The Improver Podcast | Episode 10 | Precision wellbeing – pivoting to virtual

Lara Mott (00:20)
Hi, everyone. Welcome to The Improver. I'm Lara Mott, CEO and Co-founder of ImproveWell.

Na'eem Ahmed (00:27)
And I'm Na'eem, Clinical Lead and Co-founder of ImproveWell.

Lara Mott (00:31)
We are really excited to welcome Dr. Kathleen McGrow to the podcast today. Kathleen is Chief Nursing Information Officer for Microsoft Health and Life Sciences, where she uses her expertise in data analytics, and artificial intelligence to educate organisations in enhancing clinical, operational and financial performance, maximising capacity and patient experience, and transforming care models. Before she worked at Microsoft, Kathleen has held various senior positions at GE Healthcare and Phillips and her clinical background spans many years as a trauma nurse. She was also involved in building an electronic health record system for the Amazon basin. So Kathleen, welcome to The Improver.

Kathleen McGrow (01:21)
Hi, Lara. Hi Na'eem, thanks for having me. Appreciate it.

Na'eem Ahmed (01:25)
Thank you for coming.

Lara Mott (01:27)
So Kathleen, you and I already known each other for but for the benefit of our listeners, it would be wonderful to hear a little bit of background about your career. You obviously started as a nurse in a clinical role. So if you could just talk us through, yeah, what brought you into the world of information analytics in healthcare. That would be wonderful**.**

Kathleen McGrow (01:50)
Sure. Sure. Lara, thanks for asking. It's one of those stories where it's sometimes happenstance - things happen, right, and you take some twists and turns. So, my background is a trauma critical care nurse. I've been very lucky. I've worked at organisations across the United States. I worked at Johns Hopkins in the surgical ICU. I worked at University of Maryland Shock Trauma in the trauma resuscitation unit, which is the first level one trauma centre in the country, and essentially the golden hour, which is that hour to get to definitive care for a trauma patient to save their life was actually developed there. So, you know, had a very strong pedigree of trauma. And back when I was a nurse in clinical, we, you know, did everything most everything on paper and pencil. And we actually had a computer system called the MIM's clinical system, MCS is what they called it. And I had a very sick patient. It was a young girl who was in a car wreck. Her arm flew out the window, so that therefore the moral of the story is do not leave your window open when you're driving at a high rate of speed.

And essentially, she amputated part of her hand, and she had to go the operating room. And as I was looking up her laboratory results in MIM's clinical system, in MCS, it was like 3.2.1 for haematology, 3.2.2 for chemistry. And so, I had to look at two different screens, and I said to my co-worker, one of my other nurses, 'Why can we not see this all together?' And, you know, essentially, she said, 'Because some guys in the basement built this for us.' And I was like, 'What? Who are these guys in the basement?' and she was just like 'some engineers. And they never came and asked us what we wanted.' So, the nursing staff never had any type of input into it. And I just kind of had that, 'hmmm', you know, and went about my business and you know, kept working. And then more and more, I kind of saw that there was this now, you know, we're getting into more and more technology. And so how can we as nurses be represented in that. And I, you know, had this kind of 'AHA' moment where I realised I needed to go back to, if I was going to be recognised for anything related to informatics, I had to go back to school, and I had to get my Master's in Nursing Informatics. And it just so happened that the University of Maryland School of Nursing had the only Nursing Informatics programme at that time in the country, in the US. And it was directly across the street from where I work. So that could literally walk from work to school, and that was when you know, you went to school, in face-to-face classes. So, like I said, you know, sometimes luck and happenstance. And then the other thing is always treat people well, because they'll be nice to you, right? And so, I was lucky enough to get into the programme. Just a little side note, when I applied, they actually thought I was applying to be a Trauma Critical Care Nurse Practitioner and I had to go back and say, 'No, I want Nursing Informatics', and they're like, 'Why?' So, you know, there just weren't a lot of people that were applying for that. But I'm glad I did, and it worked out really well, you know, all these years later. But, it was really related to a patient. The folks that I worked with at the bedside, they did not believe I would leave the bedside, and I said, 'I'm going to tell you right now, one day I'm not going to come back here. I'm actually going to be getting a job in the world of informatics.' And that's what I did. But I will say, I'm a very pragmatic person and I didn't know if this informatics thing was going to work. So I actually, continued to work at Shock Trauma for five years after I started working at GE Healthcare. So, I did GE Healthcare during the week, and I worked at Shock Trauma on the weekend, because I didn't know if this informativcs gig was gonna work out, right, I just, you know.

