

Short Communication

School reopening during COVID-19 pandemic: Considering students with disabilities

Joline E. Brandenburg^{a,*}, Lainie K. Holman^b, Susan D. Apkon^c, Amy J. Houtrow^d, Robert Rinaldi^e and Maurice G. Sholas^f

^a*Department of Physical Medicine and Rehabilitation, Department of Pediatric and Adolescent Medicine, Mayo Clinic, Rochester, MN, USA*

^b*Department of Pediatric Physical Medicine and Rehabilitation, Department of Pediatrics, Cleveland Clinic Children's Hospital for Rehabilitation, Cleveland, OH, USA*

^c*Department of Physical Medicine and Rehabilitation, University of Colorado School of Medicine, Aurora, CO, USA*

^d*Department of Physical Medicine and Rehabilitation, Department of Pediatrics, University of Pittsburgh, Pittsburgh, PA, USA*

^e*Department of Physical Medicine and Rehabilitation, Department of Pediatrics, University of Texas- Southwestern Medical Center, Dallas, TX, USA*

^f*Sholas Medical Consulting, LLC, New Orleans, LA, USA*

Abstract. Over 80% of the children in the world have had their education impacted by COVID-19. For children with disabilities who receive special education services, access to in-person education and other resources at school is particularly important. The American Academy of Pediatrics advocates for students to attend school in person, without specifics for how children with disabilities can safely return to school. To appropriately plan and accommodate children with disabilities we must prioritize safety, allow for adherence to the Individuals with Disabilities Education Act, and preserve essential school staff. The less cumbersome default of confining students with disabilities to home is not acceptable. We provide an outline describing why Individual Education Plans and 504 plans are important, how they are related to the COVID-19 pandemic, and recommendations for measures to help with safe return to school for children with disabilities.

Keywords: Disability pediatric rehabilitation, children, school, education, COVID-19, health equity

1. Introduction

Globally, over 80% of children have had their education impacted by COVID-19 [1]. In the United States, the impact of COVID-19 on face-to-face education for school-age children was substantial as most schools across the country moved from typical in-person edu-

cation to an abbreviated online curriculum [2]. In the United States 2019 school year, 56.6 million children were enrolled in school with 50.8 million of those in public school [3]. Of the children in public school, approximately 14% were students with a variety of disabilities who receive special education services under the Individuals with Disabilities Education Act (IDEA) [4]. Students with disabilities differ from their peers in a multitude of ways. They are more likely to be from socioeconomically disadvantaged backgrounds [5]. They are also more likely to be of minority race, live in poverty, have adverse childhood ex-

*Corresponding author: Joline E. Brandenburg, Mayo Clinic, 200 1st St. SW, Rochester, MN 55905, USA. Tel.: +1 507 255 1141; Fax: +1 507 284 3431; E-mail: brandenburg.joline@mayo.edu.

periences, be victims of bullying and live in households headed by single mothers [4,6–12]. The benefits of school attendance extend beyond academics for students with disabilities because many are socially disadvantaged compared to their peers. The services provided to them beyond special education, such as meals and extracurricular activities are exceptionally important to their health and well-being [1,7]. Therefore when the COVID-19 pandemic hit and schools were closed, children with disabilities were more severely impacted than their peers. Thus, it is critical that they be included in plans for safe return to inperson school and be given special consideration for inclusion when inperson school is not viable.

1.1. The history of special education in the United States of America

In 1954, racial injustice in education was met with the Supreme Court ruling that a separate education based on skin color is not an equal education [13]. This construct also applies to education for students with disabilities. In 1975, IDEA (previously known as the Education for all Handicapped Children Act) guaranteed children with disabilities access to a free and appropriate public education [14–17]. IDEA also mandated that education be provided in the least restrictive environment with schools and families collaborating in designing and implementing special education services [14,15,17]. For each child who qualifies, schools and families invest a significant amount of time and effort into crafting the appropriate supports to optimize and individualize learning in the school setting. Prior to IDEA, section 504 of the Rehabilitation Act of 1973 made discrimination against individuals with disabilities illegal in programs where federal funding was involved, such as in public schools and public colleges [14]. For children with disabilities who do not qualify for special education supports under IDEA, section 504 is often implemented to provide necessary educational supports. In 1990, IDEA and section 504 were further strengthened by the Americans with Disabilities Act, which made discrimination against people with disabilities illegal regardless of funding type [14]. Unfortunately, with the rapid and unprecedented transition to distance learning, alterations of these specialized education plans could not be made.

