Data-Powered Health

How technology is reshaping the nation's attitude to health

07 Op Opinium


PROGRESS
812
Consumed
-220
Burned
592
Net
FOOD DIARY
TRANING SCHEDULE
MICRONUTRIENTS CHART
42%
27%
31%
Protein: 53.97
Carbs: 32.18
Fats: 95.34

CONTENTS

EXECUTIVE SUMMARY

We're in the midst of a revolution. Data and technology are completely changing the nature of healthcare. Health advice is being removed from the sole control of health professionals, allowing people new ways to better measure, understand and improve their health and fitness.

The UK is becoming increasingly digital.

This is not only due to the penetration of smartphones and tablets, but also wearable fitness technology which, as our research shows, is becoming increasingly popular. Over a quarter (27%) of adults now own a fitness wearable, whilst 20% plan to buy one within the next twelve months. These devices provide real-time data in a way which is easily digestible, allowing users to make more informed decision about their own health. The increasing desire to take control of one's health is demonstrated by the fact that 44% of adults would like to have more tools to monitor their health in order to make informed choices and to be less reliant on professionals.

GPs are still the first port of call in non-emergency situations for a third of adults (32%). However, growing numbers search online either from official sources such as NHS Choices (7%) or simply through search engines (11%). The report shows how health apps such as Babylon Health can bridge this information gap and alleviate pressures on health services, while ensuring high quality reliable health information.

Health apps are becoming more popular.

One in eight (12%) use health apps regularly, more than both personal assistant and finance apps (10% and 8%, respectively), but still significantly lower than photo sharing apps (20%) for example. Users of activity apps want to quantify changes in their health and fitness, with 55% saying they use them to monitor their progress over time.

Looking to the future, there is a clear demand for healthcare providers to improve the service that they offer online – 54% would like to see an online booking system, for example. Nearly half (47%) would like to access their own health records online and 34% would like a service which allows the sharing of health data between hospitals.

Data sharing is a particular sensitive topic for health services, especially in light of recent cyber security scares.

Yet despite this, a majority (55%) would share their health records anonymously with medical researchers if it meant that new more effective treatments could be developed faster to benefit more people. These data altruists would be willing to share various aspects of their lives from physical health (82%) and dietary health (70%) to leisure time habits (60%).

We hope this report will not only quantify current attitudes towards health, but provide the basis for greater conversation about what the public want from health technology. Health services have patient care, diagnosis, and treatment data but often do not have the means to utilise it. Whereas private companies have the capabilities to turn information into actionable solutions, from diagnosis to resource allocation. Combining health data and technology, in the correct manner, can create more effective health services for everyone.

James Nicandrou
// Opinium

FOREWORDS

It is more clear than ever that we are on the cusp of a potential revolution in the way we use technology and data in healthcare, the consequences of which could be profoundly positive for patients. What we need to do now is unleash it.

What this research shows is that the public are more connected to technology than they've ever been, and are more comfortable than ever with using technology to manage their health and wellbeing. These findings show that the current generation and those in future will not only be relaxed about sharing their health data for their own betterment, but will actively expect it.

But this revolution is not inevitable.

It is vitally important that we act now to ensure the systems and infrastructure is in place to connect the data and maximise its potential for the health of our society. Though we as consumers are increasingly connected to our personal technology and share more and more of our data with it, the health service more widely still largely languishes in the paper-based age. We need to start demanding our health service to embrace 21st century medicine. Our NHS is world leading and rightly revered, but it is still based on a post-war model.

As a patient who has benefitted from the power of data and technology I know from first-hand experience the life changing difference it can make. I got lucky with the drug that I received for treating my leukaemia, but we need to start taking luck out of the equation for other patients.

Graham Silk, Empower
// Data4Health

This research confirms much of what we see around us with regards to how we all use technology, the variation in engagement of health apps and how this differs across generations. Crucially, with much of this research, respondents are often not those who are the greatest users of healthcare, crucially the elderly or those more socially deprived, however the future looks bright for the next generation's digitally literate elderly.

The most striking findings were around attitudes towards health data sharing, and how willingness remained lower than research and population health requires. Furthermore, the incongruity between the types of data Data Altruists were willing to share, and what we know from population data habits.

We liberally share where we are, who with are with and what we are doing on Google, Facebook and Twitter, yet our health information remains in an almost impenetrable fortress.

We, the population, need to understand that our health data collectively, can radically improve the NHS, help cure disease and ultimately save lives. However also, the data showcasing our lifestyle, shopping, leisure and financial habits is being collected, used and shared all the time and THAT data is where the key to disease prediction and prevention lies.

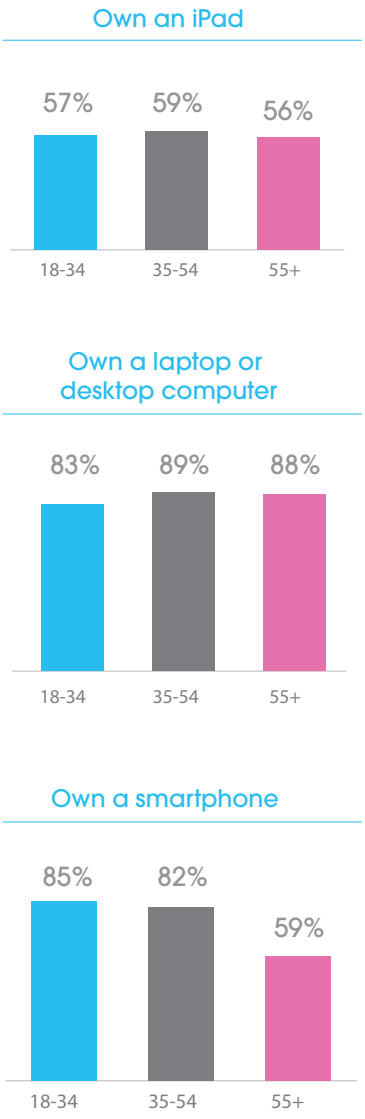
We need to share the positive stories and opportunities and showcase the amazing research, scientists, doctors and patient stories behind the health data revolution. We need to encourage everyone to ask themselves, how long will it take until the next thalidomide scandal is picked up? How can my genetic information be used to prevent my child from getting a disease? And how can we ALL rally together with our health information to build a better, healthier and people-powered health system, for everyone.

Maxine Makintosh
// Health Tech Women

In 2014, NHS England set out a new five-year blueprint for England's health services. Amongst other features, the blueprint called for: a bigger emphasis on prevention; more patient control of their own care; and different models of care, with a focus on leveraging people and communities. The findings from this study support these aspirations, and highlight the trend of increasing responsibility for personal health, and a more engaged community, both socially and digitally. The report also highlights that developing innovations is not enough, – a key to unlocking people powered health systems is to understand people's preferences, differences, and behaviours. This intersection between technology, psychology and behaviour science is extremely exciting, yet more investment is needed to realise the benefits. We hope you find the report useful.

Jullie Tran Graham
// Nesta

DIGITAL BRITAIN



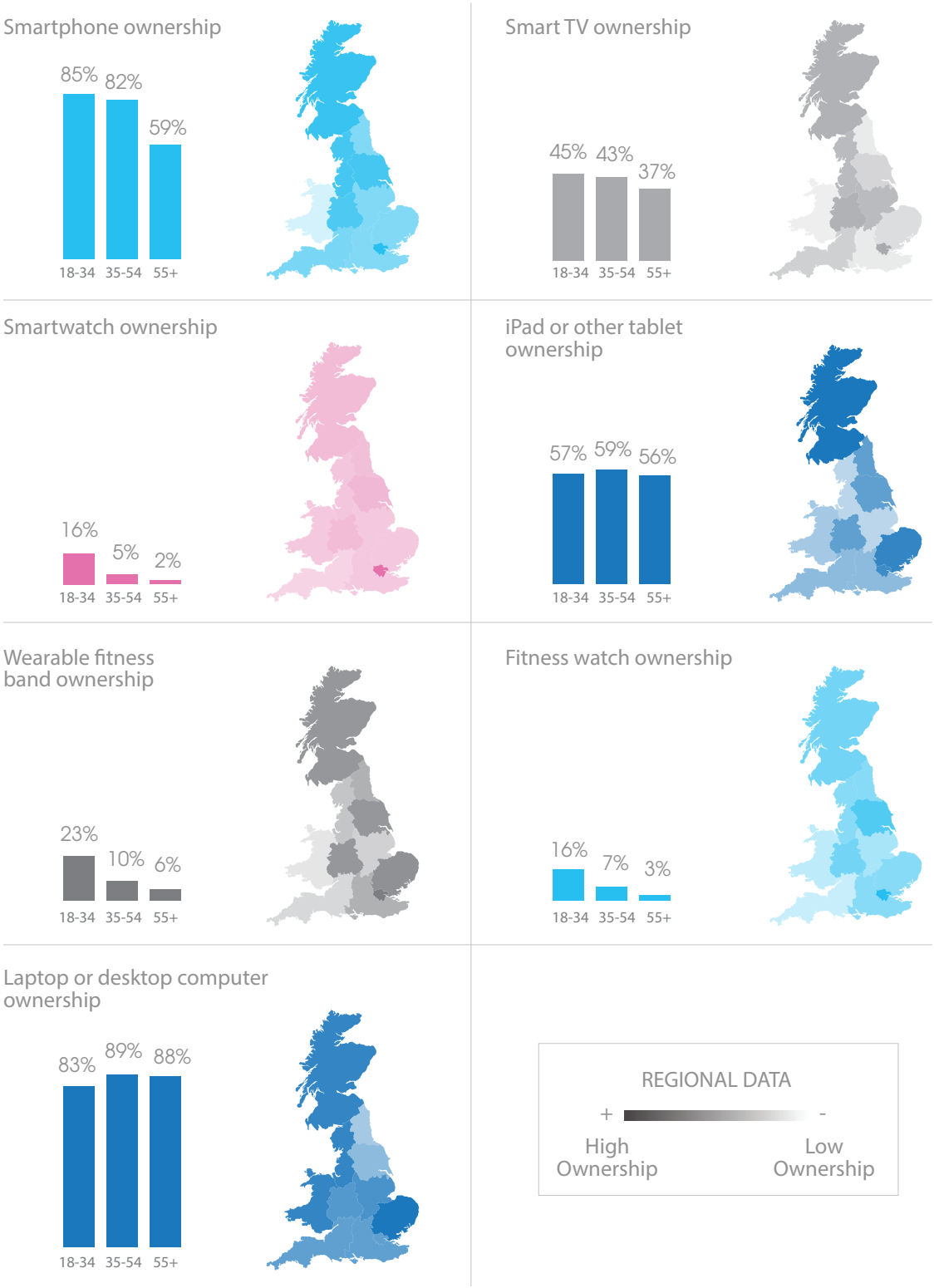
Growing appetite for health technology

The overwhelming majority (97%) of UK adults now own a connected device, ranging from smartphones to wearable fitness bands and smart TVs. A connected device refers to a piece of technology that has access to the internet, which allows people to download and share data. This means that nearly everyone in the country is interacting with digital services as part of their daily lives.

Figure 1.1 shows how technology is not just the dominion of the younger generation. In fact, ownership rates of some technologies are similar across age groups. For example, 56% of those aged 55+ own an iPad or tablet compared to 57% of 18-34 year olds. However, young people are increasingly turning away from traditional computers towards mobile technology: 85% of young adults own a smartphone compared to 59% of those 55+. Meanwhile, laptops or desktop are owned by 88% of the oldest generation, five percentage points higher than young adults.

Young people are early adopters, but regional tech ownership is uneven

Figure 1.1 Current ownership of technology across the UK



Wearable technologies

Nearly a quarter (23%) of those aged 18-34 own a fitness band compared to 6% of those aged 55+. Probing in a bit more detail, our data shows that this younger generation is very responsive to new technology. A third (33%) of those in this age group own a wearable, be it a fitness band, fitness watch or smart watch, compared to just 9% of those aged above 55.

