Elizabeth Blackwell Annual Public Lecture 2025

Healthcare in the digital age: A new era of inequality? by Professor Trish Greenhalgh

Monday 3 February 2025, 18:30 – 20:00, City Hall, Bristol

Speakers:

- Professor Patrick Kehoe, Director of the Elizabeth Blackwell Institute for Health Research at the University of Bristol
- Professor Evelyn Welch, Vice-Chancellor and President of the University of Bristol
- Professor Trish Greenhalgh, Professor of Primary Care Health Sciences at the University of Oxford

Transcript:

Pat Kehoe

Good evening, everyone. My name is Pat Kehoe, and I'm the director of the Elizabeth Blackwell Institute. And I'm delighted to welcome you here this evening for the eleventh Elizabeth Blackwell Institute annual public lecture. It's fantastic to see so many of you here on a chilly February night.

But before we introduce our fantastic speaker, I'm afraid I've got a few housekeeping issues to cover at the moment. Also, I'll tell you a little bit about Doctor Blackwell and the Institute lecture. So first of all, a few practicalities. As I said, there are no fire drills planned. So if you hear an alarm, it's the real deal. So I'm afraid you'll have to vacate the building and vacate by the main entrance to the right and assemble by the cathedral.

There's accessible toilets on this floor, but there's also toilets downstairs. The Elizabeth Blackwell team are here for your help if you need it. And we're all wearing green turquoise, especially for the event. And photography wise, we will be taking photographs. So if anybody has any issues with that, can you please let a member of the team know? We do also have first aid facilities but hopefully they won't be needed tonight. But again, if you need or something arises, please contact a member of the team. And we are also delighted to have interpreters with us today, Claire Cryer and Laura Frayne, who are helping us on this evening's event.

So who is Elizabeth Blackwell? Well, this lecture is hosted by the Elizabeth Blackwell Institute and honours the memory of this inspiring doctor, Elizabeth Blackwell. The Institute is part of the University of Bristol, and as an institute, we support and nurture health research across the whole university and in partnership with organisations and groups across Bristol and beyond. Elizabeth Blackwell is Bristol born and bred, and she was born on the 3rd of February 1821. So this evening is actually the anniversary of her birth. So it's fitting that the lecture is to honour her and held in this beautiful building of City Hall.

When Elizabeth was eleven, her whole family moved to the United States of America, and as a young adult, she went on to become the first woman to be awarded a medical degree in the United States. After qualifying as a doctor, she worked in Paris and then finally in London. In 1859, she received her place on the British Medical Register, which meant that

she was able to provide medical care and practice here in Britain as a doctor. This means that many people refer to her as the first woman doctor.

Our annual public lecture takes place once every year, as the name suggests, to honour Doctor Blackwell and thanks to the generous donation of descendants of Elizabeth's family who visited Bristol here in 2013 for the launch of the Institute. Our annual lectures are free to attend and open to all, especially members of the public. And our intention with our annual lectures is to revive the spirit of Elizabeth Blackwell's original Penny lectures which were designed to educate and encourage new thinking, ideas and debate. We are delighted to be able to host this event at City Hall, and we are honoured to have many colleagues from the council here tonight, including the Right Honourable Lord Mayor, Councillor Andrew Varney and the Lord Mayor's Consort, Councillor Jos Clarke.

With health research a centrepiece of the university's international reputation in this very prominent digital age, the topic of this year's lecture on digital health and health inequalities is of huge interest to us. I'm now going to hand over to our Vice-Chancellor, Professor Evelyn Welch, to introduce our speaker. Over to you.

Evelyn Welch

Thank you Pat. This year we are delighted to welcome Professor Trish Greenhalgh. She is Professor of Primary Care Health Sciences at the University of Oxford, and she will be our speaker for the eleventh Annual Elizabeth Blackwell Public Lecture. Professor Greenhalgh studied medical, social and political sciences at Cambridge and clinical medicine at Oxford before training first as a biologist and later as an academic general practitioner. She now leads a programme of research at the interface between the social sciences in medicine, working across primary and secondary care. And her work seeks to celebrate and retain the traditional and humanistic aspects of medicine in healthcare, while also embracing the exceptional opportunities of contemporary science and technology to improve health outcomes and relieve suffering.

On a personal note, I first met Trish when we were both at Queen Mary University of London some decades before. I was the newly appointed Pro-Vice-Chancellor for Research, which involved putting a big university wide application in called the Research Excellence Framework. And that time we had something introduced called impact. That is, we couldn't just write papers. The research that we did actually had to make a difference, ideally a difference to a wide public in terms of health, economics, culture and society. So I showed up at an impact case study workshop, which in theory, I knew all about. And there was Trish Greenhouse responsible for impact for the then medical school And actually, by the time we'd finished together, really responsible for impact across the entire university because she truly understood how to get the best out of researchers and how to make it meaningful, understandable, and genuinely impactful in a positive way.

But what I couldn't work out was that every meeting I attended, she was always on her mobile phone, always on her mobile phone. And she told me about this thing called - this is about 2009, 2010 - She told me about this thing called Twitter. Which was really terrifying, putting yourself out there, constantly communicating. And it wasn't until she showed me the videos of her son, who is a biologist out in Fiji's manta ray videos, and how they were circulating around the world that I suddenly went to "You know what? This might catch on. This just might catch on".

