Digital technology within healthcare

Roundtable report

UNBOXED

Introduction

Digital technology is drastically altering the way we do things, changing the way we interact and making everyday products and services much more easily accessible to us.

From bionic eyes to lab-grown bones, healthcare innovation is advancing exponentially. Digital technology is too – but not in healthcare. Facebook, Twitter, Skype and Tinder have changed our lives so…

… Why is it still so difficult to book an appointment with my doctor?

… Why don't I have an online record of my healthcare treatment?

… Why are so many UK citizens who try to manage their own health and wellbeing feeling isolated from the NHS?

With these questions (and so many more) in mind, a panel of healthcare leaders formed to discuss key topics around how digital technology can benefit healthcare in the modern world.

Three lightning talks and a four panel discussions formed this session, with topics including:

- Creating scale
- Creating space for innovation
- Sharing platforms
- Immediate, measurable value

Panel

Dr. Anatole Menon-Johansson
Clinical Lead for Sexual Health,
Guy's & St Thomas' NHS Foundation Trust

Carrie Bedingfield
Founder, 50th Generation

Charlotte Housden
Product Manager & Senior Scientist,
Cambridge Cognition

Gillian Holdsworth
Director, SH:24

Ian Drysdale
CTO, GoodGym

Janak Gunatilleke
Head of Managed Services, Dictate IT

Kumar Jacob
CEO, Mindwave Ventures

Martyn Evans
Head of Product, Unboxed

Neil Basil
Managing Director, Patient Choice

Nigel Miller
Project Manager, Central London
Community Healthcare NHS Trust

Richard Pinder
Consultant & Digital Lead,
Evida Medical

Sam Meikle
Founder & CEO,
Spark The Difference

Sandeep Senghera
CEO & Founder, Toothpick

Tom Whicher
Founder, DrDoctor

Lightning Talk 1

Kumar Jacob

CEO - Mindwave Ventures

Kumar is currently leading an initiative to bring to life innovative use of digital technology in mental health care. Previously he has been a non-exec director of an NHS trust, the Vice Chair at Christian Aid and held leadership roles in a number of technology companies.

“If we are going to change digital health, we need to change the way we create ideas.”

Ideas are plentiful, particularly in the frontline of every level of every organisation (it’s only the middle management who have no ideas). The challenge is picking them up and transforming them.

“How do you set people up to turn ideas into solutions?”

The way in which ideas are nurtured in public health isn’t going to work. If you start with a timeline and an agenda to get to a to do list, you won’t get far. Do people need to be courageous? No, they just need to be encouraged.

“You need money but not a lot of money.”

To make it work, you need to create the space where people can create ideas and try them. Then it’s about scale and impact. Somehow that needs to be created. You can’t have hundreds of small variations of the same thing. Our job is to challenge organisations to take that view – to look for underlying architecture that is the same.

Lightning Talk 2

Tom Whicher

Founder, DrDoctor

Tom is co-founder of DrDoctor. With a background in operational improvement, Tom has worked in several hospitals delivering multi-million pound savings, before setting up DrDoctor. Driven by a frustration with existing clinic processes, DrDoctor aims to ‘Make every NHS appointment count.’

“Our innovation is getting the right patient in the right place at the right time with the right information”

In 2012, my co-founding partners and I were convinced there was a problem managing referral once you’ve been referred to the hospital. Two reasons. 1. It’s a black hole. 2. There is a lot of value to getting it right.

We knew we needed to find something immediately valuable to patients and doctors. It has to have a crisp financial saving if it was to be adopted at scale. But we also wanted to add long term value over and above solving that specific need.

Key metrics for DrDoctor:

- Increasing attendance rates
- Increasing clinic utilisation

“The core issue is that most innovations don’t achieve scale”

We need to ask this question, above all others. “How am I going to bring the patient to the solution?” We tend to assume people will come to good technology.

For us, that meant a change of media and technology. We thought we were going to build a smartphone app. Actually we built a text (SMS) engine first. For 85% patients, it made most sense to use text.

Text gives a really clear way to bring patients to the service. We opt all patients into the text service. 25% click on the link they are sent. We know who they are and we offer them more value when they get there. Then they use the site directly because it adds value to the care pathway.

“The biggest challenges are the biggest opportunities”

Every time we do a project, we start from scratch. The integration work is bespoke every time we set up a foundation. There is a huge opportunity around a common infrastructure. It can’t just come from CCGs (Clinical Commissioning Groups). It has to come from partners. We are massive believers in partnership. None of us can solve all the problems on our own. We can join things up and provide much more value for much less cost.