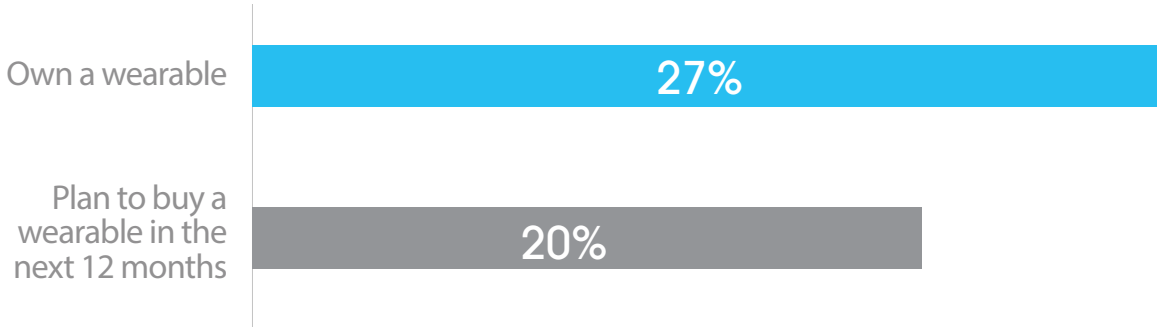
Overall a fifth (20%) of adults own, or plan to buy, a wearable device in the next 12 months (see Figure 1.2), signalling that adults are increasingly seeking to take advantage of new developments in technology to understand their health.

Through wearable technology, health and fitness data is now available on demand, and users have access to a huge amount of personal information at their fingertips, including heart rate, step count, and sleep quality. This data can be compared with performance over previous weeks and months, and also with friends and family, leading to an emerging trend of communities contributing to individuals' personal health.

Evidently there is a growing appetite to measure and track personal health and fitness. This is a theme that is consistent throughout our research: adults want to take control for their own health through technology rather than being content with rough estimates.

Increasing numbers are likely to own a wearable

Figure 1.2 Current and future ownership of wearables accross the UK



Ownership vs usage

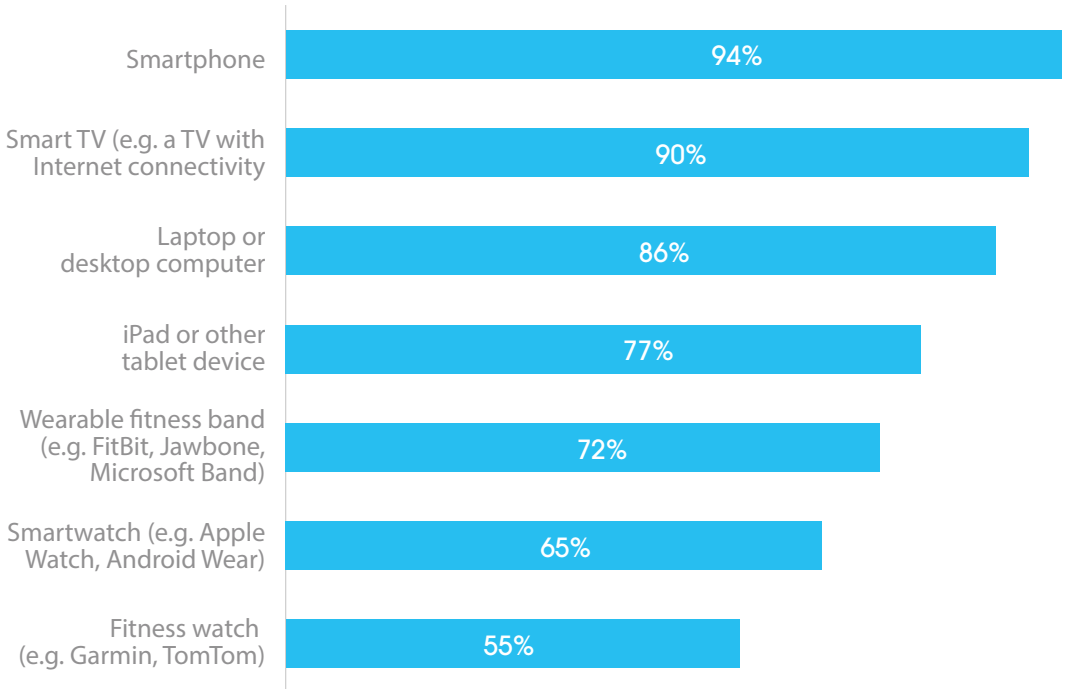
Our research indicates that the vast majority do use their connected devices regularly, although ownership does not always equate to usage. Of those who own a smartphone, 94% use it at least a few times a week. As Figure 1.3 demonstrates, smart TVs and laptops / desktops also feature heavily in people's routines. Wearables sit slightly behind these devices in terms of regular sustained usage.

Also notable is the significant proportion of owners who have never used their wearable: for example, 7% have never used their fitness band. There are similar figures for the Smart Watch and Fitness Watch (8% and 11%, respectively).

While wearables are becoming increasingly popular, there are still barriers that need to be understood if we are to see greater use of this technology.

Smart tech usage is high but wearables are not far behind

Figure 1.3 Use at least a few times a week (% of owners)



How consumers interact with technology

Connected devices are becoming increasingly multi-faceted, and advances in technology are changing the way adults relate to them. Four years ago, people might have felt hesitant about accessing their bank account on their smartphone due to security concerns. But it is now commonplace to use banking apps: our figures show that 39% of smartphone owners use their device for mobile banking or financial management.

This trend is also reflected in online shopping, where 35% of smartphone users use retail apps, which are increasingly taking over from laptop or desktop computers as the preferred device for shopping. Smartphone users are more likely to use their device to access social networks, blogging and broadcasting sites than laptop or desktop users (54% vs 48%, respectively).

Different ages use devices in different ways. The lives of younger people tend to revolve around their smartphone, which is used to complete a range of tasks, including using online shopping (49% of users aged 18-34), reading the news (54%), and online banking (52%). By contrast, older generations are more likely than the younger generation to use laptops and computers for these tasks – online shopping (86%), reading the news (56%) and online banking or financial management (67%).

The applications of health technology

Almost a quarter (23%) of respondents in our survey use a health app at least a few times a week and more. Of those, the most popular perceived benefit is monitoring progress over time (55%) followed by encouraging a healthy lifestyle (42%) and encouraging people to feel more dedicated to achieving their goals (41%).

Users are seeking health advice on a variety of devices.

24% of smartphone users, 28% of tablet users and 39% of computer users use their device to search for health information and advice online. This suggests that there is a desire for individuals to take a greater role in the diagnosis of their health conditions, before seeing an expert. Of those who do not use health apps, 24% say they do not see the benefits of using them, suggesting app developers need to do a better job of explaining the advantages of their products.

Interestingly, 24% of those who use health apps said their usage dropped off after a few weeks because they got bored or it got too complicated to use regularly. The same proportion said they did not have time to use the app more often. This suggests there is a clear need for app developers to improve user retention if they are to encourage long-term usage.

COLLABORATIVE HEALTH

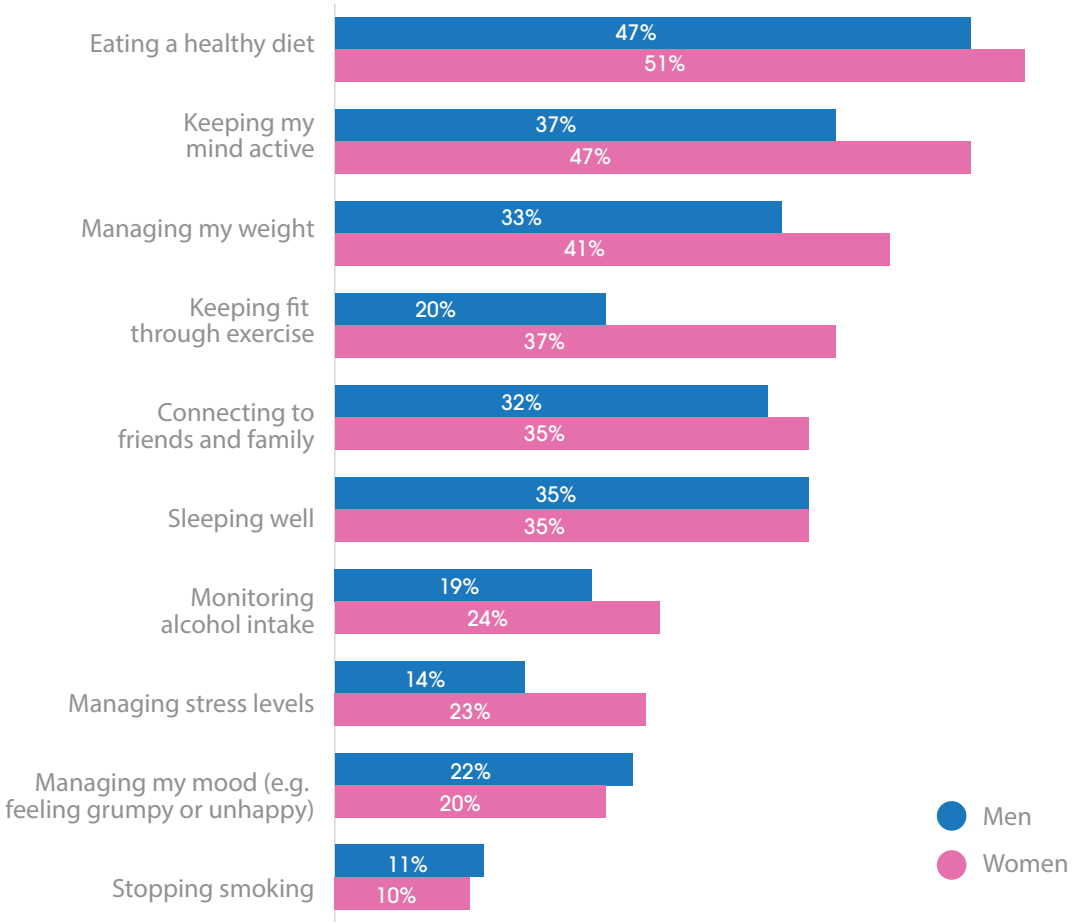
Health management

Our research extends to the topic of health management, not only looking at the strategies adults employ to become healthy, but also the sources they turn to both when ill and when seeking advice. Understanding the mind-set and behaviour of an adult reaching out for support is important when assessing the effective ways to deliver healthcare through technology. In this next section, our research examines how personal health is handled and how information is sourced. The vast majority (81%) of UK adults say they actively manage their health and wellbeing. This could be through cutting back on unhealthy habits, such as stopping smoking or reducing alcohol intake, or by taking more active steps such as exercising and keeping mentally engaged.

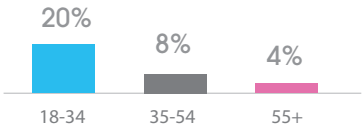
Interestingly, our research shows that women are more likely to say they actively manage their health than men - 83% to 79% respectively. As Figure 2.1 demonstrates, women are more likely than men to manage their health by keeping their mind active (47% compared to 37%) and managing their weight (41% compared to 33%).

