HELEN BEVAN:
Hello, I'm one of the two co-hosts for the NHS Transformathon, 24 hours of virtual sharing. I'm very pleased to welcome colleagues from the British Columbia Patient Safety & Quality Council, who are going to talk about gamification.

Now, I get to work with leaders of health and care improvement around the world. And there is lots of people that I love to work with.

And the colleagues in the British Columbia Patient Safety & Quality Council are some of the people I like to work with the best because they are always doing new and interesting things and pushing the edge, pushing the boat all the time.

And the work that they are doing around gamification, you know, I think is absolutely a case in point. And I think we are going to have a really great hour now. And where the British Columbia Patient Safety & Quality Council is today, the rest of the world is in one year's time.

What I'm going to do now is I'm going to hand over to Shari McKeown and colleagues in British Columbia. Can you hear me?

SHARI McKEOWN:
Yes. Hi.

HELEN BEVAN:
Hi. We are broadcasting live and the screen is yours.

SHARI McKEOWN:
I'm Shari McKeown, Director of Clinical Improvement at BC Patient Safety & Quality Council. We are talking about gamification today, which is a topic that maybe you haven't heard the term before, but we will describe it for you.

I'm here with a panel of exciting people. With me today is Lauren and Jacob. Do you want to say hello?

LAUREN:
Hello.

SHARI McKEOWN:
And we've also got Echo, Michael and Patrick.

SPEAKERS:
Glad to be here.

SHARI McKEOWN:
We are going to take turns to do quick 10-minute presentation talking about examples where we have used gamification and then we will have some discussion at the end and some questions.

I'm just going to get my slides going.

Alright.

HELEN BEVAN:
Hi, Shari. We can see your slides.

SHARI McKEOWN:
OK. Can you see that OK?

HELEN BEVAN:
We can see that absolutely perfectly.

SHARI McKEOWN:
Great. Gamification, we will start with the definition. It is the use of game design and elements in non-gaming contexts, like healthcare improvement.

Why do we use gamification? We know games are good way to capture people's attention and it can lead people to complete complex tasks and solve difficult problems. Most importantly it can motivate people to change their behaviour.

Just to give you a sense of how popular the term has become, this is a Google trend map for the search term that reflects the rapid rise in popularity mostly after 2010.

It is used in many different contexts now in marketing, retail sales, employee engagement, education, occupational health and safety, to promote personal health and fitness and some are using it for employee training. These are just a few of the companies using gamification.

Why does it work? It gives us the opportunity to include extrinsic motivators, things like points, rewards, positive feedback. It also gives the opportunity to include intrinsic motivators that can actually lead to sustained behaviour change. In the health improvement context, this is the real important part we can think about in terms of effecting behaviour change in clinicians, or motivating patients, or the people we provide care to.

In terms of intrinsic motivators, the important things that lead to sustained behaviour change. One of those things is relatedness, the desire to be connected to other people. In gamification, it's covered by things such as social status, guilds or team
play, social networks and competition, and building in social pressure, feeling that others value your input and experience.

Autonomy is another intrinsic motivator that can be incorporated to help improvement initiatives through gamification. Autonomy, most people don't like to feel like they are being controlled or stifled. Giving users a level of autonomy gives them the feeling of having control over what they are doing.

You can add gamification components to your initiative, things like exploration, branching choices, hidden surprises, creative tools or customisation.

Mastery is another strong intrinsic motivator. It is important to us that we feel our skill is increasing in proportion to the level of challenge. Gamification can make it easy to include challenges and learning, quests, progression, and things like (inaudible).

Purpose is another strong intrinsic motivator. Where there is a need for meaning in our actions. You can integrate things that people can do to help other people, like gifting or sharing knowledge, or making it explicit how the initiative contributes to a greater need.

When you incorporate gamification into health improvement, we like to think about using a structured framework like this gamification pyramid. At the top you have the dynamics, the big picture aspects like constraints, emotion, narrative, story and thinking about relationships as part of the gamified activity.

Below that you have mechanics, the processes that drive the action forward. And components, the tangible pieces of the mechanics and dynamics you would experience as you move through the initiative.