So during Covid, Trish's Twitter feed was probably one of the most reliable sources of information throughout Covid. I should say that Trish no longer is on what is now known as X, but if you follow her on BlueSky, you will once again get that deep, insightful, witty 140 characters or so that actually you can really rely on to make your day.

So it is my enormous personal pleasure, as well as my pleasure as the Vice Chancellor of the University of Bristol, to welcome Trish's lecture on the topic of ‘Inequalities in the digital age: Beyond Neoliberal Solutions’, where she talks about how digital tools should make healthcare more efficient and accessible. But do they make everyone's lives easier? Trish.

Trish Greenhalgh

Thank you. Thank you. Thank you very much for that flattering introduction. So the title that I was supposed to be talking about was the one that was that went through the public understanding of science mill and this was the one that apparently is very accessible. The title that I originally thought of, and I couldn't understand why they'd changed it. And then I remembered that I'd agreed to them to change it. But my preferred title was Health Inequities in the Digital Age: Beyond neoliberal solutions. And I'm going to come back to that neoliberal thing in a bit.

But first of all, thank you to the organisers. I think it was Rachael Gooberman-Hill who first invited me. Thank you. To the logistics people who'd got me here in one piece, still smiling. Thank you, all of you, for giving up your Monday evening and engaging, as I'm sure you will, with the discussion. But thanks to my research team, my university, which is Oxford, my collaborators, my funders, too numerous to name individually, but I do want to just single out three people whose work I am going to be talking about and presenting: Fran Dakin, who's from Anthropology, Sarah Rybczynska-Bunt, who's from Sociology and based at the University of Plymouth, and Laiba Husain from Psychology. I'll tell you more about them in a bit.

We've heard a lot today about interdisciplinarity or what some people call transdisciplinarity. What I mean by that is not just collaboration across disciplines, but the active harnessing of contestation, those productive frictions, when you realise that someone else is looking at a problem differently from you and they don't quite get how you're looking at it. And sometimes even the harnessing of productive conflict among disciplines.

And I spent the afternoon meeting people from the Elizabeth Blackwell Institute, and also from more widely across the university. And this idea of having an interdisciplinary institute that can draw down on the expertise across faculties and be a bit of a crucible. It's a real honour to have met you all and to have heard about that institute, because it's something that's very dear to my heart.

So coming back to this word 'neoliberal'. I'm not going to give you a theoretical explanation, but I thought you'd like to meet Sandra. Now, Sandra, you can see her there, is from an image bank. She comes up if you put into one of those search engines and you want an illustration of remote or digital healthcare, and you can see that Sandra has a roof over her head, she's got a nice sofa, she's got a smartphone, she is literate. She appears to have a single, relatively non stigmatising condition for which she takes a single medication. And she's checking in with this health professional who might be a doctor or nurse or a pharmacist and will no doubt take that clinician's advice.

Now, Sandra, is what the neoliberal policy solutions people call an 'activated patient'. I've got nothing against Sandra. I'm Sandra, you're Sandra, you're Sandra. Everyone in this lecture theatre, with a few rare exceptions, is Sandra and I want to spend the rest of this lecture talking about people who are not like Sandra.

But before I do that, I want to talk a little bit about the changing nature of healthcare work. If you've had to have an encounter with a health professional in the last couple of years, you'll realise that things are changing. Things are changing in slightly weird ways. There's these three linked phenomena.

Fragmentation. When a single episode of care is spread across a large number of providers. In our data, we've got someone with a simple urinary tract infection that actually has 15 different people involved. The person who did the triage on the telephone call, the person who called the person back, the person who received the bottle of urine when the patient brought it in. The person who dipped the stick into it, etc., etc. and you can see that linked to Fragmentation is Taskification.

Nobody manages a urinary tract infection anymore. Somebody dips the urine, someone else phones the patient back and linked to that is De-professionalisation which the doctors and nurses get very exercised about.

When professionals' elite status, their exclusive body of knowledge, their advanced skills are undervalued and sometimes even derided. So those three things are happening.

There's Complexification now. The obvious way that healthcare is more complex is task complexity. What I've just been talking about, there's more people, there's more technology, there's more interactions, there's more subprocesses. But there's also something called value complexity, clashes of professional norms. Scope of practice. Is that my job or your job or is that person qualified to do that? And people get really, really cross about this. And sometimes it's value complexity that can make an innovative idea hit the sand and just not work.

Then there's these two related things, Distanciation and Disembedding. Now these are these came from, I think, Anthony Giddens originally, and rather than explain those in the abstract, I'm just going to give you an example. And it's an example related to my health condition. I haven't really got a health condition. I've got one of these preconditions. I've got thin bones because I'm one of those skinny athletes and I have to have my bones checked once a year.

Now, what used to happen is I used to go up to the bone clinic at the hospital and put my hand in one of those machines, and it would measure my bone density, and then it would print out a bit like one of those supermarket receipts, and I'd hold that bit of paper in my hand straight through to the doctor, and the doctor would give me my bone density result and say, 'yep, keep drinking the milk. You're doing alright'.

But actually, in recent years, that's all changed. What happens now when it's time to have my bones checked, is I go off in the opposite direction to the hospital, to a community diagnostic clinic, put my arm in the same machine. I don't get the bit of paper anymore, because the results are sent directly up to the bone clinic and I go away and forget about it. And 2 or 3 weeks later, I get a phone call which says 'your bone density result is this, keep drinking the milk'.

