



Communicating with patients requiring anti-VEGF intravitreal injections and their families during the COVID-19 pandemic: an update

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Dear Editor,

In Spring 2020, with our colleagues at The Vision Academy [1], we identified the need for clinician guidance on how best to communicate with patients and caregivers to ensure crucial eye care appointments and services were continued during the current COVID-19 pandemic. At that time, we noted, in particular, heightened anxiety levels among patients, receiving intravitreal injections of anti-vascular endothelial growth factor (VEGF) for neovascular age-related macular degeneration (nAMD), who need to attend regular ophthalmology appointments to maintain their vision. We therefore published guidance for managing such patients during the acute phase of the COVID-19 pandemic [2] and supported this with a patient communication template. The communication could be sent via e-mail, post, or text messages ahead of appointments to reassure patients and caregivers that their safety and eye health remained a priority [3].

Since then, the COVID-19 pandemic has escalated: clearly, it is not going to disappear quickly, and we need to make the necessary adjustments to establish a routine of safely treating patients while the pandemic is ongoing. Evidence has emerged that people with moderate/severe visual impact are significantly more likely to experience worsened mental health because of COVID-19-related restrictions than those with mild/no visual impairment [4]. Additionally, a UK study found that approximately 50% of patients with nAMD failed

to attend a scheduled hospital or clinic appointment [5]. Of those non-attendees, 85% said they were fearful of contracting COVID-19, and over 70% would have attended if they had been given clear advance information of adequate infection control measures. These findings are understandable given patients with nAMD are at increased risk of COVID-19-related complications, hospitalization, and mortality because of increased age with comorbid conditions. They also reinforce the need for patient information tools.

We now provide greater detail about the implementation of patient guidance according to the local epidemic situation, based on three (risk) tiers, until such time that long-term solutions (e.g., effective vaccine) are available [6]:

1. The effective reproduction number, R_t , is < 1 , but herd immunity through mass vaccination has not yet been achieved
2. R_t is ≈ 1 , and local COVID-19-positive clusters result in a relatively high risk of contracting COVID-19, although local hospital resources are not critically overwhelmed
3. R_t is > 1 , and hospital resources are under current or imminent risk of significant pressure, with higher number of local or national restrictions likely

For each scenario, we provide guidance on prioritizing patients according to clinical need, while minimizing risk for patients and healthcare professionals.

The Vision Academy has also endorsed a new ‘Dear Patient’ letter and two accompanying infographics with the goals of clear communication to minimize patient/caregiver anxiety and maximize clinic attendance. Three color-coded tiers (green, yellow or red) indicate simply the level of risk and, most importantly, the precautions that are in place to ensure the safety of patients and their caregivers (Fig. 1). It is very important that appointments are not missed especially during treatment phases.

This article is part of a Topical Collection on *Perspectives on COVID-19*

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Description of tiers	Summary of main adaptations to clinic procedures
 <p>Rates of infection remain at a low level Public health measures are less restricted but social distancing measures remain critical</p>	<p>Clinic staff are regularly tested as appropriate Patients and accompanying individuals are asked to wear a mask Appointments may be rescheduled if patients are unwell Number of people allowed in the waiting room may be limited Appointments will be brief and some regular tests might sometimes be skipped</p>
 <p>Increase in infection rates New public health measures implemented</p>	<p>As green plus: Regular eye examinations might be skipped, although treatment would be given Some injection schedules may be changed to avoid additional monitoring Some non-essential / non-urgent appointments may be postponed</p>
 <p>High rates of infection Strict public health measures have been implemented</p>	<p>As green and yellow plus: A pre-appointment telephone or video call may be required to see if the clinic visit is essential or if the appointment can be postponed Patients requiring regular treatment to preserve sight will be prioritized Non-urgent appointments will be re-scheduled</p>
<p>All patients should regularly monitor vision at home and contact the clinic immediately if vision changes</p>	

Fig. 1 Description of main clinic procedural adaptations during the COVID-19 pandemic according to local epidemic situation, summarized from the patient infographic

Educational material in the form of infographic patient factsheets highlights characteristics for each of the three risk scenarios (and include an Amsler Grid) and provide patients with information on maintaining and improving their mental wellbeing alongside their eye health. When patients are unable to attend the clinic, they must re-schedule the appointment as quickly as possible and monitor their vision in the meantime. Should any change in their vision occur, patients are asked to re-contact the clinic.

We encourage the ophthalmic community to download these patient materials from <https://www.visionacademy.org/vision-academy-community/COVID-19-materials> and adapt them for local use. Regionally, campaigns to call patients and encourage them not to miss examinations and treatments should be considered.

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Compliance with ethical standards

Conflict of interest Jean-François Korobelnik is a consultant for Allergan, Bayer, Kanghong, Novartis, and Roche. Anat Loewenstein is a consultant for Allergan, Bayer, Kanghong, Novartis, Roche, ForSight Labs, and Notal Vision.

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