

Fernanda Dreux Miranda Fernandes¹ 

Simone Aparecida Lopes-Herrera² 

Jacy Perissinoto³ 

Daniela Regina Molini-Avejonas¹ 

Cibelle Albuquerque de la Higuera Amato⁴ 

Ana Carina Tamanaha³ 

Ana Paula Ramos de Souza⁵ 

Ana Cristina de Albuquerque Montenegro⁶ 

Fernanda Prada Machado⁷ 

Leticia Segeren¹ 

Bárbara Niegia Garcia de Goulart⁸ 

Use of telehealth by undergraduate students in Speech Therapy: possibilities and perspectives during COVID-19 pandemic

Uso de telessaúde por alunos de graduação em Fonoaudiologia: possibilidades e perspectivas em tempos de pandemia por COVID-19

The COVID-19 pandemic brought challenges and the need for adaptation on several fronts. Updating working methods is necessary; and promoting education and services in health sciences that are appropriate to the 21st century is essential. School clinics associated to universities and training centers working together with public health services provide assistance to a significant portion of the population

In this letter, we will propose some reflections on the relevance of using telehealth technologies as part of the professional training for speech-language pathologists, considering the articulation between national curricular guidelines, professional training and ethical aspects.

The eighth paragraph of the National Curricular Guidelines⁽¹⁾ for SLP education⁽¹⁾, approved in 2018 by the National Health Council, states that internships include practical activities integrated into the network of health care, with teacher's supervision. These presuppose activities using telehealth resources, since there is a national policy on digital health and telehealth, proposed by the Ministry of Health⁽²⁾. Within the scope of Brazilian Unified Health System (UHS), the objectives described are to overcome socioeconomic, cultural and geographic barriers, so that health information and services could reach the

Correspondence address:

Fernanda Dreux Miranda Fernandes
Programa de Pós-graduação
em Ciências da Reabilitação,
Departamento de Fisioterapia,
Fonoaudiologia e Terapia Ocupacional,
Faculdade de Medicina, Universidade
de São Paulo – USP
Rua Cipotânea, 51, Cidade
Universitária, São Paulo (SP), Brasil,
CEP: 05360-160.
E-mail: fernandadreux@usp.br

Received: June 12, 2020

Accepted: June 18, 2020

Study conducted at Universidade de São Paulo - USP, Universidade Federal da São Paulo - UNIFESP, Universidade Presbiteriana Mackenzie – UM, Universidade Federal de Santa Maria – UFSM, Universidade Federal de Pernambuco – UFP, Pontifícia Universidade Católica de São Paulo - PUCSP and Universidade Federal do Rio Grande do Sul - UFRGS in the cities of São Paulo (SP), Bauru (SP), Porto Alegre (RS), Santa Maria (RS) e Recife (PE), Brasil.

¹ Programa de Pós-graduação em Ciências da Reabilitação, Departamento de Fisioterapia, Fonoaudiologia e Terapia Ocupacional, Faculdade de Medicina, Universidade de São Paulo – USP - São Paulo (SP), Brasil.

² Programa de Pós-graduação em Fonoaudiologia, Departamento de Fonoaudiologia, Faculdade de Odontologia de Bauru, Universidade de São Paulo – USP – Bauru (SP), Brasil.

³ Programa de Pós-graduação em Distúrbios da Comunicação Humana, Departamento de Fonoaudiologia, Universidade Federal de São Paulo – USP - São Paulo (SP), Brasil.

⁴ Programa de Pós-graduação em Distúrbios do Desenvolvimento, Centro de Ciências Biológicas e da Saúde, Universidade Presbiteriana Mackenzie - São Paulo (SP), Brasil.

⁵ Programa de Pós-graduação em Distúrbios da Comunicação Humana, Universidade Federal de Santa Maria – UFSM - Santa Maria (RS), Brasil.

⁶ Departamento de Fonoaudiologia, Universidade Federal de Pernambuco – UFPE - Recife (PE), Brasil

⁷ Programa de Estudos Pós-graduados em Fonoaudiologia, Pontifícia Universidade Católica de São Paulo – PUC-SP - São Paulo (SP), Brasil.

⁸ Programa de Pós-graduação em Epidemiologia, Universidade Federal do Rio Grande do Sul – UFRGS - Porto Alegre (RS), Brasil.

Financial support: nothing to declare.

Conflict of interests: nothing to declare.



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

entire population. The norms and guidelines for SLP undergraduate programs accreditation involve quality parameters, workload and content that guarantee quality professional training and do not recognize courses entirely conducted in Distance Learning Format. Supervised practice in telehealth does not subvert any of professional training quality parameters; it only expands the development of new competences.

The need for social distancing and extreme care to reduce the spread of contamination by COVID-19 anticipated changes that were already possible and necessary regarding the use of telehealth in SLP practices. Some undergraduate programs and courses, based on previous experience and international literature, were already organizing themselves to involve undergraduate students in activities that allow increasing the use of these resources in search for a more equitable service delivery system.

