do that.

(JW) That's quite exciting isn't it?

(SSR) Yes. It's a good bit of tech. But tech is only as good as the people who use it. So the only other thing we have to bear in mind in a lot of our clinical areas is nursing staff are the constants because they are ward based. The medical staff, the junior medical staff rotate in and out and so just as they are getting up to speed and learning how new processes are on that particular ward, they're off to somewhere else. So that is a challenge for the Acute Medical Team. How do they try and keep that core knowledge of how to use this system. Therefore one solution would be if it's working well in one area, let's replicate it and use it in other areas so there is a baseline. There is a baseline standard that the patient journey board is now electronic rather than being a whiteboard process.

(JW) **Would you like a little break?**

(SSR) I'm good. I'll just have a sip of water.

(JW) **Feel free to top it up. So use of MS Teams in clinical areas. What does that mean?**

[00:35:00]

(SSR) WA Health has an enterprise agreement with Microsoft for all of its products and when Microsoft Office 365 it was the first time that all of their products were not just tethered, if I can put it that way, to a desktop; it was mobile. We are all communicating differently now when we were two years, five years ago and absolutely a decade ago. So we recognised that staff are already using instant messaging platforms to communicate outside of work anyway. So we thought why not use that notion that people are already familiar with in instant messaging and bring it into the hospital. So what Microsoft Teams allowed you to do was to share information in a secure manner because it is all kept within the normal cyber security protocols that Microsoft have to follow to comply with WA Health legislation but also with our Data Privacy Acts as well.

What it meant was you no longer needed to in theory page someone. You could send them a message on Microsoft Teams to inform them about something that you would like to either have done or an update on that patient.

(JW) **And that goes to their mobile does it?**

(SSR) Yes. It goes to your mobile device. If you are logged onto a desktop it will go anywhere, so that message goes anywhere. Again, I know we are going to be talking about COVID-19 shortly, but it was the platform to say that as and when COVID-19 was to come, as and when the hospital will have a quantum of patients that we are looking after we need to communicate differently as well. We need to find that platform that can allow us to disseminate information quickly. We do have a predilection to utilise emails. Emails have its place but if you want to get repetitive information out this is the best way to do it. So Microsoft Teams provided us with that solution. So we were

flipping the use of Microsoft Teams from corporate areas to see how it could be used in the clinical context as well.

(JW) **And it's been successful by the sounds of it?**

(SSR) Yes. Well, COVID-19 meant that no-one had a choice but to start to utilise Microsoft Teams because that's how all meetings were conducted on Microsoft Teams. All education was delivered through Microsoft Teams. Key clinical updates were searched through Microsoft Teams. Yes, other things were used as well but the adoption went from being … It was going quite well. We were working specifically with key medical teams in the trauma unit who use it really well. Now it's all areas use it. A little tweaking is needed in terms of how it's used but, by and large, everyone within WA Health both clinical and non-clinical areas are now completely au fait with the functionalities of Microsoft Teams and we are currently looking to work slash partner with Microsoft and some of their partners to have a few bits of Microsoft Teams to be tailored to aid us or help us with some of the communications that we have.

(JW) **Generally, all the hospitals across the board have the same sort of set-ups with the communications and computers?**

(SSR) So all the WA hospital network. So we are all linked in. Yes. So from that point of view. We are all on the WA Health Network. The question is more nuanced. So how we communicate. That's an excellent question because how we communicate is very different depending upon where you work and less about the where and more about the whom and who you work with as well. People have a preference for a modality of communication. I once posed a simplish clinical question to a group, a varied audience between managers, medical, nursing, physio, allied health etcetera. I just said, "How would you get across this message to me that you need Patient X to have this procedure done?"

And we realised that there was probably about six or seven different modalities: landline; fax (we still use fax in Health); Microsoft Teams; you could email me; you could send me an electronic referral; you could page me.

[00:40:00]

So I think broadly speaking what we do need to do is just … I wouldn't say WA Health alone. This will be health but industry wide is to actually just understand how do we communicate and how do we want to communicate. We might have many different modalities but do we choose the right modality to communicate the issue or with the comms piece at hand. The teams that I works with know that I don't like emails per se. I find them a distraction, the ping, ping, ping, ping, ping going off. Often many things that are sent in emails could either be pick up the 'phone, come and see me, have a chat. Send me a message on instant messenger platform. It doesn't necessarily have to be an email. So you expand that out, you know? I am just one. Expand that out. Because everyone wants to communicate with each other slightly differently does make it quite complex. But we should have some sort of, almost like a matrix of if this is the thing you want to communicate what are the preferred options for communication. It must look intuitive.

(JW) **It's quite hard sometimes with people with emails because some people put way too much information in and other people kind of don't but I suppose maybe in Health it's a bit different?**

(SSR) Oh no. It will be the same. The same. Email use is quite prevalent. You can have anything from a one word answer via email to *War and Peace* come through an email. But it is just a better understanding as to there are definitely. There are so many different … it's only going to increase, the communication modalities we have but what's the most appropriate tool to use in the situation.

(JW) **So, the other thing was working with the Clinical Teams to set and use the electronic Goals of Patients Care form.**

(SSR) I think it was 2016, 2017. I think it was 2016 that a great trial happened in Armadale Hospital where the rehab team there piloted the use of a Goals of Patient Care form. Now prior to that, the most equivalent form to that would be a Do Not Attempt Resuscitation form and that meant almost the decision to resuscitate was binary. It is either a yes or no, as opposed to actually understanding what patients' wishes were. Because for some patients you kind of have to

recognise they've got multiple different co-morbidities. They might have come in with something quite serious but if you take them down this particular treatment pathway you may be able to remedy parts of this but as a consequence they might be ... the morbidity might be affected or they won't be able to get back to their previous functional level and that might not be something that the patient wants. So the rationale for the Goals of Patient Care was having a shared decision making process. Because the Do Not Attempt Resuscitation form has a connotation. It is very medically-driven conversation as opposed to more of an open conversation with the patients and families to say, "Tell me a bit about you. What's important to you?"

Because we want to make sure that what we provide you is commensurate to that and see where that kind of lands .

So we did a trial at Armadale Hospital and it became clear that the old way "Do Not Attempt Resuscitation" did need to change and be that Goals of Patient Care conversation. So the form is again a bit open to a communication piece as well. It is only as good as the way you communicate information. A form is a form. But the art is in having that conversation.

So that paper form has kind of been in a trial form for some time now. It is now standardised across all of the health sites which is good. So now it is a single form. But we have had some amazing champions within Royal Perth Hospital and again citing COVID as a bit of an accelerant to these things, a great education runout on how to have a conversation with patients and relatives. What we wanted to do was, because we are a paper-based system, these were important conversations to record. It needed to be visible to anyone and everyone. So we worked with the Health Support Services to design an electronic form that meant that information was carried with the patient wherever they went and wouldn't be lost within the medical records. If the patient came back into hospital you can recall that information electronically instantaneously without waiting for the full record to come.

[00:45:00]

It's always – if you are going to have that conversation again with a patient, it is always good to know what has been discussed previously. So we've been working with our intensive care doctors and palliative care physicians and thus far it's completion rate has increased. There are some workflow impediments that we are working with because as I mentioned we are a paper-based system. We are still writing medical records so this is something slightly different but overall the general feedback is that it is a good step to go electronic because it means that information is visible.

You asked me earlier about WA Health are we are all in the same system? Yes. We are. One of the advantages of that is that if our team has a conversation here at Royal Perth Hospital that information can be reviewed by any public hospital site. So Fiona Stanley, Charlies; they can see it up in Broome. So that's one of the advantages we do have in WA Health, we are quite linked.

(JW) **So, it sounds like these were building blocks that helped you cope when COVID came but you didn't really know that was going to be the case?**

(SSR) The single … If you were to ask me what's the single biggest thing I drew on from my time working within WA Health and the things I learnt in the last couple of years whilst working at Royal Perth and Bentley Group Hospital and the time spent in the NHS and as a medical student is trying to find a way to communicate more effectively. Because with COVID particularly the first two weeks or so, the information kept changing so quickly. You'd turn up at 8 o'clock in the morning and by midday the red list of countries has changed, the testing criteria has changed. Things just kept getting added, some things removed, wording changed. So it was really important in my mind to work out how do we communicate that information effectively and rapidly. Hence the biggest thing that we did was we worked with our data and digital innovation team at East Metro Health Services to create our COVID-19 digital application

web form because we knew that at the heart of managing this particularly at a system level was to get good quality data.

(JW) **Let's go back a step. So when this all was starting to bubble, I'm just trying to think when it was now. 2019, was it? It was starting to sort of …**

(SSR) So end of 2019 around December time there were a few little rumours and cases. You could click onto a news platform and you'd see some concern being raised about some respiratory type illnesses in China without clarity as to what it was and what's causing it. I think things became more apparent in early to mid-January that we are looking at a -

(JW) **That seems to be when it was Italy if I remember rightly. It was really going through Italy and then it reached the UK in what February last year?**

(SSR) Feb, so we .. I think the WHO[3], I'll have to check dates on it but I think the WHO declared a global pandemic for COVID-19 on the 8th of March, I think off the top of my head.

(JW) **A bit late actually.**

(SSR) Yes. The 8th of March is when they declared it but probably six weeks prior to that it had spread to at least … So it was in Europe, in pockets in Europe; it was in South-East Asia as well. I think we had the first confirmed case I think was in New South Wales was I think actually on the 8th of March as well. We opened our in WA our public COVID clinics in the tertiary hospitals opened on the 10th of March [2020].

(JW) **So do you think in hindsight you could have got onto it quicker or was it a case that we didn't really know what was happening?**

(SSR) I'm not sure is the answer. I take it back almost a decade, so on the first jobs I had was working in an intensive care unit in London and that was at a time when Swine 'Flu[4] was endemic [2009]. We didn't know what we didn't know. I remember vividly a night shift having a very young patient, she was twenty-one, otherwise fit and well, came

[3] World Health Organisation.

[4] https://en.wikipedia.org/wiki/2009_swine_flu_pandemic

in with a cough and fevers and she was very short of breath at the time.

[00:50:02]

She rapidly deteriorated once she came into our intensive care unit and I remembered her case vividly because at that point in time we were still just doing our fit testing to make sure we've got the right masks. If we have to go into these rooms to manage these patients that we were protected as well. We hadn't even finished doing that and we had a patient there with severe respiratory illness and she succumbed to it. That stuck with me ever since. I just couldn't believe that someone who was otherwise completely fit and well would deteriorate so quickly. This was one of the first jobs I did so this was … Everything was new to me anyway but this was confronting.

So could we have been alerted earlier? I don't know. The world has changed so much in that time that freedom of movement means that - anything crap can happen or any single viral illness which COVID is. You will never contain it to a single pocket or region. You have to be cognisant of that. It will spread and spread quicker than you think.

Maybe perhaps if we were to look back on this time in another decades' times is to say that perhaps we could have shielded ourselves a bit better but ultimately the virus goes where people goes. Travel has been decimated since the early part of 2020 but at that time. I don't know what the stats would be there but there are some wonderful infographics on the internet of just what the flight radars look like. There are so many people in the air at any point in time. We are all taking things back home or somewhere else, somewhere foreign. I don't know.

