

Otolaryngology Subspecialty Surgical Rescheduling Rates During the COVID- 19 Epidemic

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Abstract

COVID- 19 is a new coronavirus that was linked in December 2019. After public lockdown restrictions were legislated in March 2020, COVID-19 affected the practice of numerous specialties, including otolaryngology. Otolaryngology was supposed to be a high- threat specialty for COVID- 19 transmission due to its primary focus on the nasopharynx and respiratory tract and to the substantial aerosol product during operative procedures. Multitudinous studies have indicated the localization of large viral loads in the nasal epithelial cells, with the nasal depression and nasopharynx having the loftiest attention of contagion in the upper respiratory tract. These factors, in combination with reports of shy particular defensive outfit and delayed reversal time for individual testing, placed otolaryngology providers at high threat during surgical procedures in the early stages of the epidemic [1].

Keyword: Coronavirus; COVID- 19; Respiratory tract

Introduction

Within otolaryngology, subspecialties vary in their optional nature as well as the threat of COVID- 19 exposure, with rhinology and head and neck surgery at loftiest threat. Nasal and Trans nasal endoscopic procedures are among the highest- threat procedures in otolaryngology, whereas the threat for transmission in head and neck surgery procedures is directly commensurable to the degree of mucosal exposure; therefore, neck and thyroid surgery tends to be of lower transmission threat as compared with Trans oral procedures. Colorful otolaryngology- related tiring systems were accordingly developed at hospitals across the world, including Thomas Jefferson University, to drop nosocomial COVID- 19 transmission to cases and providers while furnishing timely care. These tiring systems placed imperative surgery as the top precedence and cancelled all no critical and optional surgery. Although the threat for transmission of COVID- 19 during surgery remains high, a study from the United Kingdom indicated that head and neck surgical procedures are safe with proper particular defensive outfit, as 0 of 47 cases contracted COVID- 19 from surgery [2].

Once acceptable safety protocols were established to alleviate nosocomial spread of COVID- 19, hospitals faced a new challenge of reengaging cases for optional surgical procedures. There are no published studies yet regarding the surgical cataloging challenges in otolaryngology or variability in cataloging rates across subspecialties. In addition, there are limited studies regarding the rate of COVID- 19 transmission during otolaryngology surgical procedures. This study aims to probe the cancellation and cataloging rates among otolaryngology subspecialties during COVID- 19 and the coexisting challenges of reengaging cases to pursue optional surgical procedures. We hypothesize that subspecialties with cases that face significant threat for complaint progression will have the smallest cancellation and loftiest cataloging rates, whereas subspecialties with further optional surgery will face advanced cancellation rates and lower rates of tallied cases [3].

The Department of Otolaryngology-Head and Neck Surgery at Thomas Jefferson University Hospital consists of 18 croakers covering the subspecialties of head and neck surgery, sleep surgery, rhinology and cranium base surgery, facial plastic and reconstructive surgery, otology and neurology, and laryngology. All cases in this study were listed for any otolaryngology procedure between March 16 and May 29, 2020, at a single sanitarium system (with a focus on 1 tertiary university sanitarium within

that system). Any case that was offered a surgical appointment, whether and being case or a new bone, was included in the study. The original listed surgery date was defined as any case that was firstly listed within the time frame of interest, anyhow of cancellation or cataloging. This time frame represents when the sanitarium system confined optional surgical cases due to COVID- 19 preventives [4]. The sanitarium developed a prioritization system for optional or unselective cases to determine which cancelled were. Which were suitable to do within the study time frame?

Sanitarium COVID- 19 lockdown preventives and cancellation of optional and no urgent procedures affected numerous surgical subspecialties. The field of otolaryngology faced a unique challenge of precluding nosocomial spread to cases and providers while handling frequently time-sensitive procedures. The findings in our study demonstrate that high- precedence cases were more constantly completed without cancellation or were tallied, whereas specialties that primarily work with no cancer cases faced lower completion rates. In our department, head and neck surgery had the loftiest number of cases firstly listed, the smallest number of cases cancelled, and the loftiest number of cases tallied. In discrepancy, sleep surgery had the utmost cases cancelled and the smallest cases tallied. When compared with head and neck surgery, all other specialties within otolaryngology saw a sprucely varied rate of cases who didn't register within 6 months, with losses 2 to 3 times lesser [5, 6].

