A Review of the GIANT Health Event 2021

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Citation: EMJ Innov. 2021;6[1]:8-9.

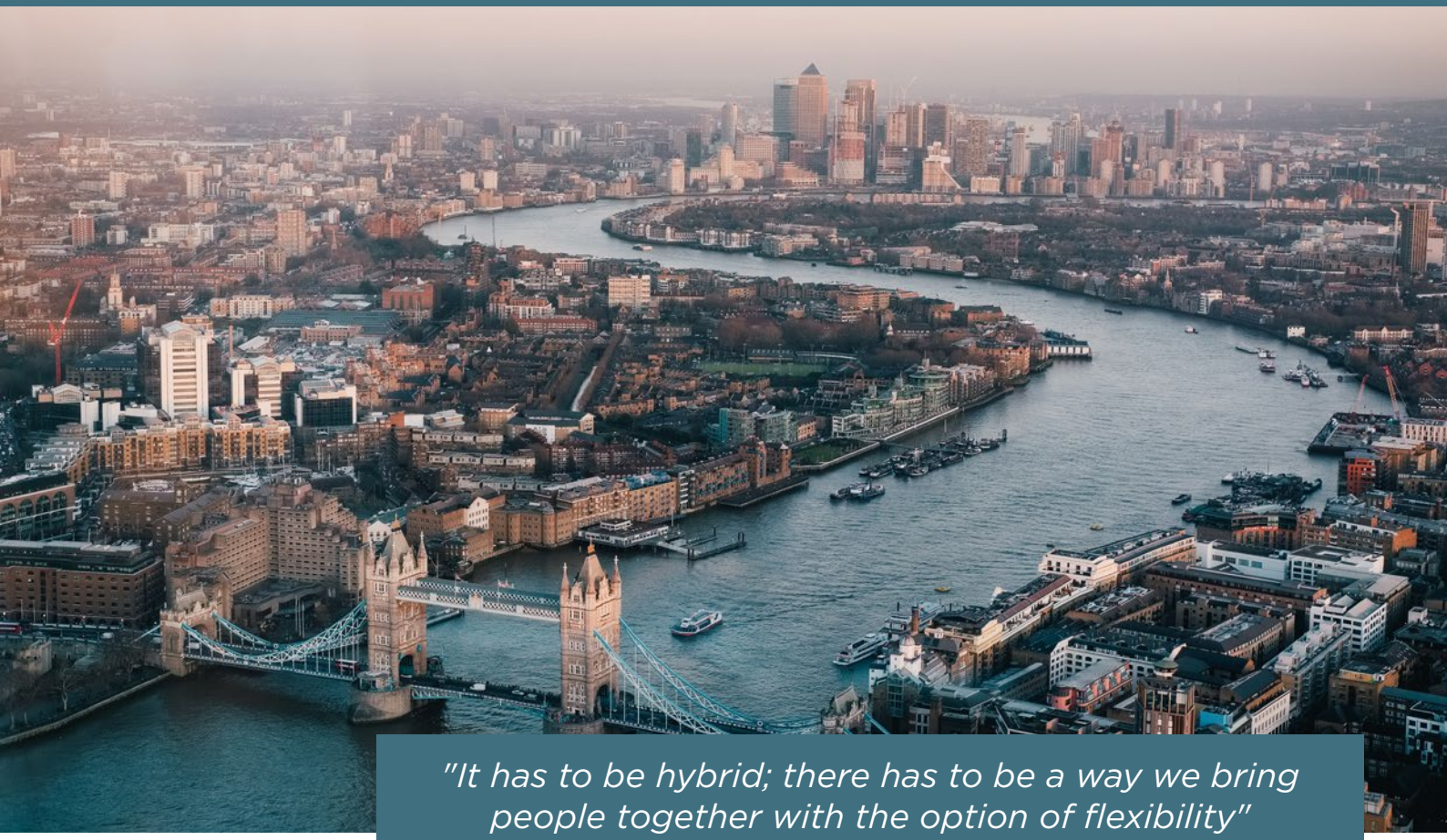
THE FOREFRONT of medical research has once again been dominated by advances in understanding the COVID-19 pandemic, but a deeper look reveals significant progress in multiple modes of futuristic clinical knowledge and practice. The stage was set in London, UK, at the GIANT Health Event 2021, harnessing a hybrid model of attendance giving delegates the opportunity to learn about progress in several hot topics in healthcare and technology.