Traditionally startups are good at partnering. Now, the big companies are joining – otherwise they’re going to get excluded. They bring scale, we bring bling/sex appeal. The opportunity is to joint tender.

“Think bigger – change services, don’t make apps”

We can’t just think in terms of tech but in terms of how services are commissioned. We need think in terms of changing services, not just little add on apps. If you can do that, you can create an incentive to scale.

Lightning Talk 3

Ian Drysdale

CTO, GoodGym

Ian is the CTO and co-founding partner of GoodGym – a not-for-profit that helps people get fit by doing good; a group of runners that combines regular exercise with helping our communities. His Twitter profile says he's "Into ageing, design and software development. Occasionally caught running".

"Lack of social relationships can be just as detrimental to our health as lack of exercise"

There are two conspiring factors at work in the first world. First, exercise is being designed out of our lives – we use escalators, take buses, use automatic doors – then pay £50 each month to go the gym. Energy is wasted. People are lifting iron that doesn't need lifting. At the same time obesity is on the rise.

Second, old or vulnerable people are increasingly disconnected from the community around them. GoodGym brings the two together. We connect people who want to take exercise (runners) to vulnerable old people (we call them 'coaches'). Our runners run to coaches' houses each week as part of their workout.

The majority of our coaches don't see family or friends regularly, so this weekly visit is incredibly important to them.

"A sense of connection is what makes it work - the tech ticks away in the background"

We're tapping into the zeitgeist. People want to be more connected in their community and identify with the place they live.

We also host group runs, incorporating a 30-minute physical task that helps the community. We're always trying to answer the question: "Where can we put that energy to better use in the community?"

Game theory works well too, for example this January we challenged ourselves to collectively run the furthest we ever have and to do the most good deeds in a single month. We smashed it. When an individual runner completes 50 good deeds, we reward them with a black T-shirt.

Hero stories connect people to their activities. Every time someone does something great, we create a webpage with a photo and a quick story and we tweet them celebrating their achievement.

"Scale is the biggest challenge. How do we reach every city in the UK?"

We have an ambitious plan to be running in every city in the UK in the next three years. The process is to source founder members in each city, raise support from potential runners by getting them to sign up, then to approach local government for a grant to hire a personal trainer to lead GoodGym in that city.

It's important not to position GoodGym as a volunteering scheme. Instead, it's a positive aspirational philosophy to be connected with. Think Runner's World, not Third Sector magazine.

Discussion 1

Creating scale

Mismatch: we encourage people to solve a small problem first – but to achieve scale quickly

The innovative sexual health online testing service, SH:24, planned for scale from the start. The solution was complete. The way to scale it is simply to extend the postcode. Tom Whicher (DrDoctor) encourages startups to start with an end goal – or a Big Hairy Audacious Goal. Whatever problem is solved, fits within this, creating a roadmap for scale.

Broken NHS scaling model

The logical thinking is that if you get it right in one area of the NHS, then we can just roll it out, yes? No.

If you do a successful pilot in Sussex, the CCG next door won't just roll it out, they want to see it working in their area. There are 'more pilots in the NHS than in the RAF'.

We are constantly battling against the absolute fear of risk. "I need to prove it here so I won't get fired." There are too many people who can say no. They can say no so they will. It becomes like doing business with hundreds of mid-tier companies.

Two ways to address scaling in the NHS

1. The top motivation is financial. Prove it financially first.

2. A really big vision cracks open boards and individuals, once the financials are clear.

And what won't work: one technology provider outside this roundtable recently said "We're all doing it wrong – we need to go to the secretary of state for health!" But there's no evidence that this is a viable option. We have to create solutions from the ground up.

From the roundtable: "You have to understand policy to influence but we're ignoring it more and more. The most useful people are on the CCG board or just below. They have budget and if you do a good job, they'll roll out.

In other parts of government, Alphawork and gov.uk are totally reforming government digital service. They have the best developers in the country working under the radar. They work at the middle layer, with each individual partner. The same thing is not happening in health. Could it?

In other industries, for example chip and pin in retail, big and small players are encouraged to innovate together and share cost/risk. Then all players are compelled to adopt the tested solution or outcome.

So how about proposing this for UK healthcare?

Agree a particular region will take the risk. Everyone else signs up to say they'll accept the answer and they can't spend any more public money testing the same solution. The pilot 'unit' of testing is agreed to be representative.

> "We should be able to get past that mindset of everything has to be done in every single locality to be sure it's correct."

