The Future of People Powered Health

Insights from leaders and thinkers on how digital and social innovation can contribute to better outcomes

July 2016
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# The Future of People Powered Health

Insights from leaders and thinkers on how digital and social innovation can contribute to better outcomes

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Introduction: People Powered Health

The language is simple. But the agenda is ambitious.

Halima Khan, Executive Director, Health Lab

This pamphlet sets out reflections from some of the inspiring thinkers and doers who spoke at Nesta’s People Powered Health event in early 2016.

It is an intentionally diverse set perspectives - some from those leading direct change on the ground and others from those who research and reflect on what’s going on. There are contributions from digital pioneers, startup founders and public sector innovators. Many of the insights come from the interplay between thinking and doing.

All of the contributors are deeply engaged in the creation of a more human and more data-driven approach to health. The importance of kindness, understanding and empathy is woven throughout, from the humanising forces of the new ‘sisters’ in Paris hospitals to Stockport’s use of new conversations to improve health and wellbeing.

Digital disruption is another core theme. Several highly promising and scalable ‘digital medicines’ are profiled, dealing with issues as diverse as cardiac arrests, Parkinson’s and getting a good night’s sleep. Each is a powerful example of how to make data ‘work as hard as possible’, in the words of Bruce Hellman, and the potential of ‘continuous real-time signals’ driving a true revolution in health as set out by Deborah Estrin.

A third theme is how change happens. Jennifer Dixon shares her thinking on the importance of context for scaling the complex social interventions needed to build People Powered Health. This perspective is threaded through other contributions as well, bringing out the passion, energy and sometimes bravery it requires to drive through this kind of change.

The breadth of the contributions also serve to demonstrate the ambition of the agenda. Despite the simplicity of the language, People Powered Health requires a complex set of changes.

So, what do we mean by People Powered Health? At its core the agenda is about putting people at the centre of their health and wellbeing - in control, knowing how to manage well and having the confidence to do so, being connected to other people who can support them and working in partnership with clinicians.

That’s our starting point. But People Powered Health is also about empowering professionals. Professionals - just like patients - can feel ‘done to’, voiceless and disconnected from the purpose which brought them into health and care. Engaging professionals as sources of crucial insight and knowledge and as problem-solvers is also at the heart of People Powered Health.
Overall, People Powered Health is about humanising our approach to health. And, at Nesta Health Lab, our work is focused on themes that are deeply social in nature:

- **Relationships** - between patient and doctor, amongst professionals and between citizens. Relationships which are as collaborative as possible - where each person is an equal player, valued for their knowledge and experience, and with outcomes negotiated as a partnership.

- **Networks** - building networks between people that create health. Support from peers is equally important if you’re a person with a health condition wanting practical or emotional support, or a professional needing support from your colleagues in a highly stressed system.

- **Movements** - building positive social movements for health which improve health and wellbeing through mass mobilisation. Movements could focus, for example, on people getting more active, or giving their time to support their local NHS, or connecting with neighbours to build social fabric in streets and local places.

For these human or social dimensions of health to reach their full potential, they need to be underpinned by knowledge. So threaded throughout our vision for a People Powered Health system is the use of technologies to radically enhance the creation and use of health data and knowledge. Digital technologies will be essential to creating People Powered Health by generating new sources of data and turning that data into knowledge that can accessed in real time.

We think it will be the combination of these two elements - digital and social innovation - which, together, will help to transform the health system. That’s why we talk about a vision of a people-powered and knowledge-powered health system.

As you’d expect from an organisation focused on innovation, Nesta has an optimistic view of what’s possible. We see challenges and problems as productive spurs for change.

We think there is immense potential and opportunity to create better ways of doing things. Our optimism is also grounded. We engage pragmatically with the everyday and sometimes micro changes required to make progress. We know that innovation can’t remain broad brush if it’s to achieve anything.

It’s also worth saying that we know we don’t have all the answers. We see part of our role to be convening to help solve issues collectively. That is why, in early 2016, we brought together 400 people to discuss and engage with the future of People Powered Health.

This pamphlet captures some of the insights shared on that day, which are encapsulated well by Edwin B. Fisher’s reflections in the last essay: that a shift to a People Powered Health system requires moving from an old model of ‘illness as micro, discrete and individual’ to ‘health as macro, complex and social’.

That is the challenge before us and that is why this is a challenge of systemic change. It will take creative and adaptive approaches at scale combined with the passion and courage of leaders from all parts of the system to bring People Powered Health to life. It is a significant endeavour but, as the contributors here show us, it is already happening - so here’s to the future of People Powered Health.
How best to mobilise people and communities to improve health and wellbeing

Martin Hirsch, Director General, Assistance Publique Hôpitaux de Paris

One of my predecessors was known for ending every memo he wrote with the phrase “the patient is at the heart of what we do”. That was 20 years ago.

Twenty years later, suffice to say, the patient still isn’t really at the heart of what we do. If anything, the phrase has just become such a cliché that it’s no longer worth the paper it’s written on.

At the same time, we must bear in mind that Paris’s public hospital system, the APHP (Assistance publique – Hôpitaux de Paris), employs almost 100,000 people, including over 20,000 doctors, and is subject to financial, organisational, social and technological constraints. The challenges of addressing the dynamics of power inherent in such a system are complex.

So how can we move things forward? Firstly, we must be clear that the hospital community is not limited to the professionals within it, but has a far wider reach which encompasses patients and volunteers. And we must have a system in place which makes them useful, so useful that we cannot ignore them or - and this is essentially the same thing - accept that their role is a solely passive one.

But it’s clear that this is no longer just an ethical or noble aim; there is now a vital need to include these people in our health community.

Let’s take patients. The relationship between the hospital and its patients has fundamentally changed. Until recently, the relationship began when the patient was admitted to hospital and ended with their discharge letter. Nowadays, ‘time spent in care’ and ‘time spent in hospital’ are two very different things. Many patients suffer from chronic illnesses which demand a lasting relationship with their hospital. At the same time, hospital stays are becoming shorter and shorter, with the arrival of outpatient surgery and day clinics. We’re not just interested in the patients’ tests and charts when they enter the hospital, but also in the data they have produced over the previous weeks, months and years. In the past, the patient was something of a prisoner within the hospital walls, at the service of the hospital. Now patients have reclaimed their freedom; we must therefore bring them back, gain their trust and give them a reason to stay on our radar.

This means we must involve them more than we used to - the notion of ‘connected medicine’. Patients have always been involved in medical progress; there would be no medicines on the market if there weren’t patients and volunteers who agreed to participate in clinical trials. But
in examples like this, they are very rarely co-creators. But when medical progress rests on
digital applications and data collection, patients have an active role and are essential from the
very beginning. At this point, we’re playing a different ball game.

