

# Is the COVID-19 Emergency an Opportunity to Reshape Assistance Models for the Future of Maxillofacial Surgery?

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After the lockdown, a period of severe restrictions corresponding with the so-called “Phase 1” and “Phase 2,” as newly diagnosed cases of COVID-19 continued to decline, on May 18, Italian government issued “Phase 3,” which included a significant reduction of limitations imposed to citizens. Reasonably, Phase 3 is expected to lead to a novel increase in cases. Considering that as physicians our ethical commitment is to provide the highest services to our patients, at our institution, University Hospital of Udine, the Oral and Maxillofacial Surgery Department has not modified assistance protocols and the quality of care but has promoted specific regulations.

The first and most important precaution was to optimize human resources to reduce the number of healthcare workers in the hospital. Taking into account the reduction of clinical activity occurred during Phase 1, the most restrictive and correspondent to the lockdown, shifts were organized to ensure the presence in the hospital of the necessary medical staff to maintain efficient clinical activity, leaving home needless resources to minimize unnecessary exposure. Web-based seminars and classes for residents were organized in order to maintain and reinforce the appropriate learning curve. After Phase 3, all healthcare workers are present, but non-clinical activities, including meetings for organization and seminars, are managed through teleconsultations.<sup>1</sup>

For inpatient care, before any patient is hospitalized, a nasopharyngeal swab is mandatory. At our institution, virology laboratory has developed a technology to process up to 2000 samples per day, with an average time for response of 4 hours, in a period in which reagents deficiency poses a threat to wide spectrum testing of patients and healthcare workers.

Healthcare workers were trained to adopt correct behaviors, including the maintenance of an interpersonal distance of at least 1

meter, avoiding crowding, and were instructed to frequent hand wash and to wear adequate personal protection equipment. When medications are necessary, all the protective equipment must be worn, including at least gloves, goggles (a face shield is preferable) and N95 or FFP2 (Filtering FacePiece 2) mask. For surgeries in the operating room, educational videos were recorded by expert personnel to instruct healthcare workers to correctly wear protection devices, which include a surgical cap, FFP2 mask, a protective disposable gown, gloves, a drape covering the neck area, and a face shield. In cases of surgical urgencies, a nasopharyngeal swab is immediately performed and the operation is delayed until the result is ascertained. Patients whose status is unknown needing an emergency surgery are treated as positive cases and operated in a dedicated COVID-19 operating room. A dedicated protocol was followed for trauma surgery, and a prominent role was played by percutaneous tracheostomy to manage difficult cases owing to the significant reduction of aerosolization it causes compared to traditional surgical tracheostomy.<sup>2</sup> However, surgical tracheostomy remained the standard for oncologic patients requiring the change of cannulas, which is difficult to accomplish using the percutaneous technique.

Outpatient evaluation poses further challenges and exposes operators to significantly higher risk, owing to the greater flow of patients.<sup>3</sup> At our institution, outpatient consultation offices are located in a separate building from the ward and operating rooms. This logistics is important to prevent overcrowding of spaces in the ward, where complex patients are hospitalized. A crucial decision was to modulate the flow of outpatient clinics, decreasing the number of patients needing consultations in maxillofacial offices. All non-urgent public and private practice first consultations, were stopped, maintaining the service only for short-term and urgent consultations. Only one gateway to the outpatient area is maintained and is guarded by a nurse standing behind a monitoring station, which provides patients with hydroalcoholic solution for hand washing and performs a body temperature screening. Access is exclusively restricted to people with a reserved appointment or a negative test. The most important step is to appropriately instruct all personnel to recognize common signs and symptoms of COVID-19 infection, which is a fundamental component of telephone triage. If the patient does not report any symptoms, he is admitted to the consultation and a booked appointment is provided. Once the patient arrives, he undergoes another triage consisting in body temperature measurement and, if temperature is below 37.5°, he can be admitted to outpatient spaces without necessarily undergoing a nasopharyngeal swab. Nasopharyngeal swab is otherwise mandatory for patients needing an urgent consultation. If the patient is positive to COVID-19, he is examined in a dedicated space.<sup>4</sup>

The entire schedule of outpatient consultations was redefined, extending the whole duration of the consultation from 20 minutes in the pre-COVID-19 era to 45 minutes, 30 minutes for the examination of the patient and 15 minutes for the sanitification of the office, considering COVID-19 surface persistence according to literature data.<sup>5</sup> Overall, still 50% of the routine consultations and outpatient oral surgical procedures are performed, in the logic of a planned increase according to daily epidemiological data. Waiting rooms were reorganized and separate spaces are prepared for patients needing a consultation or oral surgery procedures. A separate waiting room was created in an open space, outside the building, for accompanying persons, while patients are asked to come alone to consultation areas, unless they have mobility limitations.