I will walk you through an example of how we used gamification in a sepsis improvement initiative in British Columbia recently. We looked at incorporating some dynamics. The overall purpose of the initiative was to increase the use of sepsis protocols in BC emergency departments.

The dynamics of the campaign included a narrative or story based around something meaningful to clinicians – saving lives. The evidence was telling us the number we needed to treat for severe sepsis or septic shock protocols was five. For every five protocols you used you could save one life; so we built the story or narrative around that.

We also incorporated progression. We announced the campaign on World Sepsis Day on September 13, so it was connected to a greater purpose; and we set a timeline of 150 days between October and March. Given our reasonable estimate of the number of patients who were admitted to BC emergency departments at that time with sepsis, we estimated we could save 150 lives if 750 protocols could be used.

Every good game has rules and constraints. In order to participate teams would have to voluntarily sign up, appoint a leader, and track all the patients they screened for sepsis and protocols that they used for the whole duration of the campaign.
We provided encouragement and rewarded with feedback and prizes throughout.

What we were asking people to do was to collect data on the number of protocols they used and to submit that.

If you have ever done recruitment work with clinicians, that is not a simple feat, but they were very engaged and motivated to take part in this campaign.

Some of the mechanics we included things like transactions. Clinicians entered the data through a mobile app or a tracking system on our website, or they also have the option to write it on a piece of paper on the wall.

At the same time they were asked to drop the patient label in a physical box in their ED, we called that the 'box of lives'. Each week the team leader would check the online entries against those patient labels, just to to make sure there were no duplicates, and to keep a sense of fairness in the game.

We also developed a some competition. Teams competed against each other, within their team, within the health authority, and also within the province.

Some of the components we integrated included a countdown clock. It was front and centre on our website and all communication. It created a sense of urgency in the game: it counted down time left, and counted up the number of lives saved.

We also gave virtual badges to anyone who submitted entries. We also gave feedback daily, weekly, monthly, we kept it positive, we called it 'juicy communications'. We kept it fresh, frequent and fun.

Teams could win a real pizza party at the end of the campaign for the emergency department; individual champions won plaques to display on the wall. We also tried to incorporate a sense of fairness on to the wards, so we took the number of entries each team submitted, divided by the number of emergency department admissions per site, that way we didn't give bias to the larger sites and everyone competed on a fair playing field.

We also gave rewards to the most engaged team. We felt that this was a really important part of this and that people were excited about saving lives and using sepsis protocols. We collected photos and quotes and tweets and other social media, and other evidence to give out those prizes.

Some of the results, we had voluntary participation from 33 teams, just over half the emergency department in British Columbia.

Over 1,000 people were screened for sepsis, over 750 life-saving protocols were used for severe sepsis and septic shock, and mortality decreased significantly in one region where we were tracking that data.

I hope that gives you a general sense of what we did in sepsis. I will now hand over to Lauren and Jacob and the example of using gamification for mental health.
LAUREN:
Thank you – are you going to transfer our screen up?

I am Lauren, an Occupational Therapist working at Island Health in British Columbia. I am sitting with Jacob Gallant, a member of our youth design team, who helped us come up with a mobile app for mental health.

We will start by talking about how we incorporated gamification concepts into the creation of this app and then Jacob will talk about his perception as a user as well.

Are you able to see that OK?

Booster Buddy is a free app designed for teens and young adults to improve their mental health – you can find more about it by Googling or going to the link you see on the screen.

It was created by Island Health in collaboration with teens and young adults with lived experience. Made possible through a generous donation through the Victoria Hospitals Foundation.

When we first began to create the app, we went to a focus group of young people and their families who have experienced mental health challenges – we asked them what they wanted an app like this to do.

We heard a lot of suggestions for tools and resources that would help someone manage the mental wellness, things like coping skills, checking in on your mood, reminders for medication and appointments and a way to get organised on wellness activities.

Users of an app like this wanted the app to evoke positive emotions. They wanted to feel encouraged. They wanted positive feedback. They wanted to have a sense of progress, and they wanted to feel connected and have a sense of companionship with the app or other users.

They wanted to feel more capable and more confident with managing their unwellness, and they wanted to be in the driver's seat and have a sense of ownership. Not only do many mental health challenges impair your ability to feel positive emotions, it is harder to feel internal motivation and a sense of accomplishment. Also, people that experience challenges with mental health often find themselves in a system that is disempowering, or experience stigma.