More widely, we must show that patient experience makes for change in hospitals. I make use
of this idea very often, for example using the letters we receive from patients. It’s thanks to
letters from patients that we’ve changed the way we work in our A&E department. Previously,
loved ones couldn’t pass through the door of the emergency room and patients were left
alone in their cubicles. After receiving two letters, I showed how this set-up, which left
patients waiting alone, could be dangerous. And now we have a new rule: the patient should
never be left alone. We either authorise a family member or friend to wait with patients, or we
get a volunteer to keep them company.

Following that change, we were able to develop a programme for bringing young volunteers
into the hospital. In the past, hospitals had been reluctant to welcome these young people
carrying out valuable citizen service; now, they are a part of the hospital landscape.

I was keen on the idea from the beginning, because I’d been involved in citizen service when
I was in government. The programme encourages young people aged 16 to 25 to spend a
period of between six months and a year contributing to civic life, with an allowance paid 90
per cent by the state.

Professionals and these young volunteers have perfectly complementary roles. The young
volunteers aren’t under the same time pressures. Patients need some time away from
health professionals. And they need people around them who aren’t subject to productivity
demands. I often remind people that until the 19th century hospitals were run by many
religious sisters and few doctors; today, it’s few religious sisters and many doctors. I see
volunteers as the ‘new sisters’; they may not be religious, but, like them, they can offer their
time and kindness. We now have a few hundred volunteers, and hope soon to have thousands.
They help us look at our own practice, and it’s extremely important that we bring people into
our community who can provide an external viewpoint, a candid gaze which allows us to
improve more quickly.

Finally, in any hospital there will be patients who do need to stay for a long time, such as older
people, children with rare illnesses and people with certain disabilities. We work to help them
be both patients and volunteers, giving previously passive recipients an active role in the
hospital environment.

APHP is a huge hospital group and its biggest enemy is inaction and conservatism. Patients
and volunteers are now two of our biggest assets against our enemy, and they will only
become stronger assets in the coming years.
There is a clear social gradient in whether you get a long-term condition, and your outcomes if you do are often socially and behaviourally determined. Social prescribing of non-medical activities, which address the concerns of the individual rather than their medical condition, seems a fairly obvious way forward. It has been around for a long time but despite numerous pilots and lots of anecdotal evidence of benefit it has never been done systematically and at scale with a defined population.

West Newcastle, with high levels of long-term conditions and social disadvantage, provided an opportunity to do this. There was a history of previous small-scale pilot studies run by HealthWORKS Newcastle, and the GP commissioning consortium prior to becoming a CCG, had been a partner in the production of *Thanks for the Petunias*: a guide to developing and commissioning non-traditional providers to support the self-management of people with long-term conditions. The CCG was also a Nesta People Powered Health site exploring the delivery of social prescribing. At about the same time in 2012, Voluntary Organisations Network North East (VONNE) was exploring the feasibility of developing and testing a social impact bond (SIB) as a new way of funding the sector.

Nearly three years later in April 2015, Ways to Wellness went live as a charitable foundation with a seven-year contract with Newcastle/Gateshead CCG as the prime contractor, with four sub-contractors employing link workers to deliver social prescribing to patients with specific long-term conditions in 17 practices covering a population of 120,000 in West Newcastle.

Reflecting on the key elements leading to this point, it is possible to identify a number of factors:

- A strong steering group with good local credibility and connections located in a voluntary sector umbrella body.
- Success in securing development funding, first from the DH Social Enterprise Investment Fund and secondly from the Big Lottery Commissioning for Better Outcomes Fund, which allowed us to secure the services of a project manager, financial and business management expertise.
- Early discussion with the CCG to ensure that Ways to Wellness would be the prime contractor with a long-term contract, so that once developed the service would not have to be tendered.
- Production of a regular newsletter and continuing discussions with key stakeholders including patient groups, the local voluntary sector and local GPs and Practice Managers.
• Detailed study of the available data on the incidence and cost of long-term conditions, in order to develop an appropriate **costed intervention and the metrics** to demonstrate improved social and financial outcomes.

• An open and transparent **consultation process** for developing a service specification and subsequently for procuring four service providers to employ link workers, and to work with discrete geographical practice clusters.

• Securing the interest of **potential investors** and refining the policies, referral criteria and processes so that successful applications could be made for additional grant funding from the Cabinet Office Social Outcomes Fund and the Big Lottery Commissioning for Better Outcomes Fund.

• Development of a website and a dedicated management information system to provide **real time data** on key performance indicators.

• **Patience and persistence** in retrofitting the service to the NHS Standard Contract and NHS information governance requirements and for negotiating and agreeing a complex set of final contracts.

**Nearly one year on, what is working well and what needs further development?**

Referrals, at one year are 1,129 which is ahead of an ambitious target figure of 1,094.

All of the practices are referring but there is significant variation between them, and between the ability of the four providers to generate referrals. Generating referrals in a new programme is always challenging but both Ways to Wellness and the link workers are getting better at doing this through a combination of shared learning and using data feedback to generate a degree of competition between both practices and providers.

The Long-Term Conditions Wellbeing Star is proving a useful tool for the link workers in their interaction with clients and as a quality of life repayment measure: initial analysis of second Wellbeing Stars done at six months are showing significant improvement. Lots of data are being generated on goal-setting and the choice of activities that people are making. Broadly, social activities around exercise and healthy eating seem to be the most common but welfare rights, housing issues and help with mental health problems also figure as significant issues. Looking at and discussing all of the data generated with the service providers, it has also become clear that the management information system needs more input from the link workers in order to make it more user-friendly.

More work is also being done on understanding the link worker intervention and on different ways of measuring the impact of this intervention. This has led to a focus on trying to define the key skills and competencies of link workers and exploring the feasibility of developing an accredited training course. Work is also going on to use some of the data that we are generating to try and clarify what might be an appropriate case load and case mix for link workers.

The prime contractor model, with a specially created charitable foundation with two staff managing four not-for-profit providers who employ link workers, seems to be working. It has enabled four local organisations that would not have wanted, or perhaps been able to, take the risk of a large outcomes-based contract to test out the model. It has also meant that the CCG has a single contract with an accountable body that is responsible for contract management of the providers. Balancing collaboration and competition between providers with regular meetings of the provider link worker managers and the link workers learning community group has also been an interesting challenge.

The next step is to see whether or not we have produced savings in hospital costs when compared with a control group with similar socio-demographic features from a neighbouring area, who are not receiving social prescribing.
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Ways to Wellness Bulletins. See: http://waystowellness.org.uk/news/category/bulletins
Empowering patients and communities in Stockport

Nick Dixon, Stockport Together Vanguard and National lead, Empowering Patients and Communities, New Care Models Team, NHS England

Empowering Patients and Communities is where the agendas for the NHS and local authorities really come together. The *NHS Five Year Forward View* acknowledges that we can only achieve better health, better care and better value by fundamentally changing our service’s relationship with patients and communities.

Local authorities have long been engaged in shaping their communities, building local assets and community resilience. They, too, know that we have to reduce people’s need for statutory services to be able to face the future demographic and financial challenges. So together, we all have the same aim: to have strong cohesive communities where people have the knowledge, support, skills and resources to manage their own lives and health to realise their own ambitions, and where partners across communities are recognised for what they offer.