The most consistent and up-to-dated teaching proposals involve the development of professional competences based on scientific evidence. It is possible that the use of telehealth technologies will be part of professional reality in the near future, both to respond to imposed needs by the pandemic and to the possibility of expanding the availability of SLP services. Thus, it can be considered that the academic environment is a promising scenario for the development of these competencies. In academic structures, telehealth can be developed as a supervised practice, respecting all ethical precepts typical of clinical activity, with organization and support by an experienced supervisor. The alternative is insufficient professional training, in which the professional will have to seek the development of specific competences after graduation. Ethical, technical and safety issues are also complex, important and uneven in face-to-face internships. Obviously, remote care does not exclude any of these aspects.

This theme has been addressed for several years in countries with different levels of development⁽³⁾. A systematic literature review indicated that there were more than a hundred publications on the topic⁽⁴⁾. The remote health care can offer access to services for communities located in geographically isolated areas, or with diversity and inequity in service delivery^(5,6). In December 2019, the American Speech-Language-Hearing Association (ASHA) published an entire issue of *The ASHA Leader* magazine regarding the need to improve the skills of using digital resources in professional training. Volkens^(7,44) stated “[...] *family members will develop activities that were previously performed by therapists*”. Specifically discussing professional training. Foster et al.^(8,59) mention the importance of building competences for telehealth work. The authors emphasize that “*we can offer students the chance to practice these skills in a controlled teaching environment, so that they are ready for work*”.

There is also already scientific knowledge regarding the use of telehealth resources in the national reality for some years. After a controlled study in 2014, the use of digital technologies to develop SLP students' competences was considered effective⁽⁹⁾.

Barbosa and Fernandes⁽¹⁰⁾ reported an intervention proposal with remote monitoring - by undergraduate students, with systematic supervision - of activities parents of children with ASD should conduct at home with their children. The results indicate progress in all measures assessed before and after the

remote monitoring period⁽¹⁰⁾. In a subsequent study, the same authors identified that only 40% of the parents of children with ASD were able to conduct all the proposed activities and reported difficulties with the household routine and children's behavior⁽¹¹⁾. These studies were fundamental to the implementation of other versions of this same proposal.

On a study⁽¹²⁾ about parent coaching involving activities carried-out at home to stimulate executive functions with children with ASD, the remote monitoring was performed by the SLP. This stimulation program was conducted by the parents for 10 weeks, in which there was systematic contact between parents and therapists (by phone, text message or video call) to report progress and problems and discuss small changes necessary to the activities proposed⁽¹²⁾.

The report on the implementation of telehealth in speech therapy during the COVID-19 pandemic for patients who were previously treated on an outpatient clinic in a primary health care facility was recently described⁽¹³⁾. The purpose was to guarantee the continuity of the care service for patients who could suffer worsening or comorbidities, during the period of social distancing. The consultations were carried out by video calls by participants on the project - SLP students and professionals - with synchronous supervision. The use of telehealth resources has proven to be efficient to the care of patients with speech-language demands, enabling remote care with the same quality as face-to-face care.

After the changes imposed by the pandemic, several international associations such as CAPCSD (Council of Academic Programs on Communication Sciences and Disorders)⁽¹⁴⁾, ASHA, (American Speech-Language and Hearing Association)⁽¹⁵⁾, IALP (International Association of Logopaedics and Phoniatrics)⁽¹⁶⁾ and the CPLOL (Comité Permanent de Liaison des Orthophonistes et Logopédes)⁽¹⁷⁾ presented guidelines and material to the development of activities in remote care / telehealth including basic undergrad training for SLP.

Finally, a word about ethics. A significant proportion of supervised internships for undergraduate students in SLP involves the delivery of services in school clinics or outpatient training services. These services comply with the teaching-assistance-research tripod. Supervised practice activities offer quality service to a repressed demand that the health / educational system is unable to meet. On the other hand, without the participation of these people, the professional training provided by the supervised practice would be unfeasible. The need to continue serving this population, through the search for viable alternatives, is an ethical commitment to which academic services must answer. Indefinitely interrupting intervention cannot be the only alternative.

Reflection on how we become the speech language pathologists that we are, what we owe to the patients we worked-with during our training and what we want for our science in the future is a question for all of us.