The median time to procedure completion for tallied cases across all subspecialties was 70 days. Head and neck surgery had the shortest standard time to completion at 56 days, and laryngology and otology and neurology had the longest standard time at 81 days. In terms of league distribution among subspecialties, head and neck surgery had

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the loftiest quantum of league 1 cases at 32.5. Rhinology and cranium base surgery had the utmost league 2 cases at 75, and laryngology had the utmost league 3 cases at 65.3. Head and neck surgery had the loftiest chance of time-sensitive and oncologic procedures as compared with the other otolaryngology subspecialties, as demonstrated by having the shortest standard time to procedure completion and loftiest proportion of Tier 1 cases. In comparison, more optional subspecialties endured advanced cancellation rates and smaller cases tallied. For illustration, 93 of sleep surgery cases were league 2 or 3, and this subspecialty endured the utmost cases cancelled and the smallest tallied. Prior to the lockdown, the otolaryngology department endured an average cancellation rate of 16.83.

Since establishing acceptable testing and safety protocols for continuing optional surgery, health care systems have faced a significant challenge in reengaging cases across specialties. Reported a backlog > 1 million orthopedic cases since the conclusion of optional surgery during the original months of the epidemic. Hesitancy to renew optional cases poses a health-related threat to cases and a fiscal burden to institutions [7-9].

In this COVID-19 pneumonia epidemic, some experts have expressed concern for the mental healthcare of medical workers,⁴ older adults,⁵ confirmed and suspected patients as well as other people in quarantine.⁶ Further, according to the national commission initiative, emergency guidelines were formulated for these different groups. However, hospitalized patients with severe mental illness were seemingly overlooked. Compared with patients from other departments, psychiatric patients encountered more barriers and problems. For instance, psychiatric patients had to stay in closed wards, their family visiting was cancelled due to fear of transmission of the novel coronavirus, smartphones and other electronic equipment were not permitted in the ward and no online information was made available. Meanwhile, psychiatric patients are more susceptible to COVID-19 contamination in relatively isolated settings [10]. It was reported that 50 psychiatric patients and 30 medical staff suffered from COVID-19 at the Wuhan Mental Health Centre; recently, a similar tragedy occurred in a psychiatric hospital of South Korea. Unluckily, some small to medium sized psychiatric hospitals also refused to receive new inpatients because of poor medical conditions, which possibly deteriorated psychotic symptoms for patients with mental illness. At present, a great number of psychiatrists and clinical psychologists are flooding into Wuhan to support the front line. However, the psychological needs of hospitalized patients with mental illness are not likely to be fulfilled.

Accordingly, some effective measures should be rapidly undertaken to reverse these challenges. First, current policy and regulation issued by the government ought to highlight the needs of psychiatric patients and their families or supplement-related rules to provide mental health services. Second, the provision for communication between psychiatric inpatients and their families should be considered by hospitals. Some electronic devices such as smartphones should be fixed in the wards and managed by nurses, so both patients and family members have a channel to alleviate the stress and negative emotions caused by isolation and loneliness. Third, in the published guidance for mental healthcare that has been initiated in China, we suggest that the combination of online psychological intervention and face-to-face counseling should be widely adopted in psychiatric hospitals nationwide. Finally, the teams responsible for patient's psychological support and treatment should include not only psychiatrists and psychologists but also psychiatric nurses, social workers, volunteers and family members, in order to unify patients within a supportive system in which every member is able to smoothly

exchange information and seek better solutions for mental issues [11].

Despite Chinese guidelines for psychological crisis interventions and expert consensus for the treatment of psychiatric patients during the COVID-19 epidemic, psychiatric patients are still a vulnerable group who need more attention and respect, particularly during the COVID-19 outbreak in China. Healthcare workers and authorities should jointly deal with mental health problems to offer effective and timely psychological services for psychiatric patients.