For these communities to emerge and flourish we have to recognise our role as public services. Sometimes we prevent others doing more by what we do. At the very least, we have to refocus the way we work and our interactions with the places in which we work. We must become enablers and champions of self-determination and self-care, not fearful of our own irrelevance. We must take part in our local community’s conversations, not always think that they must take part in ours. We must move away from our professional focus on needs and vulnerability and be the first to celebrate people’s strengths and interests.

These changes do not need big structural reorganisations or complex multifaceted programmes. They do need a new mindset. In each and every one of us. In our colleagues and in their colleagues and in theirs. We need to reach the tipping point. It starts with us. We build on long and proud histories in many areas, of communities recognising and responding to local need. Our job then, is to be the invisible, non-invasive architecture that supports this resilience.

The Stockport approach is around transformation of the whole system, encompassing four broad areas:

**What can we do? Four main areas**

From our experience of People Powered Health over the past four to five years, we have developed four tangible areas that can make a difference:

1. **Give our workforce (health, social care, CVSE, independent) the permission, training and tools to shift from ‘doing to’ to ‘working with’**

   Our approach must change from ‘factory repair’ to prevention and enablement. Individual people should be at the heart of our work and must always receive a ‘nothing about me without me’ approach.
This requires vision and leadership, permission to change and sponsorship. We must shift the emphasis from clinicians taking responsibility for people’s health - which creates passivity and raises unreal expectations - to empowering patients to take control of their health (by employing nurse coaches and peer supporters, for example).

We must enable goals to be set by patients, encourage positive behaviour change and take account of what matters to people in how they want to live. This approach is all about behaviours: being positive, courageous and encouraging individual ownership of actions.

By using the concepts behind ‘Patient Activation’ and Self-Care, we can guide (rather than direct) patients by holding collaborative consultations. We must link patients into specialist advice and treatment but we must also think about people and networks. This can be achieved with a ‘human’, conversational approach based on their individual strengths and interests.

Workforce development then will be key to supporting collaborative consultations. For example, by using the ‘Three Conversation Approach’, we can replace the traditional ‘assessments for services’ culture with a new behaviour, culture and practice based on three conversations:

**Conversation 1** – How can I connect you to the things that will help you to get on with your life, based on your assets, strengths and that of your family and communities? What do you want to do? What can I connect you to?

**Conversation 2** – If you are at risk, if your life is in melt down - what needs to change to make you safe and help you regain control? How can I help to make that happen? Furthermore, what offers do I have at my disposal, including small amounts of money and using my knowledge of the community, to support you? How can I pull these things together in an ‘emergency plan’ and stay by your side to make sure it works?

**Conversation 3** – How can I make sure you are in control and feel empowered to be so? What is a fair personal budget and where do the sources of funding come from? How can I help you to use your resources to support your chosen life? What do you want to do, what matters to you, what makes your life worth living? Wigan Council offers an excellent example of a comprehensive approach to addressing workforce culture.

2. **Develop place-based health and community networks of support**

‘Place based health’ should be the approach; the concept of People Powered Health together with people shaped pieces offering a persuasive framework.

It helps to think of a borough as a number of geographical areas, localities and neighbourhoods, and ask what residents recognise their neighbourhood to be. In every neighbourhood there are community hubs, cafes, libraries, church halls, community centres.

We need to identify and help develop new community hubs for locating information and advice in places people identify and will go to in their neighbourhoods, including carers. Find out what is already happening in terms of lifestyle and behaviours in a community and use resources creatively to enable new ‘assets’ to evolve.

We must ensure local GP practices are included and linked with community hubs through creative social prescribing, through connecting to targeted prevention services (use community navigators or connectors) and through patient participation and involvement.

And we should use targeted prevention tools such as the evidence-based Health and Wellbeing Checks, as used in Stockport, to identify need.

Links must be made between the formal healthcare system and informal, voluntary and community sector activities happening in local communities. Approaches described as ‘more than medicine’ can give people skills and confidence, working on the social fabric of communities to improve health and wellbeing.
The new approach shifts focus from organisations to places encompassing the wider determinants of health beyond clinical symptoms.

For those unable to access the offer, we must develop a virtual, digital information service and offer enhanced and supported access to it. We should seek to use social media to enable others to be informed.

We can help prepare neighbourhoods to be dementia-friendly communities by taking on the messages of Greater Manchester’s Ambition for Ageing, for example.

We should use public health promotion services as an asset to support education, lifestyle, behaviour change, develop peer support and expert patients, develop links to targeted prevention services and the new multi-speciality community teams.

And crucially, we must ensure strong links are made between the primary care services and the new MCPs or Integrated Neighbourhood new care model teams.

3. Promote health as a social movement

Internal reorganisation won’t be enough; we need to take notice of the empowered community voice to stimulate ‘social movements for health’.

In order to do this, existing community champions and ambassadors need to be identified. By enabling and encouraging others to come forward, we can creatively grow volunteering.

We should ask what social movements are already happening and seek to make connections to health and care. For example, connect arts, leisure and community issues such as transport or energy to health.

Health as a social movement can tap into the inherent compassion in a community, raising awareness of isolation, loneliness and anxiety.

Loneliness is a key issue impacting significantly upon the health and wellbeing of many citizens. There is significant evidence that older people are profoundly affected by loneliness in our communities, but we believe it is an issue that affects all ages, and has a high cost not only to those experiencing it, but also to wider communities who miss out on the knowledge, kinship, skills and assets of so many people.

We can generate a social movement by creating neighbourhood steering groups and identifying those who can advise and enable action. By holding community conversations, we can highlight the levels of hidden distress in the neighbourhood and ask the question ‘do you want to live in a kinder community’?

“There is no power for change greater than a community discovering what it cares about.”

Margaret Wheatley

The enabling role of public services should be emphasised, and we should seek to grow a spider’s web of connections, spreading out from neighbourhoods to cover a borough. Consider using startup funding, participatory budgeting and timebanking to develop interest and incentive.

Intergenerational connections can be powerful. We should involve wider organisations in a system-wide approach - housing, VCS, fire service, public health, businesses, private providers of care and support and faith groups from all persuasions.
4. Commission differently

We must seriously question the current commissioning model and not be afraid to ask if it is fit for purpose. The Voluntary and Community Sector has a lot to offer and we could be using it more effectively.

In Stockport, we were not afraid to decommission 70 VCS organisations on the same day, in order to generate a new collaborative approach, using Alliance Contracts, working to a common vision and outcomes, in contracts which stress trust and integrity. Alliancing redefines relationships; it’s about alignment around a common vision, trust and working collaboratively to shared outcomes; together the sector is more than the sum of its parts.

Resources need to be used more efficiently; we should seek to reduce silo working and duplication. We must see decommissioning as a positive step and use recommissioning to achieve common outcomes.10

Last word: Time to be brave and take people with us

The approach recognises that what is needed is top-down leadership and the permission to change culture, staff to be empowered to question and change, and the encouragement and heeding of ‘outside in change’.