There are lots of reasons to increase positive emotions, mastery, accomplishment and ownership.

Gamification seemed like a tool that could help in that regard. If it is used well, it can spark positive emotions, magnify internal motivation, increase a sense of mastery and competence. We wanted to include that in the Booster Buddy app.
There is the idea of using a game-like approach to allow people to adopt personas that embody their most heroic traits and allow them to enact those strengths. It can embed the difficult experience into a story, a narrative that can be transformative, build hope and resilience.

Our youth design team took that approach, they thought about wellness...

(Lauren's audio drops out)

HELEN BEVAN:
Hi, how are we doing? We have lost Lauren’s audio – can we get Lauren back? I am in the middle of writing a tweet about how amazing this is – is she coming back?

LAUREN:
When did you last hear me?

HELEN BEVAN:
You had just gone onto the slide with a cross and a tick.

LAUREN:
Our youth design team conceptualised mental wellness as caring for something. They created this narrative whereby you choose this buddy or sidekick, one of three characters. They are cosy and comforting and you care for your sidekick, as well as yourself.

The buddy falls asleep every day and you have to wake your buddy up by performing real-life activities or quests. These real-life are designed to help the user's mental health and improve the wellness.

While they do that they are also helping their buddy. They are able to enact behaviours that are compassionate, self-nurturing and they are able to persist over time and keep going one step at a time, every day.

There are other game design elements that provide a sense of mastery and accomplishment. The quests are graded so they are the just right challenge. Depending on how you feel on the day, they might be easier or harder.

When you complete the three quests, your buddy wakes up, which is rewarding. You also collect virtual coins and move through levels, every time you complete tasks.

When your buddy wakes up, he provides you with an inspirational and motivational pep talk.

HELEN BEVAN:
We can't see your slides, Lauren. It's such a shame. Can others see them?

ALL:
No.

HELEN BEVAN:
Is there any other way we can see them?

LAUREN:
You were seeing them earlier and now they are gone?

HELEN BEVAN:
Yes.

LAUREN:
I haven’t changed anything from before.

HELEN BEVAN:
I think the best thing is to keep going. We will make sure people get them afterwards.

LAUREN:
There is a note from the internet saying the connection is weak.

I'll just keep going. When your buddy wakes up you can use virtual coins to buy virtual accessories for your buddy and dressed him up in different outfits, and he is customisable. It's a fun and customisable approach.

We received a lot of feedback that indicates people are experiencing positive emotions. If you could see the slides, you would see some quotes: "I find it comforting and motivating, when I am depressed I use this app," "I love all the features and I find myself, accomplishing more goals every day." "I particularly appreciate that it builds your strength from where you are, when you're depressed and not where you should be if you’re not". "I have used this app to bring myself from the brink of disaster to a place where I can cope and deal with my problems."

Words like motivating, accomplishment, building strength and coping, which is what we are hoping to accomplish.

Now I'm going to turn our camera back on and turn things over to Jacob, who is a member of our youth design team, and just hearing his perspective on using the app. I seem to be having trouble getting... OK.

Here you go.

JACOB:
Hello, I am Jacob. I found that with the app, although I really enjoy it and I find it very useful, I find that I am coming back to it when I need it and not so much when I don't. Which I think is probably a good thing because it is not that I am reliant on it as much as I am using it when I need it.

It has also helped me a lot when sometimes I will get... I go through very weird phases and I almost feel like I'm getting really hyper and it helps me track that down and it helps me track it down when I am getting low and depressed. So it's like I can go to my psychiatrist and say, "You know what? Recently I have been very high and I have been very low. But I have been taking my medication every day," and I have proof on the app that says I have taken my medication every day.
LAUREN:
Thanks.

SHARI McKEOWN:
Thanks, Jacob. Can we hand over to Echo?

ECHO:
Alright, thank you.

OK... Can everyone hear me OK?

SPEAKER:
Yes.

ECHO:
My name is Echo Porlier, I'm a registered nurse in BC. My portion of this presentation is to talk about my experience of using an app. The presentation is ‘how gamification was experienced through the GooseChase Initiative for Change Day ambassadors’.

