**Digital Transformation Leadership Panel**

**Future NHS Stage**

**Monday 11 September 2017**

**15.00 – 16.00**

**Speakers:**

- Professor Keith McNeil, Chief Clinical Information Officer, NHS England Social care
- David Brindle, Public Services Editor, The Guardian (Chair)
- Will Smart, Chief Information Officer, NHS England
- Juliet Bauer, Chief Digital Officer, NHS England
- Eve Roodhouse - Interim Executive Director, Implementation of Programmes, NHS Digital
- Dylan Roberts, Chief Digital Information Officer, Leeds City Council

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**Keith:**

Thanks, David. It's hard to believe, isn't it, that just 12 months since Bob Wachter was up here delivering his review and all that has been going on in the meantime. There are a couple of things that have been totemic to me about what is happening in the last year which is the length of time I've been in this role.

As Juliet pointed out this morning, we have gone from what was a very artificial domain-based structure for the National Information Board 2020 programme into something which is now firmly aligned with what we're trying to deliver on the ground, engaging people and clinicians and getting the system working effectively and creating the future and importantly integrating care.

We have changed and realigned all of the work going across those 33 programmes and delivering on those totemic areas. It doesn't exist in isolation. We're talking about system transformation which is what we need. We all talk about we need system transformation but digital products and computers in and of themselves don't deliver transformation, people do. So, what we need is that engagement of people on the ground.

As I walk around and talk to people who are delivering care in EDs, intensive care and surgeries, et cetera, there is a real thirst and hunger for this to make the change. The challenge for us in the portfolio office, our challenge is to make sure that what we do nationally helps those people do it. One of those things -- I was really privileged to be involved with the innovator programme in London -- is getting innovation unleashed across the system, freeing up people to really come up with innovative ways of dealing with the challenges that we have in healthcare and making sure that what we build, what we deliver at a national level really aligns with that and allows that to happen.

**David:**

Thank you, Keith. A real thirst and hunger. Let's discuss that in a moment. Let's hear from Will Smart.

**Will:**

So a year ago I came on this -- it might have been this stage -- as my first event as Chief Information Officer, after coming from the Royal Free, so moving from a local to a national stage has been an interesting 12 months. If you buy me enough to drink, I will happily share many of those insights! But Bob Wachter made some intelligent comments in his report about the criticality of people in driving this agenda forward rather than seeing it as technical innovations we just need to implement.

One of the best things that I've been involved in over the last 12 months has

been the Digital Academy and the work we're doing in creating a landmark institution to actually train the CIOs and the CCIOs of tomorrow that can make a real impact on the skills and professionalism of those people in organisations across the country that are working in this space to really drive the agenda forward.

The second area I have been personally involved with over the last 12 months has been around global digital exemplars.

In fact, 12 months ago the Secretary of State announced the first exemplars. That is not a programme that was widely and universally welcomed 12 months ago, I think. There was a sense that we were once again focusing on those organisations that already had the money and focusing on acute organisations. Since then, we've found 12 acute global digital exemplars. We have launched seven mental health digital exemplars, we are working with ambulances to see how they can drive exemplar technology into their area as well as some work we're doing around local-based exemplars as well, so trying to spread out the concept of let's prove in the NHS that technology drives improvement and innovation, let's measure it and let's build the template and drive that template out rather than kind of feeling that every organisation needs to start from scratch.

The third area I think there is going to be a lot of activity in the next year is interoperability. We need to do much more as a community to move data and to make data available where it's required to support patient care. It is important to say and to thank all of the individuals in this room that worked so hard to minimise the impact of that service and we have a huge amount of work as an NHS, as a social care, over the next months to make sure that we are as prepared as possible for the next attack of a virus and as capable as possible to respond when the attacks happens.

**Juliet:**

I should have a video. Perhaps it's going to play.

**[FILM]**

A digital NHS is on its way. A mobile NHS. At home. On the move. An instant NHS at your fingerprints 24/7. A local NHS. Your GP, your pharmacy connected to you. A smart NHS at the touch of a button fit for the 21st century. Get urgent advice from NHS 111, access your GP record, order repeat prescriptions are all now online. You can even book a same-day video consultation with your GP. We're changing. Your digital NHS is coming soon.

**Juliet**:
Thank you. So, I wanted to show a video largely because it's a much easier way of telling you lots of information. Also, because it gets across what we're trying to do and what we're trying to build. I have spoken before a year ago about what I thought the digital NHS should be and since then the teams at NHS England and NHS Digital, along with Public Health England and DH have been working really hard to put that together.