Women actively look after their health in more ways than men

Figure 2.1 Ways men and women actively manage their health and wellbeing



Use a mobile app to manage health and wellbeing



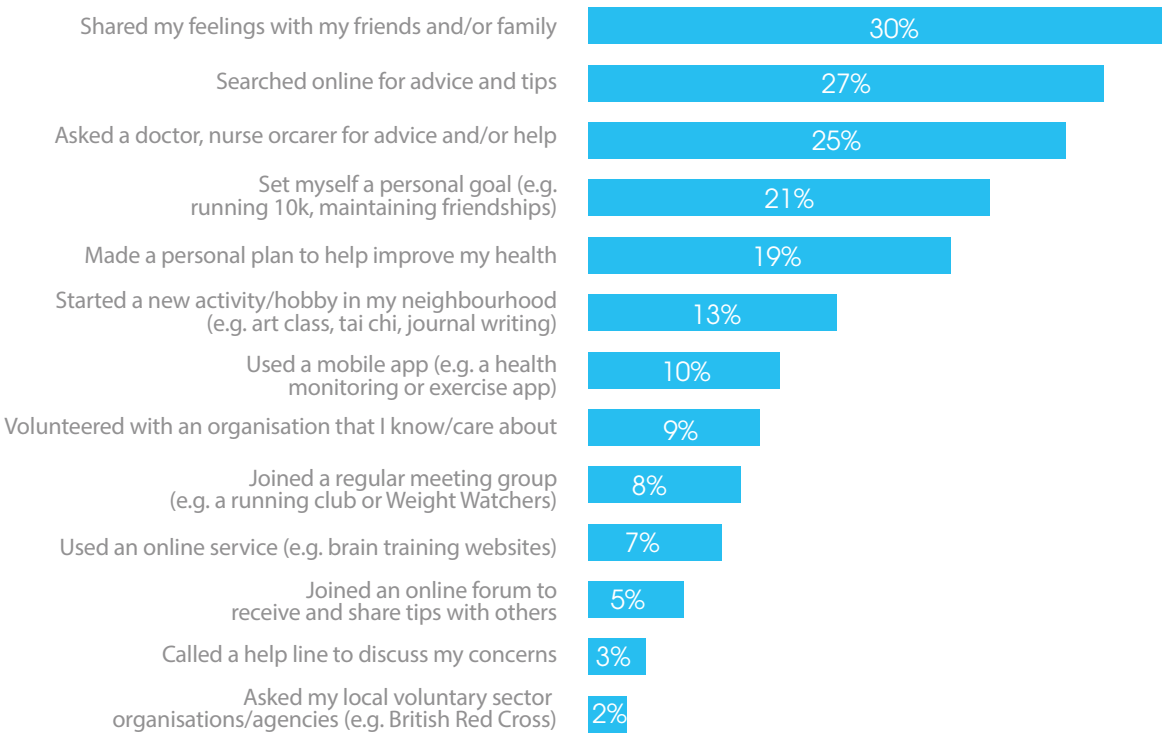
Non emergency situations

Our research extends to the topic of health management, looking into the sources people use enable them to become healthier. As Figure 2.2 shows, the strategies people employ to address their health concerns are often unique to the individual. Just under a third of adults (30%) share their feelings with friends and family while a quarter (25%) ask a doctor, nurse or pharmacist.

There is confusion over the best source of information about becoming healthier. Technology can be used here to alleviate the confusion and provide accurate and helpful solutions to people's concerns. Currently 37% of those managing their health turn to technology to address their concerns.

Internet search and friends & family beat healthcare professionals

Figure 2.2 What adults do to address concerns over health



The data indicates that when UK adults feel unwell in a non-emergency situation, a third (32%) would contact their GP first. Of those who say they manage their health and wellbeing, 30% would turn to their friends and family for advice, while a quarter (25%) would seek a medical professional and 27% would search online. It appears these people are happy to trust friends and family as a first step to managing their health rather than relying solely on the advice of doctors, nurses, pharmacists and online advice.

A minority (10%) use mobile apps to actively manage their health. However, young people between the ages of 18-34 are much more likely to use mobile apps to manage their health compared to those aged over 55 (20% vs 4%, respectively).

Community spirit

There is increasing interest in the role of communities and collaborative health, where people are supported through peer-to-peer interactions, to help address behavioural issues, in particular around preventative health management and post-diagnosis care. Communities can not only address preventative health issues, but also provide support for those diagnosed with serious and/or long-term illnesses.

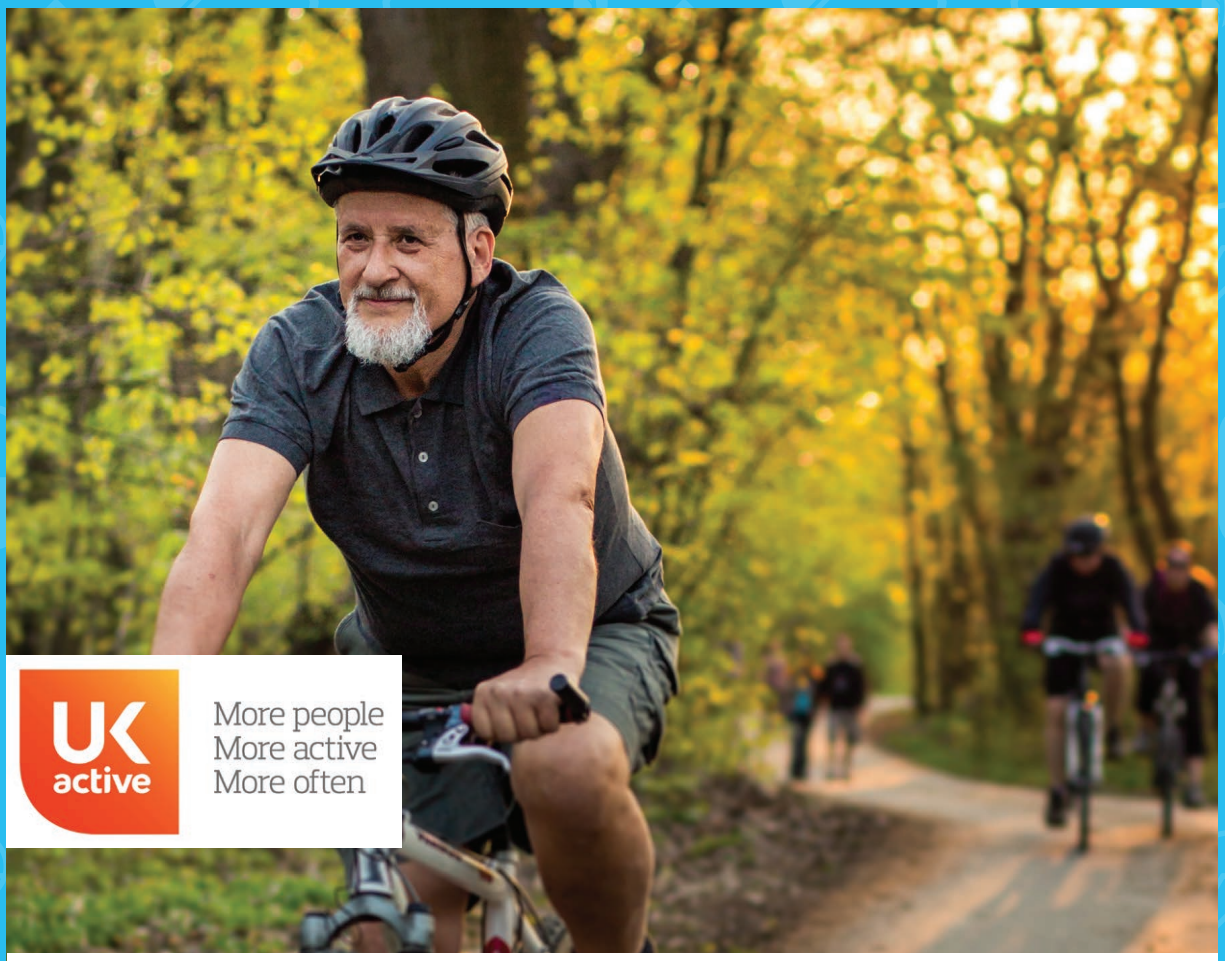
HealthUnlocked is a social network for health, bringing people together online with the same conditions or health interests. The platform brings millions of people together to share experiences and knowledge about what it means to live with a diagnosis each month.

Through online communities people find peer-to-peer support and information to support better self management at home. Research carried out by HealthUnlocked found that 70% of people did not know anyone else with their health condition prior to visiting the platform and encouragingly, the majority of users felt more confident managing their condition as a result of the support they get received on the platform.

HealthUnlocked also found that accessing a community of people with the same condition was successfully transforming isolation into knowledge, experience and support instantly, in much the same way as small in-person support groups have done for many years, but in a far bigger, faster and more impactful scale.

Meanwhile, ukactive's research shows the effect peer-to-peer groups can have in helping people to become healthier.

While communities have been somewhat successful in promoting health and wellbeing before and after diagnosis, they seem to be under-utilised by the wider public. Only 8% join a regular meeting group such as a running club or Weight Watchers to address health concerns. Even fewer adults (5%) join an online forum to receive and share tips with others. There are clearly opportunities here to harness technology to promote collaborative health.



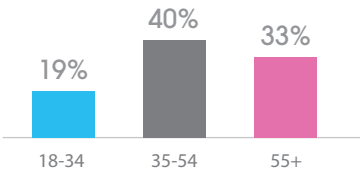
CASE STUDY: ukactive's 'Let's Get Moving'

ukactive is a non-profit membership organisation that is committed to getting more people more active, more often. A key focus of their work is delivering active lifestyle programmes on the ground. Let's Get Moving is a 12 week peer support programme to help inactive people to adopt more active lifestyles and improve their health. Support was provided in small groups led by a Community Exercise Professional (CEP). Peer groups were held weekly in community settings and allowed people participating in Let's Get Moving to voluntarily join and support each other. Results showed significant increases in physical activity levels at 12 weeks and 6 months. Furthermore, 'Let's Get Moving' highlighted a significant increase in vigorous intensity physical activity, total physical activity and sport.

Turning to digital for diagnosis

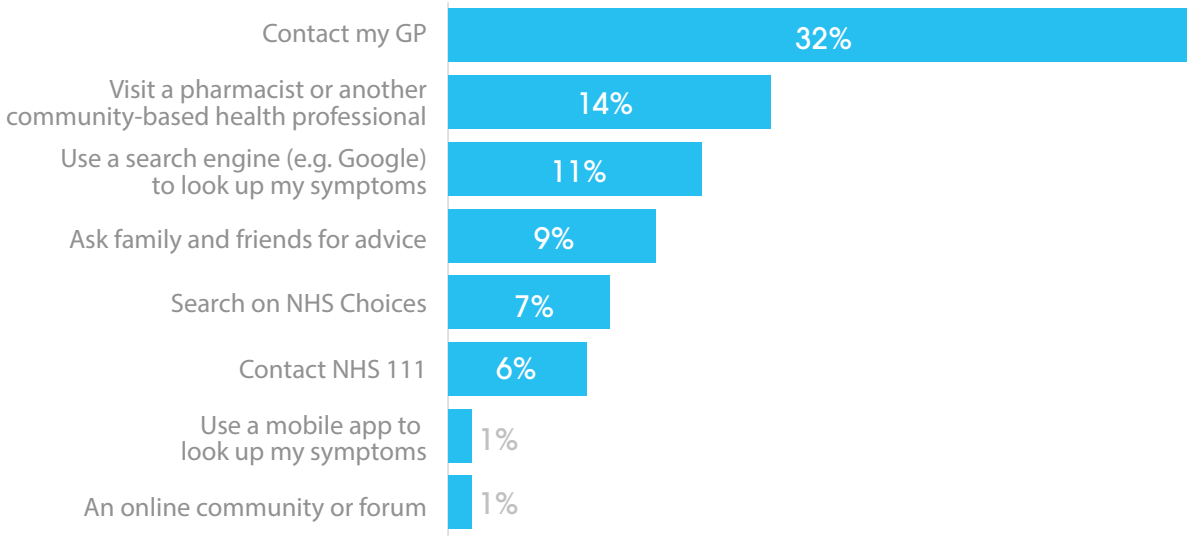
The reality remains that when we are ill, the most common port of call is to contact a GP, Figure 2.3 shows 32% of UK adults say this is the first place they turn to in a non-emergency situation. Those aged over 55 are twice more likely to contact their GP first in these situations than those 18 -34 (43% vs 19% respectively). The oldest generation are dependant on their GP in these situations. However, a significant minority (11%) would use a search engine in a non-emergency situation to look up symptoms first.