The barriers (e.g. cultural, policy, resources, perception of risk, who holds decision-making, investment in the current model) need to be recognised and understood. Disruption is likely needed, but not chaos.

Innovation must address both the head and the heart - to inspire and motivate through persuasive narratives and stories. In theory, change of scale happens through developing a core of passionate champions which expands to those more reticent, before finally reaching the watershed where those come on board who were resistors when they see everyone else has.

“Never doubt that a small group of thoughtful citizens can change the world, indeed it’s the only thing that ever has”

Margaret Mead

ENDNOTES

1. Realising the Value. www.nesta.org.uk/project/realising-value
9. www.halliances.co.uk and www.stockportapa.org.uk
Spreading improvement: how to accelerate and the importance of archetypes

Dr. Jennifer Dixon, Chief Executive, The Health Foundation and Tim Horton, Associate Director, Improvement Insight and Analysis

Adoption versus adaption: Understanding the nature of the spread challenge

By the mid-19th century it had been convincingly demonstrated that handwashing by healthcare staff dramatically reduced patient infections, but only in the 20th century was it mainstream practice. Even in the 21st century best practice is far from universal, as NICE lamented in its 2014 Quality Standard on the subject.

Of course not everything takes two centuries to spread. On the one hand, a study of healthcare interventions from the 1960s to the 1990s found it took an average of 17 years until they became standard care.1

But on the other, some practices go ‘viral’ very quickly. For example, featured in The Health Foundation’s recent Power of People film2 was the Flo’ text messaging app, which enables patients to receive reminders and health tips via their mobile phone. Through a social enterprise – Simple Telehealth – which licenses the package, it has rapidly spread to more than 70 organisations and continues to grow. Another innovation that the Health Foundation has supported, PROMPT – which is a one-day, team-training package to reduce maternal and child morbidity around birth – has within a few years spread across the UK and well beyond.3

There are myriad reasons why proven innovations and improvements can spread at different rates and why demand for them can differ – ranging from their complexity and the cost and effort of implementation, to the nature of their evidence base and the persuasiveness of their advocates. But underpinning many of these issues are the complications of context.

Adoption versus adaption

A basic issue here is conceptual. It is usual to consider innovations as discrete entities that simply need to be adopted elsewhere to have impact. This is akin to thinking of an innovation like a pill that only needs to be taken to have its effect. Under this thinking, the main issue to facilitate spread is to motivate staff to take the ‘pill’ – i.e. to copy and implement the exact same innovation – and to consider which factors best increase that motivation. For simplicity, let’s call this a copy-and-paste ‘adoption’ view of the world.

But to continue the analogy, we now know that the impact of a pill can differ according to not just the age, sex and weight of an individual but also their genome. In other words, ‘context’ – the environment in which the innovation or intervention is meant to operate – matters. In healthcare many factors can make the environment helpful or hostile to the implementation of new ideas or interventions.4 And what is more, to be successful an intervention may need to be adapted to the context in which it is implemented, or the context itself can change the intervention. Let’s call this the ‘adaption’ view of the world.
The adoption view is relatively simple. It may work for some families of innovations, for example the simple, possibly intuitive, often technology-based and which don’t rely on too many people to change behaviour or too much extra investment beyond the cost of the thing itself. For example, a new bit of diagnostic kit, or some kinds of app. Those with a simple adoption orientation may favour simpler motivators – external ‘push’ levers and nudges to motivate healthcare staff or patients to do what seems absolutely obvious, such as more information, mandated guidance, targets, financial incentives and regulation. This worldview also resonates with the drive to ‘standardise’ key aspects of care.

The adaption view of the world, by contrast, is more complicated. Some families of innovations are complex, may not be discrete, must be adapted to the local context and rely on different staff groups and patients to develop them. For example, innovations to improve the flow or safety of patients along a clinical pathway. As we see with many of the projects the Health Foundation funds, this work is often a long, hard grind, requiring intensity of local effort that does not tail off after a few months. Because of this, those with an adaptation orientation may favour ongoing ‘pull’ factors internal to the provider to clear the obstacles for staff and patients to maintain energy and focus constantly to design and deliver. These factors may be many, more diffuse and more local, such as leadership and trust, which allows autonomy and risk-taking to adapt interventions over time; a collaborative working culture if many staff groups are involved in designing and making changes; and rapid feedback and learning loops relying on continuous assessment along with the space for intelligent course correction. The ‘adaptors’ will argue that spreading best practice is much more complex than a simple concept of ‘standardisation’.

Of course these are overly simple twin archetypes, roughly caricatured as authoritarians versus free thinkers, pragmatists versus idealists, rules versus trust or mechanistic versus organic modes of organisational behaviour. The truth is that both approaches are probably needed in most cases, but in proportions we don’t yet know enough about. At present we are shooting in the dark when trying to spread innovation because we are still treating it as a pill to be taken everywhere.

What is now needed is a more intelligent typology of innovation, host context and motivators – and even more intelligent analysis as to their interaction and impact. Only then will we be able to chart a speedier course to spreading innovation and improvement.

**Where do we go from here?**

All this sounds complicated, and to the pragmatic (who just want a handbook, and now) possibly indulgent; after all, the quick fix is always the sharp nudge. In the immediate term, some important insights from David Albury at the Innovation Unit might help.

First, supported interacting communities of innovators and potential adopters/adapters can help develop and spread innovation and good practice. Such communities are structured, facilitated and supported to use disciplined methods to develop, codify and adapt innovations. This is exactly the kind of approach we will be looking at in our Improvement Labs, which will bring people together to make progress on complex health challenges – part of the ‘Q’ initiative that the Health Foundation is developing with NHS England.

Second, mobilising ‘demand pull’ through movement building. This requires building a compelling case for change alongside a vision that inspires people, as well as developing and empowering wide coalitions to call for change.

Third, creating an ‘enabling ecosystem’ for spread, including a culture and leadership that encourages experimentation; investment and infrastructure to support spread; incentives and rewards for adoption and adaption; and an enabling policy environment that allows local freedoms.
Try all this in an environment of austerity, when ‘grip’ is in the ascendancy? But that is the task now at hand, for the goal of £22 billion efficiency savings will remain no more than wishful thinking if innovations and best practice stay locked in their site of origin. And ‘first base’ must be to understand better the nature of the spread challenge.

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We’re all citizen scientists now: Making people powered health a reality

Bruce Hellman, CEO and Co-Founder, uMotif

Shop online? Watch movies online? Book your flights online? Keep in touch with friends online? Manage your health online? If you’re like most people, you’ll have answered ‘yes’ to four of those questions – but probably not to the last – and arguably most important one. But change is happening, that will soon make digital health management normal, expected and demanded by each of us as citizens and patients.

During the last three years at uMotif, we’ve been working with incredible clinicians, academics, patients and patient groups across 14 clinical conditions in the UK, USA and Australia. We’ve been building, testing and refining our platform for digital health management. This work has proven to us that there is huge demand and potential for digital technology to empower and engage people in self-management and enhancement of their care.