Some of you may recognise the term ‘Change Day’. We coined it Change Day BC but it was modelled after the global movement by the National Health Service.

Our target audience was to target organisations and individuals from health and social care across our province. We wanted these individuals and organisations to commit to an act of change that would improve care for patients or the system we work in. They could do this by making a pledge. The pledge could be something big or small.

But essentially, the pledges were committing to doing, changing or improving health or social care. For example, one of my colleagues, they pledged to wear a hospital gown and walk around with an IV pole for a day. One of my other colleagues said she would greet everyone in the office with a smile. Others were that people would take the stairs instead of the elevator. So it could be big or small, whatever you want to pledge to improve things in some way.

The overall goal was to have about 5000 pledges by October 15, 2015, which was the day we decided we would have Change Day here in BC.

The Goose Chase app, I was new to it. I haven't used gaming devices very often and never within my work. This was very new to me. The Goose Chase app is run like a scavenger hunt with missions to complete.

You download it onto your phone, make your teams – it could be big or small, an organisation, whatever you want – then you automatically start using the app.

The missions and their corresponding points are all on the pages and there is an option to see what other people in your feed do like the Facebook News feed and you can upload anything – pictures, video, what have you.
There is also an ongoing ranking system so you could see who was in the lead and who had so many points and where you stand. It was very user-friendly. It was mobile on my phone, so it could go everywhere with me and it was fun. I thought it was just something totally new and foreign to me, so it was great.

My team consisted of myself and my colleague. We are rural nurse educators in the interior of BC. We have 16 sites and our focus is on acute care nursing topics and skills. Our furthest travel is to Williams Lake, three hours away. And this is us.

Our experience – the missions, we completed in the majority. The only thing I was unable to do was tweeting. Sorry, I don't have a Twitter account. But we did do selfies, which were also new to me, and we also tried to get onto local radio.

We went to meetings throughout the TCS, nurse educator meetings, and we talked about Change Day BC and the initiative itself.

The British Colombia Patient Safety & Quality Council provided Change Day swag, lanyards, stickers, pledge cards, pins, anything you could think of they gave us to help promote the cause. Points ranged from 100 to 3,000 points depending on complexity. My colleague wrote a poem, which was one of the missions.

As you can see from the picture on the right, you have remaining missions and those you have completed. So you keep track of it that way.

For engagement, one thing we do within our health authority is skills fairs. These are interdisciplinary skills fairs, we invite acute care, residential, community nurses and physicians, Allied Health, PT, OT – they all come to the skills fairs. They circulate through it and there are poster boards and staff that manage the sites.

My colleague and I made up a poster board and it had all the swag on it and everyone who came to the booth made a pledge. We took pictures of them with their pledges and that was uploaded onto their team sites, onto our intranet, which is the platform we use for our Interior Health Communications. And we gave out the swag. They told their friends and so forth. We were able to capture a lot of staff and colleagues through this.

Motivation – our main objective was to spread the word about Change Day BC. When Shari was talking about intrinsic motivators and the types of users we are, mine is that of a philanthropist. I was motivated by spreading the word of this powerful movement.

I wanted my staff to make pledges to commit to meaningful change whether big or small. And I wanted them to consider the patient and how we can make their experience in health care a positive one. Which is really important for anyone especially who has had loved ones in the system.

And I wanted to see my fellow colleagues engaged in workplace morale. The whole ‘smile and say good morning to someone’ goes a long way in your workplace.
We also spoke at quite a few meetings. In general, it was a very humbling and gratifying experience. Something I had not participated in before. I really appreciated that aspect of this gamification.

Successes – we ended up winning! There was only two of us so we were pretty proud of ourselves. We were given T-shirts. We were also given a cake, which we donated to our local Y Women's Shelter.

What was awesome reading the pledges from our staff and colleagues, seeing what they had pledged. All pledges were uploaded onto the Change Day BC website. You could see the pledges and pictures. People posted links to videos. I don't know if anyone has seen the YouTube video 'Leading with Lollipops' by Drew Dudley. That was a great example of something uploaded.

