

# TELEMEDICINE TAPS INTO NEW DIGITAL AGE OF PATIENT CARE

With the highly infectious coronavirus having propelled Irish healthcare into the digital age, telemedicine may now well become part of the 'new norm'. Lorraine Courtney talks to those at the frontline and finds an increasing appetite to use video solutions for medical consultations that may well continue for the foreseeable.

**A**t the beginning of March, the HSE urged Ireland's GP surgeries to reduce their face-to-face appointments to prevent the potential transmission of Covid-19.

The virus has fundamentally changed the way medicine is practiced in Ireland, particularly in general practice, according to Dublin-based GP Dr Knut Moe.

He said that since the start of the pandemic, most queries had been dealt with by phone or video consultations (probably about 90%), adding that prescriptions were emailed to pharmacies using 'health-mail' and GPs were back wearing scrubs, masks etc.

In many ways, innovation comes at a time of crisis, so many practices have used the opportunity to adopt

new strategies and policies, some that may have been otherwise slow to be introduced at HSE level or slow to be adopted in the community.

## COLLATERAL DAMAGE OF COVID

"We have seen a dramatic fall-off in numbers contacting their GP for advice, leading to concerns about the 'collateral damage' of Covid – patient care has been delayed by not seeking medical help in a timely enough manner," Dr Moe told 'Emergency Services Ireland'.

Irish GPs have been slow traditionally to adopt telemedicine, often saying that there's no substitute for 'eyeballing' a patient. "However, in a patient with whom we already have an existing relationship, it can be quite a useful tool and certainly can be more beneficial than a phone call for all the visual cues it can give," he claimed.

"Only recently a patient described a 'small blister' on a finger, I started a video consultation to assess it and the resulting sight prompted me to refer the patient to hospital, where she spent nearly 10 days and nearly lost the finger!"

Telemedicine is here now, with most GPs and many consultants having had some experience with it over the past few weeks, so it is likely here to stay in some way.

"Increasingly, people are stuck in work or at home with kids and unable to visit their GP for some reason, so I do think that there will be times when we come through the other side of Covid-19 that it will be useful," he noted.

"However, it works best when the GP and patient have an existing relationship and it's certainly not appropriate for many types of consultation. One thing that we often pick up as general practitioners with our patient are the visual cues, such as a change in body language or something not quite right that prompts us to dig a little deeper, often to reveal the hidden





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agenda of why the patient is really attending, perhaps with mental health or psychological concerns," according to the Churchtown-based GP.

"These can be the most rewarding consultations, but they are more difficult to pick up on the phone or even in video consultations, so we have to look out for these cues even more carefully."

### NEW DIGITAL SOLUTIONS

And in terms of the new digital solutions now being put in place, it means that GPs have a more effective system of triage, which should vastly reduce the number of time-consuming face-to-face consultations needed in the future.

Irish company RedZinc is now providing two main video solutions for medical consultations. The first is the 'BlueEye Handsfree' platform – a headset with integrated high-definition camera, using a smartphone for mobile connection.

The healthcare provider who is local to the patient (paramedic or community nurse) wears the video camera and can send live video to the hospital for the purpose of getting medical expertise.

The ergonomic design and lightweight hardware make the video camera easy to wear and use in an

### 'ICU FAMILY LINK' AT UNIVERSITY HOSPITAL GALWAY

University Hospital Galway's new video call system – ICU FamilyLink – enables contact between families, patients and the clinical teams providing care, which is particularly important as visitors are not permitted into the hospital, due to the COVID-19 pandemic.

When the visiting restrictions were introduced in early March, the Intensive Care Unit (ICU) team in Galway appreciated that it was going to be very difficult to keep families and patients in the ICU updated and connected, particularly where family members may be in physical isolation in different locations.

In an effort to address these challenges, the hospital's ICU team reached out to its academic partners in NUI Galway, who in turn reached out to industry contacts in Galway and beyond. NUI Galway, Cisco and IBM assembled a team to answer the call and working closely with the ICU and clinical engineering teams in UHG, have rapidly developed a state-of-the-art video call system specifically for the ICU setting.