As with any other industries, there are significant improvements when services are centred around people; where we have the tools to do more ourselves. This digitisation of healthcare is happening right now. No longer are nurses, doctors, carers and – most importantly – patients, happy with the status quo. A status quo when too many patients are discharged with too little information or support. At best, being provided with an impersonal photocopied information leaflet, and in most cases given no tools to support health management, and recovery, or enhance follow-up appointments.

The exciting news is that a bright new digitally-powered future is coming. A future where technology enhances human-to-human interactions. But we want to make this happen sooner; to improve people’s quality of life and treatment outcomes – giving people a better experience of care, and making health systems more efficient. We believe that to make this happen quicker, we need to engage each of us – the public - harnessing our collective desire for better healthcare and opportunities to self-manage.

So with backing from the Nesta and Cabinet Office’s Centre for Social Action Innovation Fund, we’ve launched a public-facing citizen science project – 100 for Parkinson’s.

The project - open to all adults with a smartphone – engages people in self-management of their health. For 100 days, participants track their health using the uMotif Apple or Android smartphone app, and donate their data for research. We hope you will sign up too!
This type of population-level, citizen-science approach relies on three core principles that are key to encourage and drive the shift in healthcare:

• Clear benefit for the individual taking part.
• The opportunity to contribute to something larger than as an individual.
• The data contributed is made to work as hard as possible.

Firstly, there has to be a clear ‘what’s in it for me?’ proposition for each person. People need to understand that there is value for them in taking greater control and ownership of their health. So by taking part in 100 for Parkinson’s, each of us will get a better understanding of what’s affecting our health – by tracking what’s important to us.

There needs to be a clear value proposition to the individual, and we’re already seeing some great examples of how people are improving their quality of life by taking part:

"I would say; give it a go, it’s not difficult and it really makes you think about your day. You can look at the data and see when your best times are and make the most of it. I think you have to look at what you can do, rather than what you can’t and challenge yourself."

Many people have also told us that they want to be part of something big, and make an impact on research. People are motivated and enthused by the opportunity to take part in large-scale projects; being part of a significant new movement; and helping with ground-breaking research.

We’ve seen how people want to get involved in research and so-called ‘citizen science’ projects including Zooniverse, the Apple ResearchKit studies in the USA (mPower, My Heart Counts) and also our sister project in the UK focusing on arthritis and the weather: Cloudy with a Chance of Pain.

These studies and projects have quickly recruited thousands of people, contributing millions of datapoints. This level of data and participation is unheard of in health engagement or research.

Our strong belief is that people are more motivated and excited when they know they are part of something large, global and forward-looking. So we decided early on that 100 for Parkinson’s should be a UK-led but global project, open to as many people as possible. Our aspiration is to recruit over 20,000 in the UK and up to 100,000 globally to take part – each tracking for 100 days.

These ten million person-days are expected generate over 100 million person-generated symptom and health data points!

Certainly big and exciting!

Finally, the third principle is that the data people enter and capture should work as hard as possible to generate meaningful impact. That means that the data should available for free for academic researchers across the world to use, build on and combine with other data sets, to generate new knowledge.

The 100 data set will be anonymised and made available via the Sage Bionetworks ‘Synapse’ platform to accredited researchers, who will have to submit a research request to a Data Access Committee, chaired by the Cure Parkinson’s Trust. In this way we can ensure that the data is used to its maximum potential to unlock new knowledge and deliver positive impacts for patient care, now and long into the future.
So what new knowledge might we gain?

The dataset will include people with and without Parkinson’s, and with a range of other health conditions. From this rich dataset we could gain a better understanding of how daily life affects how well we feel we sleep each night; and also how poor sleep quality affects us the next day.

The sorts of questions that most people have, but for the first time could be answered through citizen science and large data sets. For those with Parkinson’s, there could be information around how people’s cognitive and motor functions are affected by their daily habits and adherence to their medication regime.

Again, these are the sorts of questions that people have been pondering for decades. Now we can go from trying to answer those questions alone, to harnessing the power of smartphones at a population level to answer them together.

Finally, we’ll learn more about how we can use the advances in technology to unlock this new knowledge. How a project should be structured to appeal to the people taking part and how we ensure that they remain engaged and feel a sense of ownership about the problem that they’re looking to solve.

So change is happening, helping healthcare to evolve and challenging the public to do more themselves to improve health. We hope that you’ll register and take part in 100 for Parkinson’s; learning more about your health, being part of a global movement, and making a difference for research.

Welcome on board!

www.100forParkinsons.com/takepart
Sleeping for People Powered Health

Dr. Sophie Bostock, Sleep Evangelist, Big Health (Sleepio)

My take home message from the Future of People Powered Health conference was that the balance of power and responsibility for health is undergoing a seismic shift.

When I applied to medical school, I wanted to make a difference. My ambition was to become one of the elite hospital specialists who could use the secret ‘black box’ of medicine to help people who were unable to help themselves (that, and to join George Clooney on the cast of ER).

A few decades later, and my perception of high impact healthcare has turned on its head. Chronic diseases cannot be solved by a quick trip to the doctor. Improving health at scale means getting better at prevention.

Proactive versus reactive health

To sustain a publicly-funded healthcare system we need a step-change in disease prevention. Most of us need to adopt healthier lifestyles, but few people have the capability to transform both their environment and the habits of a lifetime on their own.

Policymakers have the responsibility to help create the conditions that make being active, eating healthily, and living smoke-free the easy choices. But when demand for acute medical care is already stretching the NHS, who can provide the daily, moment-to-moment support which most of us need to maintain difficult changes in health behaviours?

We saw great examples at Nesta’s conference which showed that individuals, families and their communities can help themselves, and each other. The question is how to scale up these great examples.

How do you put the ‘power’ behind People Powered Health?

I’d argue that technology and a good night’s sleep give us some very valuable tools. I work for Big Health, the company behind Sleepio, an evidence-based digital sleep improvement programme.

Sleeping for self control

If you’ve ever had a bad night’s sleep (and you’d be very unusual if you hadn’t), you’ll be familiar with resulting lack of energy, irritability and poor concentration.

Many of us catch up on our ‘sleep debt’ at weekends, but more than one in ten adults suffer from chronic insomnia, debilitating sleep problems which persist for months, and often years.

When we can’t sleep our emotions go haywire. Small problems seem insurmountable, we have less self-control and we find it harder to look after ourselves. Insomnia is linked to increased risks of high blood pressure, weight gain, diabetes, weaker immune defences, cognitive decline, and depression. Insomnia sufferers typically have healthcare costs 60-75 per cent higher than good sleepers.
A digital solution to scaling effective therapy

Prescriptions for sleeping pills have soared 126 per cent in the last ten years, despite the fact that pills are not a cure, and harmful side effects are common.