Now that's both Distanciated, in the sense that my care for that episode is stretched across both time and space. But it's also Disembedded. It feels hollowed out. It doesn't feel like a real consultation because it's not what - as a researcher,I've been studying the clinical consultation for 25 years. My unit of analysis has disappeared.

Now, from my perspective, I'm perfectly happy with what's happening with my bone clinic. But I'm going to tell you later about patients for whom that is problematic and troubling.

There's also Responsibilisation when people are rendered individually responsible for tasks which previously would have been the duty of another. Many of you will be checking something at home. Maybe it's your blood sugar level, your blood pressure, and you've then got to send the stuff back. You are being Responsibilised. And again, maybe you don't mind that because you're all Sandra, but I'm going to tell you about people for whom that's problematic.

Now Facsimilisation. This was a word that Fran Dakin came up with. It's kind of a bit like digital twins. It's the need to create a digital facsimile of the patient on the electronic record, and then what gets treated is not the patient because the patient's not there anymore. They're at home. What gets treated, what gets analysed, what gets examined is that digital facsimile.

Sorry, but I'm going to come with another example from my own bones. It's so much easier to use yourself so then you don't have to kind of ask your auntie if you can use her and all the rest of it. So there I was at the gym. I'm often at the gym, doing my weights, doing my plank, all that kind of thing. So I've got strength in my bones, remember? And I overdid it a bit and I strained the front of my ribs. I got myself something called Costochondritis, which is where the rib, where it joins the front bone, starts to get a bit inflamed, and it hurts. It's sore. I've had it before.

And there's a tablet I can have, which is strong anti-inflammatory. And I needed some more of those. It's prescription only. So I thought I'll get on to this e-consultation website. I don't know if you've ever done one of these e-consultations. So I get on to it and all I want, I know exactly what I want. I know what tablet I want, I know it's worked before. First question on the consultation: "Do you have chest pain?"

Now, at the time, I had the worst chest pain I've ever had in my life, but I knew that the correct answer to that question was no, because the algorithm had been programmed to cream off the people with the red flag symptoms. If you're having a heart attack, you don't want to waste time. You want to go straight in your ambulance. So I said no. And then I filled out more and more of these questions, mostly writing ‘not applicable’ in the box, because I wanted to get to the big box where I wrote what was wrong with me. But. And then I hit send. 45 minutes later, I get a text from my GP saying, "Trish, your prescription has already been sent electronically to the pharmacy". So I went down to the pharmacy and within the hour I had my medication.

So that's because I was able to create a digital facsimile on my record that was plausible, that was accurate, that was persuasive, and then got me what I wanted. Not everyone can do that. So let me summarise what I've said so far. We cannot examine the digitalisation of healthcare and the associated inequities without also engaging with health care's

Fragmentation, Taskification, De-professionalisation, Complexification, Distanciation, Disembedding, Responsibilisation and Facsimilisation. That's a heck of a mouthful, isn't it?

All right. Time for some data. I always find it interesting that when you put the word data into an image bank, you get this. You get graphs and pie charts and lists of numbers. Actually, that's not the kind of data that I'm going to be giving you. I'm going to give you these little stories I've got written on my crib cards. It's called qualitative data.

Let me tell you a little bit about something called the 'Remote by default 2' study. Remote by default 1 was when we all went over to remote by default during the early bits of the pandemic, everything had to happen remotely. So we didn't all die of Covid, and then 'Remote by Default 2' was a bit where people said, "Well, we're remote now. We might as well stay remote". But actually it felt a felt a bit weird then because we weren't in the middle of a pandemic anymore.

Anyway, so we got this money to have a look at what was going on. It's a big project with lots of members of the team, lots of participating GP practices, lots of patient and public involvement groups, and the National Institute for Health Research who funded it.

So what was it all about? Well, we did research on 12 UK, in 12 UK general practices, two in Scotland, two in Wales, eight in England. And we wanted to know what's been the impact of the shift to remote and digital modalities for both triage, which is the bit where someone hears what's the problem and then says, "Right, you need to see the pharmacist, you need to see the nurse, you need to see this, You don't need to see anyone" type thing. And also clinical care. Just a couple of definitions. What I mean by 'remote encounter' is when the patient and the staff member are not co-located. So an ordinary telephone call is remote, but it's not digital. A digital encounter means any encounter that's undertaken with the aid of digital technologies and through those technologies, even if you are co-located. I'm going to give you some examples, or an example, of a digital encounter that's not remote.

So what do we do? As I say, we collected a mostly qualitative data set. We did observations. We hung out in the reception areas. In some consultations, in meetings, you know, wherever they would have us really. We interviewed staff and patients and lots of other people. We held workshops, some online, some in person. Then we looked at safety incidents. And I'm going to tell you just a little bit about some of our findings.

The current context for general practice care is, as many of you will know, characterised by financial austerity. They're feeling really squeezed. There's not enough money to hire the staff that are needed and do what people want to do for the patients. There's fewer GPS, there's more non-medical clinicians, not just nurses, physician associates, pharmacists, paramedics, etc., etc. and there's also a wider range of support staff. It's not just the receptionist. We found about 25 different titles of the different support staff, many of whom had newly created roles.

We found a loss of in-person interaction. We found a lot of lonely clinicians and lonely managers sitting there having their lunch while looking at the screen and dealing with the kind of tasks that were coming through. And we found that general practice was seeing more patients and they had more complex patterns of illness.

