The majority of COVID-19 infections are mild (80%) or even asymptomatic. People at risk of sometimes fatal complications are the elderly and people with chronic conditions. Nevertheless, respiratory distress occurs in patients under 50 years of age without risk factors.

**Ophthalmologist-patient or vice versa, contamination is done by close contact** by projection of naso-pharyngeal droplets or by contact with soiled hands (by patient and environment), which will bring the virus by impaction on the mucous membranes of the face, essentially the nose and mouth, and perhaps on the conjunctiva. Transmission by aerosol (small droplets) is possible but seems rare, based on knowledge for other coronaviruses (SARS and MERS), especially during invasive respiratory manoeuvres. Contamination can also be manipulated if the caregiver puts his hand on his face after contact with a contaminated surface, knowing that the virus can remain on surfaces for up to 6 hours.

The ophthalmologist is at increased risk because of his or her proximity to the mouth and nose of patients during the slit-lamp examination, since one of the validated risk factors is keeping "less than one meter away for more than 15 minutes". In addition, conjunctivitis can be part of COVID even though it appears to be rare, around 1%. Viral excretion in tears has been found only in patients with conjunctivitis. In this context, it is prudent to take precautions when examining patients with conjunctivitis.

**The possible protections are**:

- The mask of care ("surgical" or anti-projections) which is effective to limit the diffusion of the droplets from the patient or the carer who wears it, it must be renewed every 4 hours.
- The FFP2 mask, which provides better protection for caregivers exposed to aerosols but is difficult to put on (https://www.youtube.com/watch?v=zl2-ChcyRaM) and to wear for several hours, so much so that it has been shown that when worn continuously, its effectiveness is similar to that of a face mask. It will be used punctually and temporarily by the ophthalmologist in case of COVID positivity of the patient.
- Hand hygiene by rubbing hydro-alcoholic solutions (SHA) or by washing with soap and water.
- Gloves worn only in case of contact with body fluids or skin lesions.
- Plexiglass or plastic slit lamp shields that can be used as a screen and hygiaphones for reception staff, being careful to clean them.
- Protective goggles to avoid splashing on conjunctiva, charlottes and over-blouses to avoid splashing on clothing.
It is essential to secure stocks of masks and SHA to prevent their theft. For the overall protection of the community, the use and conditions of use of masks must be attentive and evolve according to the state of available national stocks. A thrifty practice for masks is to wear them continuously and change them every 4 hours.

**Stage 3 of the epidemic was declared in France on 14 March 2020:** the virus is considered to be circulating throughout the country, with varying rates depending on the zone.

**The goals of the health authorities are to:**  
- Reduce as much as possible collective contacts (public transport, gatherings, meetings, festive and social activities...) or individual contacts (telecommuting, elimination of travel, family meetings and visits to EHPADs, confinement at home...),  
- Participate in the containment of vulnerable people and social distancing,  
- To protect the nursing staff as much as possible so that they can continue their missions,  
- Preserve the material and personnel resources in the facilities managing potential or confirmed IDVOC patients by reorganizing the care circuits globally to ensure continuity of care for other patients.

This is to limit viral spread in the population, to optimize the use of masks and other protection, and to protect oneself personally. Indeed, in this situation, the preservation of healthcare teams becomes a national health issue.

Under these conditions, professionals must individually and collectively examine the local organization of ophthalmological patient care.

Public health establishments have already been ordered to cancel all non-urgent medical-surgical procedures without loss of opportunity for the patient, which in practice means cancelling all cold surgery and non-urgent consultations. This is in order to promote social distancing for uninfected patients, to protect their nursing staff, and to reserve their resuscitation equipment (respirators).

In private and urban practice, everyone must redefine in his soul and conscience the priorities in his patient, knowing that this situation is likely to last. The DGS has not issued any particular recommendations for consultations, apart from special attention to vulnerable patients (giving priority to teleconsultations, organising an appointment "protected" from the risks of contamination, which is so essential) and the deprioritization of non-urgent interventions in clinics using respirators (GA, post-operative resuscitation). Nevertheless, it is possible that patients may spontaneously comply with the stage 3 social distancing instructions issued by the Prime Minister.