(JW) **Were you getting any feedback because you'd been in London for so long, were you in touch with people? Were they telling you things about what was going on?**

(SSR) Yes. Absolutely and still now. I have many close friends who are working in and around the UK and at the time I was getting messages saying that “Heh! Have you seen any cases?”

At the time actually because it was linked to the travel so it was interesting. We were seeing cases of people who had the money, had the ability to travel, so we were seeing a demographic of people who were colloquially we would describe as well-to-do. That would be a similar experience I would share as I go on to elaborate about more about the time spent in COVID clinic where we were seeing people who were reasonably well-do-do. One of the first things they all said, we had a group message thread going between a lot of us saying that it’s only a matter of time before I get it. That was the sentiment of my friends back in the UK.

(JW) Do you know anybody who has died in the UK?

(SSR) I don’t have anyone from a work perspective. My friends – I’ve had a couple of people who’ve had it twice now. I have got family and family friends who have passed away from it in India. Yes. I mean that’s another very sad personal reflection to perhaps elaborate on at the next juncture at a time when the Delta variant really took hold in India. It was very challenging. I was getting video calls to provide some medical consults as it were and ringing around trying to find iPortable oxygen for family and family friends. Calling in as many favours. It is a horrible thing to say but one of the only things I knew I could assist with was just providing money. So transferring money to the friends and family in India. But everything unfortunately got seen as an opportunity. “Portable oxygen? Sure. Here is the price for it.”

So, yes. It was quite challenging.

(JW) Perhaps we should talk about where you were when COVID sort of started to become a problem and when did you get involved in the COVID clinic?

(SSR) So where I was is an excellent question because I do remember that. I was sat in a lecture hall at Melbourne Business School. That was part of my Master of Public Administration through the Australia and New Zealand School of Government. The reason why I was involved

in it was because it was an opportunity to move around to different parts of Australia and get taught by some really eminent people.

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So the Melbourne Business School have got some amazing lecturers including the School of Law as well. I had the opportunity actually in 2019 to go to Singapore as well to the School of Public Policy. That was an amazing experience.

But it was a Friday and we were just finishing the modules called Governing by the Rules. My mind was already beginning to switch into I am going to go back to work on Monday. I've got to fly back. I've got to do things I need to sort out. I was also … it was the first time I'd spent time away from my little person. My boy was born in November, November 2019. So it was the first time I'd spent time away so I was quite homesick to get back to him. My parents were over from the UK as well at that time. My in-laws had been out just before that as well to just help us. My wife and I, Jas, we were very happy that we had some support. So I was quite desperate to go back. I was just changing my mind set to go. I have all these things I need to do from the study but I want to go home and spend some time with my boy and the family.

I started looking at work emails coming through. There was a low grade concern at that point to say that something is happening. We are not quite sure when it's going to come but it's coming and it's beginning to go, "Okay. I think things are going to be different for the next few months potentially."

Pretty much from late February, that last week of February onwards it was a case of okay, the world as we know it is changing. The way we practice medicine is likely to change very soon. I just went into full on what can I do to, not that I don't anyway, but what can I do to help? How can I assist?

When it became apparent that there was a mandate from the State Government to say that we need to set up COVID clinics I thought, "Okay, look I've just spent … what use is it studying a Master's in

Public Administration in the public sector if I can't start putting some of these skills I've learnt to use."

I guess I'm sometimes considered to be the Jack-in-the-Box who thinks slightly differently to my peers at times. There is no right or wrong reason but I felt that I could contribute. So whilst the COVID portfolio didn't sit with myself I thought I could contribute both from a clinical perspective and from just a process perspective. So we literally set up a COVID clinic, including the infrastructure in under 72-hours. Yes. Around 72-hours which included weekend as well.

(JW) And this is what February 2019?

(SSR) March the 10th we opened and that's when I go back to what I mentioned earlier saying that we knew that whatever we did we needed to have an electronic process and an electronic process that spelt out in Acute in a line. An electronic process that continues from a triage perspective and an electronic process that is complete and finalised as an assessment path and you are actually spending some time with someone doing the swabs etcetera. And it had to be agile in the sense that we build something now but it had to have capabilities for us to change it because the nature of information is constantly changing. So that was one of the key inputs and bits that we had. The other one was, okay how do you staff it? Thinking about staffing in a different way.

(JW) So, where was it based?

(SSR) At Royal Perth Hospital but the clinic is based in, and it still is, in Ainslie House – that's on Murray Street. The reason for choosing that location was there is a little bit of outside space. There is a grassed area front and back and it also allows us to have one-way flow. So it reduces the opportunity for people to mix. It is slightly away from the main hospital. It's still very much within the Royal Perth grounds but it's not in the main hospital area. So as the press has demonstrated previously with the pictures they've taken when we did have snaking queues, it's not quite in the hospital area. So it shouldn't have as much of an impact with the normal hospital

patients and families that would come through. We chose that location with … I remember doing walk-throughs of many, many, areas … In fact it was actually quite interesting to me because I got to know the hospital in a very different light as well. I got to see places that I had never ever seen before or even knew existed. So it was good from that point of view. We chose that location primarily for access more than anything.

[01:00:01]

(JW) **So you say "we", so what role were you doing at that time? You had to change to this other one, did you?**

(SSR) So I was from a … My main position as I am, is Deputy Director Clinical Services working as part of the executive team. Under that portfolio the main thing that I manage is medical workforce. So we have about 850 plus junior doctors that we contract and manage on a yearly basis. So a big turnover and big changes. We've got a team of 12 or 13 in the medical workforce team that manage that. I have a safety and quality portfolio as well trying to reduce our hospital related complications. Then I guess from a personal interest perspective I can see how it matches and how we do things in a hospital perspective. I am interested in data. I am very much interested in digital workflows. So trying to incorporate that.

So working differently meant that I had to delegate my medical workforce responsibilities to a manager for a bit and say, "Here are the things we need to consider".

I then assisted with whatever we needed to do to get the clinic up and running which included getting our medical staff trained up in Personal Protective Equipment. I got myself trained up in it as well and providing staff for it. So working with the data digital innovation team (DDI) for this webform that we knew and has proven to be, but at the time we weren't one hundred per cent sure but we knew that it was definitely the right way to go in terms of managing the information that was coming through.

Then I guess being … the term I would use is the information conduit. So I would get hold of information and I'd work out what's the best way to get this message out to the COVID clinic team so they are not constantly having to … not that they were working in the dark but sometimes they can feel quite isolated because just by proximity in the hospital area it is such.

Then setting up the processes within the clinic. So the clinic workflows. So how patients come in. How they get triaged. How they get seen and how they exit. What information we give them on exit and then spending time in there as a senior doctor, I guess, in the COVID clinic. Because we did have occasions where there would be patients who were just unwell. They were there and they'd made it to the clinic but they were unwell and actually needed to have a secondary assessment in the Emergency Department. Sometimes to be admitted as well.

(JW) So how many people would they see in a day? That's a hard question.

(SSR) No. No. But the little smile is because it did vary. So the first few days and weeks we were seeing a couple of hundred to two fifty, three hundred. As we became slicker, quicker and as the team formed more importantly than anything, as the team formed and got to know one another well, got to understand the processes and they just bedded down a routine, they were easily seeing three hundred a day.

(JW) And who were these people?

(SSR) They are our COVID heroes. So our nursing staff were pulled from initially from a casual pool but also from staff who expressed an interest as to want to work in the COVID clinic. The medical doctors initially for the first three to four weeks were pulled from a relief pool kind of just. That was an interesting conversation I had with them. I said, "Look, I appreciate that it may feel that because you're not working or attached to a particular service, that you're being requisitioned but this will hopefully only be a once in a lifetime opportunity to get to be part of an interesting process. But you get to

feed back to change, to help us inform how we should be doing things differently. You get to be the eyes and ears. I am going to be there in the clinic as well. We will work through it all together."

Just so they didn't feel that just because they were in a relief pool position that they were being moved into this role. As one they were happy with it.

(JW) **So the people you were seeing are these people coming from quarantine or just general public?**

(SSR) In the beginning because right at the beginning, there was no quarantine, right at the beginning. So we saw a combination. We saw very first off people who had travelled from European countries, the States, the UK, etcetera and from China as well who were basically told that they need to get tested. So they were the original returned travellers.

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We also saw a second demographic of people who were in Perth wanting to get home but who had been instructed that they had to get tested before they went home, as well.

Then it morphed. So the first month was more international based travellers. Once hotel quarantine had been set up, that dropped off. What we were then seeing were patients who were directed to COVID clinics based on WA's controlled border policies so the first part would be a large quantum from Victoria. Then New South Wales came and then it went to Queensland. There was a slight lull and then it kind of went back again and it was South Australia first and then Queensland and then New South Wales and Victoria. So it ebbed and flowed.

The days when we did our largest ever testing was well over 1500 people got tested in a single day. That was when we were managing the concern related to a suspected outbreak in Maylands. So that was I guess home testing as it were. But the first part of the COVID clinic set up was international returned travellers or those wanting to leave WA to return to either their home or somewhere else.

(JW) **And the testing seems to be the sort of up the nose business. Is that the only way they can find it?**

(SSR) It's not the only way. So you may be aware that a lot of agencies are testing public sewage because you do excrete the virus in your faeces as well. But from a testing ability and accuracy perspective oral and nasal pharyngeal swab is by far the best way to determine whether you have the virus or not, through PCR, which stands for Polymerase Chain Reaction. So it is really looking for fragments of the genetic components of the virus and it's because it resides pretty much between the back of your throat and the back of your nose. That's where it kind of resides.

(JW) **Okay.**

(SSR) It's not pleasant. I am not going to deny that. I have many a comment saying I wasn't expecting it be uncomfortable … I have to say the workforce who do manage it, the COVID clinic team are so slick at it that it's, whilst it's not the most pleasant experience, in skilled hands, it's not that uncomfortable.

(JW) **And how long does it take to get the test results? It's still about a day is it?**

(SSR) It all depends upon the number of people testing. So in the current environment, that's where each clinic is perhaps only seeing a hundred to one hundred and fifty people a day. People are getting the test results back in less than twelve hours.

(JW) **And that clinic is still running is it?**

(SSR) Yes. Yes.

(JW) **I might just have a pause for a minute.**

[*PAUSE*]

(JW) **So, we just had a little break because we've talked about the COVID clinic but the next arm of it was the hotel quarantine and you were involved with that as well.**

(SSR) Yes. So hotel quarantine was set up quite rapidly between different agencies I think at the end of March 2020. The reason why it was significant is because Royal Perth Hospital is the closest Emergency Department to where the CBD [Central Business District] were and

so the hospital was seeing a – I wouldn't say large number but we would see the hotel quarantine guests come through our Emergency Department and then onto some of our wards as well.

We were approached to say that would we consider managing the health component of hotel quarantine with an onsite health staff that were basically employed through us as Royal Perth Hospital but broadly speaking as East Metropolitan Health Service. Now the rationale for that was that it was trying to give almost like an end to end process that if we were managing them in the hotels, if they did become unwell then at least we knew who they were. We'd already have some systems in place and, as I mentioned before, where WA Health has one linked health network, health system. If they were to move from a hotel into Royal Perth Hospital we'd have all that information as well.

