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Letter to the editor

Accelerated implementation of teleconsultation services for the monitoring of oral potentially malignant disorders as a result of the COVID-19 pandemic

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To the editor

Before the COVID-19 pandemic, the adoption of digital health in healthcare has been slow despite evidence of potential benefits particularly in improving patient access to care. Reservations in the uptake of telemedicine are mainly associated with the perception that remote consultation may be less accurate due to the lack of physical examination [1]. Furthermore, many projects remain in the research setting or as pilots and fail to be integrated into clinical pathways, due to administrative, regulatory and infrastructural barriers [2]. As the COVID-19 pandemic emerged, cancer care, including oral cancer (OC) and oral potentially malignant disorders (OPMD) was suspended to curb infection rates, putting patients at risk of missed or delayed diagnosis [3]. Inevitably, alternative care pathways such as teleconsultation were adopted for the follow-up or triaging of new OC and OPMD patients [4–7]. The benefits of teleconsultation include real-time monitoring, time, and cost savings for patients, providing access to care for patients lacking mobility and those who live far from specialist centers. Especially when physical access is restricted, the pandemic could serve as a catalyst in promoting the acceptance of telemedicine.

In Malaysia, all non-essential dental services were suspended during the height of the pandemic, including services at Universiti Malaya, a main OC and OPMD referral center in the country. As such, we offered teleconsultation using a web-application (MeMoSA®2.0) that we developed to provide continued care to patients. Reviewing images on MeMoSA® by specialists has been demonstrated to be comparable to that of clinical oral examination with an accuracy of 94.9% [8]. MeMoSA®2.0 allowed patients to upload images of their lesions securely and answer routine clinical questions that were reviewed by their specialists remotely. Additionally, our objective was to understand the perception and acceptance of patients, as well as the gaps in the teleconsultation service to inform scale-up and implementation plans. Therefore, we evaluated the knowledge, perception and willingness of OPMD patients to teleconsultation and measured usability & acceptance of MeMoSA®2.0 using validated surveys [9–12].

Forty-seven patients attending Oral Medicine and Oral Surgery clinics at Universiti Malaya who were eligible consented to participate in this feasibility study, of which 32 experienced teleconsultations. Most were aged >50 years (40/47; 85.1%) and had oral lichen planus (41/47; 87.2%). More than 60% (28/47) of the patients in this study experienced delayed care due to the pandemic. Knowledge on teleconsultation was low (27/47; 57%), but a majority of patients had positive perception, as they thought that teleconsultation increased their access to care (39/47; 83%), and saves time (98%; 46/47). Knowledge of teleconsultation was associated with a higher educational background, which means educational materials to raise awareness are necessary to prevent a digital health gap. Patients were willing to adopt teleconsultation, where 100% would like to continue having teleconsultation as an option and 70% (33/47) would like it to be integrated within their care. For usability, the majority (27/34, 84%) found MeMoSA®2.0 to be simple and easy to use. Overall, 68.8% (22/32) of the patients thought that the care provided by the teleconsultation service was better or about the same as a clinic visit. However, 59.4% (19/32) of the patients reported difficulties in capturing images of their own mouth, suggesting that training in capturing intraoral images prior to teleconsultation is necessary.

Although movement restrictions due to COVID-19 are beginning to ease in some countries, regions with a high oral cancer burden still experience high infection rates and clinical services remain disrupted. Informed by the high acceptability of teleconsultation from this study, teleconsultation using MeMoSA®2.0 was successfully implemented at Universiti Malaya and is now available as a service to OC and OPMD patients.

Implementing digital health solutions is complex in nature and involves many stakeholders to effect change in clinical practice. We performed a benefits realisation assessment [13] to identify the benefits of teleconsultation which include (a) providing care options, (b) reducing absenteeism, and (c) encouraging patient engagement & empowerment. With teleconsultation patients will be able to communicate and send images to their specialists should they observe any changes to their lesion in between clinical visits. To execute the service, patients suitable for teleconsultation were identified and provided with support (including training material to capture intraoral images, and a user manual to use MeMoSA®2.0) within a modified clinical workflow. For the implementation of the teleconsultation service, approval was obtained from the Dean of the Faculty of Dentistry and the Telemedicine Committee at the Universiti Malaya Medical Center (UMMC). All specialists performing teleconsultation on patients with OC and OPMD had to undergo credentialing through an online standard teleconsultation course that covered teleconsultation etiquette and regulatory requirements. They were also provided a refresher training in the use of MeMoSA®2.0 via a video. To increase awareness among patients, promotional brochures providing information on the service based on the World Health Organization's guide to promote mOralHealth programmes [14] were developed. The specialists also explained the service to eligible patients individually.

This service has been launched on November 10, 2021, and at the time of this writing, 12 of 26 patients approached have registered for teleconsultation. We will be monitoring the service by measuring adoption rates and barriers at fixed intervals to improve implementation in an iterative manner. We acknowledge that teleconsultation may not be suitable for all patients and does not replace emergency care; however, it can improve the overall patient experience and could empower patients to be in control of their health. The pandemic was able to accelerate the implementation of digital health in oral cancer care and parallel development of digital health tools, infrastructure, regulatory requirements and training of healthcare providers would be pertinent for successful implementation of such services.

Ethics approval and consent to participate

This study was approved by the Medical Ethics Committee of the Faculty of Dentistry of Universiti Malaya (DF OS2016/0069/20132) on 17 September 2020. The study was performed following the Declaration of Helsinki. All patients consented to participate in the study.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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