Na'eem Ahmed (05:27)
Something about healthcare professionals, the fact that we're risk averse, right? And it's interesting, talking about innovation and taking risks, and stuff like that. But it goes against our sensibilities as healthcare professionals. I'm one of those, that was a beautiful story in terms of connecting what you saw on the front line and taking that. And that's really, you know, the philosophy we have at ImproveWell. But one of the things that we hear is that the people on the front line will say, 'Look, we just don't have the, this is so far removed from my day job as a nurse, as a doctor, as an allied health professional.' I mean, how do you bring it back to them? And what, what could you say to them? Is this a nice to have with something that you know, everyone should be doing?

Kathleen McGrow (06:21)
Yeah, that's interesting. That's a good question, Na'eem. So, because I was, you know, around when like, informatics was kind of birthed, right, it was really before electronic health records were as deployed as they are now. Now, they're just everywhere. And my nieces who are nurses, they've never done paper, ever. So, it kind of freaked them out, right, if their system would go down.

So, I don't know if this will answer your question exactly or not, but, I feel that what happened when they came in with electronic health systems, they said, you know, 'You have to deploy these', right? And as clinicians, we were like, 'We'll do it. We just want to take care of patients.' So, we abdicated a lot of power to, like, information technology, you know, we said, 'Oh, let the IT do it. Let IT do it', not realising the ramifications of today, now 20, you know, maybe 25 years later, depending on how long ago you had implemented your system. And now we realise the ramifications, and I think that in general, the, my nieces, you know, that are, you know, newer nurses, they do realise the value of the informatics, the nursing informatician, because they help them so much. Whereas I was so early on, there was really kind of this, like, 'Why are you doing that? Why are you doing that programme and not the trauma programme?' So I think that, because we abdicated so much power, we're now trying to, I don't want to say take that power back, but we're now trying to really inject ourselves into these systems and the workflows, and how they can, you know, these systems are here to improve the workflow. And that kind of brings me to the whole point of, you know, what's going on with our clinicians and the terrible moral distress and, you know, moral injury they're experiencing, because I'm not saying that the root cause is electronic health records, but I think they definitely contributed to, as a root cause for the distress that our providers are experiencing, because part of this is that it's, I'm taking this way down a different path, Na'eem. But part of it is that we've given them such huge amounts of volumes of data through the use of electronic health records, that they have this enormous, enormous information and cognitive overload occurring. So that, you know, kind of compounds amongst everything else that they're trying to do. I would say that, now the nurse informatics is seen a value because the clinicians realise that, you know, there's someone there who can kind of help embed and get into that workflow. But it's taken a really long time, and I don't know that it's 100% across the board. I think that organisations still deploy systems that don't necessarily meet the needs of that workflow. I mean, electronic health records, come on, let's face it, they really were around regulatory, in the United States, it was around regulatory and billing, right? And, you know, we weren't really thinking of a 360 view of the patient. And we never I mean, in the beginning, we never thought, 'Oh, the patient's going to access their electronic health record, and the government, US government is going to mandate this transparency.' So it's been, it's such a huge thing. We, we didn't know, you know, back then we were just like, 'Oh, we're going to, you know, push a couple buttons. My vital signs will flow in automatically, this will be great.' A lot of it was, you know, not so great.

Na'eem Ahmed (09:36)
I mean, I've heard, you know, my colleagues, I mean, I'm a radiologist, but my colleagues that are working, I guess more directly on the wards would say that, wheeling a computer around actually sometimes can be… almost we've created a barrier between them and the patient and they spend a lot of their time typing and they're not looking at the patient itself. So, there are some challenges. I mean, you've alluded to it to a lot of them, but that may be affecting patient care. But on the other hand, it's been a powerful tool, and I think there's, we've still got more to go really in terms of patients having access to it. What do you foresee in terms of that, in terms of patient empowerment, patient education?

