NAVIGATING THE ACADEMIC EDUCATIONAL RESPONSE TO COVID-19 IN COMMUNICATION SCIENCES AND DISORDERS: A FACULTY PERSPECTIVE

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— ABSTRACT —

The coronavirus 2019 (COVID-19) pandemic has wrought unprecedented levels of morbidity and mortality on a global scale. The United States leads the world in the total number of COVID-19 cases with more than two million persons infected and 120,000+ deaths. In this paper, the responses to COVID-19 of the healthcare system, the communication sciences and disorders profession, professional associations/organizations, and universities are discussed as are communication sciences and disorders faculty transitions from face-to-face to online teaching and learning.

Keywords: COVID-19, online teaching and learning, faculty preparation

Background

COVID-19 is a severe respiratory illness caused by a coronavirus. It is characterized by cough, shortness of breath or difficulty breathing, and/or at least two of the following symptoms: fever (≥100.4°), chills, muscle pain, headache, sore throat, and/or new loss of taste or smell. Symptoms may develop within 14 days of exposure to the illness. It is believed to be spread through close contact with an infected person through respiratory droplets or aerosols produced when an infected person coughs or sneezes. It may also be possible that a person can contract COVID-19 (aka: novel coronavirus discovered in 2019) by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. Yet, this is not thought to be the main way the virus spreads. According to the Centers for Disease Control and Prevention (CDC), persons 65 years and older and those with underlying medical conditions like heart or lung disease diabetes, obesity, and high blood pressure appear to be at particular risk for developing more serious complications from COVID-19 illness (CDC, 2020; Stokes et al. 2020).

Preliminary reports suggest that up to one-third of older persons with severe infection from COVID-19 may present with neurological conditions such as central nervous system manifestations (i.e., dizziness, impaired consciousness, acute ischemic stroke, ataxia, and seizure) and peripheral nervous system symptoms (i.e., vision impairment, and nerve pain) (Mao et al. 2020; Zubair et al. 2020). Most of the ischemic strokes reported in patients with COVID-19 (65.6%) are cryptogenic (i.e., of unknown origin) (Yaghi et al. 2020). Additionally, another study revealed that patients younger than 50 years of age with COVID-19 suffered large-vessel strokes (Oxley et al. 2020) thus confirming that in adults, youth does not offer protection from the virus.

With its identification in December 2019 and rise to pandemic levels in January 2020, COVID-19 wrought unprecedented levels of morbidity and mortality on a global scale in a period of less than a year. Currently, the United States leads the world in the total number of COVID-19 cases with over two million persons

infected and over 120,000 deaths. Relative to their proportion in the general U.S. population, African Americans and Latino populations comprise the majority of COVID-19-related hospitalizations (Garg et al. 2020) and deaths especially in large cities such as New York City, Chicago, and New Orleans (Miceli, 2020). In these large urban areas, African American COVID-19 mortality rates were reported to be 2.4 times as high as the rate for Whites (APM Research Lab, 2020). Social factors influencing these epidemiologic disparities include historical patterns of residential segregation, living in densely populated areas, work circumstances (with greater proportions of African Americans and Hispanics employed in essential industries such as service industry jobs), lack of paid sick leave, and lack of health insurance (CDC, 2020).

The healthcare system, public health system and societal responses to the pandemic have been massive with the search for a preventive vaccine, clinical trials of drugs to treat the virus, use of personal protection equipment (face mask, gloves) and individual practices such as 'sheltering in place' and 'social distancing.' However, some areas of the country have been particularly hard hit by the COVID-19 pandemic and health care resources and responses have been strained thus taxing hospital emergency departments and exposing the lack of critical medical equipment (e.g., respirator and ventilator units) available to care for infected patients and illuminating historic health care inequities. Likewise, another impact of racial residential segregation is that there are comparatively fewer healthcare facilities in highly segregated urban areas (Ko et al. 2013) and rural areas (Caldwell et al. 2016) to meet the needs of vulnerable populations stricken with COVID-19.

