

Commentary: Gamifying teleconsultation during COVID-19 lockdown

Pandemic and the new normal

Suddenly, everything has changed. Worldwide, a new normal is being established. The COVID-19 pandemic spread rapidly, aided by globalization and international air travel, which have made the world a smaller place.

Social distancing and staying at home, once only for introverts, are now the buzzwords. Wearing masks is necessary and even the common man is now an expert on N95, FFP2 and triple-layer masks.

Coupled with the necessary lockdown, many people lost their jobs and source of income. Several companies, especially in the software field, have quickly shifted to a work-from-home model.

COVID-19 innovations in ophthalmology clinics

Ophthalmologists, otorhinolaryngologists and dentists have been noted to be at a higher risk of contracting coronavirus due to close proximity to the patient during examination and the higher chance of patients presenting with these symptoms. Li Wenliang, the first doctor to warn the world about COVID-19, was an ophthalmologist and unfortunately died of the disease.^[1]

Ophthalmologists around the world have been quick to innovate with multiple models of slit lamp shields, face shields, indirect ophthalmoscopy shields, shielded slit lamp cubicles, protocols for sterilization and more.

Teleophthalmology: Pros and cons

The Medical Council of India was quick to release guidelines for Telemedicine^[2] by 25th March, 2020, anticipating the need for it during lockdown. Online consultation apps have found this to be a time of rapid growth, with some even offering discount vouchers with online food purchases.

Though there are some medical specialties like dermatology more amenable to teleconsultation, Teleophthalmology has several pros and cons.^[3] Due to the need for a proper slit lamp examination, intraocular pressure, refraction and fundus examination, true teleophthalmology cannot simply be practiced over a video call to an unprepared patient. There is indeed a scope for low cost diagnostic tools like the glued IOL microscope^[4], DIYretcam^[5] and Trash to Treasure Retcam^[6] in this scenario.

Smart way to teleconsult

In the accompanying article,^[7] the regular phone was used as the main gateway, thus avoiding confusion for patients. The trained tele-counsellors would collect the data from the patients who need teleconsult in a Google form, which is a simple way to manage large volumes of such data. The tele-consult team could then reach out to the patients with this information. This would be simple to implement and would not require modifications to the existing eyeSmart EMR. A good Electronic Medical Records system would be secure, easy-to-use and flexible. This would allow the doctors to securely access the data and possibly work from home.

Big data: The food for ai (artificial intelligence)

This study^[7] quickly analyzed 4 weeks of such data from a large eye care system to obtain useful information. An analysis of the collected data would show us how this service was useful to the patients. Understanding the limitations of teleconsultation, we can presume that this would be most advantageous for follow-up patients as evidenced by the data showing 76% were those on follow-up.^[7] We can see the common symptoms which were addressed and which subspecialties were most commonly referred to. This can help in planning of allocation of specialists to tele-consultation. We can also see that a large number of glaucoma patients had a query about a brand of medication which became unavailable, which is probably only a subset of the patients who had the same problem.

This kind of information, when available quickly from rapid data analysis, can be used to pre-emptively counsel patients about alternatives. Perhaps, in future, real-time data analysis of Electronic Medical Records would help to develop an Artificial Intelligence EMR which can prevent diagnostic mistakes, do pre-emptive counselling, and catch pandemics before they happen.^[8]

Gamification

Previously, gamification has often been used for health promotion,^[9] but in this case, it has been used on the health provider's side to promote a team spirit and maintain efficiency in the teleconsultation process. The scoreboards of the teams presumably helped promote a healthy competition to keep up the morale of the doctors in these times. This is indeed a strategy with a lot of potential in learning, teaching and healthcare.

Future of teleophthalmology

Teleophthalmology is inevitably here to stay, whether covid19 is here or not. It is part of unavoidable progress,^[3] we need to work out how to polish the rough edges of this tool. In addition to basic telephonic consults, photo consults and video consults, it would not be long before easy-to use diagnostic equipment can be home delivered to the patients by existing logistic platforms to enable true teleophthalmology.

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