Kathleen McGrow (10:30)
Yeah, I think you're absolutely spot on, I think as a radiologist, you, your service line, right, your profession has seen probably the most value, right? Because, you know, the PAC systems and you know, everything that happened. And I've seen a doctor, I've seen a neurosurgeon who went in and was doing a wet read of a film to do a ventriculostomy, and actually go, 'oops', and pull it down and flip it over, because he had it backwards. You can't do that on a PAC system, right, so there, you know, there's safety measures that have really happened, and, and all the AI that goes on with imaging, so you're definitely in that sweet spot of AI I think right now. I think that for patients, now, we didn't talk about this in preparation, but I don't know if you guys know, and maybe I should have let you know, Lara, is I actually broke my leg back in October of last year. So, I fell down the stairs, had a fracture, and I actually ended up at Shock Trauma, which is where I used to be a nurse. And that, just my whole, how my whole care was coordinated, well, it was very heavy into COVID. I'm a nurse, it was height of COVID Delta, I was taken to a tertiary care facility that was not able to do the surgery that I require because it's very complicated. And I literally did things like, I took a photo of my X-ray and I sent it to my orthopaedic surgeon via text, and he called me and he's like, 'You need to be transferred. I'm going to make a phone call.' And then, you know, I got told I was moved, being transferred to Shock Trauma, and two hours later, I said to the nurse, 'Have you heard anything about my transfer?' She's like, 'No.' So I Facebook messaged a friend of mine that worked at Shock Trauma, and I said, 'Hey, I broke my leg, fractured femur, I'm at, you know, this hospital.' And before I can even get my phone down on the stretcher, I hear 'ping'. And she said, 'Girl, I saw your last name and your age. And I knew it was you. And I called for you two hours ago', and 15 minutes later, somebody walked in to take me, right, she sent them over. So, I, you know, totally had to advocate and coordinate my own care via Facebook Messenger, which I think is kind of, you know, a horrible thing to say. But I, you know, when they pulled me in, they were like, 'Oh, can you, do you have a smartphone?' I'm like, 'Yeah.' So they're like, 'Okay, do you have an email?' I'm like, 'Yes.' And then they're like, 'We're gonna send you a link and you need to register. Oh, and by the way, you need to upload your insurance card, front and back.' And I will tell you, I was in excruciating pain, and I was high on fentanyl, because it gave me fentanyl in the ambulance. So, you know, I would, just could think of my 93-year-old aunt she would never be able to do any of that. So, we've made it really hard on the patients, right Na'eem? I mean, like, this is crazy, you know what we've done. Oh, and by the way, I had no one who could come visit me because it was the height of Delta, you know, COVID. So, there was zero visitors at that time in both facilities. So I was, you know, pretty much on my own, trying to coordinate my care. But I will say, you know, we have to be our own best advocate, and we really need someone to advocate for us as a patient. So I think that having, you know, the ability to have the electronic health record, to have a portal or some way to access it, to be able to share it with your family, or a family member, you know, so that they can help you, especially if you're, you know, in no shape to be able to understand or comprehend things. But it's funny that you brought that up. So, I have a very recent, that's my very recent patient experience. And I survived it, you know, I made it through, I was very proud that I was able to figure out how to upload my insurance card even though I had fentanyl onboard. But we have got to help both our providers and our patients, it's just really to the point of being untenable. You know, as a patient to try to figure out and, you know, get all your information pulled together and everything. So it's, it's been kind of crazy.

Lara Mott (14:14)
I mean, it's so interesting, that you share that, that personal story, Kathleen, and thank you for that. I also have a similar kind of health incident. Not the similar incident as yours, but six months ago, and you know, Na'eem was pretty much the first person I called to sort of say, you know, I'm getting these scans and I don't know what to do, and you know, and I think you're absolutely right, if you are your own advocate, and you've got people around you that can advise and help, that's great, but I was thinking the same if I wasn't working in this industry, if I didn't, you know, funnily enough the hospital I was in was one of the first hospitals where I'd walked the corridors, you know, rolling out our software many many years ago. But it's very daunting and really complex and overwhelming. And so, I really hear you with those important messages. I think, if I can just take it back to sort of some level of simplicity if we can, because I think AI and the world of Artificial Intelligence can also be very overwhelming and you say AI to, you know, if I say it to my father, he would probably think it's, you know, machines making decisions about him. If we say AI in the context of Radiology, you know, we've touched on that briefly in the sense of PAC systems and imaging, and being able to spot trends that perhaps the naked eye might not be able to see. But from your point of view, if somebody asked you 'What does AI in health and care mean to you?' Can you describe that in in simplistic terms?

Kathleen McGrow (15:55)
Yeah, I'll do my best Lara, I will say I do get asked that a lot. And actually, I get asked from clinicians, especially nurses, like Chief Nursing Officers, they'll say, 'Oh, Kathleen, what's the difference between CDS, (Clinical Decision Support), and Artificial Intelligence, because my nurses don't realise there's a difference.' And I actually wrote an article to try to kind of explain it, the essentials for nursing just so that they would understand it. So, one of my good friends just happened to you know, write a book around AI, Tom Laurie, who I work with, and I use his definition, right? It's really that AI, it's an area of computer science, it emphasises the creation of machines that work and react like humans. So essentially, the computer has the ability, right, the system has the ability, to pick, to mimic human brain functions. And this is like, learning, speech, problem solving, vision, knowledge generation. So, it's really this constellation of technologies, that allows computers or machines to sense, comprehend, act and learn. And really, if you think about it, a lot of people use interchangeably, like Artificial Intelligence, and machine learning, and that's okay. Machine learning is just, you know, a type of AI. So, I speak about AI quite a bit in the nursing community, because they really do want to understand it. And they really do want to know the difference between Artificial Intelligence. So that's the model that's kind of learning and making changes, as it learns, it's not necessarily programmed, like if, then, what. Clinical Decision Support is, you know, really, like I have this, then that happens. So I have a certain blood pressure range, it triggers and I get an alert, and that's how I kind of I explained it to them, because most nurses are working with Clinical Decision Support every day, and they sometimes think that is Artificial Intelligence, and it's not necessarily. That's rules-based engines, right? So, I do try to explain to them the difference. And it did motivate me to write an article because I got a lot of the same question.