Overall, our goal was to by October 15 have 5,000 pages. At the end of the initiative, we had over 7,877 pledges, which was phenomenal considering how large geographically we are and how many staff we have in the organisation.

This, I wanted to put this up here because my colleague is very talented. She sat down and wrote this in 5 minutes. This was the Change Day poem. (Reads from slides) "What in our life should be change? What part of us should we rearrange? Are we cranky, miserable or sad? We need to change the things that are bad. We can pick the changes we want to do, it can be about work, health, me or you. The change can be huge or very small. As long as it improves things overall. So make a pledge and make your change. Even if it feels foreign or strange. The changes we make can lift our hearts. Over 5000 changes will exceed the chart."

Thank you very much for your time. I hope everyone is having an enjoyable evening.

SHARI McKEOWN:
Thanks. We will hand over to Michael and Patrick now.

MICHAEL FERGUSON:
Hello, everybody. My name is Michael Ferguson. Not sure if you can see me. But perhaps you can hear me.

I'm the CEO of Ayogo. We are a company operating primarily out of Vancouver, British Columbia, that specialises in the application of gamification and design patterns from games and play generally to healthcare in a variety of other approaches, techniques, that might be generally known as behavioural economics.

My colleague Patrick is the creative director here. I would like to spend a little bit of time speaking with you about some of the underlying principles. I'm going to show you some slides from a presentation I gave at a design conference not too long ago. I hope you find it useful.

First of all, just quickly, the title of my talk was 'Everything You Know about Gamification Is Wrong'. The reason I titled the slide this way is because everybody we speak to on this topic has a lot of preconceptions. It might be that games are trivial, and healthcare is not trivial, so it may be thought that gamification is not
appropriately applied to healthcare for that reason. It may be that it's thought of as really about badges and points and leader boards. These are the outward expression, the visible evidence of games.

Maybe it is about incentives. Bribery is not a very good game. I've never seen a child play because they are being paid to play. Points and badges and leader boards are the output of games, not the game itself. I just want to talk about what gamification really is.

A little bit about our company, we have been doing this a lot of years and have a number of awards. We have customers all around the world in Europe and North America. The ideas I am presenting are not just mine. It is the senior team at Ayogo, there are about 40 of us here. These are some of the people that have contributed to the ideas in this presentation.

We might describe the problem we are trying to solve in this way: Patients are given tools they need to manage their health, good tools, effective, evidence based tools, effective tools, things that we know they work; and yet they don't use them.

We give them efficient, well designed, clean tools to help manage their health, they take them home and put them on the coffee table and never look at them again, and spend time with applications that look like this.

Applications that are not clean and not simple and not efficient at all – this is very important. When we asked the question of why patients are drawn to useless distractions, rather than applications that can save their life, one important answer was this: engagement is not about efficiency.

Things that are very efficient and predictable and simple are not engaging. Many of the things we do, in the interests of ease of use, run counter to engagement.

If you play a game that is easy and simple, you stop playing it almost right away. You need challenge, uncertainty, to experience mastery, to be challenged progressively – there is a good reason for that.

You have a 200,000-year-old brain that evolved in an environment where your life would be short, living a life of scarcity and deprivation. If you found a pile of doughnuts in the middle of the African Savannah 200,000 years ago, you should definitely eat them. Diabetes is not your problem, you will be eaten by a hyena tomorrow. This is the environment in which we evolved.

We now live in a world where we live long lives, lives of plenty, but our brains are not optimised for that. There are all kinds of flaws that prevent us from thinking rationally and clearly about what we do.

A good example is hyperbolic discounting – a person values something more highly because it is close. I offer you $10 today, or $20 in a month, you will almost always take the $10 now, despite there being no other time in your life when you are going to get 100% return on your investment within a month. It is clearly the wrong decision.
but you instinctively felt the draw to the $10 – because that is how our brains developed. You will be eaten by a hyena tomorrow, so you better take the $10 today.

Good news, our brains also evolved all kinds of techniques to get around distraction and look at long-term instead of short term. We evolved games and play. The children in this slide are playing the most important game ever, learning how to hide from predators. Without this skill, humanity would have died out. Why can children make the small investment over time, weeks, months, years, to get better at this game, why can’t we make that investment in our health?