REFERENCES

1. Brasil. Resolução nº 610, de 13 de dezembro de 2018. Diretrizes curriculares nacionais para o curso de Fonoaudiologia [Internet]. Diário Oficial da

- União; Brasília; 16 abr 2019 [citado em 2015 Jul 5]. Disponível em: https://conselho.saude.gov.br/resolucoes/2018/Reso610_Publicada.pdf
2. Brasil. Ministério da Saúde. Decreto nº 9795, de 17 maio de 2019. Aprova a Estrutura Regimental e o Quadro Demonstrativo dos Cargos em Comissão e das Funções de Confiança do Ministério da Saúde, remaneja cargos em comissão e funções de confiança, transforma funções de confiança e substitui cargos em comissão do Grupo-Direção e Assessoramento Superiores - DAS por Funções Comissionadas do Poder Executivo - FCPE [Internet]. Diário Oficial da União; Brasília; 20 maio 2019 [citado em 2015 Jul 5]. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/decreto/D9795.htm
 3. Pillay M, Kathard H. Decolonizing health professional's education. *African Journal of Rhetoric* [Internet]. 2015 [citado em 2015 Jul 5];7(1):193-227. Disponível em: https://journals.co.za/content/aar_rhetoric/7/1/EJC1728074
 4. Molini-Avejonas DR, Rondon-Melo S, Amato CAH, Samelli AG. A systematic review of the use of telehealth in Speech, Language and Hearing Science. *J Telemed Telecare*. 2015;21(7):367-76. <http://dx.doi.org/10.1177/1357633X15583215>. PMID:26026181.
 5. Rech RS, Hugo FN, Schmidt JG, Goulart BNG, Hilgert JB. Speech-language therapy offer and primary health care in Brazil: an analysis based on socioeconomic development. *CoDAS*. 2019;31(1):e20180083. <http://dx.doi.org/10.1590/2317-1782/20182018083>. PMID:30758397.
 6. Johnsson G, Kerslake R, Crook S. Delivering allied health services to regional and remote participants on the autism spectrum via video-conferencing technology: lessons learned. *Rural Remote Health*. 2019;19(3):5358. <http://dx.doi.org/10.22605/RRH5358>. PMID:31474113.
 7. Volkers N. Work: only its name will be the same. *ASHA Lead*. 2019;24(Dez):42-51. <http://dx.doi.org/10.1044/leader.FTR1.24122019.42>.
 8. Foster S, Wiczner E, Eberhardt N. What's so hard about soft skills? *ASHA Lead*. 2019;(Dez):53-60.
 9. Pulga MJ, Spinardi-Panes AC, Lopes-Herrera SA, Maximino LP. Evaluating a Speech-Language Pathology technology. *Telemed J E Health*. 2014;20(3):269-71. <http://dx.doi.org/10.1089/tmj.2013.0052>. PMID:24404815.
 10. Barbosa MRP, Fernandes FDM. Remote follow-up to speech-language intervention for children with Autism Spectrum Disorders (ASD): parents' feedback regarding structured activities. *CoDAS*. 2017;29(2):e20160119. <http://dx.doi.org/10.1590/2317-1782/20162016119>. PMID:28177061.
 11. Barbosa MRP, Fernandes FDM. Remote speech-language intervention, with the participation of parents of children with autism. In: Fernandes FDM, editor. *Advances in speech pathology*. Croatia: InTechOpen; 2017. <http://dx.doi.org/10.5772/intechopen.70106>.
 12. Sun IYI, Varanda CA, Fernandes FDM. Stimulation of executive functions as part of the language intervention process in children with autism spectrum disorder. *Folia Phoniatr Logop*. 2017;69(1-2):78-83. <http://dx.doi.org/10.1159/000479586>. PMID:29248909.
 13. Dimer NA, Canto-Soares N, Santos-Teixeira L, Goulart BNG. The Covid-19 pandemic and the implementation of telehealth in speech-language and hearing therapy for patients at home: an experience report. *SciELO preprints*. <https://doi.org/10.1590/SciELOpreprints.610>.
 14. CAPCSO: Council of Academic Programs on Communication Sciences and Disorders. CAPCSO COVID-19 recommended education resources [Internet]. Aurora, CO: CAPCSO; 2020 [citado em 2020 Jun 12]. Disponível em: <https://www.capsd.org/covid-19/>
 15. ASHA: American Speech-Language and Hearing Association. Coronavirus/ COVID-19 updates [Internet]. Washington: ASHA; 2020 [citado em 2020 Jun 12]. Disponível em: <https://www.asha.org/About/Coronavirus-Updates/>
 16. IALP: International Association of Logopaedics and Phoniatrics [Internet]. 2020 [citado em 2020 Jun 12]. Disponível em: <https://ialpasoc.info/>
 17. CPLOL: Comitée Permanent de Liaison des Orthophonistes et Logopédes. RBHS diversity, equity and inclusion statement [Internet]. New Jersey: CPLOL; 2020 [citado em 2020 Jun 10]. Disponível em: <https://facultyaffairs.rbhs.rutgers.edu/diversity-inclusion/rbhs-diversity-equity-and-inclusion-statement/>

Author contributions

FDMF, SALH, BNGG contributed with the conception of the manuscript, gathering data, writing of the preliminary version, reviewing and approval of the final version. JP, DRMA, ACT, APRS, CAHA, ACAM, FPM e LS contributed with data gathering, writing of the preliminary version, reviewing and approval of the final version