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There would be no information degradation so you'd have more pieces of the puzzle to begin with when that person arrives into the Royal Perth Hospital Emergency Department.

(JW) **What about at the airport? Did they not have anybody at the airport?**

(SSR) So there is a … as passengers come off the 'plane there is a brief health screen that is done and continues to be done which does identify passengers of concern if they've got health issues. There have been occasions when people have come directly from the airport into our Emergency Department because they were concerned about them. But, by and large, I guess if we take a step back most people that are able to navigate security, check-in, get onto a 'plane are okay in the sense that they are ambulant, walking, they are able to talk and they are able to manage their time within a pressurised cabin environment where your oxygen levels are just slightly lower to what you'd get here at sea level. So most people that arrive are of reasonable physical health.

But hotel quarantine is a unique situation. Fourteen days from when you arrive the door gets shut before it's opened again. It can be challenging. People who, no matter how robust and resilient they may think they are, fourteen days of not having physical contact with – humans, we are social creatures – with people; not being able to go outside does have quite a big impact. Also there are people who travel who are in reasonable health but have health conditions that do require regular follow-up and check-up as well. Two weeks is quite a long time when those things aren't being looked into.

So there is absolute sense to have a health component of hotel quarantine to ensure that the guests and the returned travellers are able to navigate those fourteen days as smoothly as possible from a health perspective but also realising that there is a mental and a well-being component to it as well that needs to be addressed.

So we set up a team that was a hybrid team made up of general practitioners who had expressed an interest in working in this area and nursing staff as well.

(JW) **So, how did it work, how did it work? The nuts and bolts. I mean are they actually at the hotel or they called in?**

(SSR) Yes. No. Great question. So probably take it a step back. The first thing to perhaps address is particularly from a nursing staff perspective is that it is a very different way of working for them. They are used to working on the wards and having physical contact with patients. But in the hotel quarantine perspective everything had to be done differently. It was Telehealth type. So it was telephone calls and video calls as well. So it's a different way of working for them.

Then on top of that they are used to working with medical staff who are primarily hospital based and hospital focussed but now they are working with general practitioners who aren't. Who are community based. But what you gain with having general practitioners, you get wonderful generalists, you get people who have got incredible communication skills, you have GP's who have been working with

electronic medical records for many, many, many years and who are also well-used to using Telehealth components as well.

But they had to become a team and that's the first part is how do you bring two almost what sometimes seemed two convergent elements of your workforce together. So that was our job was to make sure that they did foster that kinship and ultimately it was very easy in a sense that they were all there to ensure that every single guest that they were looking after got through their fourteen days. That wasn't a bad experience for them to try and make as good an experience as possible.

(JW) **So, what sort of ratios are we talking about say if a hotel had say 50 people?**

(SSR) A very good question. So we thought we'd run this almost as if we had usual nursing shifts to ensure there was 24/7 coverage from a nursing perspective. With our direct link to our Emergency Department it meant that if there was any concerns overnight there was a friend to call as it were. Whereas we'd have the GP on site presence would be more daytime hours, eight until six, something like that but with an on-call component because they knew who the guests were. That they could be called up to provide advice.

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The ratios were kind of determined. So without going into which hotels we were situated into, we would have guests from 150 up to 450 almost 500 in one hotel. So we would flex up the staff requirements depending upon the number of guests that they were managing because otherwise it's a case of just putting more in and not being able to manage. So, yes, that was done.

And you asked about the nuts of bolts of it. The nuts and bolts would be this was a managed process by the State Health Incident Control Centre (SHICC), who had a dedicated team for the hotel component because it is separately managed to COVID clinic and outbreaks. Later we are going to talk about vaccination and the dedicated team. What they would do is to pretty much is to try and map out the day-

zero-to-day-fourteen process. So what happens when someone lands and the 'plane has landed that is when quarantine starts. So if the 'plane lands at 5:15 pm on Saturday, your quarantine time starts at 5:15 pm on the Saturday.

We had a very slick and controlled process of getting the new arrivals through. So the process for them begins post-immigration because the Federal Government manage that and once thy have crossed immigration now they are out in Perth airport and have got their bags, that's when they're now managing the process which includes the safe transportation of guests on buses with a police escort through to the hotels. Given their instructions on roughly what the fourteen days will look like so we had some nice infographics to say roughly what the fourteen days would look like. So we had some nice infographics to say that on day zero to day one you are going to get a 'phone call from the health team to introduce themselves and say hello and get a bit of an understanding of some concerns that you may have.

Then we talked about the swabbing. So all the guests in hotel quarantine were swabbed twice. To talk about when that would happen, what they needed to do for that process as well because we have to bear in mind given the fact that we are in WA, most people who are arriving from Europe are coming with quite significant jetlag as well. So that first few days they are going to be feeling quite sleepy as well. Then about the process in which they will exit hotel quarantine. So they will have official letters to inform them that their quarantine period has ended and that they are okay to go, etcetera.

Where our health team came in was we would be the first port of call for any queries and concerns regarding not just health but personal well-being. But, like anything that we want to do, we want to be proactive so we made sure we had a daily call list of all the guests that we needed to call from the new arrivals.

(JW) **How about language barriers?**

(SSR) No. That was something that we addressed early on. So there's translation services available and what we'd have to do is to route two calls into one with the translator on the other side of the line for it. But one of the great things of working at Royal Perth Hospital is that we have got a really linguistically diverse workforce as well. So what would happen is that because we are doing a lot of this remotely if we had the onsite hotel health team, if they didn't have someone who could speak that language and another person did at another hotel they would pick up those calls and make those call as well. So they had a real shared teamwork between all the different hotel sites. We talked about rivalry earlier between the hospitals? There was very much quite healthy rivalry about the number of calls and how efficient the teams were getting. They all drove each other to be more efficient between the different hotels that they were based at.

I guess the reflection from a language barrier perspective is, is that now moving forward not just from a COVID perspective but thinking about how we could use the learnings from this is that well, how do we present information differently to our patients? I don't just mean our linguistically diverse patients from overseas or who've emigrated but for those who are in our indigenous community as well. So there is lots of things going on. There are little thought bubbles going off about how can we present information differently. Because the hotel quarantine environment is different. It's not a hospital. It's not a clinic. They are not patients. They are actually guests. We are there as a safety net.

[01:20:00]

That was perhaps the first barrier for the team to get over in the first couple of weeks that you are not in a hospital environment. You are not actually in a health environment. They are guests. You're there to support for their safety net structure. Of course, be proactive with your calls but this is not a medical hotel. It is a hotel. It took a few weeks for them to kind of settle … The cogs to turn and there were little teething problems. The teething problems would just be, given

them full remote set-up so they can access health information remotely. So the teething problems we had were laptops not working, connectivity issues, 'phones not working. All those kind of things. But once we got over that and we spent twelve months working in the hotel quarantine environment I think … I will have to go back and corroborate all of the stats that I'm giving you but I think, in the end, in a twelve months' period we saw over just over 31,000[5] guests.

(JW) And was the fourteen days enough. Was there ever a time when someone might have left and got sick?

(SSR) We worked collaboratively with the Public Health Team and actually we were completely guided by the Public Health Teams. So the example would be if a guest had a positive or turned positive and by that I mean they returned a COVID swab that was positive, the Public Health Team would then determine the length of their quarantine. So there were guests who did spend longer than the fourteen days. Then what the Public Health Team would then work out is, based on the flight data and information as to who they were deemed to be close contacts and whether they also needed a longer quarantine period as well.

There are, to use a phrase, multiple moving parts. It doesn't probably even do justice to the hotel quarantine environment. It is actually incredibly complex and it's never-ending. It's unceasing. So the team who manage it centrally at the SHICC they have an incredibly difficult job to do and so the team and I, we just wanted to make sure that we just assisted them wherever we could. But there were many different components to hotel quarantine.

(JW) But there wasn't a case where somebody had returned negative tests and then got sick after fourteen days? Fourteen days was a good -

[5] The actual figure was 31,540.

(SSR) Not that I can recall from the guests that we managed. No. There were occasions when people become unwell but unrelated to their – well actually completely unrelated to COVID.

(JW) Okay. That's good. Well, should we finish it there for today do you think or do you want to touch on something else?

(SSR) I don't mind. I can talk for ever! [*Laughter*]

(JW) Because next time we want to talk about vaccinations. So I think it might be good to maybe have a bit of a break and talk about vaccinations next time.

(SSR) We can talk about vaccinations and then at the time of probably around Spring of last year. I have to get the seasons right because Spring I still think of autumn for me. It was from a personal perspective… so clinics were chugging along and hotel quarantine was busy but the team were doing a great job. We were then given the opportunity slash challenge of how we would manage testing at the domestic airport, pop-up testing.

(JW) Did you want to talk about that now?

(SSR) Yes. I can talk about that now. So I think it was about the end of September/October we were approached, the team and I were approached to say, what would a mobile testing team look like for COVID-19? So, we went from a theoretical … I think I presented a five point PowerPoint, a five slide PowerPoint on what it could look like and the next thing I know I got a 'phone call to say, "Okay. Do it." [*Laughs*]

I said "Okay. Fine."

That was probably the most challenging. So COVID clinics was challenging because of the timeframe but at least the clinic, it's based currently within hospital grounds. Doable. The web form challenging because of time constraints but done it before in other settings and I've got an amazing team. The team are fantastic to work with. Doable. Hotel quarantine. A different scope but the workforce was medical so kind of within my own kind of scope of comfort slash expertise.

[01:25:00]

Being asked to set up a mobile testing team to test arrivals at Perth domestic terminal and potentially at pop-up locations. That's different. That was kind of a sit down moment for me going, "Okay. That's a new one for me. Who do I tap on the shoulder to help with this one this time, eh?"

But as in Health, you can always 'phone a friend. So in the WA Health we are lucky that we have PathWest who is the public pathology system and they do this day in, day out. Specimen collecting they do it for a living. They are great at it. So we leveraged their expertise particularly about specimen handling because there was no point in collecting all these specimens if you hadn't handled the specimens properly. So we learnt a lot from them about specimen handling.

This is where I go back to the webform. You need an electronic process and so all we did was compartmentalise that webform we designed for COVID clinic for pop up testing which included the airports. In fact, we were using that form in hotel quarantine because it gave us an idea of who is who, which room they were at and we also had flight information as well so we could link things together. That was the easy part but our part was "Where is my workforce?"

We've been in a very fortunate situation in WA that by probably August, September … by August but definitely by September of 2020 hospital functions were pretty much back to normal. In fact they were probably supercharged. There was a mandate from the Health Minister[6] to really try and do a bit of a catch up with elective surgery and beyond in fact, to try and reduce our waitlists. So the hospital has been humming and churning along like a big beast and the engine is powering along and everyone is working their hardest in their own roles and now I have just been requested to set up an

[6] Roger Cook, MLA. https://www.wa.gov.au/government/people/roger-cook

alternative service without a clear understanding as to where our workforce will come from.

