

# MarketWATCH NEWS

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### Reference:

<https://www.medicaldevice-network.com/market-data/>

## Few employees want to return to office full-time when lockdowns are eased: Poll

Remote working or working from home has become the new norm during the COVID-19 times which call for maintaining physical distancing and complying with lockdown measures to curb disease spread.

Working from home has multiple benefits such as eliminating the need to travel and ensuring business continuity for firms during lockdowns. The world has never seen before such a wide work from home practice implemented across industries, which will have long-term business implications.

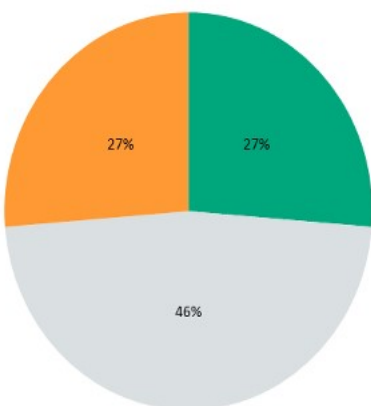
Verdict is running a poll across its network of sites to assess whether employees want to return to offices after the lockdown restrictions are eased.

Analysis of the ongoing poll results so far shows that majority of the respondents want a mix of working remotely and returning to office premises.

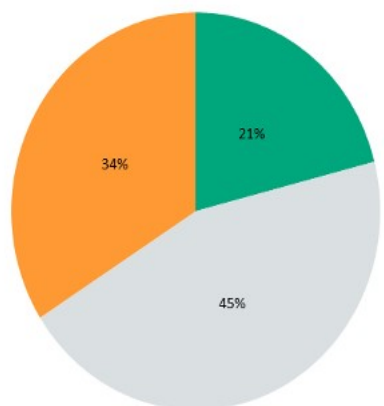
A majority 46% of the respondents voted for a mix of working remotely and returning to office, while 27% of the respondents wanted to work remotely full-time. Another 27% of the respondents wanted to return to work premises full time.

Interestingly, a majority 45% of those who are working from home for the first time wished for a mix of working remotely and in-office given a choice, while 34% wanted to return to office premises full-time and 21% wanted to work remotely full-time, indicating a strong desire to work from home.

All respondents



Respondents who worked full-time in offices pre-lockdown



When lockdowns ease, if your employer lets you decide, would you prefer to:

- Work remotely full time
- A mix of both
- Return to work premises full time

## Setting an example: Rwanda as a digital health success story

*Rwanda is set to become the first country in the world to have a digital-first universal primary care service, due to a government collaboration with Babylon Health. Allie Nawrat explores the transformation this African country has been through to make it a good location for implementing digital health innovations to benefit of its citizens.*



The past 25 years have seen Rwanda transition from its legacy of genocide and war into a largely peaceful nation with a steadily growing economy, particularly in the agricultural sector. According to the World Bank, poverty declined from 59% to 39% between 2001 and 2014 and Rwanda's economic growth has built upon previous success to exceed 10% in 2019.

### Spotlight on health and technology

Central to Rwanda's economic success is government-led national growth strategies. The first of these was Vision 2020, which was launched in 2000 and aimed for the country to become a middle-income country in two decades. This relies upon diversifying the economy beyond the agriculture sector and upskilling its population in other fields.

Although Rwanda still faces significant challenges in meeting its development goals, one of its major successes has been the healthcare sector. Rwanda is one of the few developing countries in the world to have universal health coverage; its community-based health insurance programme – known as Mutuelle de Santé – reaches more than 90% of the population.

Another area of focus for Rwanda is technology. As part of nationwide digitisation efforts the government has invested in a broadband infrastructure that now covers 90% of the country and mobile phone penetration has exceeded 75% of the population. This is a particularly impressive feat since most of Rwanda's 12.5 million people are spread out in rural areas with incredibly difficult topography.

Building on Rwanda's strong foundations in healthcare and technology – and to advance progress towards the country's long-term development goals – the government signed a ten-year collaboration with UK-headquartered remote consultations provider Babylon Health.