Now it's worth, I'm not going to tell you too much about this, but I want to give you this a bit of background before I tell these stories, which are much more interesting. The 12 GP

practices varied hugely in 'digital maturity', and I want to put the word 'maturity' in inverted commas, because it's not necessarily the case that the ones with all the tech are the most mature. We had one practice which was a digital trailblazer. It had all the kit and all the know how; you went in there, literally the doctors were sitting in gaming chairs, in gaming chairs, and we got a photograph of one. They were doing almost all their consultations on smartphones. You know, to the Sandra's of this world, often by video.

This was actually not very common, but we found this rather unusual trailblazer practice. This practice was based in North London. It was right near a Northern line station, and all the patients were young professionals who jump on the Northern line tube and go into their jobs in the city. And of course, it was perfect for them because then they could have their medical consultation in their tea break or whatever. So that was the digital trailblazer practice.

We had a couple of practices that we described as 'Digitally Strategic'. They have had quite a lot of digital innovations, but they were always introduced strategically with a business plan, with a pilot, with a careful assessment as to whether this was adding value both financially and for patients. They tended to be large kind of polyclinic type practices.

Then there was a group in the middle that we initially had divided into two, 'Digitally curious' and 'Digitally reactive'. Curious meant that they were playing around. They said, "Yeah, let's try that. Let's bring that in". Maybe someone new to the practice said "We used to use that where I used to work". "Oh yeah, we'll give it a go", but not in a strategic way. But in addition, those practices were reacting to whatever policy 'must-do' came down from on high. You've all got to do remote triage now. So they were doing that on the back foot. But they were doing their best and they were quite interesting practices to study.

Then we had practices that we described euphemistically as 'Digitally hesitant'. They really couldn't get it together. They didn't have anyone in the practice that was driving this. They said they had problems with their leadership. They - those academics among you, we have this term called 'absorptive capacity'. And what that means is have you got the physical infrastructure, the technical infrastructure, but also the people, the horizon scanning that will allow you to capture innovations and introduce them? and these poor practices really didn't.

And then finally we had two practices that were very interesting indeed. We called them 'Strategically traditional'. They had the least kit out of all the practices, but they weren't struggling. They had made a strategic decision not to introduce any or hardly any digital, and remote. One of them allowed the patients to telephone in and they had some phone calls, but mostly they were serving a clientele that for whom remote and digital was not so appropriate. One was on a sink estate in Glasgow, ran a methadone clinic. Many of the patients had complex lives, drug and alcohol challenges, that kind of thing.

The other strategically traditional practice was out in remote Wales, in a village serving an ex mining community, but also farmers. They were really a very long way away. It took us five hours to get to that practice. They consulted in Welsh mostly, and there was a dirty great mountain, between the village and the nearest kind of phone mast. So they couldn't…people didn't even have mobile phones because there was no signal. So this was a really interesting practice to study. How did we get a hold of that, you might ask? Because one of our medical students said her dad worked there, so we got that, but they certainly hadn't done research before, so it was kind of lucky to have these two. But again, there were really good reasons why they weren't introducing a lot of tech.

Now in every single one of these GP practices there were patients who had access challenges. And I'm not going to read out all these well known, well described risk factors for having trouble. Now, it's really important to note that just being old, just being non-white, just having what we call multimorbidity, which means more than a few things wrong with you, that doesn't necessarily mean you're going to have problems accessing care, but these things stack up. Once you've got several of these, and that's what the word intersectionality means, the multiple disadvantages.

I would say that one down in the bottom right. I have got to say that I did spend 20 minutes talking to your undergraduate students and their protest today, and apparently some of them have got poor housing too. So I hope you can do something about that Evelyn; I know you will. All right.

I am going to now tell you about three patients with intersecting disadvantage. And these are composite cases. And the academics among you can ask me how we generate these vignettes, but we basically get some data and then we write a new story which doesn't actually relate to any specific person, but it kind of pulls together some of the key themes. Okay. So we're going to hear about George. We're going to hear about Amir. We're going to hear about Selma.

Now George is 59. He's got mild learning difficulties. He just about manages to live alone. He's also taking immunosuppressant tablets because of a condition. Sorry. He's taking tablets, which give him immunosuppression, for some other condition that he's got. So it means he's vulnerable to get infections. And one day, George didn't feel very well. So after a few days, he phoned up his GP surgery. But because he's got a stammer, he couldn't get the words out and the receptionist cut in and gave what's known as general advice, which means if you're still unwell in a few days' time, call us again.

Two weeks later, George phoned up again and this time he managed to get across that he'd got a rash. Now, the receptionist said, and listen carefully to what she said. "Do you have a smartphone and can you take a picture of your rash?" And George said, "yes", he did have a smartphone and he could take a picture of the rash. So the receptionist then said, "Okay, I'm going to text you a link. I want you to attach a picture of your rash and then the duty doctor will look at it".

But George could *take* a picture, but he couldn't *attach* a picture. Attaching it was above his cognitive pay grade. It meant he couldn't populate the digital facsimile, which the duty doctor was then going to examine and treat. Two more weeks later, George was finally seen by a GP. By which time his shingles rash had spread to the whole of one side of his trunk, and the medics among you would know that that's not very good for someone who's immunosuppressed.

Fran Dakin has taken that whole idea of creating the digital facsimile, and she's written this paper for 'Social science and medicine', all about how access in the digital age is very much about one's ability to do what I did when I wanted the tablets for my Costochondritis. You've got to craft that persuasive facsimile. If you can't do that, you actually don't exist.