It is not just centrally. It is also locally and in the regions. There's a lot of different parts that have to come together to create the digital NHS. We're not trying to rebuild the whole thing ourselves.

One of the vital parts is redoing NHS Choices. We have been working incredibly hard to do that and we have redone a significant amount of content over the past few months. It will affect about 14 million of our 56 million visits in the coming weeks. It is fantastic news. We have also been working incredibly hard to work out how we can pull the records through into a consistent experience. We'll be talking about that a little bit more tomorrow.

Another part of it, of course, is trusted apps. We have been launching the apps library. I talked about that earlier. But that's vital because any app or any tool that we use and we want patients to use, we need to know that they can trust them, so all of the tools on the apps library have gone through 315 assessment questions to make sure they're safe, secure and they do the right things with your data, they are usable, they're interoperable with the systems, etc.

So multiple different streams of work coming together and behind that some other key programmes that our teams have been working on in terms of enabling the estate because things like Wi-Fi are incredibly important. It doesn't take a rocket scientist to know that if you're in a hotel you will get Wi-Fi and that might be the start of your digital journey.

The NHS has an amazing ability to start a digital journey with the patients on the ground and we're not using it. Luckily now, we have rolled out in primary care. We will have full patient Wi-Fi in the primary estate that point to the services in that area.

Lots of different things coming together. Lots to do, a lot of work on citizens ID and identity, which is critical.

No-one here will disagree, we have to get that right and it pulls it all together. I'm pleased to say we are moving fast as a team towards what I hope will be the digital NHS that we want and need and indeed a year ago I told the story of how a year before that the NHS had saved my life and saved my daughter's life and that's why I moved into the job. When I was there in hospital, if I had these services it would have been a lot better.

**Eve:**

One of the things I wanted to reflect on from the perspective of NHS digital is

very much aware that one size does not fit all. In the best intentions from the centre can sometimes fall short if direction and design is not the result of some continuous conversation between the national and the local so that's why over the last 12 months and the following 12 months coming we are really focussed on getting much closer to the frontline to make sure we can be more responsive to the needs of health and care and to help our partners make the most out of what we have to offer.

To give you a few examples of some of the ways we have been trying do that. We have developed new services like 111 online where we work with commissioners and the Yorkshire ambulance service in Leeds and that pilot went live in March and it's fully integrated with the local systems and since then it is digitally triaged over a thousand patients in three CCGs.

We have been working in partnership with NHS England around the introduction of Wi-Fi, as Juliet integrated. It has been very much working in partnership with CCGs, so over 20 CCGs to deploy that Wi-Fi. We have implemented a business change team. It is based across the country and it is to make sure that we build relationships regionally and locally and that we start to understand properly the challenges of different geographies and supporting your local plans whatever's going on in your geography.

One of the things we are focussed on in those teams is making it easier for patients to choose when they are referred for their first outpatient Apointments, so in time for frontline and missed appointments. Many of you may be aware we have a goal of going paper-free by October 2018, that is when we are aiming to have all outpatient referrals made electronically and to ensure that commissioners and providers have the support they need to do that we are working very closely with NHS England colleagues to help make sure that the support is there.

A pioneer project has already successfully removed paper referrals across the

CCGs of Mansfield and Ashfield and a focus on Sherwood NHS Trust. That happened in May and June and since then there has only been handful referrals on paper and we heard from them that was the first week of receiving no paper referrals at all.

So, our role is about helping other providers benefiting from their own paper switch off and we have teams out there to help you with it. If you think that is your goal go and see my colleagues on the NHS Digital stand and we can help you do that.

We are also selecting care settings to support safe patient care. So, one of the services we run at NHS digital Summary Care Record is our most used service but we want to do more with it. So, we have been working with Gloucestershire CSU to realise the benefits of downloading and sharing additional information on to the Summary Care Record.

That means there is richer data on the SCR which can support the most vulnerable patients if they arrive in A&E and out of hours. More than 16,000 records across Gloucestershire have been enhanced with additional information and we have been working closely with emergency departments and with the CSU to engage with custody suites and the homeless centre to really drive out value from the product that is already there and we are now almost at 100% GP practices issue summary care record for the patient, so let's make sure we make the most out of it.