Together they will create the world's first digital-first universal primary health care service, in which everyone over the age of 12 in Rwanda will have access to consultations with doctors or nurses through their mobile phones within minutes. Thereby reducing delays in accessing appointments or the need to travel for many hours to see a medical professional.

### A bright, healthy future for Rwanda

Rwanda minister of health Dr Daniel Ngamije stated: "Increasing access to our doctors will help stop self-diagnosis and self-medication, which lead to longer-term complications.

"With the reduced burden on health centres and other medical institutions, our medical professionals will be able to spend more time and resources on the most serious medical cases, further increasing the quality of healthcare delivery across the country."

"Digital healthcare is a significant step towards ensuring that all our members can conveniently access doctors without fear of loss of income or worry about travel to a medical institution, added Dr Solange Hakiba deputy director general of the Rwandan Social Security Board, which runs the Mutuelle de Santé programme. "Early intervention with easier access to healthcare will also reduce the burden on our universal healthcare scheme."

"We are so proud to be helping make Rwanda a world-leader in digital health, and so humbled that the Government of Rwanda chose Babylon to help its ambition to provide universal primary care to all its citizens," noted Babylon CEO and founder Dr Ali Parsa. "Rwanda is showing the world how we can sustainably tackle the challenges in healthcare, and make it accessible and affordable for all."

The country's Covid-19 emergency response project, which is being supported by \$14.25m of funding from the World Bank, will explore multiple digital health innovations to support its management of the pandemic.

These include real-time digital mapping of the spread of the disease and telemedicine to reduce the need for suspected patients from having to attend doctors' surgeries.

Rwanda's proactive, solution-driven response to an escalating driven pandemic, which is likely to wreck the economies of even the most developed countries is a real testament to how far this country has come in the past 25 years. Rwanda really is now a model to other developing countries of how technology can support socio-economic growth and stability, particularly to improve the health of its citizens.

## Will digital mental health solutions thrive after Covid-19?

Talking therapies for mental health conditions are among countless medical interventions that have been disrupted due to the Covid-19 pandemic, and many patients have now turned to digital solutions to supplement their usual in-person treatment. But are digital mental health systems struggling to make up for the face-to-face connection lost in lockdown, or is this a watershed moment for the delivery of mental health treatment?



### **Digital mental health appears to be post-pandemic friendly**

It's perhaps unsurprising that a surge in demand for mental health care services is expected post-pandemic too, with thousands of people across the world grieving lost loved ones and lost livelihoods. Resources are already stretched thin for mental health care in many regions, so the ability to access therapy digitally could shorten the path to treatment considerably as patients will no longer be limited by location-based availability. This is expected to be particularly beneficial to younger people.

BioBeats CEO David Plans is confident that his company's unique, workplace-centric digital mental health platform will have a role to play as society returns to something resembling normality. BioBeats combines an AI powered app, BioBase, and a wearable device that collects biometric health data, such as heart rate variability and activity, as well as psychometric data to provide employees with personalised health insights and tools.

Plans says: "Through continuous measurement, our technology is able to provide personalised coaching programmes for mental wellbeing, resilience, and recovery. Our products are purpose-built for use within companies to promote better mental health and build deeper resilience.

"As we come back to work from lockdown, the office is going to look very different. Employees will need support in coping with new ways of working and diminished socialisation as part of the work environment. These changes will undoubtedly take a toll on the mental health of workers, and workplaces have a responsibility to help guide their employees through these changes. At the end of the day, it benefits the employer as well, since improved mental wellness amongst employees translates into greater productivity and less sick days taken."

### **How do patients feel about all this?**

It's perhaps unsurprising that digital mental health leaders are big believers in their own products – but how do patients feel about these solutions? Verdict checked back in with Amanda (not her real name), who we spoke to in April toward the beginning of the pandemic. After four months of CBT to treat anxiety and low mood, Amanda and her therapist were forced to switch to communicating digitally, which she initially found she preferred.

"I still definitely prefer it," she says. "It's convenient and I won't feel comfortable using public transport to get anywhere for a while so this meets my needs. I feel like now I've done it this way for a while it's become 'normal' and I wouldn't change it.

