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Commentary

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Telemedicine During the COVID-19 Pandemic: A Pediatric Otolaryngology Perspective

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Abstract

The COVID-19 pandemic has created a situation unparalleled in our lifetime. As the medical community has attempted to navigate a sea of ever-changing information and policies, this uncertainty has instead bred creativity, community, and evolution. Necessity is the mother of invention, and one of the by-products of our rapidly changing environment is the increased reliance on telemedicine. Here, we discuss our experience with incorporating telemedicine into an urban academic pediatric otolaryngology practice, the challenges that we have encountered, and the principles unique to this population.

Keywords

COVID 19, otolaryngology, telemedicine, quality improvement, pediatrics

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The worldwide COVID-19 pandemic has forced the health care landscape to shift rapidly. From departmental meetings conducted on Zoom to virtual tumor boards and didactics, a reliance on technology and virtual interaction has begun to permeate all aspects of our professional lives.[1,2] Similarly, patient care is also moving online. Guidelines published by the American Academy of Otolaryngology–Head and Neck Surgery have advised providers to limit care to ''time-sensitive and emergent problems'' and to consider telemedicine as an alternative to in-person evaluations.[3,4] The current state of crisis has removed many of the administrative, financial, and legal barriers to telehealth that previously limited its widespread adoption. The powerful combination of increased demand and a more available supply has launched a new era of telehealth. Dr Anna Messner—the president of the American Society of Pediatric Otolaryngology—said it best when she hypothesized that ''one day we will look back on this pandemic as the true birth of video visits.''

Head and neck oncology specialists have been at the forefront of the telehealth movement because of their unique patient population.[4,5] Pediatric otolaryngologists face similar challenges due to the time-sensitive nature of common pathologies. Are tympanostomy tubes truly elective when hearing loss could lead to developmental delay? How long can a child suffer from severe sleep apnea without negative ramifications? Here, we discuss our experience incorporating telemedicine into an urban pediatric otolaryngology practice, including the challenges that we have encountered and the principles unique to this population.

Discussion

In our practice—where we conduct >2000 outpatient visits per month—the transition to telemedicine was a dramatic shift that came with expected and unexpected challenges. At the onset, most providers required double the time to complete a telemedicine visit as compared with a standard visit. Families were also new to this technology: they experienced technical issues with connectivity and the ability to sign on to the correct session, and to our surprise, virtual ''no-shows'' were not infrequent. In addition, it was difficult to perform a normal check-in routine, such as vital signs and medical history, and to appropriately utilize medical assistants and ancillary staff.

One unforeseen obstacle was coordination of care for non-English-speaking families. These visits required additional virtual infrastructure and foresight to ensure that video interpreters were available. Gathering data was also a problem: results that families would typically bring to a visit, such as CDs and reports, were frequently unavailable. This gap in information, often integral to the visit, required subsequent email communication and time.

Adjusting to a limited physical examination proved to be one of the most challenging aspects. For pediatric specialists, the physical examination can be problematic in an uncooperative child in the office, let alone in a telemedicine visit.

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In addition, many subsites can be seen only with specialized and technologically advanced equipment. The most challenging subsites to evaluate included the oral cavity, oropharynx, ears, and larynx. For the oral examination, positioning of the web camera, the child's disposition, and the lighting were all significant factors. To overcome some of these challenges, providers asked parents to take a picture of the child's throat and display it for the webcam. This usually provided enough adjunctive information to support providers' surgical recommendations.

The otologic evaluation has been particularly challenging for both providers and parents. In general, the examination was limited to noting the appearance of the pinna and the presence or absence of drainage from the ear. Devices that can facilitate more sophisticated examinations, such as smartphone endoscopes, do exist,[6,7] and some institutions are attempting to provide these on a mail-return basis. However, their use is limited by cost, practicality, ability to deploy them widely, and ease of use. Airway evaluations had similar limitations. Providers had to rely on physical examination signs that were apparent on observation alone, such as work of breathing, noisy breathing, and retractions. This was often sufficient for a presumptive diagnosis. However, confirming a specific diagnosis, such as laryngomalacia, was not possible due to the need for flexible laryngoscopy.

In our opinion, telehealth visits are ideal for appointments that require significant counseling. For example, appointments with cochlear implant candidates or patients with microtia are mostly spent on surgical counseling. In cases like these, physicians agreed that the virtual appointment provided an experience on par with an in-person visit. Similarly, while it was impossible to confirm diagnoses such as laryngomalacia, physicians were able to communicate important information, provide reassurance, and recommend clinic follow-up for laryngoscopy when indicated. Overall, families were very satisfied with the educational aspect of these visits. However, some families still found it difficult to accept recommendations in the absence of a complete physical examination and definitive diagnosis.

Despite some of the challenges of telemedicine, our visits have evolved and matured over the past month. Providers have become increasingly more efficient as they have gained familiarity with the system, similar to adopting a new electronic medical record. While it is unclear whether telehealth is the optimal solution for the foreseeable future, it is more important to focus on the benefits as opposed to the limitations. Providing care and solace for families during this time is vital, and we have to utilize the resources that we have at hand. At the end of the day, we will continue to fulfill our Hippocratic oath: ''Into whatsoever houses I enter, I will enter to help the sick,'' even if that house is a virtual one.

Author Contributions

Sarah E. Maurrasse, conception of work, interpretation of data, critical revision, final approval; **Jeff C. Rastatter**, interpretation of data, critical revision, final approval; **Stephen R. Hoff**, interpretation of data, critical revision, final approval; **Kathleen R. Billings**, interpretation of data, critical revision, final approval; **Taher S. Valika**, conception of work, interpretation of data, critical revision, final approval.

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