The field of communication sciences and disorders (CSD) has also responded to the COVID-19 pandemic. At the practitioner level, speech-language pathologists and audiologists historically have provided services amid very challenging times. This record continues in the age of COVID-19 with practitioners often delivering services at the 'front lines' of health care (e.g., hospitals, medical centers, nursing homes, home health) as people's need/desire to regain or develop their ability to communicate, eat, swallow and hear does not disappear in the face of adversity. According to the American Speech-Language-Hearing Association (ASHA, 2020a), several of the procedures speech-language pathologists (SLPs) perform are considered aerosol generating procedures (AGPs) that is, medical procedures that are (a) more likely to generate higher concentrations of infectious respiratory aerosols than coughing, sneezing, talking, or breathing; (b) result in uncontrolled respiratory secretions; and (c) produce airborne particles that can lead to the spread of respiratory infections. Examples of these procedures include instrumental and non-instrumental dysphagia assessment and treatments; instrumental assessment of voice (endoscopy with or without stroboscopy) laryngectomy assessment and management (ASHA, 2020); and tracheostomy and ventilation care (Zaga et al. 2020),

Professional communication sciences and disorders associations/organizations around the globe have provided informational resources and educational materials for practitioners on COVID-19. Examples of three such CSD organizations in the U.S. and COVID-19 resources available on their webpages are shown in Table 1 below. As COVID-19 rendered

Table 1. COVID-19 Information Provided by Major U.S. Communication Sciences and Disorders Professional Associations.

Professional Association	COVID-19 Link	Examples of COVID-19 Information Provided
American Speech-Language-Hearing Association (ASHA)	https://www.asha.org/About/Coronavirus-Updates/	Educational; Resources; Updates on the virus, public policies, telepractice information
American Academy of Audiology (AAA)	https://www.audiology.org/practice-management/covid-19-resources	Educational; Resources (e.g., *Ototoxicity of FDA-Approved Drugs Being Re-Purposed for COVID-19 Treatment, Surgical Monitoring Safety: COVID-19 and Beyond)*
Council of Academic Programs in Communication Sciences and Disorders (CAPCSD)	https://www.capcsd.org/covid-19/	Educational; Resources (e.g., *CAPCSD Member Survey Results – COVID-19 Impact, Telepractice Resources During COVID-19)*

face-to-face clinical delivery untenable nationwide in some settings such as public schools or early intervention centers, many practicing clinicians shifted to telepractice as a service delivery platform (Ellis et al. 2020; Parafiniuk, 2020; Boisvert and Hall, 2018; Krum, 2014).

The COVID-19 pandemic has also changed the way universities across the U.S. educate students and the ways college students are learning. Thus, the purpose of this paper is to examine from a faculty member perspective, the response of universities and the communication sciences and disorders academic programs located within these institutions, to the COVID-19 pandemic.

On-Campus Closures and the Challenging Move to Online Teaching and Learning

In mid-March 2020, as the number of COVID-19 in the U.S. reached 15,000 (Statistica, 2020), state-mandated shelter in place edicts were issued by governors effectively shutting down to differing extents, work places; social gathering sites and events; and colleges and universities. The closure of on-campus operations forced universities and CSD academic programs housed within them to cease or curtail their face-to-face clinical operations and abruptly pivot to remote online instruction and learning. Institutions accomplished this rapid transition to remote learning with varying degrees of success as underscored by Maloney and Kim (2020) who observed, "In this emergency, keeping classes going was more important than advancing the state of the art in student learning."