The mechanisms to get children to engage in this activity are emotional levers. They do it because it feels good, they want to do it, not because they understand it intellectually. Engagement is about emotional involvement; it’s not about efficiency.

We spend a lot of time in health care building applications that are designed to be precise, fast and accurate; but never personal, emotionally satisfying, beautiful, challenging, uncertain, all the things that are the basis of engagement – this is why applications fail to engage.

Games offer us design patterns that have been proven successful in building engagement over time. Lots of gamification projects have failed, you may have seen some of these yourself – some high profile communications projects have failed. Why? What went wrong?

Let’s give people points when they do something good. Let’s bribe them into doing the right thing. Can there be leader boards to make it feel as if there are other people there with you, even though you may not have any interaction with them. What about if we just give people badges to acknowledge the accomplishment? The reason these techniques do not work, the points and badges and leaders boards, is that these are just the outward face. They feel like they are tacked on, not baked in, you have to look at the underlying mechanisms and gamify it.

I have a colleague who is passionate about cycling. If I give her a helmet as a gift, she will really appreciate it. It says something about her and her motivations. But if I give it to someone who doesn't like bikes, they won't value it. It will seem shallow and unthoughtful, because it’s not attached to her underlying motivations.

Gamification is not about putting points and badges and leader boards on top of systems that are not fun. I can put Christmas lights on my treadmill but it will not make me want to go jogging, all I have done is raise my electrical bill.

How do we bake it in, what are the mechanisms? I will describe five key mechanisms that are used to generate engagement.

It is not stuff that we just made up and it’s that complicated. If you take a 100-level game design course at any university, you will learn this in the first few weeks. You must have these five things to make a game. They are necessary, although not sufficient, just because agency, conflict, uncertainty, discoverability and outcomes in your game doesn’t mean it’s a good game – there is still an art to it.
There are significant things you need to incorporate into your design principles. Things about human psychology that you need to understand to make it work. The first must be that there are actual meaningful, strategic choices to make – I can do A or B, and each is a realistic choice to get to my goal.

Often in healthcare we give the option of doing the right thing or the wrong thing. That is not a legitimate strategic choice. You destroy engagement when you offer choices like that. You're pretending to respect the decision making. You have to give them real, clear choices. True agency is necessary for engagement.

Where you put that agency is important. We don't want people making choices if the position should be taken for them. There are always places where a patient can take control over their own choices. Should I walk or ride a bike, eat broccoli or cauliflower? These are real choices that people can make. By restricting choices you break engagement.

Second thing: you must provide a real conflict or challenge. People expect and need to be challenged. The reason you don't remember the drive to work, is because it is not challenging. You arrive at work, you didn't notice anything – your brain told you it was safe to ignore it all.

So many of our health applications, because we don't provide a challenge, and we don't scale the challenge to make it harder for the person over time, based on their mastery, they lose interest. Their brain says they can safely ignore it. Once you've lost their attention, it's almost impossible to get it back. You find a place in your application to provide a real challenge.

We like to build aspects into the application that are hard to use. We make the application hard to use on purpose in certain places, as a way to keep the person engaged.

Uncertainty is a really important one. Think of the most boring things in the world – watching paint dry, watching grass grow, watching water boil. Why are they boring? They are boring because they are totally predictable, you know what will happen, why pay attention? Get in your car, show up at work; why pay attention?

You must have places in your application somewhere, where the outcomes are not pre-ordained. Where the person is surprised, delighted, you do this, get 10 points, 20 points, 30 points. There is no uncertainty so the point system is not going to create surprise and delight. You need uncertainty and discoverability.

This is very important. Let me give you a very Canadian example, Wayne Gretzky said, "Go where the puck is going, not where the puck is." I just told you that, it's a fundamental rule of hockey, but I did not make you a better hockey player by telling it to you. The only way for you to know, to feel it, to actually use it is to experience it in the course of play.

You want people to discover how to get good by actually using the system. Just explaining it to them in words is not enough. They want to get their hands on it. They
want to use it, feel their mastery growing, feel progressively challenged. Let the rules be mastered through the course of play.

Then and only then, will you get to outcomes, points or leader boards, but keep in mind, they must be speaking back to your user in a language they recognise, that is meaningful for them, not just meaningful to you.