A prominent role was played by telemedicine, which has proved to be very useful to communicate with recently discharged patients or to perform basic inspection of diseases. Similarly, telemedicine opened the doors to a novel “telesemiology” concept, which may

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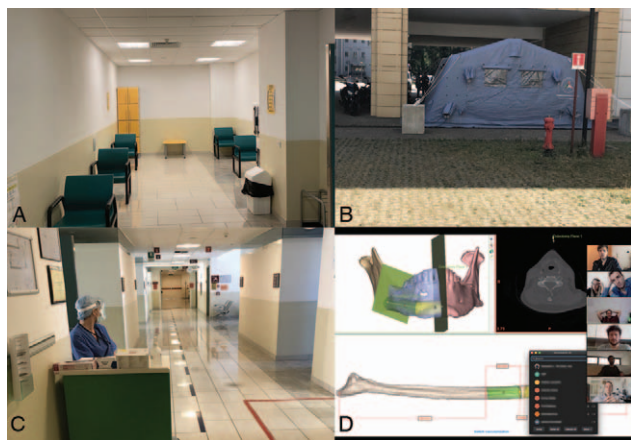
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**FIGURE 1.** Overview of modifications to healthcare organization: (A) organization of the waiting room space; (B) external tent of civil protection in which patients are sent to perform nasopharyngeal swab before being admitted to hospital prior to any procedure or consultation; (C) the only one gateway to the outpatients area is guarded by a nurse standing behind a monitoring station, which provides patients with hydroalcoholic solution for hand washing and performed a body temperature screening; (D) telemedicine has an important role to discuss complex clinical cases, including virtual surgical plans.

play an increasingly important role in the future to perform distant consultations to remote areas or to perform a basic screening of patients on the basis of their clinical findings in order to decrease waiting lists for a first examination.<sup>6</sup> Figure 1 provides several examples of the organization described.

Future improvements may involve the production within hospital centers of devices which have been largely depleted during the pandemic, such as 3D printed components for respirators, considering that many hospitals currently integrate a laboratory for 3D printing.<sup>7</sup>

We believe that in this period of uncertainty, given the current risk as long as the pandemic lasts, time has come to be even more adaptable and reflective practitioners, in order to maintain the effectiveness of safety protocols which have proved to be essential in avoiding the spreading of infection both among clinical personnel and patients.

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# COVID-19 Pandemic: Its Impact and Collateral Damage in India

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Coronavirus disease 2019 (COVID-19) is an infectious disease which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The very first case was identified in December 2019 in Wuhan, China and has resulted in an ongoing pandemic.<sup>1,2</sup> India had its first case of COVID-19 reported on January 30, 2020 and since then the total number has reached to 286,579 cases (as on June 11, 2020). There have been 141,029 recoveries (which includes 1 migration) and 8102 deaths which were reported in the country as of June 11, 2020, by the Ministry of Health and Family Welfare.<sup>3</sup> A 14-hour voluntary public curfew known as the “Janata Curfew” was observed in India on 22nd March, which was followed by mandatory lockdowns in hotspot areas for COVID-19 and all major cities. A nationwide lockdown for 21 days was then ordered by the government on 24th March affecting the entire 1.3 billion population of the country. This lockdown was then sequentially extended till 3rd May followed by an extension of another 2 weeks starting 3rd and 17th May.

Sudden lockdown significantly affected large and small businesses all over the country. Within a month of its initiation the rise of unemployment was from 6.7% on 15 March to 26% on 19 April.<sup>4</sup> Around 14 crore people were estimated to have lost their jobs and salaries were cut for many more. During the first 21-days of lockdown which was declared following the COVID-19 outbreak, it was expected that the Indian economy would lose over 32,000 crore (US\$4.5 billion) every day during this phase.<sup>5</sup> Less than a quarter of India’s \$2.8 trillion economic movement was functional under complete lockdown.<sup>6</sup> Up to 53% of large and small scale businesses in the country were projected to be affected significantly.<sup>7</sup> With the lockdown restrictions in place the supply chains have been put under a lot of stress. In the initial period, there was a lack of clarity in streamlining what an “essential” is and what is “nonessential.”<sup>8</sup> People in the informal sectors and daily wage groups have been at the maximum risk.<sup>9</sup> Indian farmers around the country who grow perishables also suffered and faced uncertainty. The unemployment rate in India has climbed to a staggering 27.1% and around 121.5 million Indians have lost their jobs in April 2020. Global rating agency Moody’s has cut India financial year 2021 growth projection to 0%. On 22nd May, the Governor of Reserve Bank of India also said that India’s GDP growth will continue to remain negative in financial year 2021.<sup>10</sup>

As of 3rd June, the case fatality in India rate due to COVID-19 is relatively lower at 2.80%, against the global 6.13%.<sup>11</sup> So deaths due to COVID-19 may be same or even less than those that occur due to hunger, accidents, and other diseases.

Strict lockdown was essential in the early stages not just to prevent the spread of the disease but also to get proper healthcare infrastructure ready. At present there is no standard protocol of

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