How have faculty reacted to this sudden shift? A national survey of 935 university faculty members conducted in May 2020 to gain perspective on the success of remote teaching found 50 percent reported being experienced or somewhat experienced with online teaching, 65 percent expressed the concern that their students' lack of access to technology or Wi-Fi would be (or was) a challenge to remote teaching and learning, and 59 percent thought that their institution's online courses in the spring were inferior to what had been offered in person (June, 2020). Likewise, with nearly all CSD academic programs (98%) indicating they moved their coursework to online in Spring 2020, 136 CSD faculty members surveyed nationwide stated they were somewhat to extremely concerned about their readiness to teach online (64%) and somewhat to extremely concerned about their students' access to online learning platforms and tools (Council on Academic Programs in Communication Sciences and Disorders, 2020). Finally, in another national study of 1,843 CSD faculty conducted between March and May 2020, 78 percent listed teaching remotely as their top challenge (ASHA, 2020b). These concerns are understandable given the limited experiences or training most faculty have in online teaching and may also reflect for many, their pre-COVID-19 attitudes toward remote learning and baseline discomfort with teaching online. For some faculty, there may be a sense of loss of engagement with their students brought about by online teaching. Thus, it is incumbent upon universities to understand faculty concerns and provide them with quality support and training in online teaching given that this mode of educating will be with us for the foreseeable future.

Training and Support of Faculty in a New Instructional Format

With the anticipation of a second wave of COVID-19 in the late summer/early fall of 2020, CSD faculty will again be called upon to teach remotely. Only one-third of them report feeling prepared for an online teaching role this fall (Council on Academic Programs in Communication Sciences and Disorders, 2020). What can be done to help prepare CSD faculty and/or increase their confidence in teaching remotely? First, there must be institutional support, resolve, and resources directed to preparing faculty for the online teaching presence. Many universities have centers for teaching and learning, university teaching and learning commons, or centers for academic excellence designed to advance student learning by helping faculty implement evidence-based, innovative, and effective teaching strategies. Others may have dedicated divisions which offer a full-service online course development model which prepares and supports faculty to teach online through consultation and training workshops. Thus, faculty can develop online courses on their own or access other campus resources.

Next, to fully meet the needs of faculty and increase their confidence and competence in teaching in this new instructional format, institutional support must be provided on an *individual or small-group level*. Many universities employ instructional technology consultants (ITCs) who offer services to assist faculty with course development, technological assistance, and preparation to teach online. Most ITCs have an educational background in technology and education and bring an understanding of pedagogy that allows them to understand the needs of faculty members and communicate successfully with them. Working collaboratively with faculty, ITCs can offer insights about the technology and technology tools that are most suitable for the type of learning and course delivery whether traditional classroom,

online, or blended format; assist in developing student learning objectives and determining how to align those objectives with appropriate assessment strategies to measure the desired learning outcomes; and share effective ways of motivating and engaging students in activities designed for learning. At those universities with restricted resources and with only one or two ITCs to serve all of the institution, academic deans or department chairs should be encouraged to identify a cadre of in-house faculty with online course development and teaching experience and incentivize them to train and support faculty at the unit, department, or program levels.

Videoconferencing Options for Online Teaching and Learning and Translating Face-to-Face Class Activities to Online

With the closure of on-campus teaching activities in response to the COVID-19 pandemic, universities needed to decide which videoconferencing application(s) to use for web conferencing, online meetings, and synchronous online learning. Typically, these applications are housed on each institution's learning management system (LMS) which could include Canvas, Blackboard, Moodle or others. Among the most frequently used videoconferencing platforms are Zoom, Canvas Studio, Google Meet, WebEx, and Panopto. Each platform has features that can serve the university's and individual faculty member's online teaching and learning mission and at least two, Zoom and WebEx, are HIPAA-compliant and have been used for delivery of clinical services via telepractice. A few of these features include synchronous delivery of course content (where learning happens at the same time for the instructor and student with real-time interaction between them); asynchronous delivery (wherein the content is created and made available for consumption later on and not in real-time); or real-time chat (which allows students to communicate in real-time with the instructor and each other during class meetings). A summary of the essential features of Canvas Studio, Google Meet, Panopto and Zoom is provided in Table 2.