Otolaryngologists, as well as other providers such as emergency medicine physicians and anesthesiologists, routinely perform aerosol-generating procedures, placing them at relatively higher risk than other specialties. Otolaryngologists are also at a unique risk during rhinology examination and procedures due to the predilection of viral particles for the nasal cavities and nasopharynx. To respond to the pandemic, various practice modifications and alternatives have been implemented to protect otolaryngologists and patients from this high exposure risk. Initially, actions were taken to cancel clinics and elective cases, limit flexible laryngoscopy examinations and nasal endoscopy to only when necessary, avoid the use of topical decongestants and anesthetics, and practice stricter utilization of PPE [12-15].

The rapidity of closures in response to the COVID-19 pandemic resulted in an unanticipated and abrupt disruption to the routine patient-care workflow. Despite the importance of mitigating the impact of the pandemic, safe and timely patient care remains a priority. Telemedicine services have risen to accommodate the need for continued patient care while allowing observance of social distancing practices. This alternative approach to patient interaction allows audio and visual communication via virtual means. Platforms such as Zoom, Doxy.my, Face Time, and others have rapidly come to the forefront of everyday medical practice to facilitate continued patient care [16].

The WHO describes telemedicine as follows: Using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities" [17].

This broad description can be summarized as the use of virtual communication methods in order to facilitate patient care. The methods of communication can be synchronous or asynchronous. A synchronous form of telemedicine refers to a real-time audiovisual interaction such as a Zoom call. Asynchronous is a term that describes store-and-forward methods of communications, such as images or video recorded by the patient and reviewed by the provider at a later time.

In the outpatient facial plastic surgery setting, in-person evaluation is likely irreplaceable for select cases. Procedures such as botox treatments, filler injections, and laser therapies would continue to require direct patient interaction. In light of this, telemedicine may effectively be implemented as a supplement to in-person clinic visits in both synchronous and asynchronous methods. A review by Shokri et al. describes the application of telemedicine within facial plastic surgery for initial consultation and for postoperative counseling. Their experience also demonstrates the role of virtual multidisciplinary care through their use of telemedicine in a facial nerve clinic, with collaboration from a physical therapist and a facial therapist in Figure 1. They report high patient satisfaction with their virtual methods. Another limitation of telemedicine in cosmetic facial plastic surgery is the challenge of obtaining optimized photographs for surgical planning. Conventionally, standardized lighting, background, and positioning are used to achieve