Again, ‘phone a friend. At Health Support Services they had earlier in the year put out COVID pools for people interested to take up roles to assist with our COVID-19 pandemic response across WA Health. They included clinical and non-clinical roles. So I had the conversations with the Health Support Services team. If I was going to name drop someone. She is one of the most beautiful human beings I have ever met. Her name in Sharon Viles. She is the director of the workforce team that manages COVID-19. She is just an absolute joy to work with because you can pick up the ‘phone no matter what the time of day and sometimes it would be 10 o’clock at night to say, “Sharon, I need your help.”

She is always open to ideas and to listen. Working with her team we found a small pool of potential workforce. We then had to design the training programmes and ensuing that they had a really good robust understanding of PPE usage and obviously, as mentioned before, swabbing. So we worked with PathWest to develop this. So they spent some time with us and they spend some time with PathWest to get skilled up. In fact, they’d almost do some shadowing with PathWest to kind of figure out the form and to do some swabbing. We started off small. A team of fifteen. It went to twenty, thirty, forty, fifty and then at its max the team were about 180 casual staff.

(JW) **How is it set up at the airport? You go through and you get -**

(SSR) Yes. So you’d … the booths depending on whether the terminals are, they would have what’s called restricted and unrestricted. Because it would depend upon the … as per the WA Controlled Border, the risk category of the State or Territory was at. But, by and large, the process would be that you come off the ‘plane, you’ve had a nominal health screen to ensure that you are fit enough to have the swab done. The team will then swab you. So they would collect your … so, you know, “I’ve checked your information.”

All this is done in a non-touch environment so they would hold up ID. We'd ask them questions. Again, these are the kind of things you need to consider because we are always socially distanced at 1.5 metres. Both the passenger and the staff member are wearing a mask.

[01:30:00]

There might be a screen depending on which terminal they are in. So you need to understand like sometimes, that's why we need an electronic process because we would look people up. So if they are known to WA Health, if they provide a couple of the demographic information we can pull the rest of the information which was important because we don't want to make any mistakes with names, date of birth, etcetera. But these are the considerations to have because it is quite hard sometimes to hear someone when you've got the mask on.

So we'd take the demographic information. We would print off labels for the specimen collection. So the form would get labelled. The specimen swab would get labelled and they would be taken to a booth, asked a couple more questions and then they would be swabbed. Then they would be sent out. They don't go back into the waiting area. They would be sent out and that's when they will go and collect their luggage etcetera and then exit.

Dependent on which State or Territory they'd arrived from they would have different rules. So if someone would be, you know test within 48-hours. But most of them wouldn't need that because they had been tested at the airport and then tested again at day 11 and day 12. That's the process that's managed through the WA Police and their G2G processes.

(JW) **So the swabs are in little tubes and things?**

(SSR) So the swab is. It is actually quite long. About that big [*demonstrates*]. So almost like the cotton buds you get from the stores, if you put two together, that's roughly the length of the swab. Then they go in VTM's, Viral Transport Medium to preserve the swab

because they might stay there for an hour, a couple of hours before they make it to the lab.

(JW) **So a 'fridge you are saying?**

(SSR) They go in iceboxes.

(JW) **Okay. Right.**

(SSR) So that was the other thing. So it's almost like … I sometimes used to joke with Jas, my other half and say like, "I feel like I am making a shopping list from Bunnings at times", with the number of – I can't remember the number of iceboxes we had. About fifty or sixty. I can't remember. It is a huge number of ice boxes that we had for this.

You know I mentioned before about hotel quarantine being about lots of moving parts at a high level. Here there were lots of moving parts at a micro level. We had to make sure that the staff have mobile 'phones for communication; they've got laptops that hold charge and laptops that can connect. Not to the Perth wi-fi because we didn't want to interrupt their signals but through different connections mechanism. That there is enough Personal Protective Equipment; that the staff aren't wearing their own clothes so they have scrubs issued to them. We were even thinking about colours of scrubs because we don't want the scrubs to seem too loud and confronting so we just went with black which is bland.

(JW) **And the PPE just has to be destroyed after each shift, does it?**

(SSR) Yes. So the gloves, the gowns, face shields, the mask. Yes.

(JW) **And how thick is the plastic on the PPE?**

(SSR) Not thick. Probably if I were to give millimetres but probably now I am wearing a double cuffed shirt today so it would probably be the area where the cuff is, about as thick as that double cuff. But what I can tell you is wearing goggles, mask, face shield, PPE – sorry, your gown I should say, and your gloves plus a full set of PPE. In the middle of summer is energy sapping particularly on the long days of testing that the COVID clinic team in particular had to do. You are so dehydrated by the end of it. So that's why, when we were talking about how are we going to get a workforce? These are contingencies

that you have to build for. You can't just be flogging everyone to say, "Well, you are going to do all this testing now."

You need to have some redundancy in the system to manage sick calls, breaks, etcetera. Yes. It was interesting. Again when you think about I want to use all the things that I've done from a COVID perspective into now into things I work with. Perhaps I can roster my medical staff slightly differently to build in some of that relief or match the demand of when those teams are busiest and have someone working there rather than them turning up and for two hours things not being that busy. That kind of thing? So, yes.

But these guys were super heroes, the team that were out at the airport because they then morphed into the mobile testing team. So when we had the outbreak at Maylands they were the team who then at the Rec Centre testing from 8 o'clock in the morning through to 9 or 10 pm at night doing thousands of people a day.

[01:35:00]

And they just took it all in their stride. What was wonderful is that we had people from all walks of life who were being trained up to work as part of this team service. And although we will touch on it in part 2, but as things slowed down, towards the tail end of 2020 and I should say really probably from February 2021 onwards when things were opening up between the States, this is pre-Delta strain arriving into Australia, the work load was not as high at the airports. But I was asked, "Will I take on the vaccination role again?" The first question was "Where is the workforce?"

And I found the workforce through the team that were managing the outbreak testing because we had a mixture of nursing staff there as well who could take on the vaccination roles with a bit of upskilling.

So throughout all this time there have been some absolute stars that I've worked with who've just – whatever you ask of them, it's always been, "Yes. Okay. I can't do it right now. But I will get back to you and I will figure out how to help you."

That just, not for me personally, that would be many, many people within the WA Health System. It's been a shared challenge and I think we have really come together. Because we are a vast network from a geography perspective but we are not huge in numbers of staff. I mean, what 60,000 to 65,000 staff across WA Health? So it's been nice to have people who really collaborate. We talk about Silos[7] a lot in the way that we work and I think COVID has brought people out of certain Silos to try and really collaborate. It has been a positive gain.

(JW) **That's probably a nice place to end today I think. Thank you.**

END OF INTERVIEW [1] 01:36:58 minutes

[7] https://www.forbes.com/sites/brentgleeson/2013/10/02/the-silo-mentality-how-to-break-down-the-barriers/?sh=24e5cfe28c7e

Transcription

This second interview session with Dr Sumit Sinha-Roy is being conducted by Julia Wallis for a joint project between the State Library of Western Australia and the Royal Perth Hospital Museum. The interview is taking place at the State Library and today's date is Thursday 30th September 2021. The first interview took place on the 16th of September.

The focus of the interview will be Dr Sinha-Roy's COVID-19 experience and his role in preventing the virus from spreading into the Western Australian community.

It is anticipated that the interview audio, transcript and any photographs, documents and materials will be added to the Royal Perth Hospital Museum and the State Library of Western Australia's oral history collections.

In the last session we talked about the Bentley SAFE team, the COVID clinic at Royal Perth Hospital, hotel quarantine and pop-up testing at the domestic airport. In today's session we will talk about the WA Health Department's vaccine rollout.

[00:01:10]

Wallis Julia (JW) **Okay, so last time we were talking about hotel quarantine and testing at the airport but we didn't really touch on lockdowns that were happening and we weren't so much locked down in Perth but certainly in Victoria they were last year. Can you talk us through what was happening in 2020?**

Dr Sumit Sinha-Roy (SSR) Yes. It almost seems like a lifetime ago but it's what? Only eighteen months ago from when we first declared, or WHO[8] declared the pandemic. So probably a bit of context for lockdown. So lockdowns are not just what perhaps has now been seen as a political measure. There is a public health imperative behind why we have lockdowns. The first one is that when people are moving around naturally they pass, they spread. So if someone is infectious or don't know that they're infectious because some people can be asymptomatic but still shed the virus, locking down reduces the transmissibility of the virus. So that's the first part.

The other part is, and this is where WA has done very well, and to the point where they've actually provided support to our Eastern States and Territories' cousins with contact tracing is when you don't have people moving around it makes it easier or buys time for the contact tracing team to work out who are the index cases and work

[8] World Health Organisation.

out any clusters that could be traced back to the original person who had the virus first.

By locking down also you buy time not just for the contact tracing but I guess it's a bit like with hotel quarantine really. Why does the number 14 days come out? Where does that come out magically? I do appreciate in places, like in the United Kingdom, they've got only 10 days for quarantine but a two-week period is roughly enough time for someone to come into an hotel quarantine environment. If they are asymptomatic they may show signs of the virus at some point during that 14-day period or if they are symptomatic hopefully during that 14-day period they would have had enough time to recover. So that two week period is enough time to either incubate, to have the virus and replicate within the cells. It is then shed and hopefully become, the person if they are not becoming too unwell, they develop their own natural immunity to the virus and therefore after 14 days – it can be extended up to 21-days.

I know previously we were talking about, were there people who stayed longer? Yes. There were people who stayed longer who were still symptomatic after day 14. We used to ask exit questions. About ten questions that used to get asked and it was binary. It was either "Yes" or "No". If you answered "Yes" to any of those questions which were usually about the symptoms they used to get so loss of smell, joint aches, runny nose – those kinds of things, or loose motion. If they answered "Yes" to those questions they they'd stay longer. Again with the public health team.

So that's a little bit of context of lockdowns. So they serve a public health purpose. Now what's changed this year is vaccinations. So most places around the world or a lot of the more developed nations started their vaccination programmes probably it would have been the equivalent of our Spring last year. We commenced ours in Australia around February, March of this year. Vaccinations changed the paradigm because the whole point of vaccinating is to provide an immune response.

[00:05:00]

So that if you were to be exposed to the virus your body will recognise the virus and hopefully kill it. Certainly what we have seen from the virus is that when the vaccines – all the vaccines that are available on the market – we have got three that we're using here. Other countries have different types of vaccines but they're all designed in a similar-type way to basically train your body to respond to the virus.

So you can say on one hand that now that we are vaccinating our population that in theory we won't need lockdowns, or as many lockdowns because if you are now protected against the virus you have then got a reduction in your risk of spread. So you can still allow people to move around. But what we also have to appreciate, as I mentioned before, is that the tools and the by-products of having a lockdown is buying time for your teams to contact trace. So you can imagine that if you had your population still moving around, even if a large proportion was still vaccinated, if someone still had the virus, it becomes quite hard to trace who they were in contact with if everybody had free movement.

So I think we are in a stage of we are learning from it all. We all absolutely have to learn from other nations to see how they've managed opening up. I don't have an answer to it. There's obviously politics involved in this which was always the concern with management of COVID-19 is that politics will undoubtedly or has undoubtedly played a role. I am not really in a position to kind of elaborate what those politics are but ultimately, our job as clinical staff is to just make sure that we provide the best advice to our patients, our families and our staff as well based on evidence and to have a unified public health message which is absolutely we must get vaccinated. There is no other way of managing this other than through vaccinations.