It's not just our staff and the implementation of business change team, our leadership team has also seen staff out on secondment working on local projects and enriching our understanding of how NHS Digital could work more effectively and we have had positive feedback about the experience of the organisations hosting our staff.

So just to conclude, if you want to make the most of our digital technology we

need to work together, sharing our knowledge and our skills to deliver the best for patients. We need to make sure we are fostering the best ideas wherever they come from, whether they come from local communities or whether they come nationally and that means we need to listen to all of our staff, not just the IT professionals and we need a continuous, honest conversation about what is working and what is next.

So, as I said before, do come and speak to some of our staff with some of your interests and your challenge and find out what we are doing and I on our stand. We are here and we want to work alongside you not above or against you.

**David:**
Thank you, Eve, when we meet next we will be 12 months away from that deadline. No pressure! Let's hear from Dylan Roberts.

**Dylan**:
Hello. I am here with two different hats as chief digital Tal Information Officer for Leeds City Council and the three CCGs in Leeds, hopefully soon to be one but also as chair of the local CIO council and I chair a group that represents all localities across the regions of the UK, but in particular within England, provide the local link into working with these guys on how we deliver paperless 2020 in the local context. I think for me the local context is critical and clearly, I would say that, but we believe that in order to transform the health and care system we need to system we need to take a placed approach to effect better outcomes for patients as opposed to focussing on making all services run more efficiently, therefore it reads that that is not just for the NHS, it's for local authority and 20,000 independent sector organisations providing care in the UK now and other partners as well.

I guess part of my role on the NIB board is helping to make that happen. I think some of the work that NHS Digital has done under Eve has really helped

with that. So, a step change for me over the last 12 months would be organisations such as NHS Digital working with as opposed to with for or to local areas which I think is great.

One of the achievements for the last 12 months for me is that, for me is the join up of some of the professional networks which support health and care, clinical information officers, CIOs and the like. So there has been a lot of work across the different networks.

I chair the local CIO council supported by the local IT management which has 98% membership across local Government. There are colleagues from the BCS, Andy Kinnear, who has been joining the BCS network, the CIO network, the ADASS network, so there has been a lot of things to join this up, if we are going to make that we need to make some trade-offs and look at how we can join up in terms of supporting our colleagues out there in localities and making sure that they understand how to apply some of 2020 paperless in their places.

We have the view that paperless 2020 has already been delivered in its entirety, it's just unfortunately it's been delivered in different pockets across the country and potentially delivered in different pockets in different contexts. Within that local context I think what is important is there is great networks out there and we have the opportunity to capture that good practice, simplify it, standardise it with a view of sharing it with other places. I think this working with thing is really important.

So just by way of examples, great that we now have wi-fi everywhere. That is fantastic and a real base foundation I think that is needed across the health and care system. So, they are delivering from local group has pushed the Govroam solution, that is a method by which professionals from across the system, whether it's the NHS, the police, the housing authority, can go into any wi-fi site and based on a certificate based system connect securely,

GDPR compliant right back to their local data and local network. It also enables the ability to connect health and care professionals together. So that is one example where the care networks are trying to join up. That is rolled out in Kent and hum inter and parts of London.

There are also some great examples of Healthy Liverpool, we Share Because We Care video. Why can't we capture that, take that and apply it in other places. From a social care point of view some really innovative work in places like Blackpool, Bolton and Lancashire where they are working with localities and communities and community assets from the voluntary and independent sector. Can we capture that and apply it to other places? To conclude, to answer your question from earlier on, paperless 2020 is already delivered it's just how do we capture it and put it in different places and put it altogether.

**David**:
Thank you. So, a whirlwind tour there and some hard evidence of real progress. Let's start the discussion. Let's come back to Keith. Keith, you talked about a first in Humber -- hunger, but is there this thirst and hunger among people who use patient care services. There was a feeling this morning in the discussion that perhaps that is yet to be captured. Would you agree with that?

**Keith**:
My suggestion is that I wouldn't. There is an expectation that we will bring the NHS into the 21st century and give them what they have in their daily lives in every other part of their life. I don't sense it's going to be for everyone, people will choose how to want to interact with us and how they want to interact with banks and travel agencies etc, what we are doing is giving those people who really want a digital experience, who want to use that avenue, we are giving them a really good professional solid grounding and way they can interface with us.

There is absolutely a desire out there for people, for some people to interface with us in a digital sense and I wouldn't say otherwise, but Juliet will be better placed.