In our experiences with faculty colleagues who are for the first time tasked to teach their course(s) online, they express doubts about converting the teaching activities they used (and cherished) in the face-to-face environment to the online environment. In the face-to-face classroom, many instructors argue, they can lecture and then ask students questions or ask student groups to discuss something or solve a problem and then share their findings with the class. Such learning activities give students an opportunity to experience the course content in different

Table 2. Online Videoconferencing Platform Options for Faculty, Students, and Staff.

	Canvas Studio	Google Meet	Panopto	Zoom
Features	Best for any size group of faculty and students	Best for groups of up to 10 faculty, staff, and students	Best for any size group of faculty, staff, and students	Best for groups of up to 50 faculty, staff, and students
Synchronous Learning	No	Yes	Yes	Yes
Asynchronous Learning	Yes	No	Yes	Yes
Video Content Management	Yes	No	Yes	Yes
Real Time Chat	No	Yes	No	Yes
Private Chat	No	No	Limited	Yes
Screensharing	Yes	Yes	Yes	Yes
Videoconferencing	No	Yes	Yes	Yes
Live Webcast	No	Yes	Yes	Yes
Two-Way Audio & Video	No	Yes	No	Yes
Record & Playback	Yes	Yes	Yes	Yes
Quizzing	Yes	No	Yes	No
Electronic Hand Raising	No	No	No	Yes
Keyboard Accessible	Yes	Yes	Yes	Yes
Screen Reader Accessible	Yes	Yes	Yes	Yes
Closed and Live Caption Options	Yes	Yes	Yes	Yes

ways and demonstrate their understanding before completing a summative assessment such as a final examination. However, most face-to-face learning activities can be replicated in an online course. Examples of and suggestions for translating face-to-face class activities to the online teaching and learning environment are shown in Table 3 below.

Return to Work, the Uncertain Future, and Concluding Remarks

What will the return to work in the upcoming and future academic years look like for CSD faculty? First, the safety of faculty who return to on-campus roles must be paramount. Personal protection equipment (masks, face shields, goggles, gloves, hand sanitizer) must be provided by universities to ensure that faculty are able to carry out their teaching, service, advising, and research roles safely. Likewise, classrooms must be sanitized between class meetings to protect students and faculty. There will almost certainly be social distancing practiced in on-campus classroom spaces (Diep & Zahneis, 2020) with classroom configurations designed to decrease exposure risk. Also, the tenure and/or promotion clock and what counts toward tenure will need to be reconsidered (Connolly, 2020). Finally, online teaching and learning will continue and perhaps broaden if there is a surge of COVID-19 and that pedagogy will be delivered online in synchronous, asynchronous, and hybrid formats. Faculty must be supported by their universities as they endeavor in an uncertain future to accomplish what they do best---teach and mentor their students.

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Table 3. Translating Face-to-face Class Activities to Online.

If you do this in a face-to-face class:	You might do this online:
Group work in class	Create groups in Canvas; create group assignments & group discussions
Case Studies	Create an interactive timeline (Links to an external site.), simulations, videos in Canvas Studio or other LMS platforms
Collaborative Writing	Use Google Docs, Collaborations in Canvas
Fieldwork	Students perform fieldwork and submit videos via Arc or YouTube or upload documents or presentations
Icebreakers	Here are some suggestions for icebreaker in online course discussion boards (Links to an external site)
Interviews	Students can use their phones to interview a subject and then upload video via Canvas Studio or YouTube
Lectures	Faculty can record using the Upload/Record Media tool; record via WebEx and link within a Canvas page
Oral Reports	Students can record video or narrated presentation and upload via Studio, YouTube or file upload in a discussion board
Peer Review	Peer review tool in Canvas
Portfolios	Google Sites
Presentations	Students can create narrated presentations using PowerPoint or Prezi and share them in a discussion board
Reflections	Assignment tool or discussion tool
Synchronous Classes	Conduct using Zoom, Google Meet, WebEx, Panopto
Web Design	Students can create websites using Google Sites

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