(JW) **Well perhaps we can talk about that; how that was handled. So you said that in WA that started rolling in February/March?**

(SSR) Yes. So the idea of vaccination was that you must protect the vulnerable population which makes sense. So I will probably have to provide some explanation so when I mean “”vulnerable population, I mean individuals who have a health condition or a chronic health condition which means that they’re own innate, so their body’s natural immune system doesn’t work as well as other individuals so they can’t mount a strong enough immune response which means they would be weak and more susceptible to the Coronavirus, SARS-CoV-2, I should say and therefore get COVID-19.

So the vaccine strategy was to target – the first phase was those individuals who’d been identified by, and their health team, as being vulnerable. Then for frontline staff and frontline staff didn’t just mean health. Frontline staff also meant our quarantine workers, border workers, police and defence forces around the nation who will be at airports when incoming passengers are coming in were obviously the greatest risk at that stage. At the beginning part of the year was the virus coming in from outside of Australian shores. So they were phase 1A in terms of our staff.

From a health perspective and I guess as my formal role in one of the vaccine leads for the East Metropolitan Health Service was we had to identify who our phase 1 health care workers were. So we basically stratified as to which areas would look after patients when they first came into hospital and were suspected of COVID-19 and as we were managing the quarantine hotels, the CBD quarantine hotels at that time there was some clear areas such as Emergency Department, Intensive Care Unit and Respiratory Ward to be managing these patients. So they were our phase 1 of health care workers.

We obviously had all our quarantine health work and then we managed our COVID clinic workforce and then also the team who would be deployed at a moment’s notice to provide swabbing support or those that were actually employed currently at Perth airport to provide when passengers come off their flights from

domestic terminals and they get swabbed. They are obviously at risk as well.

So we identified them. Once we identified them we then worked with the State Government to then set up the clinics and they were a mixture of State run clinic that were set up in key areas. So there were pop-ups that were set up at the airport; pop-ups that were set up in Fremantle, for example, for maritime crews.

[00:10:02]

Then individual health services were tasked with setting up clinics to manage their own health workforce. So there was a delegation of responsibilities. So I was responsible to work with a team so it was setting up a brand-new team. I basically said, “Right. In less than two weeks we are going to have to set up a fully functioning vaccine clinic for a vaccine that we have never used before.”

So began a lot of reading. [*Laughs*] Delivering or administering the vaccine on paper is actually very simple. Needle, syringe, jab. But actually, it was far more complex than that. The reason why it was more complex, as many people would be aware, one of the first vaccines that were made available to us was the Pfizer vaccine. That had very careful storage because it had to be stored in ultra-cold storage at minus-70 Centigrade and then, once you took it out, you only had a few days of shelf life to use it once it was refrigerated. Roughly five days. Once you had taken the vial out of the refrigerator, you literally had to use it that day. You had eight hours or so to use that vial. It was a multi-draw vial that vaccine. So when you had a vial you could draw six minimum but we were getting up to seven doses out of the vial.

Some of our very first principles was to ensure we had trained staff who understood how to manage the vaccine. Just vaccine handling became a very crucial part. Then another crucial element was inventory stock management because we had Commonwealth obligations to report our usage and wastage. I’ll come onto that because it’s become a bit of a nice friendly competition between the

team to ensure there is zero wastage and the team take absolute pride in that. There's a few little funny things to share about that.

So, roughly two weeks to set up a clinic. For Royal Perth this was set up in a temporary location to begin with because we'd identified an area. I guess one of the beauties of Royal Perth is, Royal Perth is, whilst it's an old hospital, it wasn't that long ago that it was an all singing and dancing 700 plus bed hospital. With Fiona Stanley coming online in 2015/16, some services moved, but the physical structure was still there. Meaning that we were fortunate we could identify a couple of spaces where a vaccine clinic would be suitable.

We had found one area that needed some modification and work but, whilst that was happening, we had to absolutely get on with vaccinating our key workers. So we set up a temporary clinic. So we just used our expertise knowing of how we'd set up swabbing booths at the airport which we thought could double up as vaccine booths. So we used the same companies who'd helped us previously set those temporary booths up as temporary booths for vaccines. Like anything we got very good at managing flow. So we needed a booking, checking-in process that was quick and efficient and we needed a process of getting the vaccines from very close proximity and out the 'fridge, drawing up stations to the vaccine cubicles and then a recovery area because we had to monitor people to make sure that they weren't feeling faint, woozy or had an adverse reaction to the vaccine.

That was one of the key unknowns for us was that yes, quite a lot of the world at that stage, particularly the UK had vaccinated at least at that point by March/February, about thirty to forty per cent of their population at the first does. So we were getting some data to know about symptoms and adverse reactions but it was still very new to us. So we had to make sure that we had the right clinical, medical support on hand should there be any adverse reactions. So a little recovery area. Then a small, little walled off area that had some of more emergency equipment should we need it.

But because we are on the hospital site, the beauty was that should anything really untoward happen we had a whole hospital who could help us manage should any adverse events occur. Then a simple exit area. So that was kind of the flow that we set up.

We started off slowly so we only started off without about 150 odd people getting vaccinated in the first couple of days. This was a learning experience really. So the message to the staff was, “Slow, steady, methodical, learn.”

[00:15:00]

Because we were learning all the time. By learning all the time I literally meant we would go home and when we were onboarding new staff there was about six hours’ worth of E-learning that needed to be done and the modules were mandatory from the Commonwealth and the State and it was just really to make sure that we knew as much as we could about how we handled the vaccine, some of the common side-effects and really about … This was new territory and so just to make sure that everybody was on the same page. Everybody needed that same baseline. So that’s why the learning was mandatory and it wasn’t just mandatory for us – it was mandatory for everybody in Australia who was part of the vaccine management process.

I remember some of the modules vividly because it was a Sunday evening about 10 o’clock at night when I started my first module. So I was like, okay, let’s just see. I felt like as the person responsible for some of the clinic I very much am someone that, if I ask staff to do something, I just know as much about it as possible. So I know some of the questions I’m going to get asked is, “What is in the module? What are the kind of things that I need to do? Do I need to do pre-learning. Do you have to do any pre-learning before the learning, kind of thing?”

So, I thought, you know what? It is part of the job. So I sat there and went through each of the modules and got myself certified as well. At that stage, the structured agreement was only for nursing staff could

deliver the vaccine. So we had to find appropriate nursing staff who could help and we had wonderful support from our nursing team and our pharmacy team really came through. They are quite a lean workforce but they have the expertise in medicine management, handling refrigeration and all those kind of things. So they came on board and they were learning with us all the time and so we had many different working groups. We had the pharmacy team. We had a nursing team who were primarily the vaccine administration team and we had an admin team who had to learn a brand new process.

Those admin team members were actually individuals who had spent many months already out assisting the swabbing team who were taking down the demographic information of the people arriving at airports, COVID clinics and the pop-up clinics. So we had a proper, true multi-disciplinary team who had never worked together before. So again I guess it is one of those things, the concept of teaming. All of a sudden you have got a group of individuals who have been used to working a certain way in their own team, have to now form a brand new team. So that is a challenge in itself.

We interviewed people or asked for expressions of interest for people who were interested in being a site manager who could help with this process, people who could manage the data side of things as well. So we brought brand new people into the fold.

Then, so we went from 150 doses to about 250 to 300, 500, 600, 1000, 1200. We were doing about 1200 doses a day on the site at Royal Perth within a few weeks, something like three weeks.

(JW) **Is this still front line workers you are doing at this stage or?**

(SSR) We are now doing … it is pretty much open to anyone at the moment but we have health workers and you are probably aware there has been the mandatory legislation that's come into effect to say that all health care workers must be vaccinated to work within a health care facility. So for those individuals who hadn't, who weren't vaccinated when we were doing it on-site, we can help fast track them to get their vaccines.

There were some individual who were – it's like anything. It's like human behaviour when you have something new. It's like the technology adoption curve. There are those who are, yes, definitely want to do it and there are those that want to wait and see how things pan out and there are those who for their own reasons who won't - and I don't just mean health care workers – I mean the public in itself. So I guess we can talk a little bit about vaccine hesitancy a little bit later as well.

But we slowly grew. So Royal Perth went from a temporary clinic into a say permanent structure and it was done in our – we called it our bunker because that's where the radiotherapy machines used to be when radiotherapy was delivered on site at Royal Perth until about – I don't know when. About a decade ago they stopped doing it. The team just made it their own space. It was wonderful. You would go down and there was an atmosphere in the place aided I have to say by a few key individuals who were just … Rather than just ace … the recovery area was about fifteen or sixteen chairs socially distanced apart.

[00:20:00]

You can just imagine you could have a feel like a waiting room that you go into a doctor's surgery but no, there was a bit of a party atmosphere because we were giving out fruit juices, water, little lollies and sweets and just keep on checking in, striking up conversations. There was this little photo booth to basically promote getting vaccinated and that was quite a big hit. Because we weren't just vaccinating Royal Perth Hospital. Royal Perth Bentley Group Hospital were vaccinating Saint John's Ambulance staff, Defence forces, WA Police, Border Forces. So we had all the individuals who had been or I guess the collective who had been helping keep WA and Australia safe, they were coming to our clinic. So it was an opportunity for people to have a chat, mingle and not just be within just their own health group. So it was quite interesting. So people got a broader sense of, whilst there are health implications of COVID-19, the efforts to ensure that we were as safe as we can be, was very

much a huge collaboration of many, many, many agencies and departments.

So then the vaccine programme from East Metro perspective moved out to the other health sites that we manage. So St John of God Midland Hospital and Armadale Kalamunda Health Care Group. So there were vaccines delivered onsite to those areas and there was lots involved in terms of logistics.

I can tell you the … I thought my email traffic was bad when we set up the COVID clinics. God! The email traffic with vaccines was at times just unmanageable. I guess it was hard because I was the conduit of information coming from the Commonwealth and State to then disseminate to the team. Then also information from the team to go back up to the State who were helping manage the roll-out. Then also to the Commonwealth for certain issues and things. So we had deliveries from the State but also some of the deliveries were also coming from the Commonwealth.

Luckily I wasn't the logistics person but I was privy to some of the email traffic coming through and the logistics people had done an amazing job of just keeping on top. Keeping a track of the vaccines. Because it was such a carefully managed programme. So the vaccines were obviously flown in from overseas and when they're flown in, you need to have someone check them at the airport when it's landed that the crate, the container, that everything is at the right temperature and there is no spoilage. Then it goes into storage. Then it goes from storage and it is taken out you have to make sure you have got the right processes in place.

Once it has come out of the storage 'fridge to be delivered to site, you need to make sure that at no point in time that the vaccines had been outside of the appropriate temperature range. Then when they come in, you've got to check to make sure that everything looks right. All the labels are correct and then it goes into normal vaccine 'fridges. Our vaccine 'fridges are on our electronic secure monitoring which means that we can check to make sure that that 'fridge is

constantly at the right temperature. So it's like putting your 'fridge at home onto your internet network pretty much. Just to make sure that … and I guess there are some smart 'fridges. Some people can look in the camera of their 'fridge. It's not quite like that but it's just to ensure that the vaccines, they have full confidence that they've all been at the right temperature range and are safe to be used. Because above all when it comes to vaccinations like any medications, you need to make sure that your product is safe. That's our business. Our business is about safety and health. So that was why we used the same processes that we would use for any other vaccines. Like I say, the only difference was just all the logistics and everything else that was involved in it.