Cognitive Behavioural Therapy for Insomnia, or CBT-I, is a toolkit of techniques which tackle both the negative thought patterns and unhelpful behaviours that make insomnia persist. Regrettably, hardly anyone in the NHS is trained - or has time - to deliver it.

Big Health’s co-founder, Peter Hames, came up with the idea for Sleepio after developing insomnia. He discovered a CBT-I self-help book written by Prof Colin Espie, a sleep expert now based at the University of Oxford. The CBT-I techniques were so effective that Peter was cured within six weeks.

In his newly energised state, Peter convinced Colin to transform CBT-I into a more accessible, digital version. They created Sleepio to empower poor sleepers to learn CBT-I techniques at a time and place that suits them.

Sleeping with The Prof

The star of Sleepio is The Prof, your virtual sleep expert, and his narcoleptic dog, Pavlov. The Prof teaches you to use a range of interactive tools and techniques, such as the sleep diary. If you have a wearable device like a Fitbit, Sleepio automatically imports the data to make it even easier to track your progress.

The mobile platform means that The Prof can be there at whatever time of day or night you want help. He enables poor sleepers to build a personalised 24-hour schedule that helps them plan what to do, when, and sends text reminders and notifications to help them stay on track.

In a placebo randomised controlled trial, we showed that Sleepio was as effective as face-to-face therapy for addressing insomnia.1 We’ve since demonstrated benefits for mental health and productivity at work.2,3

Digitally enabled health improvement

Technology gives us the capacity to deliver help at times that you feel most vulnerable, with a flexibility that would be impossible for a medical professional.

But digital solutions don’t need to compete with professionals – one can enhance the other. In Manchester, Self Help Services have been providing Sleepio to patients with anxiety and depression. Sleepio plus a brief supportive phonecall from a wellbeing practitioner each week resulted in over 65 per cent of patients moving to recovery, versus a national average for psychological therapy providers of 45 per cent.4 Digital self-help can be used to free up professionals’ time to focus on individuals who are less able to self-manage.

Sleepio is one of a growing number of ‘digital medicines’ which mimic the best qualities of drugs: accessible, scalable, affordable, evidence-based and yet with greater personalisation and without harmful side effects.

In the future, advances in machine learning promise an almost infinite ability to apply individual habits and preferences to deliver an experience optimised for the individual.

Sleepio is an example of patient experience leading to an inexpensive solution to a common health problem, powered by technology and clinical expertise.

Is the NHS ready for us? We’ve been awarded an NHS Innovation Accelerator Fellowship which we hope will help us demonstrate that digital medicine can not only improve patient outcomes, but reduce costs and improve efficiencies within the NHS.
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following a cardiac arrest, a patient’s chances of survival fall by 10 per cent for each minute that they don’t have good quality resuscitation or defibrillation. Survival out of hospital is approximately 8 per cent in the UK, but in areas like airports where defibrillators and trained first aiders are plentiful, survival can be nearer 80 per cent. We want to get this kind of survival across the country, but since such resources would be huge, a different solution was necessary.

**GoodSAM** is a mobile app and web platform that alerts trained responders (e.g. off-duty doctors, nurses and paramedics) to life threatening emergencies close by. It can be used independently via an alerter system but, thanks to Nesta, it also integrates with the emergency services computer aided dispatch systems. This means that when someone dials 999 and reports a patient as ‘not conscious and not breathing’, in addition to dispatching an ambulance, three nearby responders are also alerted. By arriving a few minutes before the ambulance and undertaking high quality resuscitation this will improve survival from cardiac arrest.

The system is live around the world and being used in many countries including Australia, India, the US, other parts of Europe and South Africa. Organisations (such as St John, Red Cross, the police, fire services, hospitals) can register as organisations on the platform and approve their staff as responders. Thanks to Nesta, the system is integrated with the London Ambulance Service and is being triggered around 20-30 times each day. We have over 8,000 responders in the UK and the platform is now rolling out to other regional ambulance services, and the system is already saving lives.

GoodSAM is a highly innovative group – we have recently released two new features:

**Emergiscope** which enables video transmission from the scene to other responders/the ambulance control centre. This means resources can in the future be more appropriately directed.

**Life Detector** – by simply placing your mobile phone on a patient’s chest or back, this tool displays record heart and breathing rate. This is much easier than asking the public to check for a pulse.

GoodSAM is revolutionising the immediate management of life-threatening conditions providing trained people prior to ambulance service arrival. With Nesta’s help we plan to grow the GoodSAM community across the UK.
Data driven health

Professor Deborah Estrin, Cornell Tech and co-Founder, Open mHealth

Cornell Tech and Open mHealth

Data is critical. Not for its own sake, but to simultaneously inform three feedback loops of health:

1. **Self-care.** This is often a matter of helping people answer the question ‘what works for me?’ Data can make visible what one might not otherwise be able to perceive. For example, it is not straightforward to confidently detect 10 per cent less pain, and so know to stick with a new behavior or therapy. Or that better sleep hygiene really does give one better quality of life.

2. **Clinical care,** for example for drug and treatment plan adaptation. The statistical clumping of traditional research studies hides important variability. As my colleague Curtis Cole points out, once you are on more than two medicines, there is no evidence base.

3. **Evidence.** Today, we can affordably and scalably generate evidence where there has never been before by engaging tools such as ResearchKit, and Research Stack for Android users.

What type of data are we talking about?

We can do a tremendous amount with what is already captured. We still need traditional clinical data, available from large populations of patients, such as insurance claims data, Electronic Health Records, and suchlike. However, the new opportunity is in the individual scale ‘small data’ that is captured and analysable from our mobiles and other online digital interactions.

The richest current example is activity and location, which tells much more than just if you have reached a targeted ten-thousand steps that day. Trends like shifts in location patterns over time (what time you leave for work, hours spent out of the house on weekends) can provide early signs of relapse, diverse side effects, or an indication that the patient really is improving steadily.

We can add to this our interaction in and through other applications, whether it’s detailed typing patterns or detection of laboured breathing or pressured speech, as well as the digital traces of other kinds such as what we buy, the language we use, and the self-medication we do through excessive Netflix binging. These are all sources of near continuous real-time signals that can close both behavioural feedback loops and clinical ones.

Some things we cannot detect and need to ask the patient their perception. Even there we can ask in new and personalised ways rather than generic text-based questions.

Finally, new and sophisticated wearables will, over time, offer up rich physiological signals and a convenient interface.

Making sense of the data

All these raw data are full of noise and confounding influences; they are useless without the statistical techniques and models to interpret them. To make this raw data actionable, we have to move up the information food chain to summarise, filter and fuse these data into measures of patient function. Establishing those analytic techniques means undertaking clinically anchored studies which to develop and iterate across conditions and individuals.
The key to this is to work together, collaboratively sharing data and evolving analytics. This requires a collaborative community, and the open architecture that supports it. A key role of Open mHealth is to be such an infrastructure. Just as with the internet and Web, modular open architectures can float all the boats higher and clearly don’t in any way interfere with commercialisation, as evidenced by the growth of the companies such as Google.