Lara Mott (17:57)
I mean, it's a such an evolving field still, you know, in our lifetime, it's sort of, it's really gathered pace, and, you know, you see all of these incredible videos, that is it, Boston Labs, that post, you know, with the robot dogs, and the, you know, and all of this kind of stuff. So, there's various elements of it touching our lives. But specifically AI in the health and care setting is just an interesting one, and obviously, you are very well positioned to give your views on this. And for nurses in particular then, where do you see the biggest use of AI? Because you've obviously mentioned Clinical Decision Support, which makes complete sense. But that's not necessarily, AI in its purest sense. So, where do you see the biggest sort of match here with both formats?

Kathleen McGrow (18:48)
So, I think Artificial Intelligence is going to be huge in automating manual processing for nurses, right? For example, ambient voice for dictation, and, you know, Microsoft-purchased nuance, which has drag on ambient experience for physicians, but I'm very bullish on it for nursing. So, if my patient comes in and says, you know, I say, you know, 'Mr. Smith, how do you feel?' He says, 'I don't feel so good.' 'Well, tell me the problem.' 'I have chest pain.' And it could just literally prepopulate as the patient is talking to me. It could do an entire systems review, as I'm walking through it, instead of me. You mentioned, Na'eem, right? Like the doctor is always looking at the computer, well, the nurses are too, right? Over 30 percent of a nurse's time, could be, of their day could be spent at the computer. So, if we could have, you know, ambient voice. I think it's a little tougher for nursing, from what the engineers tell me right most nurses document in flow sheets. So, it's trafficking of message into a very discrete data field versus a physician who does like a soap note. That's why it's a little bit easier for the physicians. Some of the other examples might be around computer vision. You can take a picture of a wound, and it can help you stage that wound. Say, you know, if it's like a pressure ulcer. Some, you know, care managers do a lot around claims adjudication, in the United States, you know, we have many, many insurers, it's very complicated, and then much of that is a manual process. So, it could be potentially automated and traffic it appropriately. So, I think there's a lot of opportunity for nursing if we look at the manual processes that are doing today, and how we can help to automate them. A lot of nurses are using mobile devices. So, they actually have the technology right at their hands. And then some also use, you know, the WOWs, the workstation on wheels, as well. But really, the opportunities I think are endless, we just need to figure out, how does it fit seamlessly into the workflow. We don't want to create a new workflow for some, you know, AI to be driven, right, or, you know, to make it more erroneous for our providers, because they're really suffering, the nurses are really suffering right now, and there's just so much for them to do. So, what can we do to automate those things?

Lara Mott (21:09)
That's very cool, and Na'eem, I don't know if you're, you know, because this is sort of, as a clinical person, this sort of stuff sounds fantastic to somebody that's, you know, not in a clinical role.

Na'eem Ahmed (21:21)
How do you, how would you say that, you would argue, you know, the argument about where money should be spent, right, everyone is thinking, every healthcare system is thinking about money, and that money could be spent on actually having physical nurses, or purchasing software, AI and other tech. What should the conversation be like around that, do you think? Because there's some important needs versus some long term gains here.