Now that everything has become virtual, getting logged on and setting up a call for everyday things is becoming muscle memory. I can definitely see the benefits of face-to-face but right now I'm so happy with the ease and practicality of virtual." The digital mental health market was valued at \$1.4bn (£1.1bn) in 2017 and is projected to reach \$4.6bn .in 2026, according to Zion Market Research.

With strong industry and patient enthusiasm to back them up, if digital mental health services can adequately handle the surge in referrals predicted to swamp the sector, this could prove testament to their worth.

O'Donnell says: "Face to face appointments will not and should not go anywhere, but I do think there will be more of an expectation for flexibility. Since we've been in lockdown people are working from home, they've been home-schooling, they've been doing parts of their lives digitally where that was never an option before. While it's been because we haven't had another option, it's proof that so much more is possible than we may have originally thought."

One of the many solutions to easing lockdown restrictions under UK government plans is to harness an app that can enable large-scale digital contact tracing – but not everybody has a compatible smartphone for the NHS app set to be rolled out this month. Fortunately, there could be a few ways to bring the technology to the entire population.



The UK has now surpassed more than 40,000 Covid-19 deaths, the second country after the US to do so. With its response to the pandemic widely criticised by both the country’s own citizens and on the world stage, the British government is planning to roll out a contact-tracing app to try and curb the spread of the infection. This app will be complemented by the human contact tracers whose job it is to call people who have potentially been exposed to the virus. This system has gotten off to a fairly shaky start.

If the AI calculates that the person is likely to have Covid-19, all the people the Bluetooth ID has been in recent close contact with will be sent a notification advising they self-isolate for 14 days. The sick person will then be tested for the disease. If they test positive, self-isolation will continue to be recommended to those they have come into contact with. If they test negative, a second notification will be sent by the app to tell them they can stop self-isolating.

### **Contact tracing through a mobile phone isn’t accessible for many**

Despite their apparent ubiquity, only 77% of the UK population are actually estimated to own mobile phones. Relying so heavily on mobile phone technology means nearly a quarter of the population could slip through the cracks. Plus, the app will only be available on phones which run on either Google’s Android and Apple’s iOS platform – by far the most popular mobile phone operating systems, but by no means the only ones.

“These apps are biased towards the affluent part of the population. People who don’t have the latest smartphone can’t participate, people who don’t have a smartphone can’t participate, children are not in the mix, homeless people are not in the mix. It clearly doesn’t address everyone.” As an alternative, Nauck floated the idea of ‘Bluetooth beacons’, devices that would serve the same functionality as the app but be mass-produced for those without access to an Android or iOS smartphone and serve the same function.

A small wearable Bluetooth device which could be distributed among homeless people and young children who don’t have their own mobile phones, for example, could drastically expand the reach of the test and trace program. Experts have estimated that the NHS contact tracing app will need a 60% adoption rate among the population to be a success. When only 77% of the population actually have mobile phones, that means the vast majority of mobile phone users will need to download the app.

### **Contact tracing without Bluetooth technology**

Nauck also floated the idea of moving away purely from smart devices and towards apps built into smart televisions – many older or financially disadvantaged people may not own a smartphone, but may well have a television that could be tuned into a contact-tracing platform.

Wellness app Evergreen’s UK executive chairman Stephen Critchlow stressed the importance of a web interface as well as a mobile phone platform. “We think it’s really important there’s also a web interface as well as an app,” he said. “The NHS app doesn’t have a web interface, but we think it’s really important we can continue to maintain ours. That means even if you had no device of your own, you could go into the library and use a computer and log in.”

“Technology generally tends to favour those that are able to take advantage of it, but healthcare problems happen in individuals who are more disadvantaged. If we really want to make a difference for everybody, we need to make the technology work for the most deprived populations and the most vulnerable.”

Ireland-based medical technology company



**Medtronic**

Medtronic has received the US Food and Drug Administration (FDA) approval for its Percept PC Deep Brain Stimulation (DBS) system.

The neurostimulation system uses BrainSense technology to chronically capture and record brain signals while delivering therapy to patients with neurologic disorders related to Parkinson's disease, essential tremor, dystonia, epilepsy or obsessive-compulsive disorder (OCD).