**The recommendations for ophthalmology caregivers to date are:**

1 - Any person who is not indispensable to the functioning of the care structures (accompanying person, child, visitor...) should not go there.

2 - Detect symptomatic patients and caregivers showing signs of low respiratory infection with fever:

- for non-urgent patients: send them home without examining them and have them contact their GP or the platform, or even the 15,
- for urgent patients: examine patients by putting on a care mask and even overgowning and charlotte during a consultation in a sanctuary cubicle for this type of patient
- for a consultation or ophthalmology practice staff: he works with a continuous wear mask.

3 - In the absence of symptoms, continuous wearing of the mask for:

- front-line reception staff (secretaries, receptionists, nurses and ASHs) and emergency room staff,
- the ophthalmologist who examines patients with a slit lamp, an angiograph or OCT,
- the orthoptist behind his braces facing the patient,
- personnel with chronic pathology (to be discussed with occupational medicine),

4 - Follow the usual instructions:

- do not shake hands or kiss patients and colleagues,
- do not put your hands to your face during the examination,
- wipe the devices between each patient with the usual detergent-disinfectant, containing at least one quaternary ammonium,
- Wear gloves in case of contact with body fluids, including conjunctival secretions if they are abundant, or presence of skin lesions
- hand washing or SHA friction between each patient, after removing gloves (prefer SHA to hand washing), after going to the toilet, before meals, when arriving from public transport,
- SHA available in waiting rooms and all places where there are patients,
- leave a one meter space between patients in the wards and the waiting lines
- regulating consultations to avoid crowded waiting rooms
- biocleaning of waiting rooms, arms of armchairs and door handles at the end of the consultation.

5 - Examination of patients with conjunctivitis: surgical mask for the patient and for the ophthalmologist, examination with gloves, careful cleaning of the slit lamp and surfaces after the examination, SHA friction.

6 - Examination of COVID-19 suspect patients: care mask for the patient and FFP2 mask for the ophthalmologist.

7 - Examination of confirmed patients COVID-19 +: delay ophthalmological examination. If the examination proves to be indispensable: patient mask and FFP2 mask for the ophthalmologist with gloves, over-blouse, headgear and protective glasses.

8 - Conduct to be followed in front of a patient or personnel who have been in close contact at less than one meter without protective equipment, in particular a mask, with a confirmed case COVID-19 +:
- monitoring of temperature twice a day and the appearance of symptoms,
- continuous surgical mask in the workplace,
- friction with rigorous and repeated SHA.
If onset of fever or symptoms: Wear the mask continuously, including at home, consultation with an infectious disease referent who will prescribe a diagnostic PCR in case of comorbidity or signs of severity and a work stoppage.

9 - For information: any procedure involving risk of ocular projection of biological liquid (intubation), whatever the patient’s status: protective glasses.
Phase 3 Recommendations for us ophthalmologists (as of March 15, 2020)

- **Based on national recommendations**
  - Limiting traffic as much as possible and population gatherings
  - Protecting the most vulnerable
  - Promote social distancing
  - Protection ...taking into account healthy carriers and slow incubations

  "Although there is no requirement to stop ophthalmological activity... According to ministry, depend on regional, Private-public"

  "Ophthalmology:
  - Patient Concentration
  - Often elderly population
  - Examination proximity <1 m
  - Conjunctival transmission"

  "Practice only if:
  - Masks(for the whole team)
  - Repeated disinfection
  - Distance between patients
  - Fluid waiting rooms"

- **Appeals to your medical duty**
  - Duty to assist patients
  - Commitment to health protection and education actions
  - Management of emergencies

  "In your soul and conscience: select what must decently be maintained"

  "Consultations
  - IV injections
  - Surgeries"

  "Appeals to your civic-mindedness
  - Objective: to limit the spread of the virus at all costs
  - No age limit
  - Supporting the health crisis"

  "By phone or in a secure meeting
  - Reassure, advise, guide
  - Support for general practitioners
  - Private-Public Collaboration for Flow Management"

  "Containment: the only useful means
  To: attenuate and spread the peak
  Increasing the chances of severe cases being treated"

  "The next 2 weeks will be decisive
  And will lead to adaptation of strategy and duration"