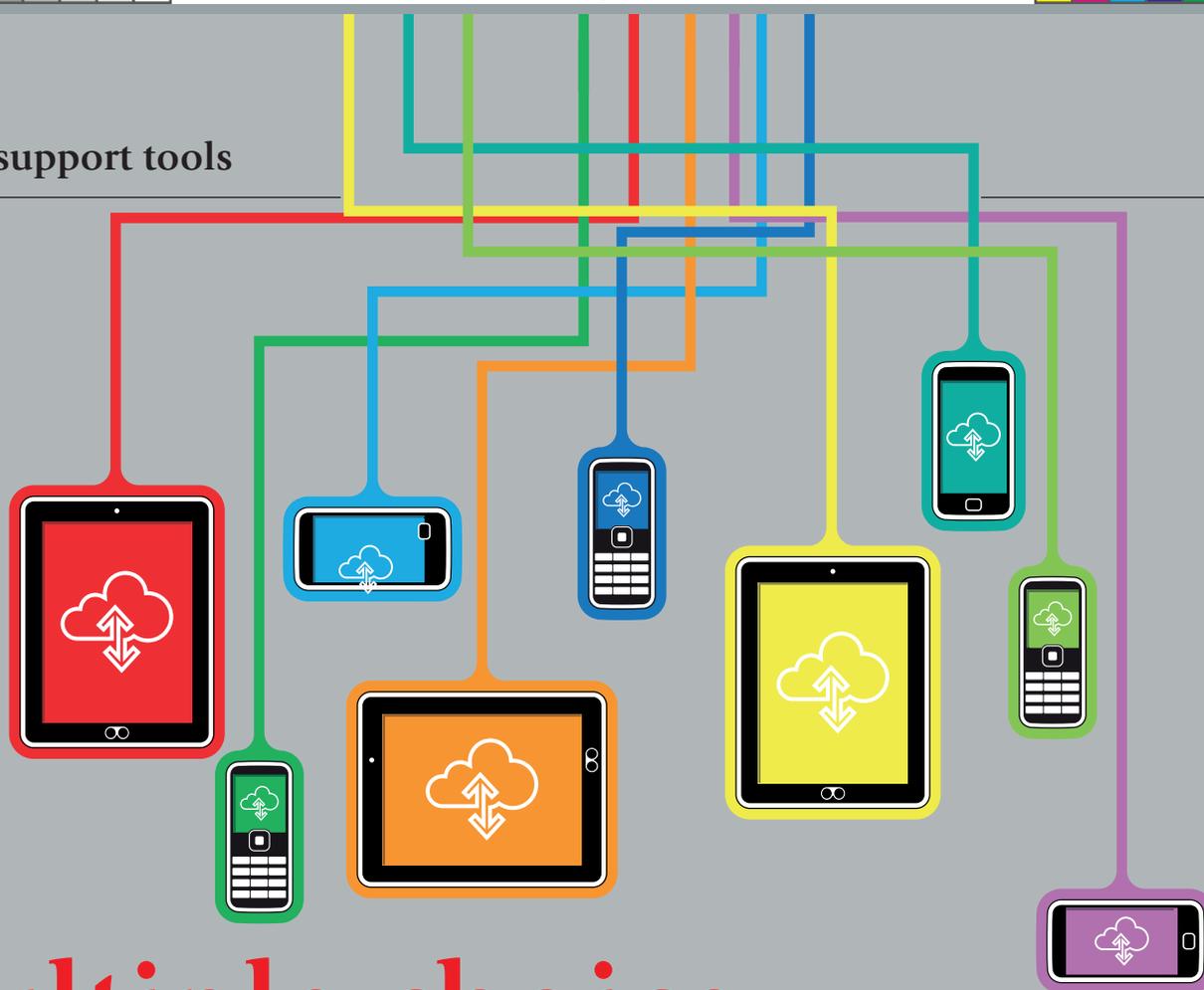## Digital support tools

Multiple choice

There's no one answer when it comes to how to effectively apply digital technology in healthcare, but the options are increasing

As the industry's embrace of most things digital continues to gather pace, a gradual consensus is building that patient support programmes that help improve patient outcomes are one of the most exciting areas.

Certainly the potential benefits of digital tools are vast, from increased efficiency for healthcare providers to improved adherence and reduced burden on the health service. But the golden bullet is engagement and giving patients the means to take control of their health or disease, and thus improve health outcomes.

The ubiquity, within many developed countries, of smartphones makes the devices something of a default channel for some companies - with the technology already seamlessly incorporated into patients' day-to-day lives.

Apps offer a number of advantages including alerts and reminders, as well as exploiting the smartphone's in-built functionality like the camera, accelerometers and GPS. They are also good for generating data, but Steven Hunt, senior digital strategy analyst at Ashfield Healthcare, says apps should utilise this technology with a view to providing actionable insight rather than simple data points.

