Behavioural insights and the NHS: untapped potential

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This report follows a seminar held at the Health Foundation on 26 March 2015: 'Behavioural insights and the NHS: untapped potential'. The report provides a brief summary of the discussion that took place on the day. It sets out the importance of behavioural insights and some potential avenues to explore. The Health Foundation would like to thank all participants for making the seminar such a success.

For further information and updates on the Health Foundation's work on behavioural insights, please contact **darshan.patel@health.org.uk**

Behavioural insights

An introduction

'Behavioural insight' combines lessons from behavioural economics, psychology and neuroscience to provide a better understanding of how people behave in everyday life. This is based on the theory that we make decisions in one of two ways – 'rational' decisions (in which information is analysed and rational decisions made accordingly) and 'automatic' decisions (decisions that are directed by the environment, without making conscious choices). Automatic decisions can appear irrational and inconsistent, and may not work toward our own (rational) goals. **Behavioural insight is an approach to understanding and changing people's behaviour by analysing, improving, designing and offering free choices, so that their automatic choices are more likely to produce helpful outcomes that benefit individuals themselves and society generally.**

As behavioural insights give a good understanding of how people behave in real-life situations, they are useful in designing effective policy and implementation. They are being used across government, including the Departments of Energy and Climate Change and Transport, and HM Revenue and Customs, with learning from the Behavioural Insights Team now being shared in a unit established in the White House.

Behavioural insights have obvious benefits: they are often very **low-cost** (it is just as cheap to write a good letter as it is to write a bad one), **scalable** (they do not require extensive system reorganisation or training), and **light touch** (they impose only a limited burden on people who do not wish to change their behaviour). There are some challenges – notably that interventions take place in a dynamic and context-specific environment, so any changes to the environment will impact unpredictably on people's responses – but the potential benefits are myriad.

Behavioural insights in the health sphere

The NHS is currently under unprecedented strain, and is facing a funding gap of £28–30 billion between 2015 and 2020. To date, there has been relatively little funding allocated to researching the application of behavioural approaches to health services, despite their potential for increasing efficiency, reducing waste and improving health outcomes. Behavioural-insight interventions tend to have been ad hoc, and it is currently not possible to say to what extent they have been applied across the NHS. Identifying areas for intervention, applying behavioural insights and evaluating the long-term impact on health outcomes has a potential role to play in much-needed increases in efficiency and patient care.

Opportunities for change

An essential part of any work to identify areas in which behavioural insights could be of benefit is to involve frontline caregivers, health professionals, health-service leaders and patients from the start, discussing ways in which they think that services could be improved, and giving a sense of ownership over the process.

There are many potentially fruitful areas in which to use behavioural insight to improve health and health-service efficiency, either by retrofitting existing processes or by designing completely new services most effectively.

Presentation

The way in which options are presented (the 'choice architecture') has a significant impact on the choices we make – and there are many examples of ways in which **simple tweaks to the presentation of choices could improve health outcomes**.

- A trial in Nottingham provided feedback to doctors of the cost of a commonly used discretionary lab test. This prompt retained clinical freedom, and did not ask doctors to order fewer tests – but the number of tests fell by a third.

- Missed hospital appointments are a serious drain on NHS resources – but the way in which reminders are worded can have a significant impact on attendance. Texts sent by St Bart's Hospital in London that included the information 'not attending costs the NHS £160' reduced missed appointments by a quarter.

- Across England, only around half the population follow up on their invitation to attend an NHS Health Check – and in some areas the rate is much lower. In one of these areas, the invitation letter was shortened and patients were given space to write their own appointment time on the letter (effectively acting as a promise to themselves to attend) – and attendance rose from 29 to 33 per cent.

- The **NHS's IT systems** are a clear opportunity to improve presentation in ways that nudge better choices. Digitalisation is not simply about producing an IT system that looks like the paper chart that preceded it: it can do much more. For example, GPs sit in front of their computers all day, so could the information that they see be presented in ways that are locally relevant, rather than nationally set? IT systems must be designed around user engagement, chiming with the way in which users think and act, rather than trying to force changes to intuitive behaviour.