**Juliet**:
Just to add, clearly, we can't ignore that some of the people who most needed services might not be as digital tally literate as others. It would be foolish to ignore that, so we do have an extensive programme called Widening Digital Participation to provide training, research and understand and make sure that people who need it can use the services. I am not going to steal the Secretary of State's thunder by telling you some key successes of that or it might be career-limited, but tomorrow at his talk you will hear more about that.

**David:**
You talked about making it easier and delightful for people, the implication we are not making it easy or delightful at the moment?

**Juliet:**
I don't think so in all places in the NHS we are making it easy or delightful, I think that is fair to say. In the ones we control in the centre, so for example NHS Choices, NHS Choices is now ten years old, so if it's going to work properly and brilliantly for mobile where 75% of people now come to NHS Choices through mobile we need to be redoing that content to be responsive and accessible.

Actually every time we redo the content which is, we have made good progress and now we have 120 symptoms and 90 medicines now live we have a chance to revisit that content and say how accessible is it and what we have done is decreased reading age of that content based on the findings we have so from an average of 13 to 11 which makes a significant difference in who can access that don't, particularly for people for whom English is not their first language, so a real opportunity for us.

**David:**

So average reading age of 11, do you want to get it down more?

**Juliet:**

At the moment 11 is right from the research we have. It will significantly impact the people who can use that content and if you think about the fact we are opening out our APIs, we are launching those, that content is going around the world, but also an enormous amount of places now, lots of other sites, we have 800 partners who use that contact. So, every week, millions of people will be able to access health information who are not before.

**David:**

Do you think there is still work to do on the accessibility point, Will?

**Will:**

I think physical healthcare and the way we have provided services are rarely seen as delightful, from a technological perspective we need to live in the paradigm with use centred design to focus on the people trying to use the technology rather than the people trying to implement it and I think there is a great deal we can learn from the other work other industries are doing and also from the great work that NHS Digital and the domain name folk that Juliet is working with in terms of rethinking the process and how we support the use and accessibility.

**David:**

Work still to do.

**Eve:**

We are aware there is so many challenging things out there every day. There are loads of pressures and decisions that need to be made when you are delivering care so why would you kind of place emphasis on technology and

the answer is because we can help free up clinical time and free up resources by doing so. So, going back to the referrals point we know that actually if we got rid of the cost of snail mail we could fund around 2,000 nurses, so it's a no-brainer in terms of driving out the value of the product already there. For referrals, we have probably not tackled the final step in the process changes that need to be made to make clear the benefit and we need to work together to make sure we do that and rise to that challenge to really get the games we can

**David:**
Dylan, presumably this is terribly important if we are building these place-based solution systems you talked about?

**Dylan:**
Yes, absolutely. I would say from a localities perspective we think the work on NHS Choices or NHS UK, whatever it is, a pretty good, the website is very good in terms of informing patients or citizens generally around their health and care needs etc. Where we with would push harder from a local point of view is if you are taking a place-based approach there are a lot of providers who are providing services so for us we are keen on in the future phases we are keen on some standards being set so when they produce content it is accessible through NHS Choices or whatever sort of portal.

As an example, there are 93 independent mental health providers within Leeds alone, so how is the information on their services from their website to their content viewed in, through Choices. That, for me, I think we are definitely in the right direction and it's just that localiser point.

**David:**
We're open to questions from you. I think we have a mic roving somewhere. I will carry on until such time as you indicate. Will, you talked about the next attack, the next cyber-attack, that's inevitable, is it?

**Will:**

Yes. I think we currently are seeing a high level of cyber-attacks internationally. A number of those are impacting on NHS organisations and every day we are doing everything locally and nationally we can do to make sure we're as resilient as possible. Through the work that we're doing with NHS Digital and with CQC -- we talked about this at the National Information Board today -- but we are looking at what systems we can join up to make sure we are collaborating and co-ordinating effectively to make sure we're doing the right things.

From a local and organisational perspective, it is about the usual hygiene factors, like is your firewall resilience, are they protecting you, have you done your penetration testing, are you patching your systems, et cetera. So, we need to make sure there is good hygiene in local organisations coupling with working with Government and with central Government in stranding what the threat vectors are to make sure we respond effectively. We have to do this in a way to minimise the scale of the damage that could be done. But we have more that we need to do to make sure we are even better at responding in the future. I think it is a case of when not if that we will have another successful cyber-attack that we will need to respond to.