Contact their GP first



Google outperforms government-backed health advice sources

Figure 2.3 Adults actions in a non-emergency situation



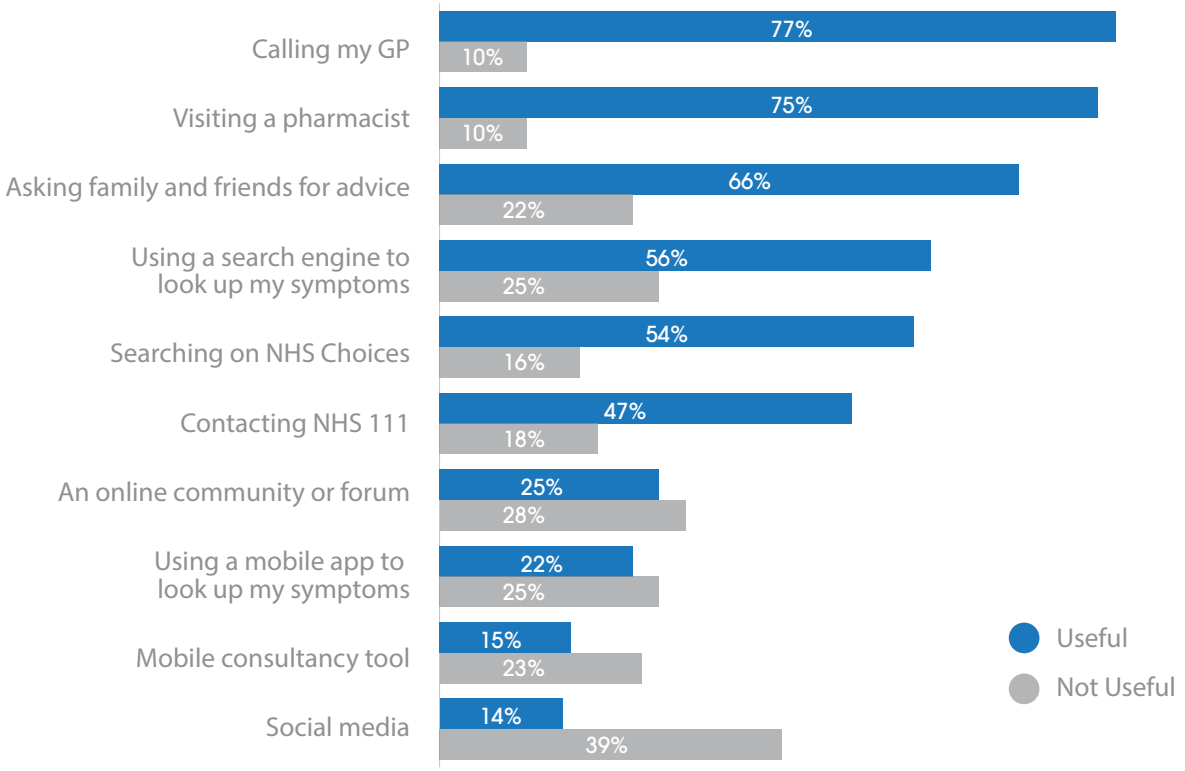
Current consumer technology

When it comes to the sources of advice and information that people find most useful, visiting a GP or pharmacist are unsurprisingly top. More than three quarters find these sources useful for diagnosing symptoms or providing reassurance (77% and 75% respectively).

Figure 2.4 demonstrates that two thirds (66%) find asking friends and family to be useful.

GPs and professionals are still the most useful port of call for health

Figure 2.4 How useful are these sources for diagnosis and reassurance



By contrast, people are yet to fully place their trust in online health information. Turning to social media is useful for only 14% of respondents, and online communities or forums are considered useful by only 25%. These findings suggest that more needs to be done to understand how social and online sources of support can better meet the needs of users.

Similarly, only 56% find looking up symptoms online to be useful, yet technology has reached a point where an online check for symptoms can be a useful first step to diagnosis (see the boxed section on Babylon Health).

There is a huge opportunity for entrepreneurs and innovators to develop solutions that truly meet the health and care needs of an increasingly connected society.

CASE STUDY:
Babylon and NHS Artificial Intelligence App

This is a new app been created by Babylon for the NHS to reduce pressure on the NHS 111 service. This app is different to others as it utilises Artificial Intelligence (AI) technology to diagnose symptoms. 1.2 million adults in North London will trial the app, which will run for 6 months from the end of January 2017. The app allows you to message its 'chatbot', in a manner similar to texting a normal phone message; it will then respond with questions and analyse answers in its database for the best solution to the problem. The app has been found to diagnose symptoms more accurately than real doctors when put to the test.

If the Babylon Health trial is successful it could change the way adults interact with health services. No longer would they have to wait to visit their GP or pharmacist. Instead, the AI technology could recommend the most appropriate course of action within minutes. This would take the pressure off the NHS and streamline GPs' efforts to prioritise the most urgent patients. However, this depends on the uptake and whether we are able to trust a machine with our health.

Mobile consultancy tools and mobile apps do not fare as well as other sources and tend not to resonate with consumers as a useful diagnosis or reassurance tools. Only one in six (15%) say they find mobile consultancy tools such as Babylon Health useful. Mobile consultancy tools are the least used source of information when adults are ill - 62% have never used this option. Users may need more convincing of the merits of this new technology before trusting it at a time of need.

However, the use of such tools is in its early stages so these figures may represent the classic usage patterns any new technology must navigate until it reaches critical mass and becomes more widely accepted.

Expectations and reality

Our research has yielded insight into the behaviour of the public, but also their expectations of healthcare delivery. Assessing the relative importance of different aspects of health care is the first step to understanding what they value.

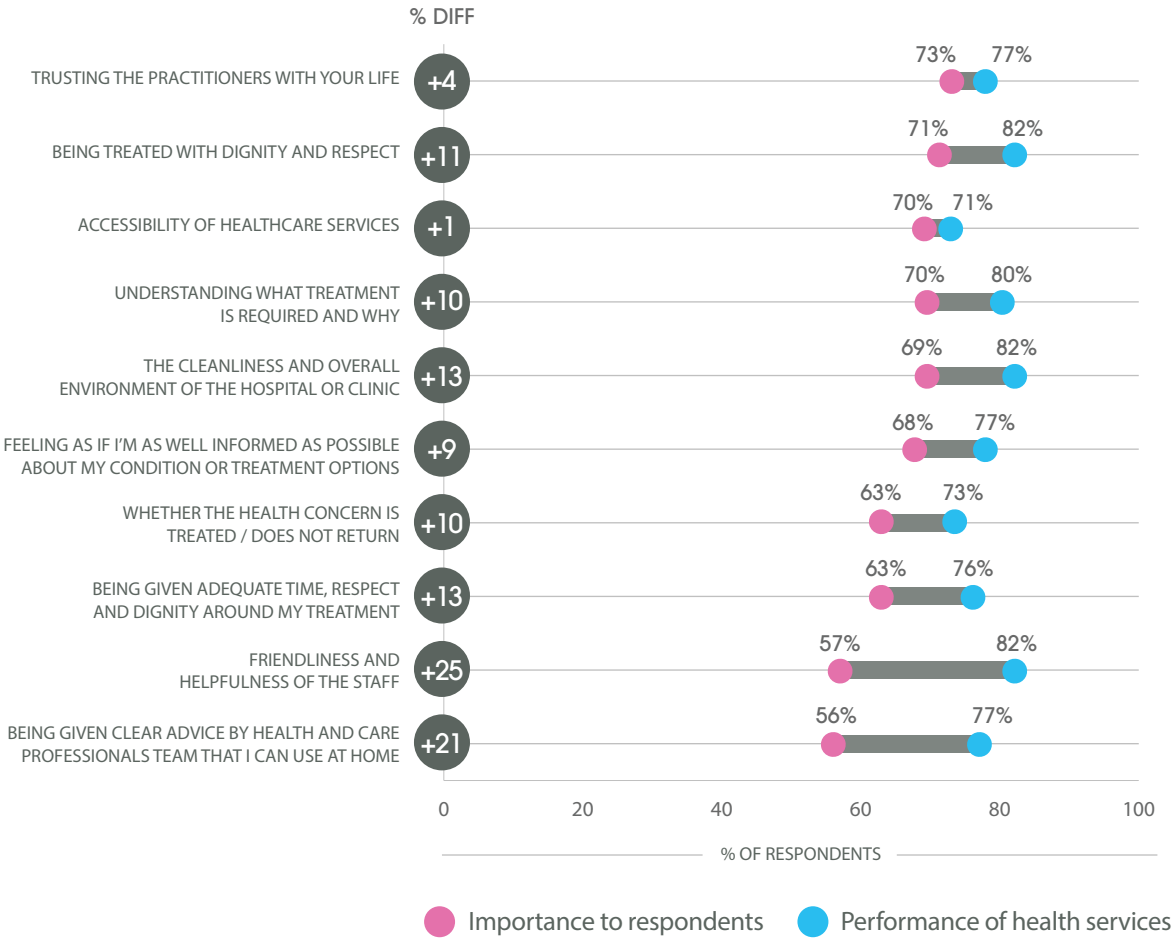
As Figure 2.5 shows, being treated with dignity (71%) and understanding of what treatment is required and why (70%) are almost as important to the public as being able to trust a practitioner with their life (73%).

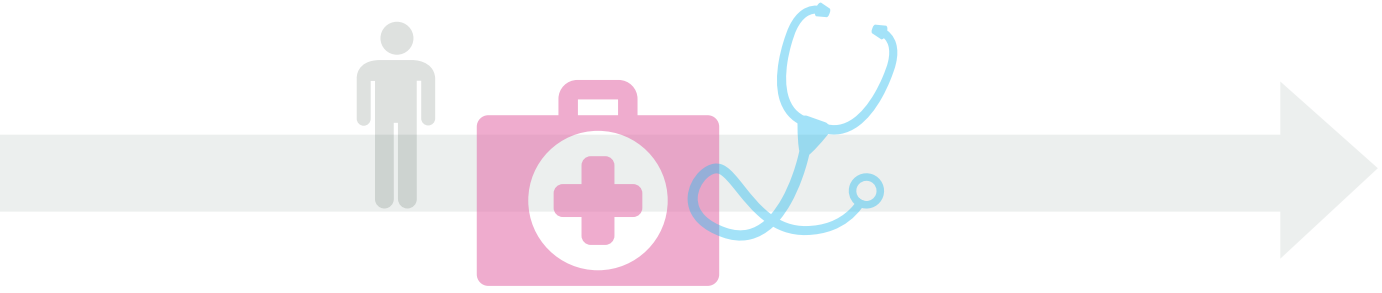
Four in ten (40%) think having access to out-of-hours information services (e.g. NHS Choices or NHS 111) is very important while a similar proportion (44%) feel the same about being treated with the latest and best technology.

Reassuringly, health and care providers are meeting or exceeding expectations across all key areas. As Figure 2.5 shows, providers are succeeding most in three key areas: 1) treating people with dignity and respect, 2) the friendliness and helpfulness of staff and 3) the cleanliness and overall environment of the hospital (all 82%). Understanding which treatment is required and why and trusting the practitioner with their life (80% and 77% respectively), are also meeting or exceeding expectations.