Kathleen McGrow (21:57)
Yeah, that's a good question, Na'eem, and, you know, it's definitely a thinker, right? You have to really think through that. So, and I didn't go out and look, I did, I've been doing a lot on workforce recently, the workforce crisis, I have a tonne of statistics on the US. Not as much on the global but I did look in the WHO and their 2030 initiative. So, I think globally, we're probably close. There's this huge crisis, where in the US, specifically to the US, you know, we have this huge growing senior population. And then we have this decreasing in birth rate, and I'm not sure how that equates across the world globally. But I do know, globally, there's much more opportunity for people to go and other different, into other different professions than into, say, nursing. So, we really have a very significant pipeline issue, and a very significant referral issue, right? Or, you know, talent acquisition issue. That's growing, you know, how do we grow and get nurses into, you know, the field? It's not happening, so we're going to be at a huge deficit. So, there is really no way to say we're going to make more nurses, it just, we can't do it. And there's a lot of reasons behind that. And we don't have enough time on this podcast to talk through that, because it's a big problem, big hairy problem. What we do have the opportunity is to, what I say, offload some of these more manual processes, or maybe non-nursing functioning processes, or non-nursing functions, and allow nurses to work top of licence. So, if we look at some maybe different models of care, or if we look at, you know, adjunctively, how can we support nurses? You know, but in the US, we have a support staff problem as well. So people, you know, working as patient care technicians, we also have that issue as well. So it's not like I can just hire a bunch of patient care techs to come in and do, you know, all the activities of daily living for patients and things like that. So it really comes down to what do we really need our clinical our licenced clinical staff to do, right? The assessments, the IV start, you know, the very specific things they need to do. I think some of it's of our own making. This is Kathleen McGrow's opinion as a nurse, you know, we always wanted to do everything for our patients. And when I worked in Shock Trauma, I would get the crutches, I would crutch walk the patient. I could have called PT to do it, but you know what I was, like, you know, I gotta get this patient, I gotta get this patient discharged, PT is going to take another half an hour, and I gotta get moving, you know, so we took a lot of it on ourselves, and we, you know, we kind of made some of the problems ourselves, I think. But I think now we're kind of at the point where we really need to leverage our support staff and all the other services to help us, and then how do we work top of licence? But I truly believe Artificial Intelligence, robotic process automation, having the ability, you know, to really look at the data to get the insights to leverage those interventions for our patients is going to be really important. We have a ton of data, we're not necessarily, you know, we're looking at the data, but are we getting the correct insights to care for our patients? And how do we trust it? And I think part of that is, you know, there's still a little bit of leariness around AI, and do I really want to trust that that algorithm says that this patient is at higher risk for x and, you know, go after it.

Na'eem Ahmed (25:23)
I mean, there might be even another controversial, which, as you said, might be outside the scope of the podcast, about even maybe the lower band, I don't know if you say band bands, but you know, entry level jobs being replaced, then by some of this technology. But that might be another risk of a knock-on effect of the technology as well. So what would you say excites you? I mean, you have this global view, in terms of technologies at the moment. Is there a top, you know, one or two, or even three technologies that you look at and you think, you know what, I think this is going to have a real impact on the shop floor for, for clinicians. Is there any examples of things that you've seen or technology that has been developed that you're really excited about?

Kathleen McGrow (26:11)
I think that virtual health, I think telehealth, is very exciting, Hospital in the Home. I think we're gonna see more and more people staying in their homes and you know, many more people are ageing in place, so they don't have somewhere to go. So, ageing in place, I think we'll see more and more devices in those homes, we'll be able to manage people in their homes much better, whether it's through telehealth or virtual health. So, I think that's really exciting. I actually, at one point was a product manager for ambulatory telehealth, and programmatically, we manage patients based on their disease process. So, we did, like, diabetes and CHF, and we had very set things that the patients needed to do to, and they all said, 'I'd rather be in my house with my pets.' So that was, you know, for me, that's a patient satisfier if you can keep someone out of, you know, wherever they would go if they would prefer to stay in our home. So, I think virtual health is really going to help us with that. I definitely think ambient experience or voice recognition, especially for nurses, is going to be huge, huge, huge, huge. I think that's going to be something that could be a game changer. If we can get away from the mousing and the clicking, I had a Chief Nursing Officer tell me I've got to get my nurses off the mouse. Like they click, click, click. I gotta get, it's crazy how much the, the AMIA here in the US they did a study, they did 25, it's called 25 by five where they're trying to decrease the burden of electronic documentation 75%, so down to 25% in the next five years, and they did a huge, they had a huge cohort where they brought in everyone and it was amazing the number of clicks, they counted clicks, and it was insane how many clicks that we were asking these clinical providers to do. In addition, they looked at the different standards across organisation and they had organisations that had, you know, an assessment, an admission assessment, that took four hours to complete. Who has four hours to complete an admission assessment? And then there were others that were like 45 minutes. So like, how do we kind of standardise, I think that standardisation, and part of standardisation, in my mind is interoperability, you know, it's fire standard. It's, you know, how do we standardise the technology as well as, you know, the coding that we're doing like the US CDI is how we're moving forward in the US. So, I think that's going to be really important. So, the underpinnings of our technology are all disparate, now how do we help make it be more integrated, better integrated, right, more interoperable, and that's going to help patients as well when they look at their electronic health records. They don't see, you know, have five different ones because they have five different hospitals they've been to.

Kathleen McGrow (28:56)
And then I would say ultimately, and I don't necessarily know that this is any single technology, but I can tell you when I was a clinician, hospitals were broken, they were just broken. We knew the brokenness of the hospital, we would never have supplies we needed. We would do procurement rounds, where someone would run around and essentially go to another unit and find us whatever we needed. The Propaq monitor that I used for my patients for transport, they actually had it hidden in the ceiling tiles, because it would get stolen. I mean just, you know, we've always had, like, these kind of brokenness things. The one thing that COVID did do, as horrible as it has been, it's kind of shined the light of the brokenness to the general population or the general public. We used to hide that from patients. We didn't want patients to know we were working short, or you know, this happened or whatever. So we would hide that. None of that's hidden anymore. So, the knowledge that there's this brokenness within healthcare and that we all need to be on board to fix it. I think, you know, we have a lot of hope for that. I've hope that we can really fix it, and as part of that, I think the biggest thing will be around provider wellbeing. How do we ensure our providers are taken care of?