One example where this is achieved is Volari (formerly Helio), a COPD app from Novartis that launches later this year. Hunt explains: "The app applies a 'generative model' - essentially taking the patient's data inputs and applying algorithms to detect trends and inform the patient to better actively manage the disease. It also attempts to combat 'user fatigue', utilising gamification to encourage 'check-ins'. Finally, the app also considered the user experience right from the concept, with the most valuable information just a glance away."

And other apps have proven their mettle as patient support tools. For instance, MyAsthma, from GlaxoSmithKline, which is a personalised adherence programme that uses data to give advice on the environmental levels of pollution and pollen in the area to reduce exacerbating asthma. User data for this app showed patients achieved positive improvements in their asthma control. Likewise, smoking cessation app Smartquit has been so successful that the National Cancer Institute has awarded a $3.1m grant to conduct a clinical trial to test its effectiveness.

Beyond apps

But digital support tools don't have to start and end with an app. Patient needs may prove there is no rationale for them despite their apparent advantages, says Chris Edmonds, managing director of emotive. Many apps also fail to deliver, he adds. "The space on our smartphones is prime real estate, and a digital patient support tool really does have to add significant value to a patient's life for it to warrant taking some of that space."

So it's paramount that pharma considers how all forms of digital support tools can add value and help improve both health outcomes and patients' lives. For instance, says Edmonds, "it may be better in some cases to create a mobile responsive site and use search engine optimisation to ensure patients can find the information they are looking for."

The range of digital tools available already includes standbys like SMS and emails, as well as a burgeoning array of futuristic devices. For instance, Google's 'smartspoon' uses algorithms to allow people with Parkinson's disease to eat without spilling food, and clinical trials have shown spoon shaking reduced by an average of 76%.

For further creative digital ideas, Synergy Vision's managing director and founder Ffyona Dawber suggests pharma should look to other industries that use digital well, such as the banking and retail sector, and adapt their digital tricks for a healthcare setting. It's solid advice that pharma, often lambasted for lagging behind other industries, would do well to follow.

Meanwhile, wearable technologies and the internet of things (IoT) provide an opportunity for pharma, says Edmonds. There may be some barriers to adoption, such as cost, but those tools that incorporate wearables and IoT can improve adherence and compliance, as well as help patients to track lifestyle and exercise goals with real-world data. Furthermore, the ability to feedback data to HCPs provides more dynamic and personalised support, Edmonds adds. This is an area that Novartis and Google are collaborating on with the development of a smart contact lens that measures glucose levels in tears and wirelessly transmits the data to mobile devices that doctors and patients

'A digital patient support tool really does have to add significant value to a patient's life'

can monitor in real time - and all without requiring a drop of blood.

Increasingly, pharma is also exploring online communities in patient support. Several firms are already working with established patient communities such as PatientsLikeMe. Meanwhile, others have set up their own specific networks or websites.

Getting personal

A shift to embracing other digital tools is an exciting development, says Hunt. Most existing digital support tools focus on providing a one-way communication of medical education and information, but Hunt believes "as we move forward, digital tools will aim to improve the dialogue between the patient and the treatment team, be it through a more personal connection or through sharing of patient data that aids discussions regarding treatment regimes and I expect individual personalisation of support tools to become standard execution of support in the coming years."

However, the trick, with all these tools at pharma's disposal, is to integrate them, as well as making use of offline resources, which are particularly relevant for patients who can't access digital tools. But, notes Hunt, not all patients will interact with a support programme in the same way and, as they move between support components to meet their lifestyle, they will expect a seamless experience between the online and offline aspects.

Indeed, it is the patient who should be at the heart of all support tools and programmes to define which elements work best. "I feel the disease and patient should be important in informing the development of both digital and non-digital support tools from the outset," says Dawber. "In any development programme it is essential to get input from patient groups." This was seen recently with a UCB-organised 'hackathon' to get patients involved in developing new digital tools for epilepsy.

It's not just development that is important though. Pharma also has to consider education around the tools, for patients and HCPs, as well as getting buy-in from clinicians, says Dawber. "There is no point in patients investing time and money in expensive kit that their HCP doesn't recognise or accept data from." In addition, support tools should not be a replacement for doctors, she says.

Another vital point is that digital tools are not one-size-fits-all, because - despite the things they may have share - each patient is, of course, still an individual. But in looking to take this into account for ever-more personalised approaches there are still pitfalls to avoid. As Edmonds warns: "Personalisation of treatment advice, reminders and the ability to track and monitor their conditions are all valuable digital interactions, but if they are not seen as useful by the patient the tool will fail."

So, with patient engagement and improving outcomes the name of the game, it's a positive step to see pharma and the companies it works with assessing a wide range of digital options that could aid them in this quest.

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