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## Editorial

# Maxillofacial services in the COVID-19 (SARS-CoV-2) pandemic – early lessons from the Italian experience

A novel coronavirus was first encountered in a cluster of patients with community acquired pneumonia in Wuhan, Hubei Province, China, in December 2019.<sup>1</sup> As a result of travel within China and beyond the virus was rapidly disseminated to all provinces of China and 25 countries in Asia-Pacific region, North America, Europe, and South America within one month of its discovery.<sup>2</sup> On 11 February 2020 the World Health Organization renamed the disease as the Coronavirus Disease 2019 (COVID-19) while the virus was classified as SARS-CoV-2 by the International Committee on Taxonomy of Viruses (ICTV).

The first confirmation of spread to Italy occurred on 31 January 2020 when two Chinese tourists in Rome tested positive for the virus.<sup>3</sup> One week later an Italian man repatriated back to Italy from the city of Wuhan, China, was hospitalised and confirmed as the third case in Italy.<sup>3</sup> A cluster of cases was later detected, starting with 16 confirmed cases in Lombardy on 21 February,<sup>4</sup> and 60 additional cases and first deaths on 22 February.<sup>5</sup> By the beginning of March, the virus had spread to all regions of Italy.<sup>6</sup>

On 31 January the Italian government suspended all flights to and from China and declared a state of emergency. In February eleven municipalities in northern Italy were identified as the centre of the two main Italian clusters and placed under quarantine. The majority of positive cases in other regions traced back to these two clusters. On 8 March 2020 Prime Minister Giuseppe Conte expanded the quarantine to all of Lombardy and 14 other northern provinces, and on the following day to all of Italy placing more than 60 million people in quarantine. The earliest documented case of transmission in the United Kingdom (UK) occurred on 28 February 2020.

Maxillofacial services have unsurprisingly changed dramatically in Italy since the start of the year. In that the UK is approximately one month behind the pandemic, we contacted surgical colleagues in Lombardy to see if there were any lessons we could learn.

It is now common practice that Maxillofacial in-patient wards in Italy have now mostly, if not exclusively, been converted into COVID-19 units. These function with cooperative input from Anaesthetic colleagues, Intensive Care and Microbiology. Redeployment of Maxillofacial staff including trainees elsewhere in the hospital is commonplace. Staff work a shift system during the week and cover nights and weekends on a rota basis. Shifts typically last between six and eight hours but given the constant shortage of staff due to suspected or proven COVID-19 infection extra shifts become the norm. Maxillofacial staff are involved in daily ward rounds of COVID-19 patients and doing respiratory assessment and drug prescription. They are also responsible for non-invasive airway management including overseeing CPAP. To date redeployment has not included invasive manoeuvres such as intubation which exclusively remains the domain of Anaesthetic and Intensivist colleagues.

Only healthcare workers are permitted into the hospitals with visiting of patients having been stopped. All elective activities have been suspended. Cancer surgery has been transferred to regional hubs or selected units.

Emergency surgery has reduced markedly, probably as a result of the countrywide lockdown that has certainly impacted on the incidence of road traffic accidents and sports-related injuries. The majority of cases when they occur are in COVID-negative individuals. The levels of interpersonal violence have also reduced. Deep soft tissue head and neck infection secondary to odontogenic sepsis are not commonplace and probably reflect a resident on call 'dental service' in most major hospitals that directs cases into more conservative management.

The few units that are still able to carry out cancer treatments and trauma surgery operate in hospitals where COVID-free areas have been implemented. Patients are triaged, tested (PCR with 8–12 hour turn around) and subsequently admitted. Temporary pre-triage facilities have been installed outside main entrances to be able to filter cases and isolate when appropriate. In-patients admitted for emer-

gency surgery are isolated after testing and universally treated with full PPE protection. FFP3 masks are in short supply. In COVID-19 wards PPE more commonly involves FFP2 masks with surgical hats, gloves, and eye protection. FFP3 masks as and when available are reserved for operating theatres, Intensive Care Units and during high-risk aerosol generating procedures.

