Novel use of technology
Gaenor Bell, Brad Peckler, Christine Coulter

To the Editor, we would like to describe a situation that is not uncommon these days, in which we have come up with a novel solution. I am a Trainee Intern (TI) doing a rotation in General Practice (GP) where unfortunately my GP supervisor came down with COVID-19. As she was not unwell with it, we decided that we would still see patients and her nurse and I would act as a surrogate.

Recently, I had participated in a simulation study using Google Glass™ (Glass), where the TI was the sole “physician” in a simulated trauma resuscitation and a stroke call in a “rural Emergency Department (ED)”, with an ED or neurology consultant on the other end of the Glass. I discussed this concept with the GP and her nurse, and we contacted the study investigators to use the Glass for consults. This technique has been used with scribes but not TIs.

The Glass has a camera, microphone and a speaker on them that allow the GP to communicate directly with the patient and myself. Wearing the Glass allowed my hands to be free to examine the patient or type notes at the same time as consulting. The GP was able to observe throughout and communicate directions or ask the patient questions as required. This made the consultation very efficient.

The set-up evolved as we learned how to use the technology. The connection was set up prior to the patient arrival. I was able to see the GP in the top right-hand corner of the Glass. We set up a computer in the consult room to join the meeting. This allowed the patient to now see the GP (at home) on the computer, and they were able to directly talk to her. This set-up provided a more personal and realistic remote consult, and improved connection between doctor and patient.

A challenge we encountered was that the volume wasn’t sufficient for a more softly spoken or hard of hearing patient. To overcome this, the GP switched over to a microphone headset she had at home, which improved her volume, and I sat closer to the patient.

The patients seen with the Glass were impressed by the technology and the enhanced care provided to them, as is consistent with the published literature. One remarked that he had received better service than usual (and he is probably right, we did spend more time with him!).

We found out that the Glass resolution wasn’t great for examining skin lesions. Some consults did take longer, and some of this was due to troubleshooting the technology, but a major contributor was that the usual time cues were not present and contributed to time “getting away”. I think this would improve with practice and with creating a flow when using the Glass and the team together.

I found a common thread in the use of the Glass with the GP and the simulated ED study. In both situations, there was uncertainty on who was ultimately driving the encounter. Was it the experienced clinician the one at home or the one with the patient? It was difficult, at times, for the in-person clinician to decide to use the consultant on the Glass for advice, direction, or “just in case.” There would need to be clear guidelines for this to be used regularly and practiced.

I can see a need for both of these roles in various settings, but there needs to be a clear discussion before using the Glass to establish the roles so there is no confusion. As a TI, I found myself wanting to “give it a go”, but on occasion the seniors stepped in early and took over the consultation, rendering me an observer or facilitator, rather than an active participant.

This was an unusual experience, but entirely predictable in this pandemic—and it was educational, novel and fun. I think this is feasible technology and fit for the purpose. The set-up was quick and easy, and the Glass was comfy to wear. It was a great way to get involved clinically whilst having some senior support in the background, if needed. They’ll definitely ensure that junior staff sleep better after those tricky clinical scenarios because someone experienced is helping and watching over along the way. The consultant GP’s perspective was that they felt, while being contagious, that the Glass was a great way to use and train more junior staff while being able to continue servicing patients.

The low-tech Glass version was purchased from the USA by the University; they have now ceased production but are still available. The Glass communicated with the expert at home via Google
Meet™ which, like using FaceTime or a phone call, do not record the encounter, but in addition include password-protected interactions that are on the same level, as is commonplace in workplace meetings these days. This technology has been investigated thoroughly and formally in the TI’s ED study mentioned above (submitted for publishing). Currently underway is a similar study, in which we are utilising the learnings gathered from these two experiences and exploring alternative smart-glasses useability in the specific clinical setting of neonatal intensive care unit (NICU) retrievals. Currently, this type of technology has an exponential clinical uptake, including studies we are aware of in international settings, still in their trial phase. However, there was a news report circulating of the use of smart glasses with augmented and virtual reality for the separation of conjoined twins. This technology is the way of the future in many clinical settings.

COVID-19 has created a strange and different working environment. It has created increased work and increased stress but as Brené Brown has gone on the record to say: “vulnerability is the birthplace of creativity, innovation and change.”
COMPETING INTERESTS
Nil.

AUTHOR INFORMATION
Gaenor Bell BaAppSc, Grad Dip Cardiac: Trainee Intern, University of Otago (MBChB 2022), Electrophysiology, New Zealand. E: gaenor@changepace.co.nz
Brad Peckler MD, FACEP, FACEM: Emergency Medicine Specialist, Clinical Lead Simulation Centre, Wellington Hospital, New Zealand. E: brad.peckler@ccdhb.org.nz
Christine Coulter MBChB, FRNZCGP: General Practitioner, Team Medical, Paraparaumu, New Zealand. E: drcoulter@teammedical.co.nz

CORRESPONDING AUTHOR
Gaenor Bell BaAppSc, Grad Dip Cardiac: Trainee Intern, University of Otago (MBChB 2022), Electrophysiology, New Zealand. E: gaenor@changepace.co.nz

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