How are we sure that they're not, what they call, the second victim? You know, because that was my clinical practice. And I didn't realise I was a second victim many times. I was talking to one of my Shock Trauma, you know, co-workers who's also in information technology. And she said, you know, 'We were second victims, but we didn't realise it.' And that is essentially that, we would have many times, a patient would come in, they could be in full arrest and die, and then we would just move to the next patient. We never took a moment to say, disconnect, or that was a traumatic event for us, we just kept moving. And it was similar to her in the OR, right, where she would have a patient, she recalls very clearly, like a really young patient who came in and didn't survive. And then the charge nurse came in and said, 'Okay, I need you to go back to OR 5 now.' And she literally didn't have a second to, like, absorb what happened. So, we have this huge, huge problem within healthcare in general, that we just don't take care of ourselves as clinicians. And I think that this is going to give us an opportunity to do that in a way that's not criticised, right? Because you and I know, right, Na'eem, as providers, and I'm sure, I'm thinking it's somewhat similar in the US, if you're a provider, you don't necessarily say 'Oh, I have, I need, mental health help,' because it looks like a stigma to you. And then they could say, 'Wait a minute, should you be working?' and things like that. So, it's really, it was really risky. But now, I think that there's more light on it, and we have an opportunity, and I believe this could be done via technology, whether it's, you know, I log into the EMR and I say, 'My patient expired', and then I get a poke that says, 'Hey, maybe you need a 30 second meditation.' Oh, maybe you don't like to meditate, maybe you want to walk around the unit, or around the block, or something, you know what I mean? Like, I call it precision wellbeing. That to me would be, you know, I made that up, Na'eem, so whatever that to me would be, right? That would be the ultimate thing. ImproveWell could do that, I mean, I know that's kind of like what you guys do, but precision wellbeing is what I'm talking about. I totally stole it from precision medicine, because I think that's the next thing, right, I think precision medicine is going to be huge.

Na'eem Ahmed (32:19)
You've encapsulated it so nicely, though. Because you know, that technology making it personal to that person. And I love the, well, I love and you know, it's bittersweet about the second victim. That's really powerful. And in terms of the wellbeing element of it, I think we talk about technology as being so dry, and so lacking that kind of human connection, and what you've said there about precision wellbeing, do we need to trademark?

Na'eem Ahmed (33:03)
W we're trying to say with ImproveWell, because if you can look at those metrics, and you can spot trends, and you can empower the individual, their state of mental wellbeing, the connectedness to the organisation, and ultimately, which will all translate into better patient care, which you and I know so well. Have you seen other kind of promising technology, we're talking about the patient side, but in terms of, I guess, the staff side of it, the areas I mean, across healthcare systems, burnout continues, is a really pressing problem. Are there interventions you've seen, and some of these might not even be technology, per se, but things that people have been doing in your experience that you say, 'You know, wow, that's great. You know, I would've loved that. And I've got a friend in the UK, Na'eem, who would like that as well.' Is there other things that you might have seen in terms of for healthcare professionals?