It enables physicians to track patient brain signals and correlate them with patient-recorded actions or experiences, including symptoms, side effects, or medication intake, offering a personalised, data-driven neurostimulation treatment.

DBS is an individualised therapy delivered from a small pacemaker-like device, which can be placed under the skin of the chest or abdomen. It is designed to send electrical signals through very thin wires to a targeted area in the brain related to the symptoms of a neurological disorder.

In addition to BrainSense technology, the Percept PC DBS system uses several other features, including 3T and 1.5T full-body magnetic resonance imaging (MRI) scans, Enhanced Patient Programmer, and low-pulse width, which enables expanded stimulation options.

It also said to have improved battery longevity and contains a smart battery for personalised prediction of remaining battery life.

Medtronic Restorative Therapies Group Brain Modulation business vice-president and general manager Mike Daly said: "There is nothing that can replace clinical judgement in treating patients. For the first time, this technology gives clinicians feedback directly from the DBS patient's brain.

"With such data-driven, patient-specific insights, we believe it can change the standard of care."

Medtronic noted that the Mayo Clinic in Rochester will be the first in the US to implant the newly approved device.

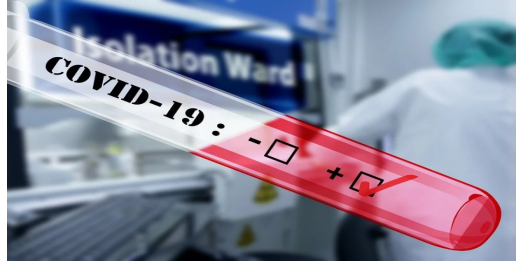
Meanwhile, the company received secured CE mark approval for its TAVI system this week.

Earlier this month, Medtronic received an investment of \$337m from Blackstone Life Sciences to scale up the development of its upcoming diabetes technologies.



**Coronary interventions experience decline due to Covid-19-**

A study published by the European Society of Cardiology indicated that the rate and timing of admissions of patients with ST-elevation myocardial infarction (STEMI), a life-threatening type of heart attack, was reduced globally since the Covid-19 outbreak. The European Society of Cardiology administered an internet-based questionnaire to cardiologists and cardiovascular nurses, receiving over 3,000 responses from 141 countries across six continents. Over 60% of responses indicated that the reduction in STEMI presentations was over 40%, and over 40% of STEMI patients admitted to hospital presented beyond the optimal window for minimally invasive treatments such as percutaneous coronary interventions (PCI) or thrombolysis.



**Timeline for resuming elective surgeries becoming more clear amid the Covid-19 pandemic-**

CEOs of large healthcare networks are now predicting that elective procedure volumes will not return to pre-Covid-19 levels for another three to six months. By analyzing epidemiology data and tracking regional guidelines, GlobalData projects surgery volumes to reach 75% of what was performed in 2019 by the end of Q3 2020 and expects hospitals to reach pre-Covid-19 capacities by the end of 2020. In early 2021, GlobalData anticipates a “surge” period where hospitals will be functioning at 10–20% above regular capacity to catch up on delayed procedures.

**Covid-19 cases re-emerge in Beijing-** Beijing has cancelled over 60% of its commercial flights amid a reemergence of Covid-19 cases which began on 11 June. The most recent outbreak in Beijing has led to a cumulative total of approximately 250 cases. In order to control the spread of the new outbreak, Beijing is implementing measures to control the movement of people in and out of high and medium risk zones. The source of the outbreak has been linked to a regional wholesale food market.

A disease control expert from the National Health Commission, Wu-Hao, has predicted that the new daily cases are expected to remain at current levels after which point they will drop off. Although Hao believes the virus outbreak to be under control, he did warn of the possibility of asymptomatic carriers and urged vigilance among the people. Beijing has flagged five high-risk zones and a further 38 medium-risk zones in order to focus on ramped-up testing efforts. Testing capacity in Beijing is now upwards of 300,000 people per day.

Authorities state that testing efforts will focus on personnel in high-risk industries such as healthcare, delivery, and food handling within the designated zones in order to continue to control the spread of the virus. New daily reported cases in Beijing were in the '30s during 14-17 June, but have since declined to a low of nine on 22 June. Despite this decline, Beijing has reported an increase of new daily cases to 13 as of 23 June, making it unclear if cases are going to drop to zero.