**Focus on patient need, not institutional convenience**

There is one final piece of the puzzle. At a meeting recently, someone asked me why, with all the years of work already put into clinical informatics, did I still have such great expectations for this area. My response was that we have a new shot at transformation because of the growing focus on creative, adaptive, smart technologies designed for patients to solve patients’ problems rather than starting with a mindset that we are solving clinicians’ problems.

Pulling this together, we need data, made meaningful, for real people. For example, GPS handheld devices existed for years, but they were mostly used by the military and some nerds. Now most of us use Google maps - an app that is informed by our small, personal, location data. We can see health data make the same transition in coming years.
The health thread: People Powered Health in context

Dr. David Halpern, Chief Executive, Behavioural Insights Team

One of the most fascinating and important areas in life is surely the fine line between wanting to help, and being wary of, those around us. It’s a tension woven deeply into policy, and into our humanity.

I had one of those afternoons on the day of the People Powered Health event where an accident of meetings and agendas seemed to tell this story especially well. I found myself on a panel alongside Edwin Fisher. Edwin works on peer-to-peer support groups and gave examples of groups from across the world, including China, the US and Latin America where people help each other to preserve health on their terms. Holt-Lunstad et al’s famous (2010) meta-analysis also featured, that social isolation has negative impacts on life-expectancy equivalent to smoking 15 cigarettes a day.

We considered how human-centric principles should be baked into the design of health services’ modus operandi. ProjectRED in Boston, for example, uses ipads to explain better to those leaving hospital how to manage their medication and conditions – allowing more time and detail than a busy clinician may have. Those who experience this programme have reduced readmission rates – down by 30 per cent in the 28 days after discharge. We also talked about how clinicians are humans too: hence how patient charts can be designed to reduce clinical errors (Dom King’s wonderful trial), or how we can help clinicians to raise sensitive lifestyle change issues with their patients, such as around losing weight, exercising more, or moving to more suitable accommodation later in life. In trials, such as that of Susan Jebb in Oxford, where GP’s tried specific prompts to encourage patients to try specific weight loss programmes (with great results, incidentally), less than one in 100 patients felt this was uncomfortable or inappropriate (asked independently of the GP). Strange then, that clinicians get so little training in how to raise such issues with their patients.

With an obesity strategy due out in a few weeks – and Britain being the most overweight nation in Europe – obesity and lifestyle evidently came up quite a few times at the People Powered Health event, not least in a forthright speech from Simon Stevens, the Head of the NHS. It also came up in the discussion on behaviour change and the future of health. Peer-to-peer networks and social action need to move upstream to address the causes of ill-health, not just support existing patients to cope better with conditions. With respect to obesity, this will surely involve seeking to reshape the obesogenic environment which in turn shapes us, literally in this case. For example, consumers in the UK are not particularly loyal to supermarkets, which in turn fiercely compete with other. Imagine a group of health-minded consumers, armed with a Wansink-style checklist scoring the healthy-promoting vs obesogenic profile of local supermarkets – covering what’s on promotion, at the end-of-aisles, aimed at kids etc. If such action encourages just a small minority of consumers to switch to the healthier alternatives among their local supermarkets, it will prompt restocking, reformulation and marketing decisions to help us all be healthier.
But the tide of the day was not all in one optimistic direction. At breakfast I’d met with a leading nutritionist to discuss the rise of obesity in other countries, noting that economic growth of 10 per cent in developing nations is associated with reduced childhood stunting of 6 per cent, but also increased maternal obesity of 7 per cent. It’s a reflection of the high calorie, but often nutrient-poor diets that are spreading across many countries; an echo of our own recent histories in the UK and USA (he highlighted just how fast the USA went from obesity rates of circa 10 per cent in the post-war boom to circa 50 per cent). But we shouldn’t attribute these statistics just to a wave of Anglo-Saxon junk food. Many culturally specific diets have poor underlying nutrient profiles. You see a glimpse of this in the ethnic differences in lifestyle diseases even within Western countries, as prosperity enables different groups to indulge their culinary preferences: Sicilians can choose healthy Mediterranean diets every day; Eastern Europeans can have endless red meat; and South Asians can indulge a taste for sweet and carb rich meals.

Lunch was combined with a meeting on health data and the thorny question of how to balance the power of data to unlock so many questions about what treatments work for who and when, with the public understandable desire for privacy and security. It was an issue wrestled with by the Caldicott Review and that rumbles on, not least how to explain to patients the sheer complexity of the modern NHS while asking them how they want their data to be used within it. Britons all know they are soon to be asked about if they want to stay in Europe, an obviously big question, but most will also soon be asked how they want their health data to be used. It is a question that could be as least as impactful on the lives and longevity of their children and grandchildren than that of our fate in Europe. Behavioural insights can help shape such questions, but ultimately they rest substantially on how we balance our desire to help, versus our distrust of, others.

After the session with Edwin, my day ended with a seemingly very different discussion in the Lords, hosted by Lord Lindsay and chaired by Professor Ragnar Lofstedt from the King’s Centre for Risk Management. It was a small but impressive group, including figures such as Paul Slovic famous for his work showing how people typically respond much more strongly to a single death or image, than to reports of thousands dying. He noted, for example, how donations for Syria that had flat-lined as the death toll had climbed through the 100,000s, but shot up 17-fold in response to that tragic child on a beach. It’s a statistic that itself seems to encapsulate something deep about the human condition, and how we evolved to think about those around us (our feelings don’t do numbers…), sometimes for good, and sometimes not – cause for despair, or hope?

But let me conclude on a really interesting, and I thought uplifting, result that was presented at the Lords event. Molly Crockett, a researcher at Oxford described an experiment comparing how much people would pay, or be prepared to profit from, getting an electric shock (what is it with psychologists?), versus a stranger getting the same shock. It turns out to be a rather elegant, if painful, test of an economic versus social psychological worldview. Most economic models would surely see this as a ‘no-brainer’: of course subjects would rather profit from a small pain administered to someone else than to themselves. But no: it turns out subjects strongly prefer profit from pain to themselves, not to others. Indeed, putting subjects into a brain scanner while the choices were made showed that there was no activity in brain’s pleasure centres associated with gain at another’s expense (unless, by the way, the gain flowed to a good cause – that’s a whole other conversation).

We have a deep desire to help and support each other, and certainly not to profit from the pain of others. Yet, as the refugee donations example illustrates, as that link becomes more abstract, this desire can easily get lost. It is a key challenge for those in shaping healthcare, whether patients, relatives or clinicians, to build a system that can harness and foster this capacity to help ourselves and each other – of ‘realising the value’ that our common humanity and connection can bring.
Social support, peer support, and strategic perspectives on health behavior

Edwin B. Fisher, Ph.D., Global Director, Peers for Progress and Professor, Department of Health Behavior, Gillings School of Global Public Health, University of North Carolina – Chapel Hill

My comments address three general topics, the fundamental importance of social support in human behaviour and health, the strategic roles of peer support in prevention and health care, and some more general thoughts about behaviour change and health.