**David:**

Presumably, you've done a full audit of the response in May. How much marks out of ten would you give to the way the system responded?

**Will:**

Ooh...

**Keith:**

11 Keith said. I agree with Keith.

**Will:**

**I** think in different elements it was mixed in the way the emergency response came out. I think it was 11 in terms of the way that the system itself was called, the communications problem was much less than that, I think again that is the issues that we need to work through and by communications, I mean how did -- the first thing the NHS did was switch off email when they got attacked but email is how we communicate with each other and we need to think about those sorts of issues and make sure we are able to communicate effectively.

**Eve:**

For those who are not aware in the room, NHS Digital does offer the capability where you can sign up to on our website which provides the latest information on cyber. We have cyber security expert service that you can tap into, so please if you're looking into that area in your organisation, look at what is there that you can tap into from NHS Digital to help you address that need.

**Keith:**

Has the wider system been involved in the learning from May?

**Dylan:**

Just to reiterate the professional networks that are in place, there was a join up there in terms of providing information. There are websites out there that people can use and working with NHS digital to refer to when these sorts of things happen.

I guess the interesting thing for me really or the challenge to the guys and one of my challenges at NIB is that I'm just very conscious that on the one hand we've got global digital exemplars up here and on the other hand we have NHS organisations who are right down here with some really crap technologies and software, et cetera, et cetera, so I think in light of the -- I'm doing your job for you actually -- but in light of the ransom ware and software

not patched to the right levels, are we going to be doing anything about, you know, rejigging the funding to help some of those organisations who are behind to raise the bar to a good enough level?

**Will:**

Something is going wrong here. I would say two things. One, we need to be much clearer about what the standards we expect of local organisations to be because at the minute I don't think we have a benchmark.

I think it is very difficult for local boards to say we can be confident in our organisation is secure or not and we have to do that work. We are going to be asking organisations to assess themselves using the care assure approach to make sure we understand organisation by organisation and where they stand. I think 12 months ago I would be horrified to hear myself say this, but I think the centre need to be more directive in more areas and if you are going to be scoring clinical data in your organisation we should be very clear about the standards of infrastructure that should be run on. I think we need to give clarity, that's the first point.

We put £21 million aside for major trauma centres. Everyone recognises it's a drop in the ocean of the investment that is required. We are having conversations in how we access further funding but I think again in the way that we've done with global digital exemplars, we would expect local organisations to invest as well as the centre because, you know, this has got to be joint investment and joint work towards resolving this.

**David:**

Keith, picking up Dylan's point, is there a risk of following the Bob Wachter agenda of having exemplars and fast followers and the rest when it comes to this sort of threat?

**Keith:**

It's a good observation. It is all about opportunities. We have had a habit in health systems in the NHS of rewarding failure, of propping up failure and it's about time we stopped doing that. It's about time we rewarded people for effort and success and showcased how good the NHS can be in what it sets its mind to. I think it's high time that in this sense we have an opportunity, a unique opportunity on an international landscape with what we can do with our data and we won't do that by miring ourselves in mediocrity.

The NHS can link a longitudinal health record for every single person here. We talk about the adaptive change required that Bob Wachter came out with which is focused on people and engaging them. But there's another element to the technology here and it is to do with the complexity of healthcare. The complexity of healthcare is going up and each year and it is being driven by data. We need data to be informing the decisions we make in an evidence-based way every day across the NHS. A million patient directions every 36 hours and they generate questions and all of those questions, to answer them, need really good data.

We need to embrace technology at a really high level to be able to handle that. We generated more data in the last two years than in the entire time we have been on earth. We cannot handle the complexity of healthcare without embracing the digital agenda and getting this right. The digital exemplars are saying this is where we need to be able do this on behalf of the health system and mostly on behalf of the patients we serve.

**David:**
I'm in the market for questions.

**Question:** Hi. I work for one of the HSNs and an integrated care organisation. The previous session on this stage was about accountable care organisations and devolution. I'm interested in what the panel think they're doing to support that part of the NHS as part of its transformation agenda with

the programmes they're delivering.

**David:**

Let's take two or three questions together and come back to the panel.