Optimising defaults

A simple way in which the presentation of infrastructure can facilitate optimal choices is by **changing the default to one that promotes the best outcomes**.

- When prepping for surgery, the default should be to get the patient to the anaesthetic room as soon as possible – any hold-ups can lead to delays at the operating theatre, leading to wasted time and money. Changing the default will increase the number of operations that begin on time, and hence the system will be more efficient.

- Currently, surgeons often ask for bespoke equipment that needs setting out individually. Putting out a standard set of equipment – while still permitting surgeons to add to it as required – could be more efficient.

- In one hospital, changing the requirement to use mouthwash for people on ventilators from opt-in to opt-out increased its use from 60 per cent to 95 per cent.

- Partnership with the commercial sector may be needed to ensure that defaults in equipment are most efficiently set before they even reach the health system. For example, ventilators may be delivered with the default breath size set too high – and this may not be adjusted by the operators, who retain the status quo setting.

Communication

Communication within the NHS is often not optimal – whether interaction between health-care professionals and patients, or between health-care professionals themselves. **Facilitating better communication can improve outcomes.**

- Patients often ask for (and are given) antibiotics inappropriately. A good example of how effective interaction and improved communication can be facilitated is an intervention to reduce antibiotic prescribing for lower respiratory tract infection, which gave online training on the appropriate use of a test for the infection, advice on communication, and provided an interactive patient booklet.

- A hospital designed a dashboard showing the volume of breaths given to patients on ventilators, which indicated with coloured warnings when volumes were too high. This intervention was social (allowing doctors to compare themselves with the performance of others), immediate, and easy to understand – and after three years, the number of patients receiving the correct breath level has continued to rise.

Error

Altering the environment to make it easier to avoid waste and harder to make mistakes is a further area for research and intervention. **Failure to follow clinical guidelines** is a common cause of error, and behavioural insights can nudge doctors to do what they agree is best, and which they genuinely intend to do – but often do not achieve.

- Empowering health professionals to deal with patients' distress can help to reduce prescribing against guidelines – for example, offering alternative support mechanisms for patients, and providing training for health professionals in handling patient stress.

- Electronic prescribing systems could be adapted to prompt GPs with information if they choose to diverge from the guidelines (this does not require the GP to change the prescription, so retaining the GP's autonomy).

- Context-specific interventions in hospitals can tackle the failure to follow guidelines (such as awareness days, e-learning and screensaver prompts) and have been shown to achieve significant returns on investment.

Demand

All too often, demand for services is higher than necessary – whether through inappropriate use of services or a failure to track individuals efficiently thorough the health system.

- An ongoing trial in Medway is tackling **use of A&E in non-urgent situations** by providing the public with information about what alternatives are available (such as walk-in clinics, including maps) – shifting the emphasis from telling people what they cannot do to what they can do. A letter has also been sent from a trusted local physician that makes the concept of 'emergency' more salient (using examples and photographs). Results of the trial are not yet available. A further trial in Blackpool invested £70,000 to reduce attendance at A&E by focusing on the behaviour of the most needy individual patients and staff (who felt limited in their ability to make decisions) – and this has led to a saving of £3 million.

- The system of **GP/outpatient appointments** is often inefficient. For example, rather than a default of a six-month interval between appointments, a short telephone call could precede the appointment to assess whether a full appointment is required. In addition, patients could be prompted to take pre-booked appointments at times convenient to the NHS – not all would be able to do this, but it would draw on people's goodwill towards the NHS if they are able to do so.

- Behavioural insights can also assist in finding ways to ensure that patients move **swiftly, safely and effectively through the system**, and are discharged from hospital in timely fashion.

    – Patients who have attended A&E for a non-urgent situation tend to be redirected on to other services (such as GPs), rather than having the issue dealt with effectively at their first interaction with the health service.

    – Patients are often repeatedly clerked as they move around a hospital, with little new or relevant information being collected at each stage. This traditional model is inefficient, and could be tackled through better integration and communication.