Social support as fundamental

Psychologists used to think that the basis for the connection between the infant and the mother was that the mother was the source of milk food. Harlow, as depicted in Figure 1, showed that, except when it’s hungry, the infant monkey went to the relatively warm, terrycloth mother on the left rather than the wire surrogate mother that was the source of milk. From this and a number of other studies, Harlow made the point that ‘contact comfort’, as he put it, is a powerful and fundamental characteristic of human behavior. A vast amount of research shows that having someone you can call on for a favour, with whom you can discuss personal matters, and who knows you and understands you helps you do better in all sorts of areas, from parenting adolescent children to aging well. The risk of death associated with social isolation, that is the lack of social contact, is comparable to that from smoking cigarettes.

We sometimes think of social support or peer-support programmes as frivolous influences with marginal benefit. The reality, however, is that these can be very powerful in harnessing the fundamental influence of social support. If we take them seriously, they can have real impacts in prevention and care.

Strengths of peer support

Harnessing social support, interventions by community health workers, lay health advisers, promotores de salud, ‘Lady Health Workers’ in Pakistan, ‘Village Health Volunteers’ in Thailand, or peer supporters by many other names, entail non-professionals helping each other lead healthy lives.
They encourage prevention and disease management, provide emotional support and encouragement, help people get the clinical care they need or find resources in their communities, and provide ongoing support for the lifelong tasks of avoiding disease or managing those we acquire. A growing literature shows peer support is effective in prevention as well as disease management, improving quality of life, encouraging ‘the right treatment at the right time’, reducing costly, avoidable care, and reducing overall costs. Four specific strengths of peer support are especially pertinent to ‘bending the curve’ of health care to achieve higher quality care that our societies can afford. Peer support:

1. **Reaches populations**, e.g., 85 per cent of 3,787 low-income, Latino adults with diabetes in a community clinic in Chicago.

2. **Reaches and benefits those too often hardly reached**, e.g., reaches 89 per cent of low-income mothers of children hospitalised for asthma; in diabetes, benefits are greater among those initially low on medication adherence or health literacy.

3. **Reduces psychological/emotional distress**, even when not designed to address these – the medium of peer support seems to provide implicit psychological support.

4. **Reduces costly, avoidable care**, e.g., hospitalisations for low-income children with asthma; ‘normalises’ hospitalisation rates among distressed adults with diabetes in Hong Kong.

**General considerations**

What do Copernicus, Darwin, Watson and Crick, and Einstein have in common? The answer: no control groups. Nevertheless, health research and agencies like the Cochrane Collaborative have enshrined the randomised control trial as the ‘gold standard’ for testing interventions. Well suited to testing the efficacy of a pill or a discreet medical procedure, it is poorly suited to testing broad, multidimensional interventions which are highly contingent on their contexts and often recruit those contexts to enhance their impacts. Interestingly, genetics may provide better models. It too entails impacts that are complexly dependent on multiple interacting influences. Figure 2, for example, portrays genetic ‘signatures’ with poor and good prognosis for survival of breast cancer. It is clear that no element of either signature is necessary or sufficient for survival or death. Rather, complex arrays of elements alter the probability of survival. Similarly, in communities and the settings of individuals’ lives, complex arrays of elements alter the likelihood of healthy or unhealthy behaviours. Studying those elements in their complexity, instead of trying to isolate them by randomisation, may be a valuable strategy.

From the variety of interventions and considerations presented during the day, two generalisations occurred to me as being of value:

1. **Context trumps content**. The programme presented from Stockport was fascinating in this regard. It did not focus on the content of collaborating organisations’ programmes. Rather, it focused on linkage among them. Within broad limits, the leaders in Stockport almost didn’t care what the interventions entailed as long as linkages among them were improved. A context of linked and coordinated services may provide greater benefit than the content of any one service.
2. **Structure trumps messaging.** If we don’t have structures in place, if we don’t have choices realistically available to people, if we don’t have incentives in place to encourage the behaviours we want to encourage, then perfecting messaging is unlikely to have great effect. On the contrary, salient, available, reinforcing healthy choices attractive healthy alternatives will tend to command individuals’ choices with minimal messaging to encourage them. Many years ago, I asked an advertising executive to identify the key ingredient of a successful advertising campaign. His wise answer: “The product.”

The range of ideas and programmes and approaches presented during the meetings suggested to me the shift in emphases portrayed in Figure 3. To explain a few of these, the old model on the left sees illness as a micro, discreet event at the level of the individual. In contrast, the new model on the right sees health as a macro, complex and social set of events. Accordingly, the two models go from illness and the focus on clinical indicators to patterns of living in the focus on quality of life in a community or population. In community and people-powered movements to enhance health, we go to from data on individual events like a blood pressure reading to mass data – either a mass of data points across an individual’s experience or across many individuals. We go from looking at the individual as the site of disease and as the locus of change to the individual as socially situated; as in Hillary Clinton’s book title, *It takes a village*. In going from micro to molar effects, we are not so interested in what the individual with diabetes eats today but in what she or he eats over 30 or 40 years of living with diabetes. Instead of looking for a unique and dominant effect of a single intervention, we recognise that interactions among influences are the rule and seek to understand the complexity of those interactions. From a statistical perspective, the world is not orthogonal. Finally, we go from seeing motivation and energy as based in the individual to seeing energy as emergent among individuals and from communities. More generally, instead of putting responsibility – and too often blame – on the individual to guide their own health, we seek to understand how communities enable individuals to lead healthy lives and look for ways to help communities do that better.

**Figure 3: Weltanschauugen – Two world views**

<table>
<thead>
<tr>
<th>Illness as Micro, Discrete, Individual</th>
<th>Health as Macro, Complex, Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illness – Focus on clinical indicators</td>
<td>Patterns of living – Focus on quality of life</td>
</tr>
<tr>
<td>Technical challenges</td>
<td>Adaptive challenges</td>
</tr>
<tr>
<td>Key relationship: Doctor – Patient</td>
<td>Key relationships: Community – People</td>
</tr>
<tr>
<td></td>
<td><em>People Powered</em></td>
</tr>
<tr>
<td>Focus on individual events and data from them, eg., BP reading</td>
<td>Mass data</td>
</tr>
<tr>
<td>Individual as focus of disease and change, able to be isolated</td>
<td>• Many events within individual over time</td>
</tr>
<tr>
<td>Micro effects</td>
<td>• Many events over many individuals</td>
</tr>
<tr>
<td>Main effects, dominant effects of individual agents</td>
<td>Individuals as social, situated</td>
</tr>
<tr>
<td>Energy from the individual</td>
<td><em>It takes a village</em></td>
</tr>
<tr>
<td></td>
<td>Molar effects and patterns</td>
</tr>
<tr>
<td></td>
<td>Complexity, interactions among influences – the world is not orthogonal</td>
</tr>
<tr>
<td></td>
<td>Energy emerges from the community</td>
</tr>
</tbody>
</table>
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