The points should not represent how far the user has gone to achieve your goals, but how far they have gone to achieve their goals. It must speak to them about their own participation in the system and what matters to them.

When I tell you my high score on Pac Mac is 185,211, in Pac-Man, that means something to me because I played Pac-Man all the time. I have not mastered the fifth screen, and so that is why my high score is there. If you don’t play Pac-Man then that number doesn’t mean anything to you, but a Pac-Man player who plays all the time will recognise immediately what that number means. It says something about my mastery. It is a language, a code that we are speaking to the player in, to describe the underlying system people are engaging in.

Those are the key elements of gamification. They are the fundamental building blocks that we use to build our software. You will notice I didn't talk about software, these are principles you can apply yourself in any system you use.

There is a White Paper on our website that is freely downloadable. Feel free to download that and apply the systems in any system you use, where you hope to increase engagement with anybody— but with patients in particular. We are happy to share these ideas. There is nothing proprietary about them.

We want to make the world a better place and this is one way to do it, help the healthcare system build applications that feel good to use, not that are designed to be efficient and precise. That is not what people want. They want to feel like they are doing something meaningful. Meaning is what people are looking for, not efficiency.

We are here to answer any questions you like.

SHARI McKEOWN:
We have a question coming in through chat: how would you deal with someone, who despite all the gift and reward systems, loses motivation to take part in the process?

MICHAEL FERGUSON:
Bribery is not a game and it is easy for me to lose interest in things for which I am not paid. There is a good term for that: the over-justification effect. The more you pay me to do something I felt I want to do, the more you destroy my intrinsic motivation.

Without knowing more detail, starting from first principles, I would be looking to build around intrinsic motivation, not trying to apply extrinsic motivators to a system, an activity, that someone may already want to participate in.

Instead of saying, "I will pay you," I might give them feedback on what they have done, or use social patterning effects, have other people reflect back that they have
accomplished something meaningful. Having someone you know say they ‘recognise what you did, that's a good thing.’ That can be more powerful than bribing them with gifts.

SHARI McKEOWN:
Absolutely. In gamification, it is so easy to incorporate that triad, points, badges and leaders boards – but those are just the surface things. This are the extrinsic motivators, the surface things, which will not sustain behavioural change.

We found our experience in gamifying health improvement initiative for clinicians, that you really need to incorporate the intrinsic pieces: a sense of relatedness, autonomy, mastery and connecting it to a sense of meaning or purpose.

MICHAEL FERGUSON:
The examples that were shown earlier are really good examples of how systems can be really simple.

People care about saving lives. That is why you are healthcare professionals. People care about their children.

Speaking to them in a language they care about can be the missing element. Rather than talking about health or targets or metrics, speak to them about values.

LAUREN:
If they are finding the activity intrinsically meaningful and you have addressed that basic principle, the second thing to do is make sure the challenge is doable but not too easy.

And that there is some mechanism built in to be responsive to the user so you are pushing the envelope but not overdoing it.

MICHAEL FERGUSON:
There is a good graph you can find in some game design manuals that shows you the channel of engagement. If you make it too challenging too quickly, they go into frustration; if it is not challenging quickly enough, it drops into boredom.

The system becomes more challenging as the person gets better at it and the channel goes to the right.

There is a really good book I recommend called ‘A Theory of Fun’ by a game designer named Raph Koster. I highly recommend it.

PATRICK:
Well illustrated as well, like a comic book.

MICHAEL FERGUSON:
Exactly.

SHARI McKEOWN:
Great, I will have to check that out. For our hosts, Helen, are there any other questions coming in for the panel?

HELEN BEVAN:
Thanks, Shari that was fantastic. I just think what great examples there. In terms of some of the people listening, I think a lot of our English colleagues from the NHS have now gone to bed. But they will be getting up tomorrow and watching you retrospectively.

Just want to ask you all, in terms of the first steps in gamification and using the principle, what advice would you give? What is a good first step? What we have seen and the principles you have described, they are sophisticated and well developed, so where do we start?

SHARI McKEOWN:
Great question. From my perspective, one thing I wanted to mention which we haven’t talked a lot about today and I think it is fundamental when working in healthcare, is to think about the patient and their experience of this.