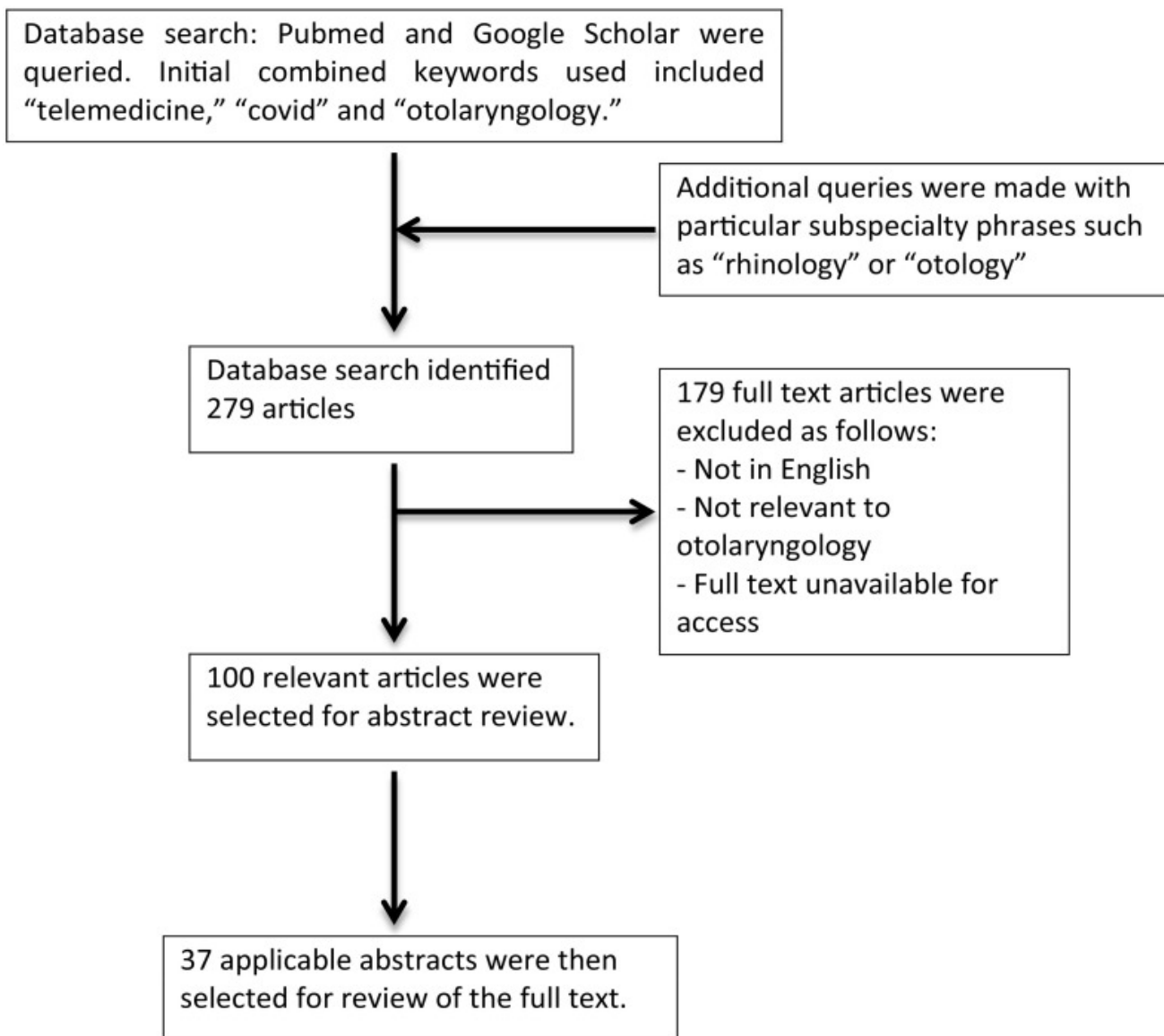


Figure 1: Methods of article selection based on PRISMA guidelines.

optimal photographic results. Tower et al. addressed this challenge by identifying a method of “screenshot photography” in order to coach patients on how to take high quality photographs to help with remote pre-operative planning and documentation. These studies demonstrate that timely and accurate cosmetic facial plastic consultations can be effectively achieved while limiting nonessential contact in the post-COVID-19 era, with the added benefit of reducing burden of cost, transportation, and time delay, compared to face-to-face interaction [18, 19].

Discussion

Of all the specialties of otolaryngology, otology is perhaps the most amenable to a telemedicine platform. McCool and Davies conducted a retrospective cohort study in order to determine which clinical diagnoses within otolaryngology were most eligible for evaluation over telemedicine visits. They found that overall, 62% of ear, nose, and throat consultations were eligible for telemedicine evaluation, and of those, inner and middle ear complaints were the most likely to be eligible. Over 80% of middle ear complaints and over 90% of inner ear complaints were

eligible for telemedicine consultation because they less commonly require a procedure to reach a diagnosis [20].

Conclusion

Telemedicine allows providers to expedite the otologic evaluation of patients who otherwise may have been delayed due to the volume of most practices. One study notes that prior to telemedicine use, 47% of audiology and ENT patients would wait at least 5 months for in person new appointments. Implementation of telemedicine allowed this number to decrease to 8% within the first 3 years and less than 3% in the following 3 years after that [19]. Innovative devices that aid in the remote detection and capture of otologic pathology have also been investigated as a means to facilitate virtual evaluation. One such device involves the use of a smartphone-enabled otoscope, which captures images of the tympanic membrane for evaluation by an otolaryngologist remotely. One study of smartphone-enabled otoscopy reports 96% specificity in identifying normal tympanic membranes and 100% sensitivity in identifying pathology. With a 97% positive predictive value and small false-positive

rate, this technology could be useful as a screening tool, reducing the need for unnecessary in-person specialty care visits. One limitation to widespread use of smartphone-enabled otoscopy tools is the requirement for patients to access this device, which may be expensive or unavailable in certain areas. An alternative application would be the use of this technology in primary care practices with subsequent forwarding of the images to the otologist. When trained healthcare workers are equipped with a smartphone-enabled otoscope, store and forward telemedicine allows for adequate screening of otology patients in the community while minimizing unnecessary in-person evaluations.