1.2. The impact of the 2019–2020 school year closures during the pandemic

For children with disabilities to benefit from educational supports they must attend school. Access to technology is a greater barrier for children in lower socioeconomic households and can be difficult for some children with disabilities to use – particularly if they are vision or hearing impaired [18–20] or live in rural areas with limited to no access to internet or broadband services [21,22]. Any lack of access to education increases the learning gap between children with and without disabilities [1], a gap that contributes to lower high school graduation rates, lower college attendance, and reduced employment [23]. This perpetuated achievement gap fosters socioeconomic inequity and isolation from society into adulthood for individuals with disabilities

Furthermore, school provides access to other resources that students in lower socioeconomic households, like many children with disabilities, benefit from and lost access to due to abrupt closure of schools for the 2019–2020 school year. Many school nutrition programs operated on an emergency basis with children only having access if they could get to school to pick up meals, if meals were made available [7]. These children also lost access to in-person schoolbased nursing supports, mental health counselors, and schoolbased health centers [7].

The majority of students with disabilities have learning disabilities, for which special education teachers have years of education and training to foster learning for these children [4]. During the COVID-19 pandemic, parents became responsible for in-person learning for their children. However, parents were and continue to be ill equipped for this role as they have no training or education in the specialized learning plans used in school. With this abrupt and unanticipated transition from a usual parent-child relationship to a special education teacher-student relationship, parents and their students with disabilities reported high levels of anxiety and depressed moods [24]. With the COVID-19 pandemic, parents of children with disabilities experienced a loss of their general and community support networks, loss of support from education and therapy specialists, and loss of routine, which continues with the ongoing pandemic [24]. For many children, the stress of this sudden transition and loss of the typical school routine resulted in depressive symptoms, acting out, and changes in behavior [24]. These losses only compounded the stressors that these parents faced prior

to the COVID-19 pandemic [25,26]. They were overwhelmed by the increased demands on them to provide for their children's schooling, maintain a home routine, and continue their own work responsibilities without opportunity for a break or respite [24]. Thus, parents will remain overwhelmed as the COVID-19 pandemic continues and supports for them remain limited.

1.3. Planning for the 2020–2021 school year

In a recent statement, the American Academy of Pediatrics (AAP) “strongly advocates that all policy considerations for the coming school year should start with a goal of having students physically present in school”, noting that in planning it is “critical to reflect on the differential impact SARS-CoV-2 and the associated school closures have had on different races, ethnic and vulnerable populations” [27]. For students with disabilities access to in-person education and other resources are particularly important because schools provide therapy services, meals through the free or reduced cost breakfast and lunch programs and inclusive social interactions with peers [1,7]. In a recent *JAMA Pediatrics* letter to the editor, Sholas et al. highlighted three factors and two truisms that “should drive the discussion on reintegrating children with disabilities into schools during phased re-opening” [28]. However, neither the AAP nor Sholas et al. provide solutions for facilitating return to inperson learning for children with disabilities. Furthermore, Sholas et al. do not describe why their proposed factors and truisms are important. We will discuss the importance of these factors and truisms regarding the return to inperson learning for children with disabilities during the COVID-19 pandemic and provide concrete considerations for accommodating them when returning is deemed safe

2. Three factors for return to school for students with disabilities

2.1. Factor 1: The default of confining students with disabilities to home is not acceptable

The AAP recommends that *all* children return to school, specifically stating that “no child or adolescent should be excluded from school unless required” [27]. A separate education is not equal education. Children with disabilities have specialized education plans because they require assistance from educators, therapists and paraprofessionals with specialized training to op-

timize their learning. A parent and an electronic device connected to the internet is not a sufficient or equitable education for a student with disabilities if their typical classmates are permitted to return to school. For many students with disabilities access to therapies and specialized tutoring has primarily been in school. Requiring students with disabilities to stay away from school altogether presents a particular hardship in terms of physical and/or cognitive functional skills carry-over [29,30]. In addition, the presence of trained therapists in schools can help to identify decreases in function that may warrant evaluation by a physician, or they may notice outgrown or broken equipment in need of replacement. For those with emotional and behavioral dysregulation, return to school routine provides consistency and reassurance which may help to stabilize mood and reduce injurious or maladaptive behaviors [24].

2.2. Factor 2: Use the IEP and 504 as proactive and contemporaneous documents for equity

With the abrupt discontinuation of face-to-face learning and educational supports at school, students' IEPs and 504 plans should have been rapidly and significantly altered to continue providing appropriate education during the pandemic. The AAP notes that “school policies must be flexible and nimble in responding to new information, and administrators must be willing to refine approaches when specific policies are not working” [27]. This school flexibility must also include responsiveness to changes in IEPs and 504 plans. Unfortunately, the transition to distance learning for all students in the 2019–2020 school year made updating the carefully crafted IEPs and 504 plans challenging incomplete, and for some not even attempted [24]. With the likelihood that school reopening will occur and that schools will operate differently than prior to the COVID-19 pandemic, these IEPs and 504 learning plans should be reviewed *before the beginning of school* and revised to ensure all reasonable accommodations are made. These plans may need to be revisited frequently as pandemic circumstances shift.