Health services are outperforming across all aspects of treatment and care

Figure 2.5 How useful are these sources for diagnosis and reassurance





Not meeting expectations

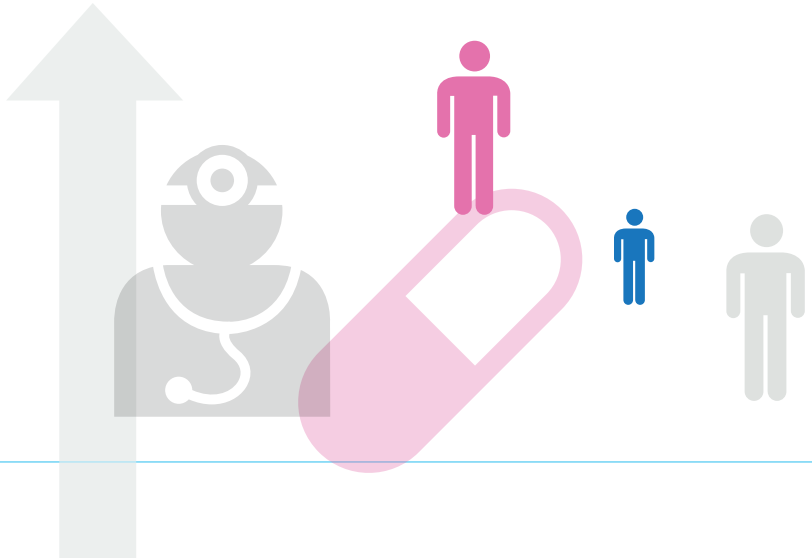
However, there are some areas where the public are more likely to feel let down by their health and care providers. Accessibility of health services ranks highly for important ways in which healthcare is delivered, but features tenth out of fourteen for meeting or exceeding expectations (71%). Furthermore, as Figure 2.6 demonstrates, 19% think that their expectations are not being met in this area. On the parameter of 'accessibility of the health services' respondents feel not enough is being done in this area to match their expectations.

A major issue in the health service is waiting times for appointments and this is often seized upon by the media.

Our research shows that 9% of adults had to wait so long for their appointment that they left the surgery or hospital, and 13% didn't have enough time to explain how they were feeling about their health and wellbeing due to a lack of time.

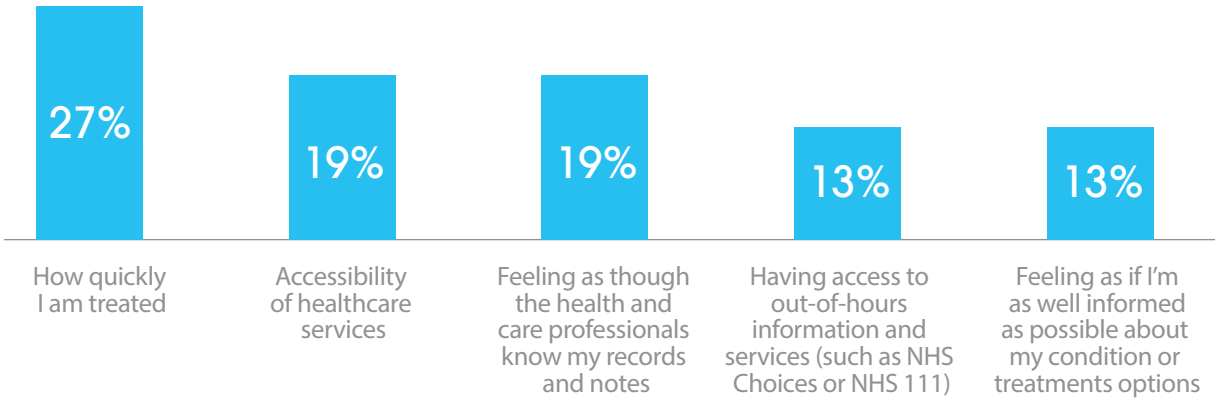
Over a quarter (27%) feel that the speed of treatment does not meet their expectations and this is the aspect of the health service that is most likely to fall short of expectations. Over a quarter (28%) were feeling better and healthier by the time they had their appointment. Not only does this indicate that their health services are not able to see them in good time, but it also hints that these illnesses could have been dealt with outside of a formal healthcare setting.

In summary, while health and care providers are meeting or exceeding expectations in care and treatment in important parameters such as treatment with respect and the friendliness of staff, they are still dogged by capacity issues which affects speed of treatment and access to healthcare. Innovation, coupled with investment, is clearly needed in these areas and this could involve technological solutions.



Health services still have room for improvement in certain areas

Figure 2.6 5 areas where health services are not meeting expectations



PREVENTIVE HEALTH

Technology driving citizen engagement in personal health management

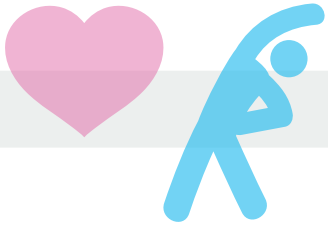
Mobile technology is changing the relationship between organisations, businesses and citizens, not only in healthcare but also in retail, banking and other industry sectors. Tech companies can equip smart phone and iPad owners with a range of services including apps to promote, maintain or monitor the user's health. Apps are now being used from accute care to wellness and preventative healthcare.

Popularity of health apps

To analyse how well consumers engage with health apps, it is worth comparing health apps with other apps, such as messaging and shopping apps, to evaluate uptake and assess usage rates. This also helps identify areas where health services are connecting well to citizens and the opportunities for growth and development.

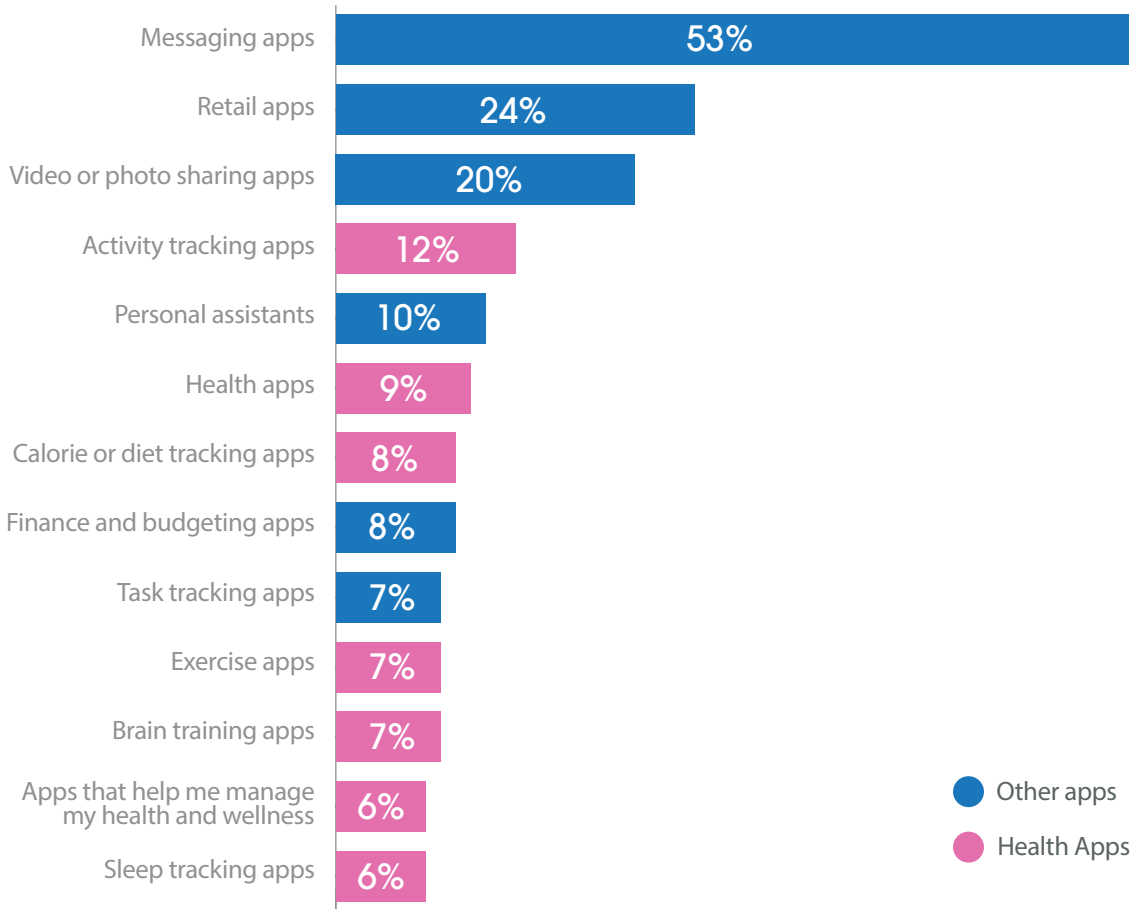
Figure 3.1 shows that messaging apps (e.g. WhatsApp) are the most popular type of mobile app with over half (53%) using this more than once a week. Retail apps (e.g. Amazon) are also popular with a quarter (24%) using these more than once a week. Also, this demonstrates that health apps are nowhere near as popular, with only 12% using activity tracking apps (e.g. Strava) and 7% using exercise apps (e.g. Fitness builder) more than once a week.

Since 35% manage their health through exercise there is scope for growth in this area. Connecting the remaining two thirds who manage their health to apps that aid healthy living would also be a strategy for market development.



Health and fitness apps lag behind messaging, retail and photo

Figure 3.1 Apps by usage of more than once a week



Looking at the different age demographics, those aged 55 and above use these apps the least. Only 1% use exercise apps and 2% use brain training apps, even though these could be important tools to maintain health, especially among the elderly. Since 59% of this age group own a smartphone and 56% own an iPad, it would seem that there is an opportunity to significantly increase usage of health apps.

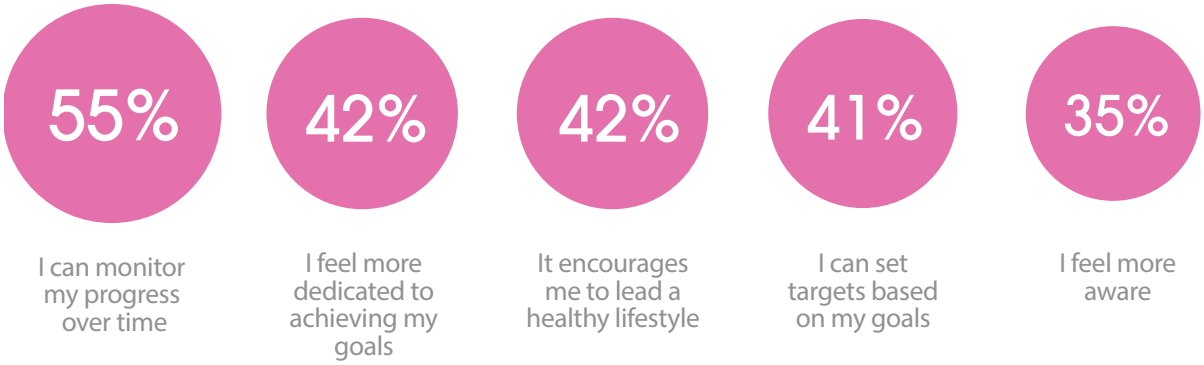
Benefits of health apps

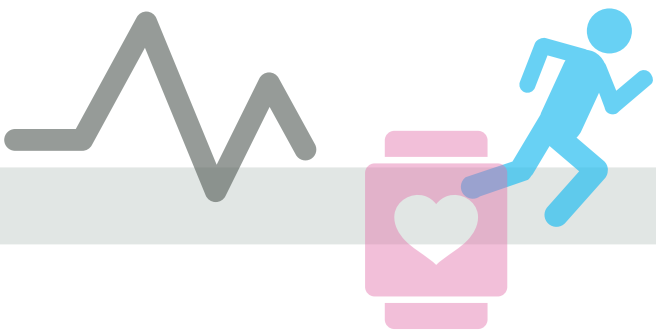
Just under a quarter (23%) of our survey respondents across all age groups use one or more health apps more than once a week. Figure 3.2 shows the benefits these apps offer to improve health, fitness and training according to users. Over half (55%) of users say that the ability to monitor their progress over time is a benefit.