Despite fears at the start of the outbreak that surgical support for tracheostomies in case of prolonged mechanical ventilation might be overwhelming the general policy has been their avoidance with a preference for prolonged ventilation via an orotracheal tube. The majority of tracheostomies performed to date have been percutaneous in nature and performed by Intensive Care staff.

Except from surgical environments or any manoeuvres where there is more aerosol generation, such as fiberoptic endoscopy it appears that infection is carried and transmitted mostly via contaminated surfaces.<sup>7</sup> Surgical scrubs within the hospital environment for all staff is commonplace along with PPE including surgical masks, visors/goggles, gloves and surgical gowns to reduce cross contamination. The key preventative measures seem to be persistent with hand washing and avoiding touching vulnerable entry points like eyes, nose and mouth.

Although hospital-acquired COVID-19 infection in health workers have been demonstrated (9% of total cases) it is a general feeling that those that occurred remain related to infection before robust cross contamination procedures were put in place and widespread PPE protection had been enforced.<sup>8</sup> Eighteen of the 41 doctors who have died in Italy from COVID-19 infection worked as primary care practitioners.

Lessons have also been learned from Far Eastern colleagues regarding the importance of empowering cleaning teams throughout hospitals in being extremely thorough with all surfaces exposed to high-volume contamination such as doors handles, tables and storage facilities. Although it is unclear how long it takes for contaminated surfaces to lose all viral load it seems likely that this virus can survive outside a host for up to three days depending on the surface involved.<sup>9</sup>

There is no doubt that we can learn lessons from our Italian colleagues. The temporary movement of staff will inevitably become a necessary part of business continuity in hospitals for all healthcare areas to allow delivery of core essential services required by an increasing number of patients and to cover for unexpected staff absence. Whilst some aspects of our speciality will reduce in frequency (e.g. trauma) others might not increase in line with our expectations

(e.g. tracheostomies) and as such redeployment for all grades of staff will become the norm dependent on inherent skills set and “on the job” training.

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## References

1. Zhu N, Zhang D, Wang W, et al. A novel coronavirus from patients with pneumonia in China. *N Engl J Med* Jan 2019;**24**:2020.
2. World Health Organization (Accessed at 10 February 2020) [https://www.who.int/docs/default-source/coronaviruse/situationreports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10\\_4](https://www.who.int/docs/default-source/coronaviruse/situationreports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10_4).
3. *First Italian dies of coronavirus as outbreak flares in north*. Reuters; 2020, 21 February Retrieved 6 March 2020.
4. Elisa Anzolin, Angelo Amante. *Coronavirus outbreak grows in northern Italy, 16 cases reported in one day*. Thomson Reuters; 2020 (21 February 2020) 21 February.
5. *Coronavirus: primi casi a Milano. Cosa sappiamo dei nuovi contagi in Lombardia, Veneto e Piemonte [Coronavirus: first case in Milan. What we know about new infections in Lombardy, Veneto and Piemonte]*. Corriere della Sera (in Italian); 2020, 22 February.
6. *Coronavirus. Colpite tutte le regioni. La Protezione civile: ecco i numeri aggiornati*; 2020 (in Italian). 5 March [www.avvenire.it](http://www.avvenire.it).
7. Vincent C.C. Cheng, Shuk-Ching Wong, Jonathan H.K. Chen et al. Escalating infection control response to the rapidly evolving epidemiology of the Coronavirus disease 2019 (COVID-19) due to SARS-CoV-2 in Hong Kong. Accepted Manuscript for Infection Control & Hospital Epidemiology as part of the Cambridge Coronavirus Collection DOI: 10.1017/ice.2020.58.
8. [https://www.repubblica.it/cronaca/2020/03/26/news/coronavirus\\_contagi-italia-252328512/](https://www.repubblica.it/cronaca/2020/03/26/news/coronavirus_contagi-italia-252328512/).
9. <https://www.health.harvard.edu/diseases-and-conditions/coronavirus-resource-center7>.

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