Let's hear about Amir. Amir's 21. He's got ADHD, Attention Deficit Hyperactivity Disorder. That means he can't concentrate very well. He's a bit impulsive. He's been kicked out of his parents' home, and he's sleeping on his friend's sofa. His asthma inhaler has run out, so he

goes off to ask for one at his friend's GP surgery. He walks in. So the receptionist said to him, "Hang on a minute. You can't do that anymore. You've got to go home, get online, register online, then phone up for an appointment". So Amir says, “look, I don't have a computer”. He doesn't say, "I don't have a home". Homeless people never say that.

But the receptionist says, "Oh, no problem. We've got a protocol for people like you. I've got the form here. Stay where you are, and I'm going to ask you a series of questions. I will fill out the form for you. First question. Do you have chest pain?" Amir is confused. He says, "Look, I have already explained my problem. I'm standing here with my empty inhaler. I need a new inhaler". The receptionist says, "Yeah, but I've got to ask you all 25 questions on this template". This is digital healthcare, but not remote. She can't just have the conversation that Amir needs to have.

Amir, of course, gets angry. The questions are stupid and irrelevant. Impulsively, he storms out. So then he calms down a bit later and he comes back in and the practice manager comes out of her office and says, "Now look, we've got a zero tolerance policy for abuse of staff, so you can't register here".

Now note Amir has the skills to use a computer. If you sat him down at a computer, he would start gaming. What he doesn't have is the ability to see that he has to keep his cool all through that list of stupid questions in order to gain access to the doctor. Do you remember at the beginning I was telling you about when I had to work through the same list of questions, and I just knew that I had to get to the end. Amir can't do that because he's not Sandra. Sarah Rybczynska-Bunt has written this paper all about that. And actually, there's a whole theoretical lens from a sociologist called Margaret Archer called 'fractured reflexivity', which means you can't keep your shit together when they're asking you the stupid questions. It's a very scholarly paper, actually. But that's what we made. We made Amir a mirror to kind of illustrate this slightly abstruse sociological concept. Okay.

Last story I've got for you is Selma. Selma is 75. She came to the UK from Pakistan 60 years ago. She's been a homemaker and she never learnt English. Or at least she never learned enough English to be confident with the doctor. After her husband died eight years ago, she moved to live with her, one of her sons and his family. Selma has got diabetes, high blood pressure, mild heart failure, three chronic conditions. And she used to go and see her GP, who was a second generation Pakistani woman who spoke a little bit of Punjabi, enough to kind of, you know, get by.

But then they changed things and Selma had to go on three Long Term Conditions registers, the three different LTC registers. That's how they do it now. And she saw a nurse at each of those. Sometimes the same nurse, sometimes a different nurse. But she was okay with that actually because she got to know each of those nurses. And again she was happy to go along and have her whatever it was checked.

She doesn't do that anymore though, because now what happens is every three months, Selma gets a text in English asking her to supply her blood pressure, her blood sugar, her weight and fingertip oxygen readings with one of these clips. Responsibilisation, yeah? The practice think that Selma is fine because her son helps her. He sends back the data very promptly. Very accurately. Very, you know, completely. But Selma hates this. She used to go to the doctors on her own. She valued the personal relationship with the familiar GP, the nurses that she got to know. Now she has to communicate everything through her son and

also through a digital platform. Nothing is private. She doesn't mind her son, you know, doing the blood pressure bit, but she's never going to talk to him about her stress incontinence or her low mood.

And also, Selma doesn't trust the system and Laiba Husain who's a multilingual now postdoc, was my PhD student, and she went to and visited people like Selma in their homes and talked to them in their mother tongue. And she got some really interesting data about the loss of agency, the loss of trust, the loss of continuity of care, and the complete disengagement with the system from people like Selma. And what Laiba did was she developed this idea of using personas, which are like taking these vignettes, taking these composite case narratives, and developing a persona in a sort of fictionalised, slightly stylised account, and then going into GP practices and other healthcare organisations and says, “Okay, what are you guys going to do with your systems and your processes that will make healthcare more accessible to people like Selma, people like Amir, etc., etc”.

Okay, so I'm beginning to wrap up. Instead of a model of equity based on individual deficits, based on the idea that we need to activate everyone and make them like Sandra, we need to address the structural causes of inequity that are built into the system. Now, I've got a preliminary hit list of the underlying structural causes of so-called digital inequities. And this is just to get us going. I'm sure you'll have other suggestions.

First off is the expectation that every patient can follow algorithms and make judgments in real time. Many of us, most people in this lecture theatre can do it. George can't, Amir can't, and Selma can't. And they never will be able to really. You know, the idea that we're going to top up their deficits.

Secondly, the expectation that the patient needs to populate their own digital record. Again, many of us are happy doing that, and we quite like doing that. And it actually makes it easier for us. But there are some people who are never going to be able to do that. Remote only access routes. The idea that a patient who's walked in has to be turned away to go home and log on. As I say, some of them don't have a home.

Another thing on my hit list is this unconscious stereotyping of deserving types of disability. This little kid in his wheelchair is what comes up when you put disability into an image bank. You never get Amir. You never get people with hidden disabilities. You very rarely get people with mental health conditions. So we need to make sure that we, when we're being equitable, that we think about the full range of conditions and impairments or whatever that are going to get in the way of people accessing care.

And finally, the deconstruction of the patient into fragments, each of which is managed by the cheapest person who can do a task. You can tell I'm a little bit bothered about taskification.