Ann Conroy, Clinical Nurse Manager 3, who works in the ICU at UHG said, "The system was designed and implemented to make it as easy as possible for the nurse caring for the patient to use safely and securely. This was based on listening to the nurses and addressing the needs that we identified. "The simplicity of the unit is what makes this such a success for the nurses who are busy caring for the patient and for the families who are at home. Also the quality of the video image is excellent, and it means it's as close as a family member will get to being in the ICU."



*UHG staff Frank Kirrane, Medical Physical and Clinical Engineering Dept, and Leonie Cullen, Clinical Nurse Manager 2, with the ICU FamilyLink video call unit which is being used to connect family members with patients and staff in the Intensive Care Unit (ICU).*

Mrs Maura McNamara, wife of a patient from Galway City who was treated in the ICU said, "We got an opportunity to use the video conferencing system to keep in touch with my husband while he was in the ICU. It was fantastic to get to see him and how he was doing and get updates from the nurses. It is difficult not being able to visit the hospital and this was the next best thing to being there."



*Using the 'BlueEye Handsfree' platform (a headset with integrated high-definition camera, using a smartphone for mobile connection) the paramedic or community nurse wears the video camera and can send live video to the hospital to get medical expertise.*



The healthcare professional logs into the BlueEye Direct Video and can send a link to a patient's smartphone, whereby the patient can click the link to initiate a video call. No app is required.

emergency. The doctor in the hospital can see and speak with the patient, and give senior medical support and help with pre-hospital diagnosis, treatment and oversight.

"This platform would be used by any remotely-located first responder service such as ambulance, fire and police to call for assistance with video. It can be used for many emergency applications but also for cases such as community nursing, for example if a community nurse is unsure as to whether an elderly/frail person needs to go to the Emergency Department in an

ambulance," said Donal Morris, RedZinc's Founder and CEO.

He told 'Emergency Services Ireland' that the time saved in diagnosing a medical condition or providing help or direction to the right hospital department can improve patient outcomes and save time in rehabilitation and save hospital and first responder resources.

#### VIDEO OUTPATIENT CLINIC

The second video service – a video outpatient clinic called 'BlueEye Direct Video' – was adapted from the 'BlueEye Handsfree' platform and arose directly from the challenges imposed by Covid-19.

"BlueEye Direct Video is a secure, reliable and easy-to-use telemedicine solution," said Morris. "It is a web-based, real-time video communication service between two devices. BlueEye Direct Video can be used as a video outpatient clinic for hospitals, or for any healthcare professionals such as nurses, therapists and clinicians."

The healthcare professional logs in and sends a video invite to the patient's device. The patient simply clicks the link to initiate the video call. "This service can be used by any clinician who can progress the patient's health, such as physiotherapy, mental health, genetics, haemophilia, occupational therapy etc. through remote video consultation," said Morris. "It is very beneficial in a pandemic situation where neither patient nor doctor wish to be exposed to contagious viruses."

Doctors are delighted to be able to use a video service, which allows them to maintain contact with their patient visually and audibly while remaining at a distance from them during the pandemic, said Morris.

"They need to be in a good Wi-Fi location for the service to work well. Surgeons are using BlueEye Handsfree to train doctors who can remain outside the operating theatre, yet they get to see and hear first-hand what is happening in the surgery.

"Emergency doctors are using BlueEye Handsfree to assess the emergency and provide decision-making and approvals for different situations, such as sending the right



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## TALLAGHT UNIVERSITY HOSPITAL ZOOMS IN ON VIDEO TECHNOLOGY

Tallaght University Hospital has introduced numerous new digital solutions to assist patient care and enable patients and their families to keep in touch during the pandemic.

New technology combined with existing innovation has been put in place to support hospital staff communicating with colleagues in order to efficiently treat and diagnose patients as well as helping them provide support for community settings such as hospices and nursing homes.