Fitbit users receive a weekly email documenting their previous weeks' effort against their current week, including steps count, calories burnt, sleep duration and floors climbed. This information can be very useful in healthcare, especially if parameters like heart rate or sleep quality can be measured independently of the user and provide useful diagnostic indicators for health professionals. Furthermore, using these apps can encourage positive behavioural change,helping users lead a healthy lifestyle.

Accessing real time data and goals are a major benefits of health apps

Figure 3.2 The benefits of health, fitness and training apps (% of owners whose usage is at least a few times a week)





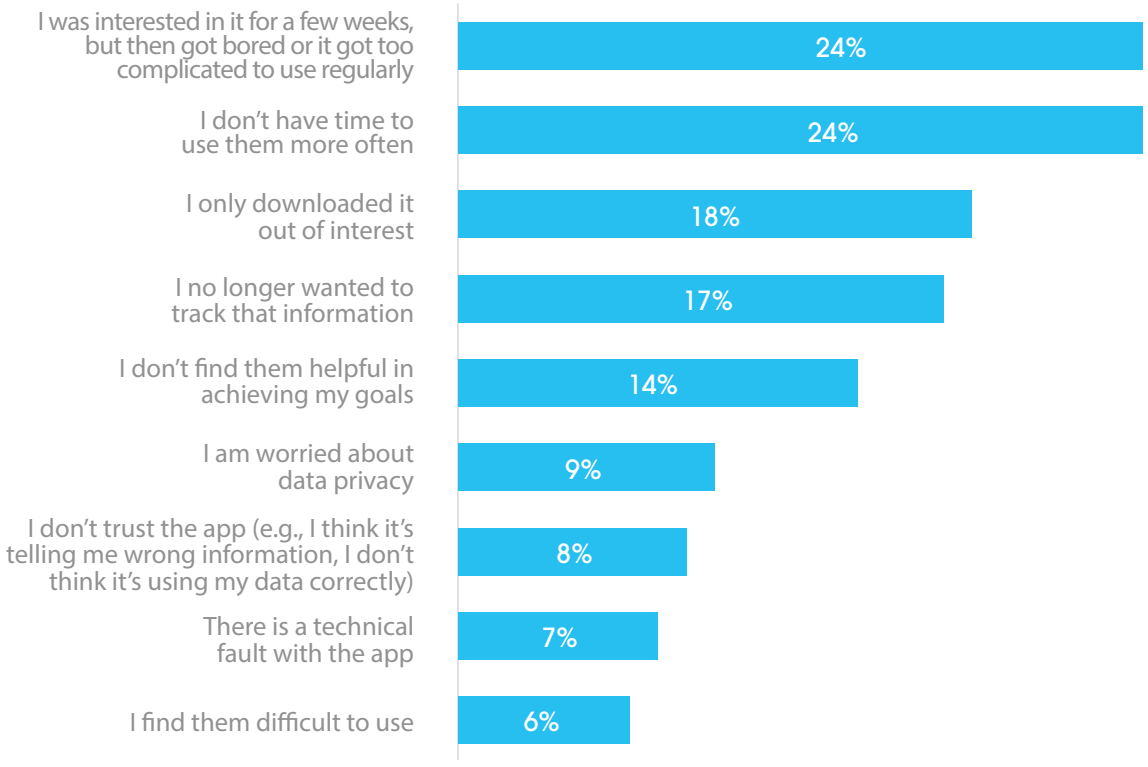
Barriers to app usage

If we look at the factors preventing infrequent users of health apps from using them more regularly, we can offer potential ways for app developers to improve their offerings.

28% of people have used one or more health apps less than once every few weeks. Of the infrequent users 18% only downloaded the app out of interest and 6% found it difficult to use. As Figure 3.3 shows, the top reasons for unsustained usage are: 1) lack of time (24%); 2) boredom with the app (24%) and 3) the app got too complicated to use regularly (42%). Although app companies cannot provide their customers with more time, they can create simpler, better apps to overcome these barriers. Furthermore, if health companies were able to tailor their apps to provide the features of most interest to consumers (as highlighted in Figure 3.2) this could potentially increase retention rates.

Lack of time and dwindling interest cause significant user drop-off in health apps

Figure 3.3 Factors preventing infrequent users from regular use (% of health app users of less than one use a week)



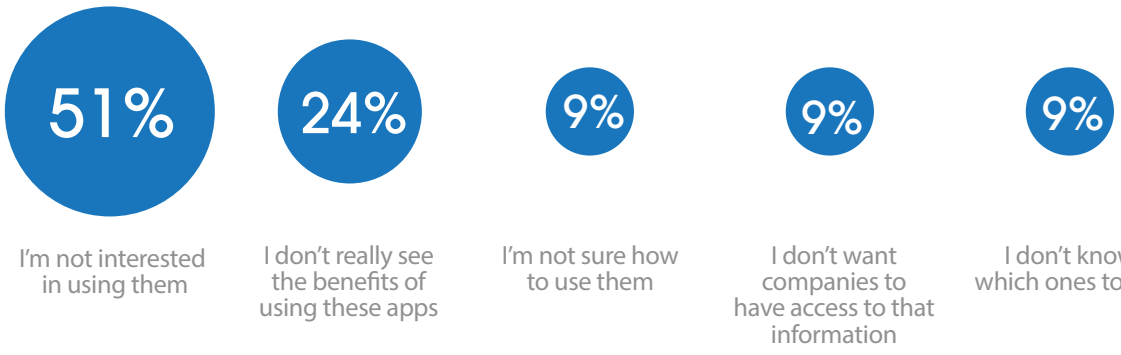
Lack of interest in health apps

Examining the reasons people have not used health, fitness or training apps can provide valuable insight into how technology companies can engage with new users. Our research shows that 40% do not use any type of health app at all and 93% do not have all the types of health apps listed. Figure 3.4 shows that out of those who do not have all types of the health apps, over half (51%) are not interested in using them, rising to 61% among over 55s. Stimulating interest can be difficult to achieve especially in healthcare, but if companies were able to generate enthusiasm and encourage adoption of apps this could create a larger, more dynamic market.

There are other reasons for lack of use that these companies must work to overcome. Figure 3.4 demonstrates that a quarter (24%) do not really see the benefits of using health and fitness apps. Technology companies need to be clearer on the benefits their app offers to users. It is difficult to change the opinion of the 9% who do not want companies to have access to that information, but there is an opportunity to better inform the 9% who are not sure how to use them. Streamlining apps to provide clear information on the benefits can break down the barriers and increase app usage.

Health apps haven't captured the attention of much of the population

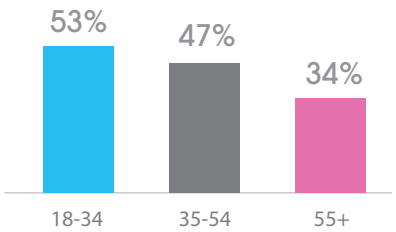
Figure 3.4 Reasons for never using health, fitness or training apps



HEALTH INNOVATION

Increasing adoption of new technology will require a deep understanding of user needs to be incorporated into product design. Only innovations that fulfil genuine needs will be adopted by the wider population. In this section we have highlighted data from our survey showing which technology the public would like to use when connecting with health services and taking more responsibility for their health in the future.

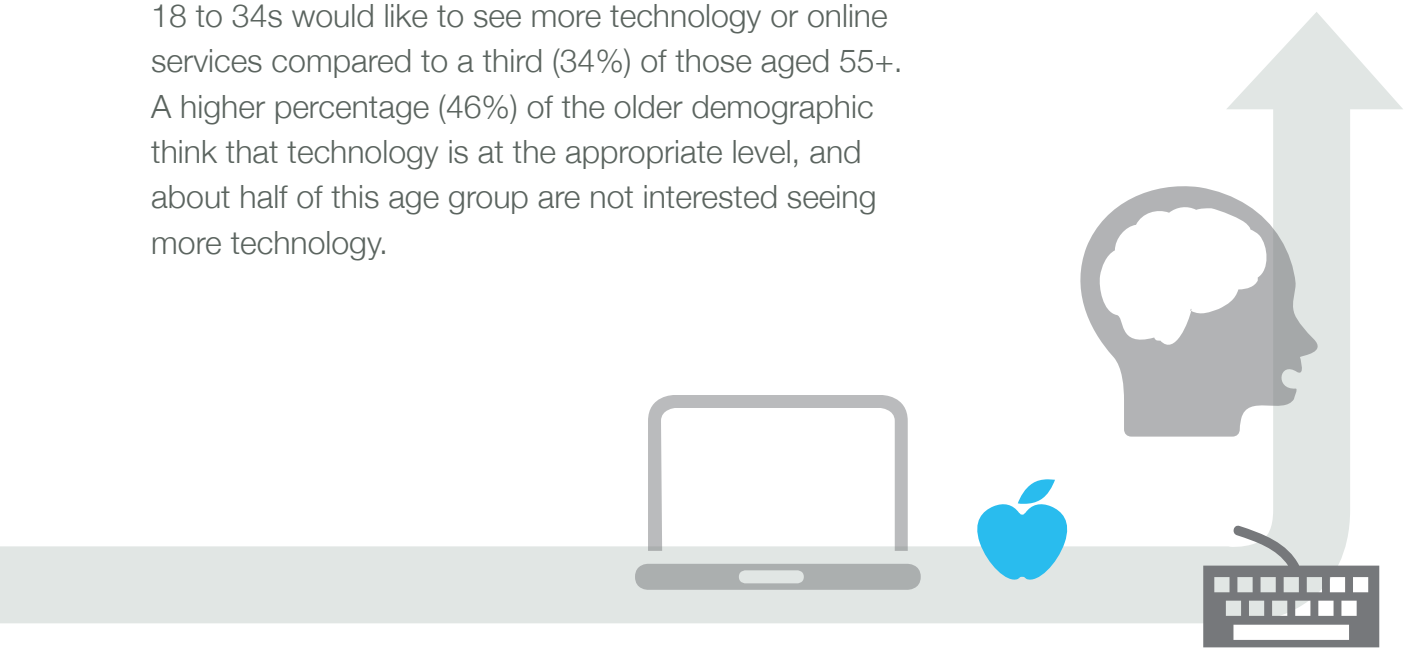
Like to see providers deliver more services online or use more technology



Is there more interest in technology?

There appears to be a healthy appetite for using technology in healthcare, with 44% saying they would like to see healthcare providers delivering or prescribing more of their service online or use more technology.

Enthusiasm for the use of technology is significantly higher among younger age groups. Over half (53%) of 18 to 34s would like to see more technology or online services compared to a third (34%) of those aged 55+. A higher percentage (46%) of the older demographic think that technology is at the appropriate level, and about half of this age group are not interested seeing more technology.