Fears of a second wave are mounting, even as many countries around the world continue to struggle with combatting the first wave. Countries such as India, Iran, and Russia and many countries across Central and South America are among those that are currently focused on flattening their curves. With a vaccine still not available, social distancing, contact tracing, and robust testing remain vital efforts in combatting the spread of Covid-19, in Beijing and worldwide, ensuring supply chains



**4D Printing-** No, it's not a typo – we didn't mean to say 3D printing (that comes next!). The healthcare industry will be one of the first sectors to benefit from 4D printing. It's the next stage up from 3D printing, in which special materials are used to print objects that change shape post-production when triggered by water, heat, wind, or other forms of energy. For example, let's assume that a patient needs a prosthetic. 4D printing makes the process easier because the materials with which the prosthetic is printed can reshape themselves on their own and adapt to the patient's body and movement much more easily than regular prosthetics. 4D printing is also due to bring benefits to artificial organs, smart sensors and even nanotechnology. It's a world where objects can manipulate themselves to physically fit certain needs.

**Machine Learning (ML)-** Yet another familiar technology that's growing fast. This tech comes with several benefits and uses in the healthcare industry, such as: Imaging analytics and pathology. Machine learning can add to the skills of human radiologists by identifying more quickly subtler changes in imaging scans, increasing the chance of earlier and more accurate diagnosis.

**Natural language processing and free-text data.** PDF images of lab reports, voice recordings of consumer interactions, and free-text EHR inputs all pose significant challenges for traditional analytics tools, but machine learning offers a new way to extract usable and meaningful information from these data sources.

**Internet of Medical Things-** The Internet of Medical Things (IoMT) is a variety of apps and medical devices used to connect IT systems in the healthcare industry. It's a way for computers and medical devices to communicate with one another in various ways, including: In-hospitals and clinics. IoMT is used for patient monitoring, but this isn't the only application where you can find it. MRIs, X-ray machines, CT scanners and other equipment can be remotely monitored for performance issues. IoMT in this context can also be used in remote diagnosis, predictive maintenance and performance upgrades for imaging products.

**Medical Robots-** It's no longer surprising to hear that a hospital's top-performing surgeon isn't human. With unmatched precision and the ability to work without fatigue, medical robots are one of the most useful applications of robotics in the healthcare industry. These robots are used in several medical scenarios, such as difficult surgical procedures, and they have completely revolutionised the speed and efficiency of healthcare services across the world. The first medical robot was Puma, first used in 1985. The robot placed a needle for a brain biopsy using CT guidance. **Da Vinci Surgical Robot-** Commonly used for prostatectomies, cardiac valve repair and gynaecologic procedures, this robot is controlled remotely by a surgeon from a console and is designed to perform highly complex surgery using a minimally invasive approach. **ViRob Miniature Medical Robot-** this medical robot was developed to crawl through the human body, locate tumours, and treat them with drugs. It's only 1mm wide and 4mm long, using tiny arms controlled by an electromagnetic field to propel its way through different cavities in the human body.

**Software as a Medical Device-** According to the FDA, software as a medical device (SaMD for short) is a class of software that is designed to carry out one or more medical actions. This includes software or mobile apps intended to treat, diagnose, cure, mitigate, or prevent disease. SaMD's defining feature is that it performs these medical actions without the need for actual hardware. It's usually used alongside non-medical computing platforms, which may be connected to virtual networks, traditional medical devices or other general-use hardware.

Here are some examples of SaMD: An app that calculates appropriate insulin dosage based on a person's blood glucose levels. Software that draws data from other digital devices to determine risk factors associated with epileptic seizures.

**Virtual Reality-** Virtual reality (VR) in healthcare often involves software that's beneficial in many ways. For example, VR software can improve the training of surgeons and medical students by allowing them to "perform surgery" without the risk of harming someone. VR medical devices also benefit patients suffering from depression, autism, vision problems and many other conditions.

***2020 is unquestionably a year of major change in the medical devices industry and we're looking forward to seeing what's in store over the coming decade! In the meantime, have a look at our offer in the medical devices industry!***