There was a lot of media attention. I am proud to say that the very first person to get vaccinated in Western Australia was one of our nurses at Royal Perth. She was working at the time in one of the quarantine hotels, that is with the onsite health teams. I think it was an important message to say to the public that we are vaccinating our health care staff but we want to demonstrate that actually the vaccines are safe and that it's important that we do get vaccinated.

I guess this is where it intersects with lockdowns and how things are, is human behaviour is predicated on two things, threat and reward. At the time and still now, because we are fortunate that we don't have COVID-19 within the community, a lot of people can be … I know that people have come up to me socially saying, "Should I get vaccinated? We don't have COVID here? Should I get vaccinated?"

My answer is always the same. It is that it is the only thing that is going to protect you. The answer is always, "Yes. You should get vaccinated."

But it just demonstrates that we're driven when it comes to COVID-19, we are driven more by threat.

[00:25:02]

That threat isn't real until you've had threat it appears and from a public sentiment perspective. If we look and see what's happening in

New South Wales and Victoria[9], their vaccination rates have just exponentially gone up in the last week or so because of community transmission. Whereas here in WA, whilst we are absolutely on an upward curve, I do feel that – this is a personal thing; this is not coming from me speaking as a doctor – this is just me personally saying that I feel that the push to get vaccinated perhaps isn't as great because we don't feel that threat is there. Which is a concern to me because the threat is always there.

(JW) **So when did it really start being rolled out to the general public?**

(SSR) It started probably at the end of March/April. I will re-phrase that. It has always been available to the general public. It was stratified by risk. So it was individuals as I mentioned before who were considered to be vulnerable were prioritised. So at the same time as health care workers and aged care workers were getting vaccinated. So aged care residents. So in fact there were many aged care facilities that reached double vaccinations within the first four or five weeks. But all the resident were vaccinated which is a remarkable thing.

Then slowly but surely because the State Government was essentially following the advice of the Commonwealth in terms of the phases and the phased roll-out. They were going by your chronic health conditions. Those who were vulnerable and then by age. The reason why we went by age is, it's probably a good time to talk a little bit about variants of the Coronavirus. So when I refer to the Coronavirus I mean SARS-CoV-2, so that's the novel Coronavirus that causes severe acute respiratory syndrome and COVID-19 is a disease that is caused by SARS-CoV-2. So when I'm talking about variants, I am not talking about variants of COVID-19 because variants don't apply to disease. I am talking about variants of the virus itself.

[9] Cases in New South Wales peaked at 1351 on 16th September 2021. Victoria's cases peaked to 1438 on the date of the interview, that is, 30th September 2021.

So there are at the moment probably four key variants that are being monitored by the World Health Organisation. I will talk about Delta in a moment which is a present threat and danger to us. There's Alpha, Beta, Gamma and Delta. So the Alpha variant is otherwise known as the UK variant which came to light and was fully classified roughly September of last year, September 2020. It was first found in the UK; hence it was called the UK variant.

I guess the definition of variant is an interesting one for me because we talked last time out about how communication was key. COVID-19 has led to lots of scientific or clinical terms used interchangeably which undoubtedly perhaps has led to some confusion within the public and I can absolutely see how that's happened. So I am talking about variants of the virus but not the disease. The word that has been used interchangeably with variant is mutation.

If we take it a step back the original SARS-CoV-2, which was from the WHO's perspective, thought to have originated from Wuhan. So Wuhan region, Hubei province in China. That is genetically, that is the original or from a genetics perspective, the nomenclature is wild type. A mutation is a change in the genetic code. So for this virus it's the RNA, the Ribonucleic acid which is the genetic code for the virus. A change, mutation in that code leads to a variant.

So going back to variants now. So the Alpha variant is what was found in the UK. So, I'm from the UK. September to me will always be synonymous with autumn, even though it's springtime. What they found was that it was a variant that seemed to spread quite quickly amongst children and in comparison to the wild type, so the original genetic variant – not variant, sorry - original genetic code, was readily transmissible. Two and a half times more transmissible.

[00:30:00]

That obviously led to what was called in the UK at the time, "the Second Wave" where they saw increased transmissions, increased hospitalisations and unfortunately, increased death. The deaths were predominantly in those who had underlying health conditions and in

the older population as well. This is where it intersects with vaccine. So this was at a time when the vaccines were not readily available. As soon as a vaccine programme really kicked in to overdrive in the UK, the spread and transmissibility really dropped down and the death rate has also dropped down. Because there was real concerns that around the winter period, so our summer last year, around the Christmas period, that with lockdown measures being eased, so to allow families to see each other, that there would be an increase in deaths and that very fortunately didn't happen. I think the vaccine played a key role in that.

The other variants that are variants of concern from the WHO's perspective is the Beta variant and this is otherwise known as the South African variant which is also found there at the time and that was responsible for an increased death rate within South Africa. The other one was the Gamma variant which is otherwise known as the Brazilian variant and that was seen to have an increased spread. So that was probably around our winter time last year. Much of regional and the built-up areas of Brazil were in real, real, real danger and trouble. In fact, even the President contracted COVID at the time. That has also seen a significant increase in the death rate.

Then what we're now dealing with is Delta which was known as the Indian variant because that's where it first seen or purported first to be seen. That's of concern. The reason why the Delta variant is of concern is it is about 40% more transmissible than the Alpha variant. So if the Alpha variant was already two to three times more transmissible you know you do the sums. It is roughly about five times more transmissible on average than the original SARS-CoV-2. It replicates quickly.

It's got a specific mutation that allows it to enter the airway cells. So where SARS-CoV-2 replicates is within our respiratory tract so that's from mouth and nose all the way down to our lungs, anywhere along there, the epithelial cell linings, this particular virus with this particular variant has a way of attaching to the cells better, quicker, more

effectively and it does that through the spike protein. So if you look at it under a microscope, spike protein looks like there is a little triangle that sticks out. It almost looks like a sea urchin or pollen actually. It looks like a bit of pollen and it just attaches to the cells, gets internalised into the cells where it takes over the cell, tricks the cell into using all of its kind of production factory to replicate. Then it bursts. It kills the cell and bursts out and then it transmits.

That's why we see the concern across the world and what we are seeing now in Victoria and New South Wales and to some extent in New Zealand as well, is Delta seems to spread quicker and it seems to spread between household contacts as well. What we are seeing and this is where the data is quite key is, the death rate has increased in those who are unvaccinated. Even a single dose of any of the vaccines that are available here within Australia seems to provide protection. You may get unwell and you may well still spread if you get vaccinated. That the important thing is you are unlikely or you are less likely to die from it.

So vaccines have a double role. It protects you as the individual but most importantly it protects others. So that's kind of where we are from a variants perspective right now. All these variants are identified at different times I think pretty much from May/June until about November/December time of last year. There will probably be other variants that we don't know of yet.

(JW) **Yes. I seem to recall or I did read something that Anthony Fauci[10] is getting really concerned. He said there is probably going to be a monster variant come and unless the whole world is vaccinated -**

[00:35:00]

(SSR) Yes. As I say, Anthony Fauci, he has probably been ever present on people's new feeds, essentially the head of the Coronavirus Taskforce in the US Centre of Disease, Clinical Diseases in the United States [of America]. His comments are essentially based on the fact that if you don't vaccinate, you don't confer protection for the

[10] https://en.wikipedia.org/wiki/Anthony_Fauci

individual but the rest of the community. You don't get to a stage of herd immunity. '

And that's what we see if we take it a step back. If we actually just don't talk about Coronavirus or COIVD-19, the disease caused by Coronavirus and just think about some of our highly transmissible diseases that are relatively rare now. So measles for example. The reason we are where we are with measles is because of incredibly successful worldwide vaccination against measles. So for most countries that the MMR, the measles mumps rubella programme that you get from childhood. So your childhood immunisation programme. The same principles apply to COVID-19, is to prevent the disease, we need to get vaccinated. Until such time we find our own natural immunity to it, we need to have vaccines as our mode of protection. It's our single best mode of protection.

Where am I going with all of this? Why do we need the world to be vaccinated? It's because what Fauci is describing is that in an unvaccinated population, using Delta as the example, so I've just said it's got a particular mutation that allows it to enter the cells quicker, allows it to replicate quicker and then just burst that cell and come out and spread quicker. That will continue to happen until we find a way to prevent the spread.

Some mutations aren't always good mutations for the virus. Because the virus is always trying to adapt and change the environment that it's in. So in an environment that … in a particular country that doesn't have high vaccination rates you may end up having a variant that may not confer a very good mutation for the virus itself. It may enhance its replicability or spread ability but it may not cause as much harm.

But mutations are a natural process. In fact, within our own human body we are having mutations and over time, over many decades, a millennia, that's evolution. My skin tone is brown because my family originates from the Indian subcontinent. Because there was a mutation to say I need to protect the folk from the sun so it needed to

produce an increased melanin because that's going to protect my skin. It's going to protect me from having things like skin cancer. So that's how a virus is the same. Viruses mutate to try and protect itself.

So Fauci's comments are absolutely true. I don't know if I subscribe to the full Doomsday of here is a variant that is going to come but I absolutely think it's from a vaccination perspective and here's where the politics intersect again, there is a push for a booster vaccine or a third shot. There is probably from a research perspective evidence to provide a booster shot to those who've got low immunity because that makes sense because if you give two doses you are not going to get the same level of immunity for someone who is immunocompromised compared to someone who isn't immunocompromised. So from an evidence base that does make sense.

But from a social justice perspective and from a point of we are looking to try and open again; have the world get back to some semblance of normality, we must have the rest of the world vaccinated. So you can think going back to the comment I made about social justice, we've got areas of the world that want to push out a third vaccine. Not necessarily to a vulnerable group but to all. Who are essentially using up a vaccine that could be given to someone who hasn't even had their first vaccine yet. And echoing Fauci's comments, well, if that happens and there is an increased likelihood of another variant through another mutation is likely.

So it's a very … from a combination of social justice to geopolitics and from a public health perspective where is the view? If you draw a Venn diagram, where's the happy kind of medium. From a pure public health perspective, we need to vaccinate the whole world. There is no other way. It's really it.

[00:40:00]

Where are we up to in terms of our vaccination now. So we in WA have moved from I guess the satellite models to now mass

centralised vaccination clinics and that's what proven to be most effective the world over. I am very proud of the team that was set up in our bunker has now moved into the Perth Convention and Exhibition Centre and they are delivering up to two thousand vaccines a day.

I mentioned before about the team having a bit of friendly competition? But friendly but it is really important that we don't waste. Wastage is an absolute no-no. So every day we call it a donut day when we get a zero. The team now bring in donuts and I think we might have to watch for their cholesterol and sugars at some point but that's the kind of spirit that they have. They all look after each other.