**Question**: As a place which is mostly digital less mature but we have very, very high level of senior sponsorship for seventy of our leaders wanting to make a step change with digital, what are the things you propose us to do? We would welcome the opportunity to be a GD but we have had little investment historically, with a team of very committed and dynamic leaders wanted to make a step change how do we coming from the back handle that? We'd really welcome some suggestions. I absolutely agree with Keith that we need to look at effort and success and, to me, the biggest any evidence with organisational change is bringing strong leadership and sponsorship of the change throughout the place. I'd welcome any thoughts on that.

**David:**

Thank you very much. I saw a third hand in the middle here. Then we will come back to the panel.

**Question:** Michael Chapman from Cancer Research UK. I'd be really interested to understand, picking up on Dylan's point, we so often try and optimise the system we've got, what is digital going to do to help prevention and get ahead of the problems before they occur?

**David:**

Three questions. Really good questions about how this all knits with accountable care systems, about the offer for the digitally less mature -- beautifully couched -- and the prevention agenda. Pick one of those. Let's start with Dylan.

**Dylan:**

Okay. So, I think in terms of population health management and new models of care, I think in the first instance from an information and technology point of view, I think it's really important -- I would say this -- you take a place based approach to data and analytics and your data. One of the things we're trying to achieve in Leeds -- and it's happening in lots of other places -- Manchester has the data well project -- we are looking to set up an office of data analytics for the city which includes the analytics folk from the council, from the CCGs, hopefully, fingers crossed, from the hospital. We're looking at combined data working with DIAG to make sure it is all safe, and looking at bringing combined data together around our populations to really look at the variations across our Leeds system, but in particular look to prioritise our resources. So, from my perspective if we're going to deliver the new models of accountable care systems, that type of approach, it has to be done at a place based level and I think combine the data to inform that is key.

**Eve:**

I would probably pick up on the side of the prevention and getting ahead of the game. We're trying to look at this across the board and Juliet will probably touch on some of the things they are doing. The types of area we're looking at, obviously we can look way ahead into the future and we can look at stages along the way and making good progress. For example, an electronic prescribing, we're looking at what we can do to make sure we put the hands more in the patient of them understanding where their prescription is in the process, making sure that they can actually know when to get their prescription and get it at any pharmacy rather than nominating a pharmacy in the future, and there's much more control put in place.

In that context, try to work in partnership with innovators in that space so we don't have a closed shop and door around that and allow other parties, whether it's the third sector or suppliers, to help come into the market place, because we don't have the exclusivity on what are good ideas. So, would be my comment on the prevention and get ahead.

To the lady that asked about what would you do if you're digitally immature. You didn't intimate whether you have lots of funding or not. If you haven't got much funding then I would potentially look at what you can do with things that are there already in the system and whether there's things you can achieve by maximising what's already there more, by enhancing your business change around those products and services, and that way you should be able to demonstrate the benefit to the wider system in your community, and then potentially make the case for more investment.

That's perhaps my advice in that context. Just to add to the prevention. Can we go to the Matthew now?

**Keith:**
There is another mention, so we should be, we should be able to identify everyone who is eligible and will benefit from secondary prevention on the basis of evidence, we should be able to flag them and make sure they are getting the prevention that they need. So, people who have had a heart attack for instance we need to make sure they are on a beat why blocker an ace inhibitor and a statin unless there is a contraindication.

Primary care is another where we have, so everyone who has a CT scan could have their bone density measured and we could put them on something to prevent osteoporosis and. We need joined up care. The issue around what do we do with the less digitally mature or advanced? In, it's a personal opinion and I have a bias as you know and you will hear about it in a minute, the bottom line that Trusts are less digitally advanced than others is because people haven't invested in their IT and largely because they haven't understood the imperative to do so, so the investment has not been there, it's been easy to not invest in it, they have allowed it to slip. I would say one thing we need do is to provide resources to get that transformational leadership capability in there, that understanding of the importance of the digital side of

things and the leadership has to stand up and take the hard decisions like in Cambridge when we put in the Epic system. Leaders have to stand up and do what is right on behalf of their Trusts. One of the things they are going to have to do is allocate resources, as hard as it is, into maturing their digital systems. We will do our bit for trying to give them the imperative around that and embed some of those transformational leadership skills that go with it.

**Juliet:**

Thank you, Keith. Clearly, I do the self-care and prevention domain, so it is something I spend time thinking about, if you look at the apps library we have done a lot of the tools are more in the prevention space and are more for people who aren't unwell or aren't unwell at all, we are working closely with Public Health England to get a number of apps through in all of the different areas to make sure that we are preventing, as well as treating.