Discussion 2

Creating space for innovation

“It’s not the ideas we need, it’s the space”

In a large renowned institute, one of our panelists argued that it was not the ideas that were needed, it was the space. Getting the physical space right freed up idea realisation. “We now have about 10 proofs of concepts coming through.” Physical space can be used to create visibility of progress. Without it, people look from outside and don’t know what’s going on.

Where is innovation?

“Innovation is what someone else is doing over there”

An ‘Innovation Committee meeting’ is a contradiction in terms. Neil Basil suggested that innovation is much less about the physical space and more about the resistance to rocking the boat. “Even people who see a chronic problem are not blowing the whistle on patient care. People aren’t coming forward with ideas and it’s not for lack of funding or resources.”

In one innovation centre for government, the resistance “was incredible. The centre received death threats from patients when they proposed getting rid of fax machines.”

And what does innovation really mean in the NHS?

Tom Whicher commented “I get a bit depressed when people say we need to Do Some Innovation. We just need to improve services.”

Rick Harris felt the relationship between innovation and outcome in the NHS is confused. “Unless you can define very precisely the outcome of your research, you won’t get ethics committee approval. As a researcher, I’m looking for qualitative open listening from the expert in the patient.”

The panel debated incremental or transformational change. The latter is good but also intimidating. People feel “The idea I have isn’t quite big enough”. But incremental change can be very powerful.

Getting traction is about a mindset shift

Mindset shift is needed as most new ideas trigger the thought pattern, “Oh that’s just going to mean more work for us.”

Gillian Holdsworth from the SH:24 project talked about the need to ‘doorstep people’ to get their attention. “People just carry on doing their own thing because it’s too frustrating to got through the mess and process. It’s our job to change their mind.”

> “Physical space and visualisation of the ideas are really important.”

Discussion 3

Sharing platforms

“Though sharing platforms offers major opportunities of scale, quality and reach, the barriers are diverse and real”

The focus of purchasing is misaligned with creating a cross application platform that many providers and innovation projects can key into. If you’re looking through everything through the lens of procurement, you look for ‘what to procure’. Instead, the NHS need to start way before ‘something is procured’. You may not even know what ‘it’ is yet.

“From closed mindset to open source”

The NHS has traditionally been protective of its ideas and technology. The reverse is now needed. The NHS has to find a way to open what they’re doing and cultivate an open source mentality. Can digital technology providers show the way here? What would make it worth their while?

“Need the freedom to test and explore and make mistakes”

If the NHS and its partners do everything from a commercial angle, most programmes are shut down too early - long before they deliver value. The success of SH:24 so far has been in no small part due to its funding - a fixed seven-figure budget over four years which is managed by the team who know the market and product the best. This is invaluable.

By contrast, GoodGym is grant funded (fairly well) and has been funded for five years. In addition, 70% of runners donate and New Balance also fund the programme. Grants create space. Turns from weekend job to a day job. But they do not create a long term sustainable business. CTO, Ian Drysdale says: “We’re very careful with money – we know how long we’ve got left at any one point in time.”

The investor paradox

Many major investors shy away from the NHS. Its policies and decentralised decision making (every CCG requires a pilot) detracts heavily from its enormous user base and obvious need for cost saving innovation. And of course, crossing the chasm is very difficult without being attractive to investors. THIS is the elephant in the room.

“The NHS has to find a way to open what they’re doing and cultivate an opensource mentality.”

Discussion 4

Immediate, measurable value

We're measuring the wrong thing

Rick Harris pointed out that "There is a great deal of data about how patients define success but we build systems that make your tumour shrink, not what patients think is 'value for healthcare'." The NHS wants to do user-centric design – but actually they are building for the stakeholders. It's a constant juggling act between perceptions of value.

How can we understand users' perceived value when they're not paying at the point of service?

The only value proposition you can create that makes sense to NHS buyers is a short to medium term cost saving. In a system with no fee contribution from end users, it's very difficult to tangibly understand value from customer when they're not injecting capital at the point of service.

We could do more to leverage the psychological contract between patients and 'the service'

The one lever you have over patients is access. "I want to get seen quickly". You can strike a bargain – if you want to be seen quickly, you have to make it easy for the service to deal with you. Rick Harris explained that "the opportunity is to get patients to behave like patient communities, not like patient individuals."