They always aim for a donut day and when we have … If it looks like we've got spare vaccines towards the end of the day because I mentioned that once you have taken the vial out of the 'fridge when it's got to room temperature, and once you have reconstituted it, we should talk about the process here. You reconstitute the vaccine. You must use it. So we are getting about seven draws. So you take a vial out and you go, "Well, that's seven arms I need to find."

Now with vaccination open with pretty much anyone and everyone above the age of twelve, there are many arms that can be found and being in a CBD location does help. We run seven days a week. So we have lots of, between the staff and I guess the public, and lots of contacts, to get people over or we actually go out. So we still come to Royal Perth sometimes to vaccinate some staff who haven't been vaccinated or people around Royal Perth at the time. So we've got a homeless population that are around here as well. So we make sure that they're vaccinated too.

So the team have just done a remarkable job. I have very much focussed on the Royal Perth Bentley Group Team, the health service team but it's very much a collective effort. So the State team is made up of many, many, many individuals from many health services and I can't comment on how the other clinics are running. I can only

comment on the clinic from the team I've helped set up. But they are also doing a fantastic job because the data suggests that they are because all of a sudden we are having this big uptick in people getting vaccinated which is great and long may it continue.

Because I am on a personal level, I am quite homesick. My family's all in the UK and I know that vaccinating is the only wait out which on a personal level means myself, my wife and my kid, the only way that we're ever going to get a chance to go back home to see family and similarly for family to come over as well.

(JW) You did mention the homeless but what about the Aboriginal communities here?

(SSR) That's a very, very … That's a really good point you've raised. Very early on they were identified. Rather than say very early on, they were identified right at the start. Remote communities. So the WA Country Health Service have done a fantastic job of getting to the communities right from the beginning, So irrespective of the fact that the Pfizer vaccine is more intricate to handle, they found ways to ensure that they could go to the communities and vaccinate those individuals and the community groups as well.

Because as I touched on at the beginning, population-wise we might not be huge but we are vast. We are a huge area and we have populations that are not just remote, but mobile. So identifying the remote and mobile populations was a key part of the public health strategy. So that's been covered off.

A big element to this is also education. I guess there are precedents and learning from a public health perspective because they've worked incredibly hard to ensure the childhood immunisation programme is effective for remote and communities as well. So they have an evidence based and data to leverage off for performance.

(JW) I was going to say there is a bit of Press out there that the Aboriginal people were not taking up the vaccine because they think it's – I don't know, there's some religious problem with it. Have you come across that or not?

(SSR) Not on a personal level. But however within the East Metropolitan Health Service we do have quite strong links with Aboriginal and Indigenous communities. It was recognised right from the outset. The message is far better coming from an Elder than it is coming from me for example.

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It doesn't matter what degree I have or my experience or my role. It's like anything. Whilst maybe not using parents as the right example because some kids may not listen to what their parents say but if you have someone who is respected; whose voice is heard; then it's not about coercing them. It's bringing them in for a conversation and actually trying to understand. So influence is very much about listening. So when I'm talking about how do you influence? It is not about persuading and that's where we sometimes go wrong with how we influence we always try and push an argument. Your argument won't be heard if you've got someone whose already got concerns, hesitancy and resistance. Until you understand what that hesitancy or that resistance is you'll never make any headway.

I kind of reflect back on it. It's how I would work with what would be "a difficult patient" who may not be completely compliant with their management. You need to understand what's going on with them. You need to listen and so I think from a public health and from a vaccine strategy and roll out what the team did was that they listened to try and understand what the barriers would be. Whether they would social, distance, cultural and then by listening you can then actually understand what the issues might be and whether you personally or the team has a solution or do you have solutions based with respected members of the community and you work collaboratively to break down those barriers.

Just to give you a local example. So there are parts of the workforce as you can imagine who are similarly reticent or I wouldn't go to the point of saying resistant – hesitant to the vaccine. What we needed to do was to listen to.

Some would have been “I’m pregnant. I’ve had issues with my pregnancy. I don’t know whether I want the vaccine yet. Maybe I need to wait.”

“I’ve previously had a health condition that isn’t listed as one of the side effects or as on the contra indicated part of the list but I’m worried.”

So we had individuals who’s got knowledge far greater than I have in just general about SARS-CoV-2, COIVD-19 to actually listen to those individuals and go and speak to them to understand what their concerns are. All we have at the end of the day is evidence. That’s all we can present and we hope by listening to what their concerns are and providing evidence that people can go and make an informed decision about being vaccinated. We know from a health perspective that vaccinations are the best management but people ultimately have autonomy to make their decision. We would like them to be vaccinated. Absolutely.

So I can understand at one level the sentiment that’s coming from other States and now where we’ve got the legislation about certain workers having to be vaccinated or if you enter a particular zone, so hospitals being a zone where you must be vaccinated. I can absolutely understand why that needs to happen and I’m supporting that they should be vaccinated but I can also see the other side to it. From the autonomy perspective why people who have a balanced judgment on they don’t want to get vaccinated. I just hope that we do all get vaccinated because it’s our only way of managing the virus.

(JW) **Interesting. Because on the radio today they said there’s been a big take up with the Māori community because they’ve seen the devastation it caused in New Zealand so.**

(SSR) Yes. And I guess that’s where it comes back to how we’re wired. Because as humans we go to something that’s rewarding and we run away from threat. What’s happened from the vaccine roll-out perspective almost the world over is that we run to where we’re vaccinating because we’ve seen the threat. That threat isn’t real until you’ve either seen it, lived it or know someone close that’s had it.

I mentioned last time out that I had family and friends in India who were affected, passed away with COVID-19 and so irrespective of my health hat on a pure personal and emotional level, well clearly I need to get vaccinated and that's been the push. Then you see the tactics from perhaps actors isn't the right word but you've seen the vaccine incentivisation.

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So those who are vaccinated can do certain things whereas those who are unvaccinated can't. That's a very interesting social dynamic and it goes back to that point I made talking about ten minutes ago saying that for us to get out of this as a world, as a community, is we need to get vaccinated and so you can understand the notion of the haves and the have nots. Because all of a sudden, you may have pockets of the world who are unvaccinated through not fault of their own potentially not having the same human rights in some respects in comparison to other parts of the world. That's going to be interesting to see how that plays out in the next few months or years.

(JW) **So how do you see your role going now? You are still trying to push people to get vaccinations. Do you think they'll be a time coming up when WA will be pretty much fully vaccinated?**

(SSR) I think so based on … Look, because of the way Delta transmits we know that … Well, we can't really confidently say that there's a particular percentage we need to be aiming for. We just need to know that as many people as we can physically possible get vaccinated because that's what's going to give you from a data perspective the most confidence of not being affected by Delta. I think we have to be quite candid and honest here. Is that we can't expect, no matter what public health orders or border control, immigration measures that we have that it won't happen. I hope it doesn't happen but we have to prepare and think as if it will happen.

Therefore as I keep mentioning the only route to protect ourselves is vaccinations and so I can't give a give a percentage but it would be … When we think about "trying to live with COVID" (in inverted commas) you need more than 90% of the population. What I mean

by population, the population doesn't start and end with those above twelve or adult ??? the population is everyone. I've got a son who is almost two, not eligible for a vaccine at present but we know from the data that kids do get COVID-19. Thankfully and I touch a lot of wood, that they're not as affected as adults but they have the propensity to spread as well so that's why it's very difficult to thrown out – I know I said 90%; but it's very difficult for me to throw out an absolute number to say this is the percentage we need to get to as a population as a whole to get vaccinated before we can be comfortable with opening up.

There's obviously, we've touched on politics, and I'm not here to share my personal political sentiments but there are I guess economic factors that will also drive some of this. You only need to pick up the [news]papers to see that in all industry sector WA is suffering with a lack of staff or there's a proportion of staff that would normally be there, that aren't there. We are a very … and that's what's been from an observer perspective, also interesting is that it just shows how connected we are as a world. COIVD-19 doesn't respect any borders. Why should it? It's a virus. Viruses don't respect anything, right? But what we have seen is that areas that WA we are very – I wouldn't say reliant – but we are an area that traditionally has really welcomed people from all over the world and all over Australasia to come, work, live, thrive.

(JW) **Study.**

(SSR) Study. Absolutely and we're missing that now. This kind of just shows how fortunate we are. I went to a little coffee place that I go into with the kid on the weekends and I've noticed that start time has been pushed back further and further and further on weekends just purely because they don't have the staff to the point where I'm not sure it's even viable for them to remain open. You only need to walk down and see shop fronts that have changed names or gone completely. So when we talk about living with COVID-19, I think we have to broaden our definition. Living with COVID-19 isn't about living with it from a health perspective without spreading the virus

about; it's about everything. How do we manage as a society? We talked in I guess some detail about lockdowns.

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Maybe there is still the need for targeted, specific lockdowns in the future? I don't know. We see some countries opening up fully, some opening up with restrictions. So I used Singapore as an example. That's just purely because on my flight home I tend to fly through Singapore. I've been there several times and my closest family to where we are is lives in Singapore. So they have almost 80% of their population vaccinated and they've opened up. So schools are opening; people are allowed back in the office spaces. It is clearly a very densely population peninsula. But they have social restriction measures in place. So they've got social distancing in place still. So they've opened up but they still have restrictions. They still have mask wearing as well.

Whereas you flip it to many of the States within the USA and areas of Europe that have kind of just opened up fully some with mask wearing as optional. My feeling is whenever you make something optional people don't do it. Again, human behaviour. Why would you do something that's optional? So we're learning all the time but we are learning as I say, we are learning in arrears. We are just waiting to see what happens. So I don't know what the right answer is as to what we should be doing as a nation or as a State. I don't have all the data points and I'm certainly not an expert to kind of provide an informed opinion as to what that should look like. All I know is that we have to have confidence in the people that are making the decision. That they are looking at the right information. That they are talking all the time and they are collaborating and that the decision that is made is the best decision made for us as the public as a whole. Because we can't look after individuals or groups. We have to look after all of us as an entirety.

(JW) **So I notice because this week is the Royal Show they actually had a clinic at the Royal Show this year?**

(SSR) Yes.

(JW) Are there any other innovations that you think are worth mentioning?

(SSR) I think when we talk about innovations. Innovation is obviously a word that gets used a lot. You think about … I got an email the other day. I have just recently finished my Masters' studies and I got an email from the Institution so it was Curtin who said, "Hey, look we've got an Innovations Hub where we connect people up. Can we have a chat."

Just reflecting on it I don't even know what an innovation hub is if I'm honest. So innovation is to me, you can break it down to three things. There is the ideas. People always have ideas. What COVID-19 has shown globally is that it's a community of ideas who then work collaboratively to work out "Well, what can we actually do to get us out of this current predicament that we face ourselves in?"

I think my answer is a phased answer. So the first phase of innovation was really trying to understand the virus. That innovation came through providing a library of the genetic code of the virus. The collaboration part came by a bit like in computer coding, once you make something open source, you can use that code, modify it to develop a website, an application etcetera. Similarly, by having a library or a repository that was open to researchers and scientists it allowed us to … Everyone says, one of the first hesitancies reflecting back on the vaccination programme, "Well, it's just come so quickly!"