Self-care

A key way in which to reduce pressure on the NHS is to move patients away from reliance on health professionals and towards greater self-care, particularly using new technology. This is a challenging area in which to operate, as it relies on the patient's own concept of self and on his/her motivation, which is dynamic and hard to influence.

- **Self-monitoring** is essential. This can be greatly enhanced by the use of social networks and peer support (online or in person), and the use of apps and other technology (in which patients must be trained and supported).

- Interactions with health professionals will need to be streamlined – and this can be facilitated through better technology.

- **Non-adherence to treatment** is a major source of waste in the NHS. This is often seen as being solely due to forgetfulness, but there may be other, much more complex, drivers behind the behaviour. Ways around this could greater interaction with pharmacists and smart design of self-monitoring technology, and also through support for patients in other areas of their lives.

- The use of apps in self-monitoring and wellbeing is an area that is currently developing fast – although many apps are not evidence based, so **direction to the best apps is required**.

Sickness absence

Sickness absence among NHS staff is currently 4.26 per cent, far higher than the average in the UK (1.6 per cent for men and 2.6 per cent for women). This is driven by an often high-stress, rigid working environment in which people have little control over their role. Currently, the financial incentives (better pay) and social (less stress, greater autonomy) incentives for NHS staff are for them to leave and to return as temporary staff, rather than staying in post.

- Levels of staff satisfaction should be monitored, and **pressure points for intervention identified**. There is scope for qualitative research at an individual level – how do staff themselves feel about their work (their role, their managers and their working environment), and why do so many leave en masse to become temporary staff?

- Levels of pay are important, particularly at the lower end of the pay scale, but are not the only driver – indeed, a financial incentive offered inappropriately can risk offending or alienating staff. Intrinsic (i.e. internal) incentives – such as leaving work at the end of the day feeling as though they have done a good job – are just as important, and **improved recognition and reward** for staff may be one way to foster this sense of wellbeing.

Making it happen

Some fundamental changes in approach are required to provide the multi-disciplinary, flexible approach that is needed to tap the potential offered by behavioural insight: the research infrastructure and approach (of health practitioners as well as researchers) must be conducive to change.

New teams

Behavioural insights are cross-disciplinary, drawing on psychology and behavioural economics, and the expertise of health professionals and patients themselves should be brought together with **design expertise** to translate theory into practical delivery. Design runs deep throughout behavioural interventions – it cannot be an afterthought.

There is a need for cultural change to facilitate this, as there are organisational difficulties in bringing the arts and sciences together. There are encouraging signs, however – University College London is partnering with Bupa on a new Global Institute for Digital Health Excellence (GLIDHE), which will 'research, create, test and evaluate innovative, commercially sustainable digital tools which promote healthier lifestyles', with 'the intention of reducing global demands on healthcare and improving quality of life'.

New ways of working

Big problems do not always require complex solutions – what is needed is **leadership, and the ability to be flexible,** rather than big budgets.

The challenge is how to create environments in which an intervention can be run, then tweaked to improve it, and then run again. Research grants are currently very rigid, and do not allow for this kind of iterative, flexible change. Opportunities to measure and respond to continuous improvement in the NHS are also limited, although there have been some advances in this area (notable the Friends and Family Test, which is rapid, but has been the cause of some debate).

New approaches to funding

When disciplines are brought together into joint consortia – such as those required to investigate behavioural insights – the topics can be so broad that they do not fall into any clearly delineated silo of funding. In addition, robust trials also need not be a lengthy or expensive process – experimenting on altering text messages to reduce missed appointments took eight months in total, and cost just £5,000 – making them too small to attract funders. **The definition of 'research' should be revisited to make it easier to bring disciplines together and ensure transdisciplinary funding streams.** Design elements should also to be incorporated from the start of planning of initiatives, rather than as an add-on – perhaps as a requirement of funding.

A final challenge is that the **benefits of a behaviour-change intervention may accrue elsewhere**: 'health is leaky'. For example, acting in a particular way may be good for the hospital or for public health, but the benefits are not seen by the department in which the intervention is based, meaning that there is no incentive to invest. Ways to ensure that the incentives align need to be found, if interventions that are in the public good are not to remain unfunded.

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