When you are working on gamification initiatives and you are targeting clinicians primarily, it's also important to think about the patient's experience. There is a great quote from Sebastian: “Successful design interventions require a deep understanding of and continued engagement through the actual people, sites and systems that they target.”

I think that is important to keep in mind. If we are looking at gamification for clinicians, we need to think about how is the patient's experience of this? And how are they reacting to it? And is it ethically acceptable to them to be taking part in some way or be affected by a gamified experience?

In terms of next steps, that is number one – start thinking about how it affects the patient and brings the patient into your team when you are looking at doing this. For me, that would be the first step. For the other panellists, what is step number one?

MICHAEL FERGUSON:
When we start a new design project, one of the first conversations we have about the health-care professionals we work with goes something like this, where we point out that they work in a very highly controlled environment, surrounded by highly qualified people, speaking very precise language, evidence-based systems and reasoning dispassionately...

This is basically a completely artificial environment. Human beings do not live in this environment. The only place you will find it is in a laboratory or health-care system. The actual life people really live is full of emotional reasoning and unqualified people speaking totally imprecise language in totally uncontrolled environments.

If you are going to give people information in an alien language in an alien environment from people they don't recognise as people they meet every day, it is no wonder they might nod at you and intellectually understand when they talk to you, but it's hard to integrate into real-life when they walk away.
Keep in mind that your life and your language and your way of doing things is completely artificial. You have to think about the way people live their lives and the language they use to speak.

SHARI McKEOWN:
That is a great point.

HELEN BEVAN:
Thank you. I would love to hear from Jacob. Jacob, we think you’re fantastic.

I’m a different generation to you. For people like me who are decision makers, what advice would you give to me?

JACOB:
What I would personally do is that instead of thinking what am I going to use this for, think about who is going to use this because… As an example, I am trying to do something right now with my own technology, and saying ‘you know what, maybe if this person has depression, maybe the people using this have depression they have this and that. In Booster Buddy, you don’t have to have depression, you don’t have to have psychosis, your general user should be everybody. It should not just be a specific group because I think if you do that it is almost like segregation. It’s like saying you have depression, you have psychosis, you have whatever – and that’s not what we want. Whoever needs this can use this. What we want to see is improvement. We don’t want to see that people are going back because they have to do this. We want people to want to do this.

HELEN BEVAN:
I think that really ties in Jacob with what your colleagues were saying about intrinsic motivation. Another thing that I absolutely take from the wisdom of what you just said is sometimes we can get very focused on games and apps and doing clever things, but this can’t start from there. This has to with a real person with a real need. A game or an app might be the right thing, but we have to start with the person’s need. Not from ‘let’s create an app’ or ‘let’s create a game’. I think that message came across really strongly.

MICHAEL FERGUSON:
That’s a good point. Just to jump in to say one more thing. You made a really good point about high quality design. It’s my professional dream that it won’t be long before we never use the word gamification again.

HELEN BEVAN:
Yes. We get told off for using jargony words.

MICHAEL FERGUSON:
It’s just quality design.

HELEN BEVAN:
We like that.
MICHAEL FERGUSON:
It's good quality design. Understanding how people think and how they want to interact with complex systems is just good design. Gamification is an interesting handle to hang some ideas on. It's a bit of a gimmick. Ultimately we need to design things well for the humans that use them, and when we don't we fail and when we do we're more likely to succeed.

HELEN BEVAN:
Fab. That's great.

We really need to end now. Does anyone else want to say anything? We do need to give the last word to Shari.

SHARI:
Any last comments from you Echo?

ECHO:
No, mine was basically about experience and how I was a novice when it comes to games and selfies, but this was a really great initiative, I have to say.

HELEN BEVAN:
We loved it. We've made a note of that idea.

Shari last words?

SHARI:
Thank you to the NHS for giving us this opportunity to share what we are doing in British Columbia.

HELEN BEVAN:
Thank you all so much and a lot of people will watch this session in retrospect, so you will be famous. Keep up the good work. We love learning form you. Thank you so much.

For everybody else, we are just going to take a short break so that we can switch over to the next session. So bear with us. Bye.