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Conflict of interest

None

References

1. Fauci AS, Lane HC, Redfield RR (2020) COVID-19-navigating the uncharted. *N Engl J Med* 382:1268-1269.
2. Ralli M, Minni A, Candelori F, Cialente F, Greco A, et al. (2020) Effects of COVID-19 pandemic on otolaryngology surgery in Italy: the experience of our university hospital. *Otolaryngol Head Neck Surg* 163:86-88.
3. Lee Y, Kirubarajan A, Patro N, Soon MS, Doumouras AG, et al. (2020) Impact of hospital lockdown secondary to COVID-19 and past pandemics on surgical practice: a living rapid systematic review. *Am J Surg*. Published online November 12, 2020.
4. Piccirillo JF (2020) Otolaryngology-head and neck surgery and COVID-19. *Jama* 324:1145-1146.
5. Anagiotos A, Petrikkos G (2021) Otolaryngology in the COVID-19 pandemic era: the impact on our clinical practice. *Eur Arch Otorhinolaryngol* 278:629-636.
6. Setzen M, Svider PF, Setzen S, Setzen G, Eloy JA, et al. (2020) The novel corona virus and rhinology: Impact on practice patterns and future directions. *Am J Otolaryngol* 41:102569.
7. Tower JI, Lee JY, Lee YH (2020) Screenshot Photography: Optimizing photo-documentation while using telehealth video platforms. *Facial Plast Surg Aesthet Med* 22:240-242.
8. Chari DA, Wu MJ, Crowson MG, Kozin ED, Rauch SD (2020) Telemedicine algorithm for the management of dizzy patients. *Otolaryngol Head Neck Surg* 163:857-859.
9. Anagiotos A., Petrikkos G (2021) Otolaryngology in the COVID-19 pandemic era: the impact on our clinical practice. *Eur Arch Otorhinolaryngol* 278:629-636.
10. Klimek L, Hagemann J, Alali A, Spielhaupter M, Huppertz T, et al. (2021) Telemedicine allows quantitative measuring of olfactory dysfunction in COVID-19. *Allergy* 76: 868-870.
11. Cruz AT, Zeichner SL (2020) COVID-19 in children: initial characterization of the pediatric disease. *Pediatrics* 145: e20200834.
12. Viner RM, Whittaker E (2020) Kawasaki-like disease: emerging complication during the COVID-19 pandemic. *Lancet* 395:1741-1743.
13. Burke BL, Hall RW (2015) Telemedicine: Pediatric Applications. *Pediatrics* 136:e293-e308.
14. Maurrasse SE, Rastatter JC, Hoff SR, Billings KR, Valiika TS (2020) Telemedicine during the COVID-19 pandemic: a pediatric otolaryngology perspective. *Otolaryngol Head Neck Surg* 163: 480-481.
15. Smith AC, Dowthwaite S, Agnew J, Wootton R (2008) Concordance between real-time telemedicine assessments and face-to-face consultations in paediatric otolaryngology. *Med J Aust* 188:457-460.
16. Harting MT, Wheeler A, Ponsky T, Nwomeh B, Snyder CL (2019) Telemedicine in pediatric surgery. *J Pediatr Surg* 54:587-594.
17. Bryson PC, Benninger MS, Band J, Goetz P, Bowen AJ (2018) Telemedicine in laryngology: remote evaluation of voice disorders-setup and initial experience. *Laryngoscope* 128:941-943.
18. Sayin I, Devecioglu I, Yazıcı ZM (2020) A closed chamber ENT examination unit for aerosol-generating endoscopic examinations of COVID-19 patients. *Ear Nose Throat J* 99:594-596.
19. Doarn CR, Zacharias S, Keck CS, Tabangin M, DeAlarcon A, et al. (2019) Design and implementation of an interactive website for pediatric voice therapy-the concept of in-between care: a telehealth model. *Telemed J E Health* 25:415-422.
20. Triantafillou V, Rajasekaran K (2020) A commentary on the challenges of telemedicine for head and neck oncologic patients during COVID-19. *Otolaryngol Head Neck Surg* 163:81-82.