Kathleen McGrow (34:12)
Yeah, actually. So, we work with a few partners who actually do have the ability, like say, you talk into your phone, and it can give you like an analysis of if you're stressed based on your voice, which I think is pretty cool, like a 30 second thing. We have other, other partners that we work with where, you know, you can do different surveys or, you know, answer different questions, and it'll actually do that type of thing, right, where it will actually render to you as the provider, like something that you might want to do or how do you look after your health and wellbeing, you know, there's a lot of like wellbeing asked. I think the situation is for our health care providers, how do we embed it into their workflow? And how do we look at the signals, right, like somebody died, that's traumatic or I just told a parent their child has cancer, right? Like, could we look at the soap note and see certain words and then send a trigger to that provider who just did that, right, that documented that. So, I definitely see that there is definitely capabilities around it. I do also know that, I'll have to look it up and let you know, Johns Hopkins has a programme called Rise, and Rise is actually being distributed to other organisations, and really, it's about caring for the caregiver. And what they do is they actually promote peer support for caregivers in distress. And I think they're trying to expand it out to have, like, wellness rooms and things like that. I will say I'm not 100%, I definitely think Rise is wonderful as far as, you know, having your peers to support you. But again, having like a physical room to go to, in, within a hospital, when I know myself and my unit, I never got a chance to, you know, go to cafeteria to get lunch. So, I don't know that I would get that opportunity, or would I do it on my, as I'm leaving my shift, I'm not 100% sure. The situation really is that our ,as healthcare providers, people who are healthcare providers, are very much the highly resilient people, it's in our DNA, we are very, very resilient, I firmly believe we are very resilient. Whether we were resilient and decided to go in the profession, or whether we were kind of trained to be more resilient. What essentially has happened over time, especially during COVID times is our or, you know, we work in a 12-hour shift. Our resilience just gets kind of like drip, drip, drip, drip, right and gets worn away, worn away, and what happens is we leave our shift, we're driving home and it hits us. All these things that happen kind of come to us and it's very, very stressful. And then we get home, but we don't want to share it with our families, most people elect to not share it with their families, because I think it's too stressful. They don't, they don't want to share that. And then we go back the next day, and we do the same thing. So that's why I feel like it's having something that can kind of meet you where you are. And you know, especially generationally, right, especially nurses, I had a Chief Nursing Officer who told me, she has nurses between 20 and 70. So that's five generations she has to cover and the 20-year-old and the 70 year-old do not interact with technology the same way, as you know. So, you know, how would we, across that span of generations with, you know, potentially a wellbeing app or something like that, to meet them where they are, I think that would be really important. We need to take that - end users - into consideration. That's why I call it precision wellness, the 70-year-old is not going to want with the 20-year-old wants. So, I think that's important. That's to me, that's a big piece of it. So hopefully that, I hope that answered your question. I think I was kind of on the right track there.

Lara Mott (37:51)
Yeah, definitely. I mean, I think you highlight a really interesting challenge there in terms of the adoption of technology across the health and care system. The 20-year-old is going to use technology very differently to the 70-year-old. And it's interesting because before co-founding ImproveWell with Na'eem, my career was in Biotech. So, we've seen innovation in Biotech takes a very, very long time. Healthcare in general is a risk averse sort of sector, but a sector that we are all very passionate about, clearly. And I think everybody can get passionate about this sector because we're all users of healthcare. So, what do you think the top, like the main challenges in terms of the adoption of technology across healthcare, because to the outsider, it could look like nothing in healthcare happens fast. Whereas while we're in it, we feel like perhaps it is happening fast. We saw in the pandemic, the rapid spread of technology, you know, Microsoft Teams instantly rolled out across the NHS here. The NHS is the world's fifth largest employer, you know, so organisations can move quickly. I realise it's probably quite a big question, but do you have a view on what the biggest challenge is for the uptake of technology? Is it funding? Is it accessibility and sort of catering for the 20-old-nurse versus the 70-year-old nurse? Or do you have a personal view on what the biggest challenge is?

Kathleen McGrow (39:27)
I think that organisations are just slow moving, right? The pandemic made them move fast. But, I think for example, I didn't mention the Cloud. But I think the Cloud is huge, right? Huge, because there's these tremendous volumes of data you really need, especially if you're doing AI, you need a tremendous amount of compute power. You can build the algorithms, you know what I mean? There's so much to the Cloud. But yet, we see so many laggards to the Cloud, and I think it's legacy, risk adversity. You know, if I spent, you know, many millions of dollars on the big datacentre, maybe, you know, that was my job to do, and I don't want to move it. It could be lack of education and training, you have a group of people that knows how to deal with servers, but they don't necessarily know how to, you know, write code, or you know what I mean? So, I think that can be a piece of it. I just think that healthcare's been, I think the risk adversity is kind of the big umbrella of all of that, right, because all of that incurs risk. And you know, when you're doing anything related to patients, you want to make sure that it's done in a safe manner, you know, quality is very highly important. So, I think that's part of it. I think that the rollout of electronic health records is a huge resourceintensity. So maybe you don't have the resources, you know, to really write those algorithms or, you know, to do the things that you really want to do. But back to Na'eem's question, right, like more nurses or more technology? I think it would be great if we could do both. But knowing that we're not going to be getting more nurses, right, that, in the US, the average nurse's age is 52. It used to be 44, before COVID. So that, so what happened is a lot of younger people come in and leave. And then the average nurse educator in the US is 56. And the problem we have is there's only so many educators and there's this numbers game, right, you can only do so many students. So therefore you can't bring in more and more ,even though we're turning people away from nursing school, we can't bring more and more in. So that means to me, we've got to do something with technology. To me, that's where like the virtual reality could come in, like, can we educate, so therefore, you can use virtual reality to help educate and get additional hands-on experience, if you weren't able to get into your clinicals and things like that. Again, technology can assist there, which I think that virtual reality and simulation will start to see more and more.