Another key part to the strategy for me is about a cradle to grave or managing people through health as well as illness and one thing we can do and we are launching the digital red book as you know. That is now available in London and we will be rolling it out.

But the point is tomorrow's patient, tomorrow's public is going to look very different to today's. It has to. They are going to expect different things. They already do expect different things and we have to have a different ongoing relationship with them. That means spending as much time with them when they are healthy as when they are sick. So, the healthy London partnership is another example of what is going on there.

I do put the earth of what we are doing in our teams towards that because I think there is a huge win there. For example, we will be rolling out a couple of sleep tools within that to a population that you could say is healthy but having sleep issues but could well go on to have mental health issues and there is a lot of evidence that if you can intervene at that point and make a difference,

perhaps some form of light touch CBT you can have a significant impact on people going on to have mental health issues.

I think we absolutely do focus on and do think about that problem, but I will say this, currently the system is not well set up to track people across the lifetime through their health and sickness and we have to improve that, if that doesn't improve we can't do what we want to do and the other point I will say is this.

It's all very well to say you have the information, but you need to think who is going to do something with that information, who is going to communicate differently with people, who is going to intervene, take that information, recognise a pattern, recognise a problem to solve, recognise the big win of doing that and make that happen and sometimes within this industry versus other industries and I have worked in a few others, versus other ones we do spend too much time thinking about the problem after the event and not enough time identifying the patterns before they happen and one of the reasons for that is we are short on certain types of skills, product skills, analytical tools, the measurement tools that are what you need to do the clever stuff we have not prioritised in the past and we are going to need to if we are going to make a difference in prevention I think.

**Will:**

I want to touch on two areas. In terms of what you do in terms of a less mature environment, first of all I would say and I have the honour to go around lots of different organisations, look for the really great things that you are already doing in your community because you don't have to be a GDE to do great things and certainly we don't want to be getting into that debate.

Secondly, I would say don't reinvent the wheel - -like for GDEs or fast followers or other organisations you can learn from, don't think everything

needs to be built from the ground up in your community, so learn from others and take the advantages that that gives you for accelerating the transformation and thirdly I would talk to us and give Keith a hard time before he leaves in December.

On the first point around integrating data, I would just like to echo what Dylan says, I think we have a real challenge that the NHS has a lot of great organisational locks and local individual care providers we are poor at sharing that within localities and we are poor at sharing that regionally and nationally and we have some great examples, Leeds, Bristol, Hampshire Care Record, North East Care Record, what we are trying to do in the centre, we had a discussion at Digital Delivery Board last Friday is to begin to define what does the architecture that is required to enable us to safely and securely share data within regions of 2-5 million and share that data nationally to support direct care, to support case finding, population health, all the way through to research, but to do it in a way that has the trust of citizens and enables us to build a set of standard-based platforms that means you don't need to worry about how data moves, the data is available, plug your population tools analysis on top of it and in that way we can begin to make data available so that Juliet and the apps can have data available, can be used in those apps as well. We need some fundamental plumbing in the NHS that enables us do what he with need to do. It needs to be driven locally because locally is where the experience sits in these areas and we want to work with local exemplars to try and build this infrastructure arm.

**David:** Dylan, you wanted to come back briefly.

**Dylan:**
Very quickly. What has happened is the whole digital literacy agenda. Bearing in mind local authorities have massive infrastructure, libraries for example, so in Hampshire for instance, there are GPs who are pushing patients, social prescribing I guess, to the local library where they can do

tablet lending and very important the work which might be in Domain Aim, might not be.

**Juliet:** Everything is in domain aim.

**Dylan:**

Which is around digital practitioners. A key thing we have learnt in Leeds is if you get practitioners engaging with them they can help signpost the value they can get, just from the internet, never mind the great things Juliet is delivering, but they are important things that can be captured and learnt.

**David:**

Keith, last word you are leaving us at the end of the year to return to Australia, will you look back with pride at what you have achieved or frustration?

**Keith**:

A bit of both. Not being able to do more and do it faster but also a lot of pride. We have a lot of world-class thing you talk about the GDEs.
You look at what we are doing in cancer, the National Cancer Registry that is a jewel, it's the most phenomenal piece of architecture and information. It's phenomenal, it's world best practice, we should be proud of that, but it's frustrating we are a big system and we want to do things at pace and at scale and that can be challenging.

**David**: On that uplifting note please thank our panel warmly.