And you go well, "This is the first time in the world where we've just, not just chucked all the resources but we've shared information. Because we've shared information at a global level, we've understood things much quicker when it comes to SARS-CoV-2. As a result we will able to develop vaccines much quicker because we knew more information from a background perspective way more than we ever did with any other kind of targeted vaccine therapy.

So the first part is very much about vaccine innovation because that came about through sharing. That's why we know about the variants. Again, the more information about the variants that gets through.

They all are in a repository that's collated through multiple agencies shared at a State, local, national, level and then shared at a global level through the World Health Organisation.

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Which allows us to work out which – when we talk about the variants and reflect back – variant equals because there's been a mutation. What part of the mutation are we talking about? Which amino acid has changed to cause this particular mutation? So we just know far more information than we ever did.

The second part about innovation was when each of the countries started to see an increase in the hospitalisation and then an increase in unfortunately the need of high dependency or intensive care type care. They had to innovate. Innovate sometimes comes about through resource management. Every hospital in the world has a finite number of intensive care beds. When I mean beds, I don't just mean physical beds or the ventilator that comes with it if somebody is ventilator dependent. Intensive care is all about your workforce as well. So they had to use their workforce differently to managing intensive care type patients.

So there were, I think it was in Italy when Italy went through – particularly in Northern Italy when it went through a devastating wave of COVID in what would have been autumn for us last year. They were 3D printing ventilator parts. Because they were going through ventilator components at such a rate of knots that they needed replacement parts and the companies just couldn't get it to them because we saw the effects of global supply chains where a combination of border restrictions and lockdowns, etcetera. So a bunch of university students just started 3D printing ventilator parts and supplying it free of charge.

That's one form of innovation that came out through necessity. Another one was just a really simple one. I mentioned wearing full

PPE[11] for twelve, thirteen hours a day. It is quite hard particularly in Perth in March. Another area is the masks that we were initially wearing. So they were ear loop masks. You can get them in the chemists and you can get them in supermarkets. When we have a lockdown we have to wear masks. They can be quite uncomfortable after a while. In fact they can sometimes cause a bit of a pressure injury behind the back of your ear lobe. So what people did, again they 3D printed these little what looked like train tracks and you could just attach the ear loop mask which would just go around the back of your head just to stop the pressure coming onto your ears. Something simple but it makes such a big difference.

My contact lenses, I know this is an oral so you can't see me wearing my contact lenses but I wear my glasses quite often at work. Wearing a mask, glasses and a face visor is, again, really uncomfortable and you get a bit of pressure on the bridge of your nose. So someone invented a simple way to make sure you've still got a good seal on your mask but to make sure that your glasses aren't pushing into the bridge of your nose as well. Again, 3D printed. A pretty simple little structure. So that's another form of innovation that happened.

Then there was a big digital innovation that happened with COVID. That all comes back to needing to know data, understand your data to help make informed decisions about things like lockdown. Things about modelling where we thought areas of spread might be. Where there are vulnerable communities are we concerned that we need to lockdown here or do we need to keep these places separate, etcetera. Sometimes when we've had lockdowns here it's just been for Perth and Peel region, you can't move out. The logic behind that was actually your area of spread based on modelling is within the Perth and Peel region so therefore this area needs to be locked down. The rest of the areas within the WA regions will be okay to move around but don't come in and out of Perth and Peel region.

[11] Personal Protective Equipment.

So on a personal level worked with the Data Digital Innovation Team at East Metropolitan Health Service and we came up very quickly – I mentioned it in our first part of the interview – with our COVID-19 digital webform or digital app. It was a device agnostic application so you could use it on a tablet. You could use it on a 'phone, a laptop, a desktop pc and we used it to triage people in the queue who had come into COVID clinics. We used it in airports. We used it in hotel quarantine. We used it in pop-up. But what it generated for us was a lot of information and that data that we used was sent to Public Health to help them understand how many people were coming into testing. Once they combined that with the private data as well they then got an idea of how much of the community we've actually got tested and whether the negative results that were reassuring coming back (in the majority of cases), how long a lockdown should be and where the lockdown should be. So the innovation on the digital side for us was …

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In a Government sector, so you'd get a digital application up in literally three days is pretty much unheard of. I am proud to say that the team won a WA INCITE digital award recently for that. It was really about digital agility because every evening for the first fortnight at least we would wait until clinic closed and we'd get feedback from the team what did work, what didn't work, change, iterate and we'd call it sprints and then release it the next morning. So that is labour intensive for the team. Absolutely. They were all heroes and superstars in my eyes because they are the ones that did the work.

That's the reason why if you now go to a public clinic you get tested and you get your text message within 12 hours of your test result if it's negative and it's because of all the connections that the DDI Team have made listening to feedback from clinic staff as to what is going to be the best process and making the digital workflow that would work well in any setting.

So they kind of the three kind of things. There's been the innovation about ideas leading to research and it's been about collaboration and sharing which led to the physical product, so the 3D printing of parts or digital products. That has also led to I guess now what we're seeing how society has trended to favouring digital information over print information. But with that, obviously comes disinformation or misinformation and what I've seen is there is probably more fact checking websites or fact checking statements now on a lot of material that you read online that probably wasn't there at the beginning of 2020.

Again, I don't want to get into the politics of what happened in the US with Trump and Trumpism or anti-disestablishmentism that may come with it but it was accelerated through COVID-19 that people want to read factual information and so all agencies innovated to work out how can they provide factual information. I could go on for ever about artificial intelligence and predicted algorithms and things but that is outside the scope of this. But that's the next innovation in the digital space is – we already use AI on a daily basis. We probably don't realise it but every time you start your car your computer probably has … Your car computer makes more decisions than a space shuttle. Our cars are incredibly sophisticated these days and we all carry around smart 'phones as well that make decisions for us.

(JW) I was going to say I wonder will we just keep checking into places for ever now as well?

(SSR) Look, the funny thing is that without realising it, if you leave your GPS location on your 'phone you technically are checking in literally all the time and that data is being conveyed. Unfortunately in some instances it has been misused but that information has already been there. We are now doing it more overtly through our code scanning. Checking into places I think perhaps yes. We will be for the next twelve months or so as we navigate what's the best way to I'll broadly say, "open up". I think we will be checking into places. Yes.

I've got to remember to do it, but yes. We will be. It helps our contact tracers undoubtedly.

But it also helps … an interest of mine is absolutely in data and how we use data but you can probably work out where your predicted hot spots by people checking into places as well. Where your areas are. If you want to increase the use on public transport because we've see a drop in public transport use. You kind of go, "I've got all these people who live around here, do I actually have a transportation hub here or not?"

You can use it potentially as a future planner. I am going off topic here but another innovation is just the data collection. The amount of data. think. We already collect a vast array of data and I just think we are seeing that just exponentially increase in the last eighteen months. There is a cornucopia of data which is great. But we now need to have the appropriate mechanisms of storing it safely, respecting people's privacy and ensuring that we share that data in the appropriate and safe manner.

[01:10:01]

And we probably need some overarching legislation about that to be honest as we move forward.

(JW) **Do you think we've come to the end today?**

(SSR) I think we are almost there. It's been a … It's probably not fair to say it's been a ride but it has felt like that. I'm in a stage where I provide assistance to now the operations team. They have their own site. They work manage COVID-19 operations. So I'm not in the thick of it if you want to put it that way but I have felt very proud of the people that I work with and continue to work with in the space. A lot of people have demonstrated their selflessness in all of this.

There are many, many unsung heroes. Too many for me to mention because I actually think it would be unfair because I will undoubtedly whilst I was trying to make a mental note for this on the weekend of everyone, I will miss people out. But I also don't want to sweep it under by just broadly saying there are so many of them. I think from

a public perspective it's important for them to know that everybody has had a role to play from the person at Royal Perth Hospital cafeteria providing staff with coffee, making a joke, keeping people buoyant, keeping people going throughout some long shifts. Perhaps some longer shifts to come if we do get the Delta variant come into WA.

To the teams at the airport, the teams at pop-up clinics who would start at seven in the morning, finish sometimes flights would come in at close to midnight by the time you've exited, attend to people coming off a flight, it's way after 1 am. Putting in the hard graft there. Our team at the vaccination clinic now who I said are delivering close to 2,000 vaccines a day for just their can-do attitude and their humour and just keeping everyone buoyant and happy. To the clinical staff across hospitals who …

I guess it's about this way it would make a very, very interesting social study where we're at this heightened sense of awareness constantly. This threat level, this high level all the time. We are always waiting. It has a toll on the human psyche of waiting for something that fortunately yes it hasn't come. But you can't let your guard down though. We talk about what might happen and it might happen through simple human factors where you are tired on a shift and you may forget one part of the process of donning or doffing your personal protective equipment. So therefore we can never, never ever let our guard down.

So I think I'd love to give props or a mention to the education team that are constantly going out there educating our staff on good PPE etiquette, retraining them, training new staff. It is endless. They are coming in on weekends to do it. That is just the same across all of our places in Australia and I am sure the world as well. But yes, there are far too many people to mention.

But from a pure personal level it's just been non-stop. I just remember being … I am actually off this week and it's the first time since this started or being involved in February of last year, that I've

turned my work 'phone off. I haven't looked at a single work email. I have not thought about work. I have just tried to be there for my wife and my kid. Just trying to enjoy the time. Because when I talked about that heightened preparedness, something is going to happen. That was the case last year. I would take a few days off to just try and recuperate, get a bit of sleep which is difficult with a kid and a baby that doesn't sleep. But I was never really off. My work phone was always – ping, ping, ping! I was just always waiting for that call to come in to say, "Just to let you know the Minister is about to make an announcement. Get ready. Once the announcement is made we need a deploy a team somewhere."

Or, to say, "Just to let you know that we've got some concerns that a flight's come in that we think there's a number of positive people that's going to be in quarantine. Let your staff know."

So I was always waiting There's going and it's felt strange this week with my devices being off that it took me a few days to kind of calm down. I'm about to show you … because I love my sports and I am quite physically active. I keep my watch on me most days. I just want to show you what my heart rate monitor has been like.

[01:15:00]

So this was Friday of last week where I have got a pretty decent resting heart rate and you can just see it's coming down, down, down, down all throughout the week as my days off got in. As mentally I have begun to just let go and say, "Do you know what? There is a team that helps to manage things."

And that's one of the key things. COVID-19 is not managed by an individual or a group of individuals. It is an absolute collective effort. And I mentioned before inter-agency and inter-departments and the public need to know that. This isn't just us. From a health perspective it's managed by many, many, many key people, groups.

So yes, I think we are probably towards the end. The future is unknown. Vaccinations are the answer and undoubtedly the researchers are already looking at how they can tweak the vaccine

for next year and future years and maybe we will get to a time when the SARS-CoV-2 vaccine is similar to a ‘flu vax. It becomes part and parcel of our yearly vaccination and normality might well be that we have targeted lockdowns and we have to wear masks for a period of time and that we have to remain socially distanced and that to fly anywhere you need to get a rapid test to determine whether you have the virus or not.

I don’t know. I don’t know. Obviously uncertainty does breed fear and some trepidation amongst people but I do think we have to learn not to live so much with COVID-19 but to live with uncertainty. That I think is now the new normal.

(JW) **Okay. Thank you.**

END OF INTERVIEW [2] 01:16:48 minutes