Labelled Europe's largest and most valuable gathering in healthcare innovations, the 7th annual GIANT Health Event was opened by Shafi Ahmed, an award-winning cancer surgeon at the Royal London Hospital, UK, and current Chairman of GIANT Health. Fittingly for a modern technology gathering, this event provided contemporaneous virtual and in-person attendance options, labelled by Ahmed as "the model of the future." He elaborated: "It has to be hybrid; there has to be a way we bring people together with the option of flexibility," predicting that "this will happen in 2022 and beyond."

The main vision of the event is "to improve the health and well-being of people worldwide, by promoting healthcare innovation and supporting health-tech entrepreneurs," with informative sessions feeding into this. The audience enjoyed valuable updates on a range of topics, from progress in the digitalisation of integrated care systems and patient-centred healthcare, to precision medicine, and the current digital challenges facing healthcare. Overarching themes in the event included hopes for improved screening initiatives to allow early identification of malignancies, and better accessibility of healthcare via provision of remote technology.

The Main Stage, one of four live streaming sites of the congress, hosted a selection of enlightening presentations on the first day. Discussing the changing landscape and decentralisation of clinical trials, emerging solutions, and new ways to conduct these in-part or completely virtually, were discussed in more detail. Data on participant recruitment, travel, and drop out were used to argue in favour of remote trials taking place, ahead of being held at traditional test centres. This is a model gaining traction in the pharmaceutical world, likely due to the improved patient engagement and the insights digital tools can provide. The presenters explained that in 2018, around 10% of all the trials in Europe and North America exhibited an element of decentralised technology, and that this figure is expected to rise exponentially and reach one in three trials by 2025.

Turning towards the new frontiers in precision medicine, a session concentrating on brain-computer interfaces discussed the use of artificial intelligence for reading and writing neural signals in real-time. A large proportion of the session centred around neuromodulation, and its role in altering nerve activity by delivering electrical stimulation directly to a target area. This presentation clarified that future research, set to



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affect neurostimulation devices on the market and those yet to be released, will be guided by advances in the use of electrophysiology and action potentials to signal, rather than biochemistry.

Jumping across to the third stage, an informative talk on technology innovations to tackle hospital waiting lists was given by Mark Ratnarajah, a former practising paediatrician. Addressing the growing problem of waiting lists, which has been escalated by the COVID-19 pandemic, the presenter discussed the employment of risk stratification methods, such as outlining the successful use of artificial intelligence to identify and prioritise patients in the north of England.

Among topics discussed on Day 2 was wearable technology to support ageing. According to data presented by Katherine Church, Chief Digital Officer for Surrey Heartlands Integrated Care System, UK, 42 National Health Service (NHS) integrated care systems will be operating across the UK by April 2022, accommodating the caring requirement for large elderly populations. Louise Rogerson, a physiotherapist specialising in neurological conditions in older people, spoke about remote monitoring systems designed to help healthy ageing, and keep the elderly at home for longer. Underlining some of the barriers to healthy ageing. Rogerson stated: "People looking after older people who are declining, are declining themselves." She showed her support for novel therapies and technology to provide support in this discipline: "For me, technology needs to be more embedded in daily life," going on to stress the hard work that is necessary to allow healthy ageing. She urged listeners not to accept deterioration, and to adopt a shift in mindset from using technology to monitor failings in the elderly, and their progress. Concluding remarks centred on the hopes for emerging technology monitoring diagnostics in aspects like frailty and posture, and providing analytics to healthcare professionals to compliment early interventions, ahead of reactive responses to events like falls.

In his final remarks, bringing the congress to a close, Ahmed thanked the near 2,500 face-to-face attendees combined from both days, and the countless others accessing virtual content. Without a doubt, this pioneer platform of disseminating knowledge proved a success. It is expected that the forward-thinking content shared will continue to make waves in the ever-advancing pool of healthcare technology, sparking conversations and focusing approaches amongst the associated investors, researchers, and wider scientific communities. ■