Let me, before I finish, just tell you a little bit about what happened to our 12 practices. The digital trailblazer continued to blaze a trail. The digitally strategic practices did really well as well. They were interested in adapting their workflows and withdrawing tech, so adapting the workflow to make tech work if it can work. If it doesn't work despite a lot of work on workflows, withdraw it. But most of the digitally curious/reactive practices actually moved into digitally strategic. Maybe that was because they were working with us and they were

learning from the other practices in the sample. Maybe they were just on a learning curve, but they did pretty well. And they felt really quite pleased with what had happened.

When we interviewed them at the end, the digitally hesitant practices made little progress because they didn't have the preconditions. And I'm just currently writing an editorial about how those practices, who do not have the preconditions for innovation, need a completely different package of support. And finally, the strategically traditional practices, of course, were still digging their heels in because they were talking about human rights and equity. And they could defend continuing to see people in a walk up way without any fancy tech.

So my conclusion is we need to stop classifying strategically traditional organisations as digital laggards. We need to reward them. We need to fund what they're doing. We need also to learn from them, because I think they've already gone through that hit list of structural barriers. And they've developed ways of overcoming them, mainly by actually offering a very traditional service. o that is the end of what I've got to say. And I think now we have, you know what to do with these QR codes. You take a picture of them and then you get to our academic papers should you wish to. I'm now going to hand back. Or do I stay here? Maybe I stay here to answer because you want to answer my questions. Do you know I stay and answer my own questions?

Pat Kehoe

So we're opening the floor to questions. We've got two roving mics. So if you have a question, can you please put your hand up and one of the team will get to you. Don't be shy. It's somewhere right at the back there. Nina.

Question 1

Hi. Can you hear me? Okay. I have a question about what impact assessment was done before these systems were put in. We are looking at the impact that digital systems are in in healthcare systems in the hospital. So if you don't look at a patient, you look at a number on a piece of paper. What what's different with that? I wanted to know whether the GP surgeries had thought about how using a mobile phone might impact different patients, because often we're finding that people aren't thinking about the unintended consequences of tech.

Trish Greenhalgh

I heard about two thirds of that. So the question, can you repeat the actual question for me?

Question 1

Did you look at whether the GP surgeries had looked into the unintended consequences of using digital technology? So had they thought through what using a mobile phone might look like for different people?

Trish Greenhalgh

Well, sort of. But one of the things that one of the things that we found was that these GP surgeries and as you can see, they were very, very diverse. They were from small to big. They were from affluent to very poor in terms of population, etc., etc. but all of them were struggling hugely with this austerity agenda and they didn't have any time to do the kind of research on their patient populations. Actually, that was one of the things that we found, which was very, very sad. And the work I've done over the last 20 years on innovation in

general has demonstrated again and again, not just me, others have demonstrated it, that one of the things you need in order to innovate is sufficient slack. Meaning spare people, spare resources, spare physical space, spare head space to think "what what's going on here?", to be able to evaluate.

So I get what you're saying is there are unintended consequences of using phones. And that's what we, the researchers, were looking at; all sorts of unintended consequences. And I rather suspect that in your study you've got some stories to tell as well about those unintended consequences. But the GP practices did not have any resource to go out and find out what was happening. And that was. That was rather sad, actually. Have I answered your question? Yes.

Question 2

Thank you for your fascinating talk. Two things really. One, in terms of the types of surgery described. I mean, was it always kind of supply meeting demand or sometimes did one drive the other? What drove it?

Trish Greenhalgh

How? What an interesting question. Let me come back to the, these five different, this typology of practices. Now the two at the extremes, I can tell you what drove them, because in a way, they were straightforward. So what drove the strategically traditional practices was an ethical commitment to serving a deprived and very particular and very geographically circumscribed community. And we interviewed one GP who'd been serving that community in Scotland for the last 25 years, and that GP was totally committed. And that's what was driving it. And the tech followed from that.

I would say that the digital trailblazer practice was a bit more technology driven. Not that those clinicians didn't care about their patients, they cared passionately about their patients. But for them, technology was the answer. And whatever the problem, they would try technology first. Having said that, they also sometimes withdrew high tech solutions when they didn't work. And one example is they introduced a video physiotherapy service and it went down like a lead balloon, you can guess why! I mean, it's pretty obvious, isn't it? And so they were prepared to withdraw, but so the techie practice viewed technology as the route to improving care for their patients, unless proven otherwise. And so that's what drove them.

The traditionalists, the bottom practice was pretty convinced that tech wasn't the answer and so were very resistant to that. And I think they were right.

In the middle, well, actually, the digitally strategic practices were driven by values. And there was one in particular who said, "You know, we want the best for our patients. We want to make sure that our service is equitable". And they would bring things back to a practice meeting to say, "Is this working? Is it helping us provide an equitable service or is it getting in the way?" And there's a good example there in e-consultations. The more strategic the practices were, the more quickly they dropped e-consultations because they are very divisive. The, you know, the articulate middle classes will get on them all hours of the day and say, "By the way, doctor, can you do this?" People like George just wouldn't even use them.

But in the middle, those two, you know, the third and the fourth one down. It was a real mix. And in fact, I would say that in the digitally hesitant practice, it was very hard to know what was driving it. It was really just how do we keep our heads above water? You know, how do we stop staff leaving, for example.

Question 3

With the trailblazers, what do you think they might do with artificial intelligence?

