



How to Reorganize an Ear, Nose, and Throat Outpatient Service During the COVID-19 Outbreak: Report From Northern Italy

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INTRODUCTION

Coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first described in Wuhan, China in December 2019. The first case in Italy was documented on February 21, 2020 in Lombardy, in northern Italy. Otolaryngologists are at particularly high risk even when performing routine procedures, as SARS-CoV-2 is transmitted through droplets.¹ Evolving evidence demonstrated that oral, laryngeal, and nasal examinations are risky, being aerosol-generating procedures. However, the paucity of data at the early outbreak along with the shortage of personal protective equipment (PPE) have contributed to increased infections among otorhinolaryngologists, as demonstrated by the fact that the first fatality of a physician documented globally was an ear, nose, and throat (ENT) physician in Wuhan.² Therefore, a profound structural reorganization of ENT departments, including outpatient activities, is mandatory.³ We describe our experience in the reorganization of ENT services during this pandemic, which is crucial for protecting both patients and healthcare workers while minimizing PPE depletion.

METHODS

A retrospective review of the outpatient procedures performed at the ENT department of a tertiary-care hospital in northern Italy, between February 21 and March 31, 2020 was performed.

The adopted precautionary practices were as follows:

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All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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1. Routine examinations were cancelled or postponed, and telephone triage was crucial to identify patients requiring urgent procedures.
2. Waiting rooms rearrangements
 - An alcohol-based dispenser was placed to promote frequent hand hygiene.
 - Information panels were displayed to emphasize the importance of avoiding touching the eyes, nose, and mouth and to cough or sneeze into a bent elbow or tissue.
 - Patients had their body temperatures checked on arrival.
 - A surgical mask was required for those who entered.
 - The seats were separated to maintain social distance (at least 1 m).
3. Visiting room setting
 - Only the patient was admitted, except for disabled or underage patients.
 - Social distance was guaranteed.
 - Medical staff was reduced to strictly the essential, avoiding the presence of trainees or observers.
 - Superior airway endoscopy was performed using a camera connected to a rigid or flexible endoscope, projecting images on a video screen, to keep the patient and healthcare workers at a safe distance.
 - The visiting room was changed after visiting a patient suspected for SARS-CoV-2 infection to have enough time to aerate and sanitize the environment.
4. Appropriate use of PPE: disposable water-resistant gowns, gloves, cap, filtering face piece 3 mask, goggles, and a full-face visor shield were used. Only a senior consultant and one assisting nurse wore the PPE to avoid shortages. A junior resident, wearing a surgical mask and placed apart from the visiting area, was assigned to check medical documents (e.g., radiological exams) and produce the final medical report. A separate area was set up for gown removal to prevent cross-contamination.

RESULTS

ENT outpatient services have undergone a significant reduction in daily visits, with gradual decreases ranging from -7.3% the last week of February 2020 to -58.9% the last week of March 2020 (overall reduction rate = -51.2%). The procedures mainly cancelled or postponed were nasal endoscopy (-71%), laryngoscopy (-63%), biopsies in local anesthesia (-44%), and nasal cautery for epistaxis (-37%), whereas tracheostomy tube changes were stable in numbers (-2.9%). An inverse proportional relationship between the decrease in outpatient procedures and the increase of COVID-19 spread was registered. Remarkably, no viral cross-contamination was observed among the healthcare team,

nor were there patients' transmissions reported related to the ENT procedures.

DISCUSSION

At the earliest phase of the pandemic, no otolaryngology-related guidelines were available. Because Italy was the earliest and hardest hit European country, we reorganized ENT services following World Health Organization guidelines, although not specific for otolaryngology visits and upper airway endoscopy. In recent weeks, several societies have developed separate guidelines focused on specific topics (rhinology, laryngology, head and neck cancers), but no widely accepted protocols are yet available.^{4–6} We cannot anticipate how long this emergency will last, and we suppose that old routines will probably change. Some of these preventive measures should be adopted as a standard of care of ENT services for months and potentially years to come.

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