Kathleen McGrow (42:03)
Those are the types of things that we need to adjunct, not replace people, but just adjunct them, so that we can ensure that our students are getting what they need, and move them through that pipeline and that talent acquisition quicker. But I just feel that I don't know that necessarily, I would say one thing, Lara, I just feel like that, there are so many things, and you know, we're very, you know, we do things, you know, we're, you know, married to the old way of things, a lot of times, I get many, many requests for this thing called the hospital of the future, people can't see me but I'm doing air quotes, 'hospital of the future'. And I always say, 'Well, what do you think the hospital the future is?' And, you know, because I know what I think it is, and it's not a hospital, it's not a building. There's going to be a building, when I break my leg, I need to go somewhere for surgery, but the majority of it's going to be outside of a building. And we need hospitals and providers to kind of realise that and to help to pivot to the more virtual way. You know, we have ICU units in homes now and things like that. So I kind of laugh and, you know, not, you know, in a funny way about hospitals in the future, you know, what I, what I do try to say is, 'You know, what, if we look at it, instead of, you know, necessarily calling it the hospital of the future, why don't we look at it as a way of like, how can we do digital transformation? You know, what are we doing for our digital transformation, so that we can make these improvements, so that we can kind of keep, you know, moving forward in a positive way?' And, you know, I can think of many things, I don't know if you want me to get into the detail that because I know, I know, you had other questions that I can get into, you know, there's many things that we can think of to, you know, kind of participate that and just, you know, one of them is a big culture, do you have a culture for digital transformation? And a lot of organisations may not. So how do they get that culture? You know, do you have technology that communicates, we talked about interoperability very briefly, are you playing the long game? This isn't just, you know, like a six-month thing, right? You have to really plan, it's a whole strategy. Data is very important. And do you really have a good data strategy? Are you really focused on the data? And do you understand that, you know, there are certain requirements around scalability, productivity, flexibility, there's a lot to the data, preparing for talent, you know, we need to invest in these technologies in order to get the talent in, right, we need to be able to provide our employees with the ability to be educated on the new systems and the digital strategies. And then cybersecurity is a really big one, too. We haven't really touched on that. That's not necessarily my first thought process when I think of, you know, what's going on within organisations, but we know, especially during COVID, there was a ton of cyber hits. And it, our data is very, I get, you know, texts all the time, 'oh, you were a breach' or whatever happened and you know, it's insane. There's a lot of bad actors out there. So how do we keep them from our organisations, because our data is really precious. Healthcare data is very precious.

Na'eem Ahmed (45:06)
The breadth of your experience, starting off from that very personal story, covering AI, and, you know, ending on like a vision I guess for a future, or a shared vision was really, really powerful. So, thank you so much for that, Kathleen. We have a segment which Lara is going to introduce that we do for all our guests, which is called Small But Mighty, and I'll hand it over to Lara to describe it.

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Lara Mott (45:42)
Thanks, Na'eem, Kathleen, as you know, ImproveWell is all about giving the frontline a voice, 24/7, to share their real-time feedback, and one of the feedback systems that we have is ideas for improvement. So sometimes we ask our guests to comment on a particular idea that has come through the platform.

But given your absolute passion for the nursing profession, as well, as you know, you're equally as passionate, I think, with the technology side of things, we'd really like to turn it over to you to, I guess it may not even be a technological advancement, but what, what small but mighty change do you feel is needed in your world of Nursing Informatics at the moment?

Kathleen McGrow (46:34)
Yeah, that's a good question, Lara. For me, it's really about, now that we have all this data, how do we take the data and make the insights and then leverage the interventions, and that could be both for the patient and the provider, and I think I already said that, so I don't know if this was anything ground-breaking. But I really believe that nurse informaticists can be thought leaders in their organisations. And you know, they can be very, very valuable. You know, we're critical thinkers, we're analytical thinkers. So, you know, leverage them right, within your organisation because they can be very helpful. And they really do have their pulse, their finger on the pulse of the front lines, they're able to be able to get you that feedback. But I think for nurse informaticists, that, that would be my specific ask.

Lara Mott (47:17)
Which is perfect, you know, and some of these things are just very simple changes that if everybody made them every day, every week, it would really have a huge impact on the system. So, thank you, Kathleen, and thank you so much for such a fascinating discussion today. And we could carry on talking for hours, I feel you know, you've sparked a lot more questions in my mind and, you know, perhaps we can continue the conversation, you know, another time because I'm sure there's plenty more that will happen over the next 12 months that we can loop back on.

Na'eem Ahmed (47:56)
Also, the nurses and the healthcare community, wider healthcare community, are so so proud and lucky to have someone like you, and you know, everything. We began with your bio, but everything you've, you've done and continue to do, has been, it's been amazing. And thank you for leaving us with so many things to think about, precision wellbeing being number one for me.

Kathleen McGrow (48:24)
Thanks Na'eem, Thanks Lara. I really appreciate the opportunity just to champion the nurse informaticists out there.

Lara Mott
Thank you so much.