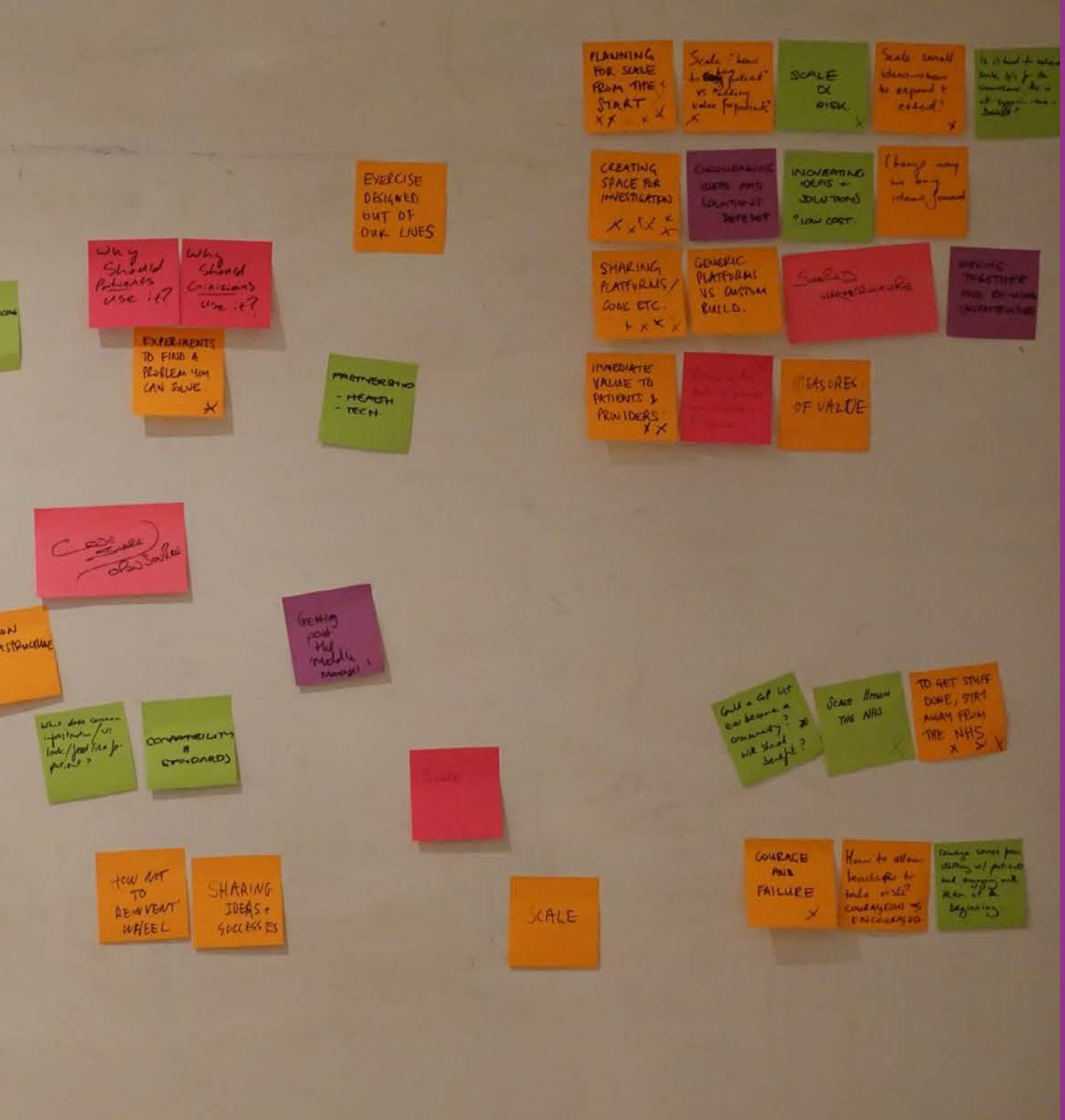
Currently that contract is broken - there is a fundamental lack of respect for each other's time

The reason people miss appointments – there is a myriad! Most common and most surprising is the broken social contract between the doctor and the patient. Imagine a 3.00 pm appointment is set. The doctor is running 45 minutes late. The patient had to leave at 3.30 pm. The patient is chalked up as a Did Not Attend and sent a warning – two more 'strikes' and you're out. Neither party has respected the other's time. For this reason there is a huge resistance to the idea of a £5 charge for non-attendance.

The role of technology – brilliant at syncing up supply and demand. Why aren't we using it? The 'patient communities' idea already thrives in organ transplant, blood donation and other corners of the NHS. We need to sync up supply and demand – a job that technology is perfectly designed for.

We live in a 'Just In Time' society. In parcel delivery, the user selects a window of time using a digital service that provides visibility of all the available options and the parcel delivery company meets it. The outcome is massive efficiency with the same resources. You don't need more drivers, just need more successful meetups. Digital is brilliant at meetups.

> "There is a great deal of data about how patients define success but we build systems that make your tumour shrink, not what patients think is 'value for healthcare'."



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