Trish Greenhalgh

Oh, they're doing all sorts of things with artificial intelligence. They're piloting it. They're developing it. They're writing the code. You know, they're very techie people. But equally, they are not stupid. They are not just jumping on every bandwagon at all. They are really good about evaluating. They are working in partnership with some of the tech companies. They are the testbed where the tech companies are coming up with things, and they will test it out in their practice, but only if they think it's safe and helpful. But mostly if there's a problem, the first thing that those, the partners in those that practice and the manager will say is, "Oh, let's see if we can get a technology for it", but then it's because they serve patients who are very techie. So, you know, it's horses for courses.

Question 4

And thank you for a wonderful talk. And I feel like there was lots of nodding. Everyone's going, "oh, yes, yes, that's the thing. And there's a word for it now". I wanted to ask about with the very digitally heavy practices, how much do you feel that that access then provides a kind of market force that then alters the perception of what's going on in that area? So if the appointments are taken up by people who are savvy and get in on the e-consults and then they're the people that are seen by the clinicians, then the clinicians think this is what's going on in this area. And actually they're not seeing the missing ones, the ones who don't make it through.

Trish Greenhalgh

Yes. We interviewed some of the receptionists in the Digital Trailblazer practice, and there were lots and lots of measures taken by that practice to try and avoid people kind of dropping off the radar, for example. One of the long-term conditions nurses was going and visiting some of the elderly patients in their homes. So that practice was doing a lot. But it is also the case that according to the receptionists, patients who had an acute problem and who also had multiple characteristics of disadvantage, and they were elderly, there was quite a lot wrong with them. Maybe they had some complex social circumstances. They didn't come to the doctor. They didn't, you know, they weren't going to book online. They just went straight to A&E and they didn't amount to very many patients because that particular practice didn't have very many patients like that. But, you know, they're supposed to cover everybody. And that practice when we finished data collection at the end of 2023, they were concerned to hear back from us that, you know, staff had expressed concerns. So I think it's not that they were all gung ho, but in the end, if you know, every system is designed to produce the outcomes that are, that are happening.

And so yes, I mean it's also the case. Now I'll see if I can remember this. There was one practice, I think it was the trailblazer practice which merged, just before we started data collection, it merged with a much more traditional practice, a kind of one of the sort of middle of the road practices. And after about a year, they then split again because of culture, because of value complexity. But interestingly, one of the partners from the traditional practice actually found that they preferred the trailblazer practice, and one of the trailblazer partners preferred the tradition. So when they split, they went in the opposite direction. And I thought that was quite interesting.

Question 5

Hi, thank you so much for that. I found that really, really interesting. I'd just be really interested to hear about whether there's been sort of any look into how this amazing research could be used to help the process of teaching and learning? People who are getting into the medical profession, who are often very techie, you know, sort of like, medicine students right now who have probably grown up with practices that are quite digitally prepped or have grown up using technology in other aspects of their life. How can we teach them to not get too much of a one-track mind around digital technology, thinking that it can be like a bit of a silver bullet in terms of making practices better. How can we show them that it can be really important to stay true to, you know, some of the things that you learnt from those strategically traditional practices in terms of having meaningful conversations.

Trish Greenhalgh

I think that's the next bit of work, isn't it? I think implementing the findings of this research is actually really complex. I mean, Evelyn kindly bigged me up at the beginning, saying, "Oh yeah Trish, you're good at this sort of impact stuff". What are we doing in relation to kind of getting policy to get their heads around the fact that practices shouldn't all be the same. They shouldn't be on this continuum of digital "maturity" because sometimes it's really inappropriate.

And I think one of the things that I want to do, actually talking to someone earlier on today about producing some infographics, producing something really clear to get across to policymakers. Look, if you've got a digital trailblazer practice, this is how you might support them. This is how they might contribute to the wider health care system and indeed the, you know, the whole of the economy. And actually, those top three can all be supporting one another. We can network them. We can, they can learn from one another.

But the bottom two, you've got to distinguish the one from the other, because it was only after about six months that the penny dropped with me, that they were actually very different. And the package of support that they need, you know, from policy that want to push the remote and digital agenda, the package of support is very different.

So I think there's a whole area of work that we're doing. We're doing a lot of work with the Nuffield Trust. Oh, we're doing all sorts. I mean, I'm still sitting on a lot of committees. Actually, that's the way you get impact, by the way, is you go and when policies say, "Can you sit on this committee and you're not going to get paid and you've got to travel second class and you know, all that kind of thing", you've still got to do it. You've got to go to briefing breakfast at some ungodly hour of the morning. So that's really important.

But I was just going to say we also have to get this across to the public. That's why I was talking. Look, you guys, a lot of you are the public. Hey. That's great. You guys need to know about this. That one size doesn't fit all. And in a way, you could probably have told me that! The press need to know about it. The image banks need to know about it. It's really hard to get images that depict what multiple disadvantage is like because they're all so squeaky clean. So there's a lot of different plates we need to spin to make sure that this research has maximum impact.

Question 6

Thank you so much for the fantastic talk. I wanted to ask about equity really. Even if I am the average Sandra, as you mentioned, having practices, 12 different practices in at different level of maturity, that is inequality in itself. And I'm wondering whether, I know you answer some questions about getting the policy change, and I know NHS England is also trying to reduce unwarranted variation. So how does your work and how does it all link together with volunteering organisation, with general public and everyone to actually try and make it better for everyone?