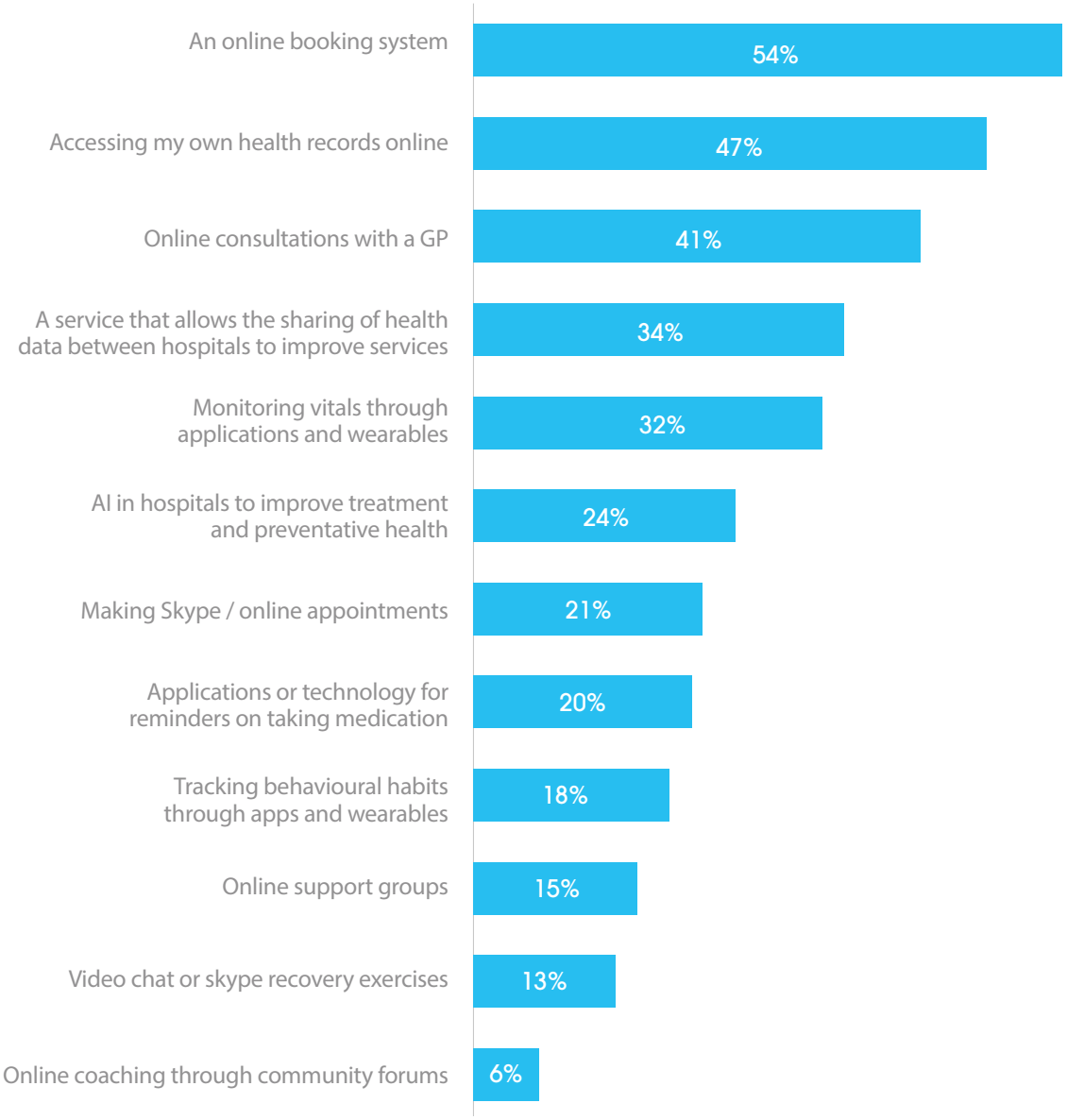


Consumer interest in innovation

Figure 4.1 shows the areas where the public are interested in technology making a difference to their healthcare

There are huge untapped opportunities in online healthcare

Figure 4.1 Interested in using in the future



The health industry lags behind other industries in terms of the development, accessibility and adoption of consumer technological solutions, due to the complexity of issues at stake.

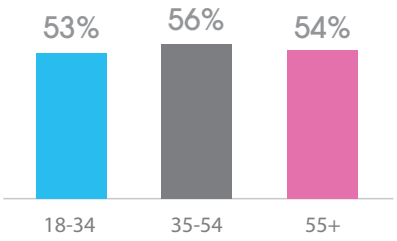
Over half (54%) of the public say they would be likely to use an app to book appointments with health professionals. Some apps to fulfill this need already exist, suggest as Doctify and Push Doctor, but these are predominantly for private practices. Time will tell how they are embraced by the general public.

Online booking systems are being implemented very successfully in other sectors, such as taxis (e.g. Uber) and food delivery (e.g. Deliveroo). However, it is doubtful whether such a centralised system could be implemented in an institution as large and complex as the NHS.

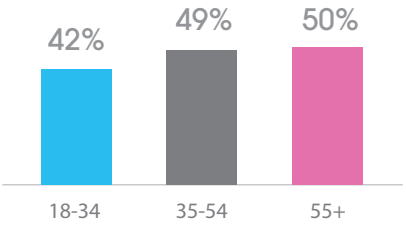
Almost half (47%) of the public are interested in accessing their own health records online, and unusually, this is more popular with older generations. Just 42% of those aged 18-34 are interested in accessing online health records compared to 50% of those aged over 55. This shows that there is demand across all ages to implement this kind of technology, although it may also be due to the fact that younger people are less likely to have sizeable health records that will have a significant impact on their day-to-day lives.

While the older demographic is interested in accessing data kept about them by others, younger people are most interested creating their own personal health and fitness records. A quarter (25%) of 18-34 year olds would be interested in using apps and wearables that track behavioural habits, compared to 19% of those aged 35-54 and 12% of those 55 and above.

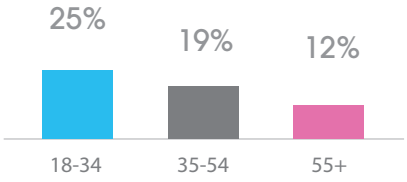
Interested in using an online booking system



Interested in accessing their own health records online

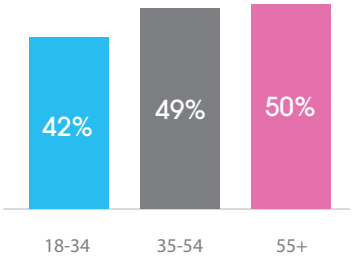


Interested in tracking behavioural habits through apps and wearables



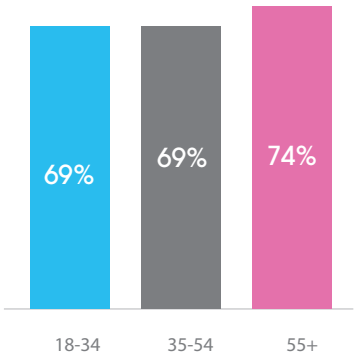
The data also shows that 41% of people are interested in using online consultations with a GP and 21% would like to make Skype or online appointments. This technology already exists and is being trialed in both the public and private sector at the moment, although take-up remains relatively low. If apps such as Push Doctor can demonstrate their effectiveness to users and decision-makers, they could help to alleviate pressure on overstretched health services.

Older people are more interested in accessing their data online…



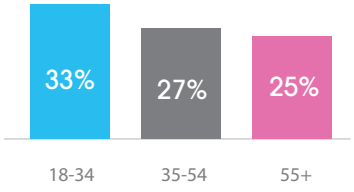
% saying they would be interested in accessing their own health data online

…but are also more comfortable with the idea of sharing anonymised health data

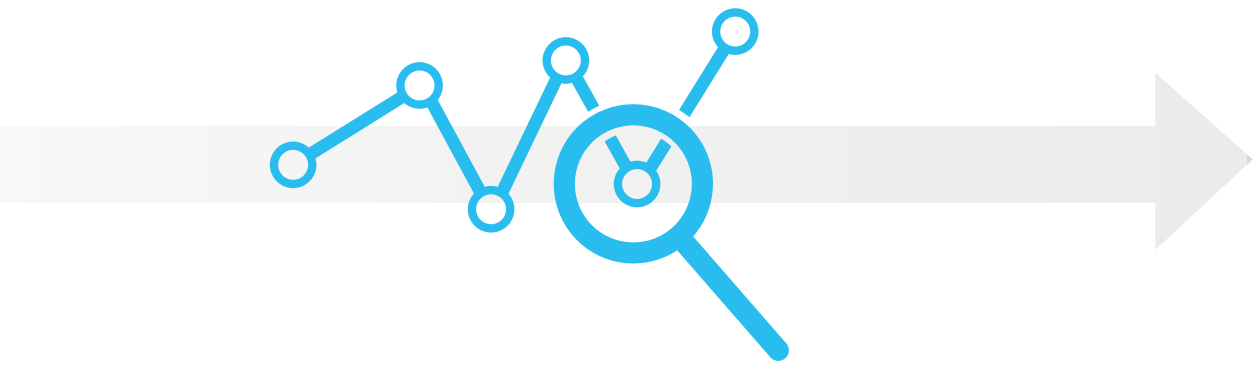


% saying they would be comfortable sharing anonymous health records to develop new and more effective treatments

…and less likely to want to track their own fitness data



% wanting to access health data collected by wearables



DATA DRIVEN HEALTH

Given the sensitivities and debate around privacy and data security, we felt it would be illuminating to assess the difference in attitudes between people who had been primed to think about health and those who hadn't.

We asked whether respondents would be happy to share anonymised health data in order to develop new and better treatments. This question was asked firstly to those who had already spent time filling in the rest of the survey on healthcare and secondly to an unprimed audience.

Among the primed respondents, 71% said they would allow medical researchers to access their anonymous health records if it meant that new more effective treatments could be developed faster and benefit many people, while 29% said the opposite. However, for those who hadn't spent any time thinking about healthcare beforehand, this figure dropped to 55% compared to 45% who would not.

This suggests that debates around healthcare, and data especially, need to engage with people in a responsible way at the right time. Many people feel a natural and immediate sense of revulsion at certain proposals. However, given more time and a more detailed engagement with the issues, they are much more likely to be amenable to the idea.

Nonetheless, this research area requires far more extensive study to fully understand the public's attitude towards data and privacy.

In this section of the report the figures from the unprimed audience have been included.

Data altruism

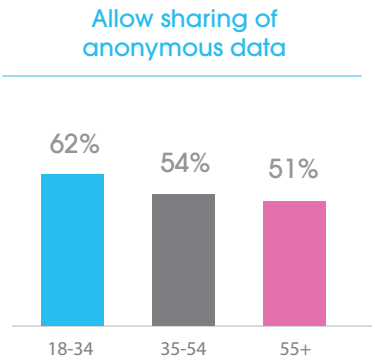
Our survey shows that people are more willing to allow their personal health data to be used if they have a clear idea of where and how it is being used. 55% would be willing to share their personal health records if it meant that new more effective treatments could be developed faster, while the same proportion would be willing to share their data if it meant they would personally benefit from more effective treatment.

Adults are split on sharing health records for the benefit of other patients

Figure 5.1 Attitudes towards data sharing

If it meant that new and more effective treatments could be developed faster, which would benefit many people, I would allow medical researchers to access my anonymous health records.

I would be uncomfortable allowing medical researchers to access my anonymous health records, just in case my data is used irresponsibly.



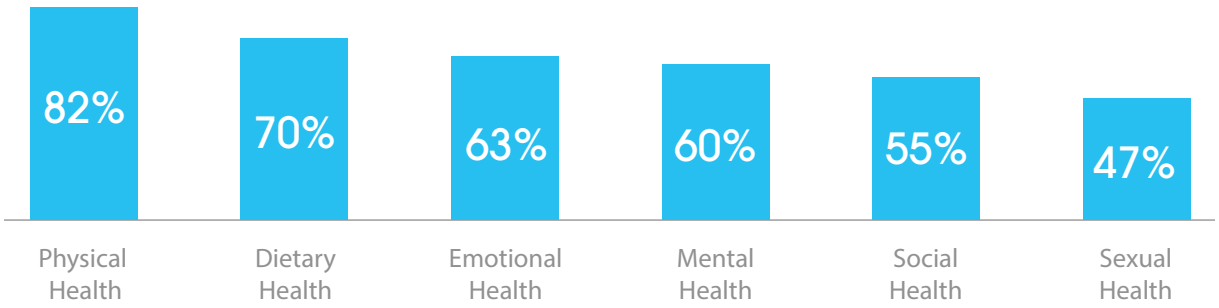
The main reason people would be likely to refuse to share data is a desire to keep their information private (56%). Interestingly, men are slightly more likely to be inclined to share their data with their data than women: 59% of men would share their data compared to 52% of women. Those aged 18-34 are also more likely to be willing than the other age groups to share their data (62%). This indicates younger generations that have grown up in a data saturated world are more comfortable about the use of their personal data, despite potential security risks.