David Wall, Director of ICT at TUH said, "Last December the hospital launched a five-year strategy with a heavy emphasis on Digital Enabled Care, we did not realise that we would be introducing so many elements of that care within a few weeks.

"With the support of an incredible team of ICT, medical, nursing and health and social care professional staff the hospital has been able to introduce a number of new innovations in the hospital very quickly. The use of this technology is proving to be critical in supporting our response to patients' needs during this challenging time.

"Combined with technology already in use in the hospital, we have been enabling safe and efficient communication between colleagues as well as patients and their families. Advances in ICT have facilitated a number of 'firsts' for the hospital including an online interactive lecture series using Zoom, medical teams being able to consult with colleagues using wearable cameras, remote monitoring and virtual visiting."

Donations from companies, volunteer groups such as Covid4comfort.org and gift cards from Amazon have helped TUH enhance the technology being used in the hospital. In ICU and Theatre, 'Echo Show' devices enable two-way video calling so clinicians can consult with team members on video, rather than in person, therefore reducing the level of foot traffic into a restricted area.

The hospital is also trialling voice activated, hands-free devices that will also enable communication between patients and their families over Skype.

Commenting on the assisted technology, Prof Paul Ridgway, Consultant Surgeon and Perioperative Director at TUH said, "The smart speaker technology enables our carers to more effectively communicate masked-face to masked-face. And using Alexa has facilitated very effective staff-to-staff communications, reducing the need to enter areas where PPE is required, saving both time and stock of PPE."



*"The use of technology is proving to be critical in supporting our response to patients' needs during this challenging time" – David Wall, Director of ICT at Tallaght University Hospital.*

medical assistance or deciding that an ambulance is not, in fact, necessary or sending the injured person to the right hospital department specialised to deal with their issue."

### PATIENT CONFIDENTIALITY

Hospitals are very busy supporting clinicians working through the new clinical processes and the need to ensure patient confidentiality using brand new technology. Video gives hospitals new options in terms of the care they can offer while protecting and assisting their staff and patients.

"Covid-19 has brought many challenges to the healthcare system globally," said Morris. "Video helps healthcare providers to see and hear patients remotely, and it offers assistance in terms of diagnosis and treatment and support.

"We believe that once healthcare providers become familiar with using the new BlueEye Direct Video technology and see the benefits of supporting patients in their own homes, with no need to travel, they will be more inclined to use video services in the future.

"It is an ideal tool for follow-up consultations where the patient needs to communicate verbally and visually. It is also ideal for contagious situations such as Covid-19 where patients and doctors need to isolate from possible contagion."

The BlueEye Handsfree platform has always had obvious benefits and this will go from strength to strength as healthcare providers get used to using video and come to see the advantages, he added. "Using video can save a lot of time for doctors who don't need to travel to patients in

different hospital locations or clinics," said RedZinc's founder and chief.

### BECOMING THE NEW NORMAL

"It will help to reduce the waiting lists, which have been building up throughout this pandemic in terms of follow-up patients who need support or check-ins on their progress at home. The doctor can get a more rounded view of the patient by seeing them in their home surroundings, which can be useful for progressing treatment."

Before the Covid-19 pandemic, telemedicine seemed like a luxury, but people are now thinking that a technology-based healthcare experience will become the new normal. One major development to have emerged for the healthcare sector from the coronavirus crisis has been the incorporation of telemedicine into routine medical care and it certainly promises to be transformative.

And while telemedicine is not a substitute for seeing and physically examining a patient, it is certainly of benefit to some patients, especially elderly patients, who may not be able to leave their homes.

"Certainly during Covid-19, there needs to be a good reason to bring a patient into our practice, potentially exposing them (and us) to asymptomatic transmission," said Dr Moe. "There are other benefits, particularly for the more elderly or those with mobility issues, who live far away from their GP in more rural areas, or those with young children. It can allow us to treat conditions more quickly than we may otherwise be unable to do."