Trish Greenhalgh

Well. There's no easy answer and everyone will tell you that for a long time I've been interested in research impact and this idea that a piece of research is like a billiard ball and then hits another billiard ball, which might be a policy or a guideline, and then that hits another billiard ball which goes into the hole. That ain't the way research impact works. Research impact for this kind of thing, for what's basically interdisciplinary, heavily social science based research doesn't work like that. And Carol Weiss showed that back in 1978, how policymakers use research evidence. They do not read The Lancet or wherever else we might publish this. They never, ever, in the history of policymaking, did the policymaker go to work on a Monday morning and think, "I will read The Lancet". It doesn't happen. Okay.

It works through relationships. It works through the drip, drip of conversations, the opportunities for influence. The reason why I was involved in the total triage that was set up in general practice in England in March 2020 was because I was already on Minal Bakhai's phone list to be phoned up if she wanted to discuss something with an academic. And Minal at the time was the head of Primary care digital transformation at NHS England. I was already sitting on two of her committees, actually, not just one. And so when she contacted me and said, “Trish, we've got to get the whole of English general practice from a walk-up model to a total triage model where nobody walks up and we've got three weeks to do that. Can you just have a look at the draft policy document?” I'm there because I already had that relationship with her, not because she'd read something I'd written and published in The Lancet.

So I think we're getting much better as a sector, as a higher education sector. We're getting much better in allowing our senior academics and increasingly, our mid-career academics, our junior academics to spend time making friends with policymakers, to go and see what's going on, where the rubber meets the road in the NHS, etc. and build those relationships and have those conversations. And it's not a one way thing either, because what influences my research is the kind of things that Minal and her people in NHS England are saying. "This is what it looks like for us". And I can take that back and say, "Well, actually we can do

some research into that. We might be able to help you". So it's an ongoing dialogue. That was just a little mini lecture on research impact, by the way. Time for one more question.

Pat Kehoe

One last question. I hope if anybody else has got any questions you didn't get answered Trish will be here for the reception for a little while, so hopefully you can catch her in the questions just here.

Question 7

So the group that worries me, Trish, are those in the bottom but one, the digitally hesitant. Because for the patients that exist in that sphere, it's not a case of either/or. It's both/and. So I'm worried that those patients actually become more and more excluded the more the trailblazers and the early adopters carry on. So my question here is something that nobody's mentioned yet tonight. It's about user centred design. How do we manage to plug in user centred design to capture those people who are otherwise excluded in a way that supports the digitally hesitant because they don't have resources? Where do we start with that?

Trish Greenhalgh

It's a great question, and the idea that some people served by this strategically traditional practice would really like to be able to connect remotely. There are all sorts of things, like, for example, the Accurx technology, which is a great piece of technology, actually, the one that they sent George to attach the picture of his rash. But actually there's all sorts of really interesting things you can do with Accurx. The trouble is, if 85% of the patients are not going to be able to use it, what about the other 15%? And they might actually be just as poor, just as deprived, you know, etc. etc. So I get what you're saying, which is why, I mean, I haven't talked to you about why we studied things at the General Practice level.

A few years' ago, someone was looking at, I can't remember who it was. It was Martin Rowland's team, I think. Were looking at telephone first, and they actually looked at, I think, about 130 practices, but they did it much more superficially. They did mainly quantitative analysis. They kind of scraped off routinely collected data, and they came to the conclusion that some practices did really well with the telephone first system, where everybody phoned up and got phoned back.

Some practices did really badly and it made everyone stressed and it increased all the costs and some practices were in the middle. What they couldn't tell you is why some practices made it work and others didn't. So when I was applying for this money, I said, we need to actually go much more in depth with smaller, with a much smaller unit of analysis. And now we can, I can tell you exactly why any of those practices ended up doing what they did. So I can give you a lot of detail about 12 practices. You can say, well, you know, what about all the other practices in the country? But I think with this typology we'll be able to slot them in.

But you're absolutely right that each of those practices is serving some of its patients much better than it's serving others. Sometimes the patients move a bit. You know, there are practices near the digital trailblazer practice that would have a better package for someone who's elderly and not very techie. But sometimes it doesn't work like that. So I think you're right. I think we've got. I'm not sure user centred design is the entire answer, but I think it would definitely be in the portfolio.

Pat Kehoe

Okay, everyone, we need to draw to a close. And just before I give my thanks to the speaker and our guests, just to draw your attention to just outside the door. When you came in, there were two noticeboards where we're interested in the institute to hear any thoughts prompted by this evening's talks that we in the Institute would be interested to hear about. First of all, the drinks reception has a hard finish at 8 o'clock I've been told. So I know Dry January is only recently finished, but please be restrained if at all possible.

So first of all, can I, will you share me your thanks for Trish and a fantastic talk this evening. We would like to thank Trish with a small gift token of our appreciation. We've been told not to open it because it's quite an exercise getting it out, but hopefully it's grown in Bristol.

Trish Greenhalgh

Oh yeah, it's Gromit! Oh, you've no idea. That is just brilliant. Thank you. Can I just thank you all again for your hospitality. It's been, they've been great. They really have. Thanks.

Pat Kehoe

I would like to thank everybody for coming this evening as well. And our distinguished guests. I'd also like to thank the audiovisual team for doing a fantastic job on the floor mics. Yeah, really. And lastly, but definitely not least, or I would be flogged, to the EBI team who have actually helped put this together through fantastic efforts. Thank you. Thank you so much. That was really good to hear how amazing it was. So I'd like to invite you all outside for a refreshment before we close.