Types of health data

There is significant variation when it comes to the types of health data users feel comfortable sharing in order to prevent disease. The majority (82%) would be happy to share their physical health and 70% would be willing to share their dietary health. Interestingly, almost all (93%) of those over the age of 55 would be willing to share their physical health anonymously with medical researchers compared to 71% of those between 18 – 34.

Data altruists are willing to share physical data, but not more sensitive information

Figure 5.2 Types of health data willing to be shared (% of Data Altruists)



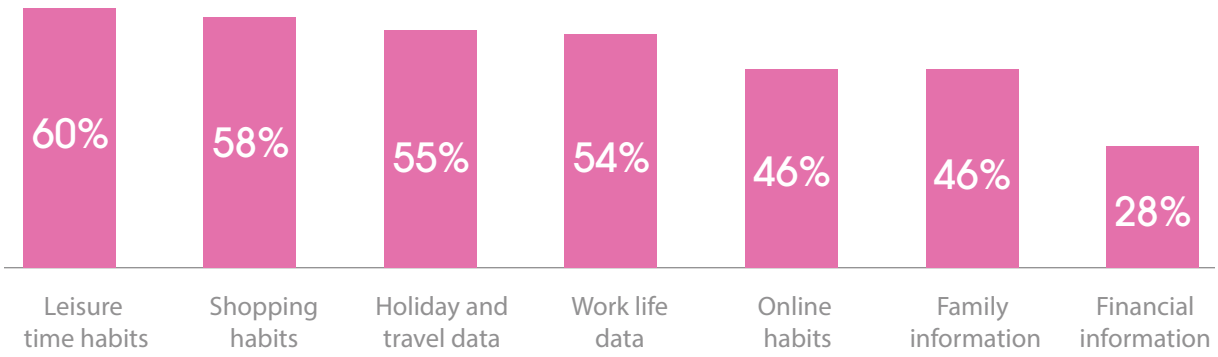
In contrast, when it comes to more personal health matters such as sexual health, less than half (47%) would be willing to share this type of data anonymously. This shows how important it is to understand not only attitudes to data generally, but also the types of data and reasons for sharing that people feel comfortable about.

Sharing lifestyle data

Data altruists are also willing to share other types of data anonymously, which could be very useful to capture to inform the development of new technologies and improve a range of existing services. Figure 5.3 shows that three fifths (60%) of data altruists would be comfortable sharing their leisure time habits (e.g. how they spend their time at weekends or after work) but only a quarter (28%) would be willing to share their financial information (e.g. income and assets).

Financial information is the most sensitive even for Data Altruists

Figure 5.3 Other information Data Altruists would share (% of Data Altruists)



Data as an asset

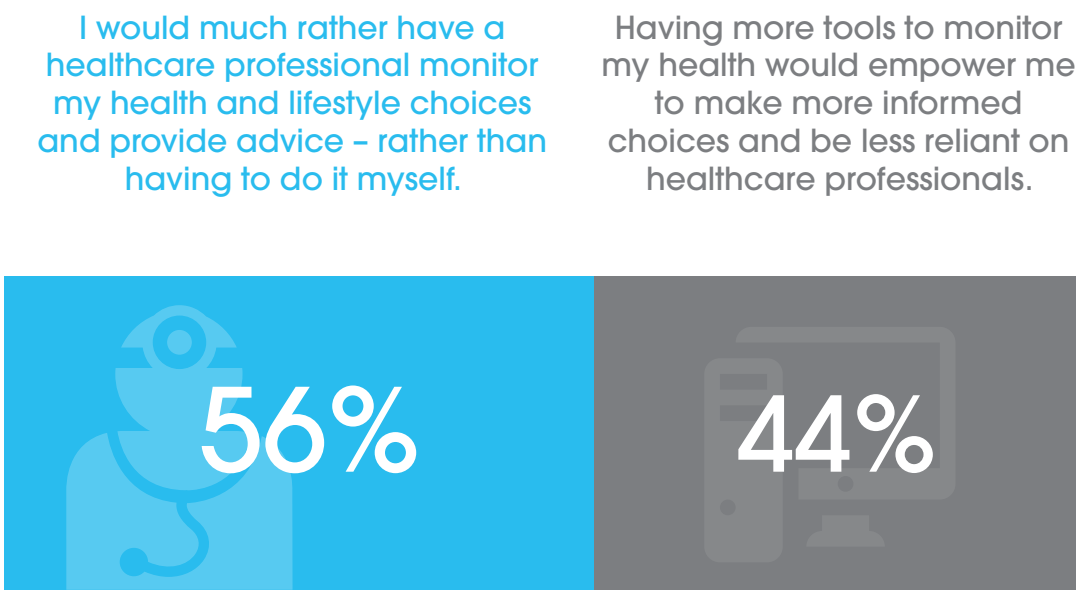
Health services struggle to harness the data that exists on patients yet it is increasingly recognised that this data could potentially be one of the NHS greatest assets to improve both individual and public health. However, the record of large-scale IT projects in the NHS and the public sector more generally suggests that harnessing this data is easier said than done.

"Do it for me" versus "do it yourself"

The availability of health technology has placed a greater emphasis on personal responsibility for healthcare. Despite this, Figure 5.4 shows that most respondents (56%) would still much rather have their health and lifestyle choices monitored by a professional, rather than having to do it themselves. Nonetheless, a significant proportion (44%) think having more tools to monitor their health would empower them to make more informed choices and be less reliant on healthcare professionals.

Access to health data is empowering for some

Figure 5.4 Health Responsibility



The issue of who takes responsibility for individuals' health is important to address at a time when the NHS is particularly stretched. Technology could be part of the solution but adoption will also require a shift in attitudes and expectations.

CONCLUDING REMARKS

Better use of data and technology has the power to improve health, transform the quality of delivery and reduce the cost of health and care services. It is clear the public are embracing technology to manage their health but the pace of change is sluggish when you compare it to how they are using technology in other parts of their lives, whether it be to book taxis, travel, DIY services and restaurants, manage finances, pay utility bills, or buy groceries.

It is interesting to compare the findings of this survey with those published in 2015 in People Powered Health: Engaging Citizens in the Future of Health and Technological Innovation.

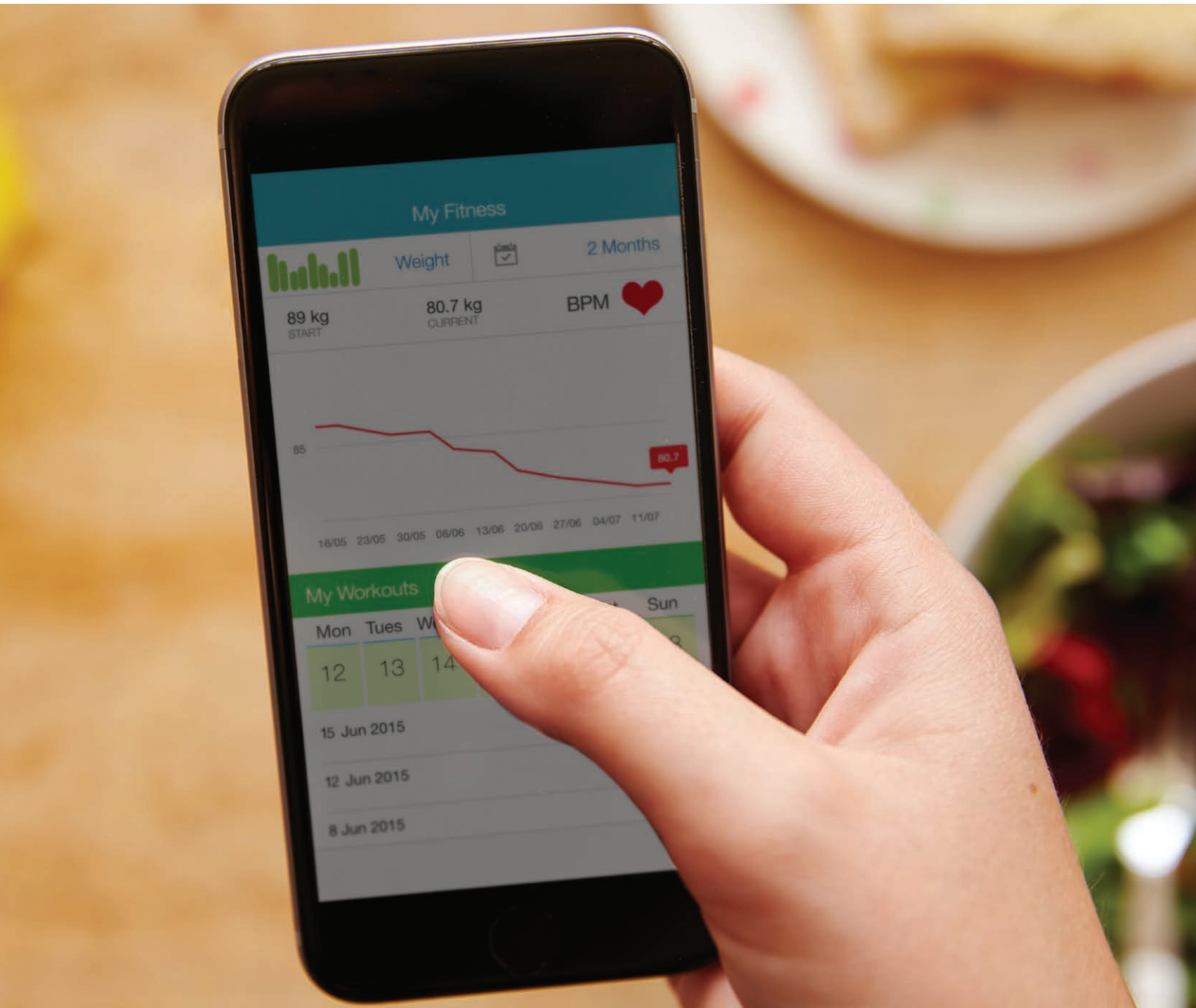
The findings remain broadly consistent that people are using health apps to give them the ability to monitor their progress over time (53% in 2015, 55% in 2016) and encourage them to lead a healthy lifestyle (45% in 2015, 42% in 2016) but there are some major issues to persuade people to adopt and maintain their use of these apps in preventive health – signalling to product developers a number of things to take on board, around understanding user need and enhancing user experience and integration.

Digitally-enabled transactions we expect in other areas of our life are still not yet happening in the NHS- in this survey the top three things that people want are: a simple online booking system to arrange appointments in the NHS (54%), access to health records online (47%) and online consultations with their GPs (41%). The British public have been patient, recognising the challenges the NHS is under, but it makes you wonder how long will they put up with this? It will be interesting to see how innovations like Babylon Health will start to change norms of behaviour and expectations.

Leveraging the power of data has the potential to be the single greatest tool to transform health of the nation, yet more needs to be done on ensuring privacy and security before this power can be unlocked – with clarity around ownership and use of personal data. It will be interesting to monitor trends in this space, including developments with personal data banks and marketplaces, especially with the new General Data Protection Regulation (GDPR) coming into force on 25 May 2018 and the Conservative Government's proposals to set up a Data Use and Ethics Commission which will aim to give consumers more control over their data.

Leadership and clarity is needed ahead to secure public trust in the transformational power of data at a time when cybersecurity breaches and global dominance of the technology giants is creating widespread unease.

Tina Woods
// Founder, Collider Health



TECHNICAL APPENDIX

Opinium conducted an online survey between the 1st and 7th November 2016, with an additional survey run between the 16th and 19th November. Each of these surveys was conducted among a nationally representative sample of over 2,000 UK adults. The results have been weighted to reflect nationally representative criteria across gender, age, region, working status and social grade in the UK.

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What people
think, feel and do.

About Opinium

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