2.3. Factor 3: Conscientious retention of specialized staff

Supports for students with disabilities at school are extensive but easily overlooked. The trained ancillary staff are especially critical. Beyond access to special education teachers, many students require paraprofessional assistance in the classroom and for other non-

educational activities that occur during school (e.g. eating or toileting). Children with disabilities need access to therapy services including physical, speech, occupational, vision, and hearing. They may require adaptive physical education or counseling services. Absence of these professionals would result in decreased access to an appropriate education, and for many a more restricted learning environment. Care should be taken to ensure retention of these staff, along with an ability to hire and train additional staff if there are significant absences due to illness to reduce potential for burnout from being overworked and under supported. [31].

3. Two truisms for return to school for students with disabilities

To protect both staff and students while providing a learning environment that is least restrictive and inclusive of all students, two truisms should be considered [28]. One, protecting staff and students takes significant effort, planning, and education. Two, students with disabilities face greater disparities in inclusion in social activities with peers, leading to exclusion and social isolation. In the setting of COVID-19, where physical distancing is critical to slow the spread of this disease, children with disabilities face greater challenges with social isolation [32].

3.1. Truism 1: Safety requires effort

Despite the inequity in virtual learning for children with disabilities and the negative impact of the loss of other supports such as the provision of meals and social interaction, returning to in-person learning during the COVID-19 pandemic needs to be carefully considered. According to the AAP, “special considerations and accommodations to account for the diversity of youth should be made, especially for our vulnerable populations, including those who are medically fragile, live in poverty, have developmental challenges, or have special health care needs or disabilities, with the goal of safe return to school” [27]. While children may have less severe symptoms from COVID-19 compared to older individuals [33–35], those with disabilities are more likely to require intensive care than those without disabilities if they contract COVID-19 [36]. Thus, a balance needs to be struck between educational equity for children with disabilities and protection from further health harms.

Public school plans to safely reopen in-person learning and provide free and appropriate public education to all children must include specific plans to accommodate and support students with disabilities. These plans should include the use and wearing of appropriate personal protective equipment (PPE – facemasks, gowns/clothing barriers as appropriate, gloves, goggles). Return to inperson learning at schools will likely include children and adults having temperatures checked wearing facemasks and frequent use of hand sanitizer. Schools are considering alterations to busing and class schedules to maintain some degree of social distancing between students. However, little is being discussed about accommodations for students with disabilities. Specific considerations beyond recommendations published by the CDC and AAP are presented below.

3.2. Truism 2: Avoid isolation

Schools need to be purposeful in optimizing inclusion in the classroom to avoid perpetuating isolation and separation from peers. Children with disabilities face greater challenges with social isolation than their peers [32]. For students with cognitive, emotional, and/or behavioral disabilities, integration into the mainstream classroom during “specials” such as gym, music, and art are often one of the few times they have direct social interaction with their classmates. For some, inclusion in activities with peers occurs solely through accessible environments such as the classroom and after school activities, as homes of many of their peers and friends are not accessible to them. With the abrupt closure of schools to in-person learning, these individualized services and opportunities for social interactions with peers are not available to the children who need them most.

4. Return to school accommodations for children with disabilities

Using shared decision making, families and school providers can develop shared goals for the student’s education during the COVID-19 pandemic, identify barriers, and review risk reduction strategies to help keep the student and staff as safe as possible [37]. Having the student’s medical provider(s) also participate in this process, either in writing or real-time, may be helpful for providing medical information specific for the student to facilitate joint decision making with regard

to return to school. Below are points to consider and potential accommodations that can facilitate return to school in as safe a manner as possible for students with disabilities and school staff.

- IEP and 504 learning plans should be reviewed and revised to ensure that all reasonable accommodations are made including supports related to student safety during COVID-19 pandemic, such as changes to emergency evacuation procedures, transportation, and medical care at school. Building in contingency plans for supported learning if schools return to distance learning, driven by the successes and failures the student experienced during distance learning for the 2019–2020 school year can help minimize the negative impact of this transition.
- To prepare young students, students with cognitive impairment, and students with behavioral or sensory difficulties for return to school, parents could help their children by practicing taking their temperature daily, wearing a mask, and practicing good hand hygiene, along with discussing why these measures are important. For some children, a reward system may be necessary.
- In addition to face masks, use of face shields or safety glasses/goggles should be considered for adults who interact with children who cannot wear face masks, require close contact/physical assistance (i.e. for mobility, toileting, eating), and/or cannot consistently follow CDC hygienic recommendations [38]. Goggles, safety glasses, and face shields may reduce risk of ocular contact with droplets generated by talking, coughing, sneezing, and singing for which infection can occur [39].
- For children who have behaviors that do not permit them or the adults who interact with them to wear PPE (i.e. children who pull or grab at this equipment or are afraid of it) considerations to help optimize safety for both the children and adults to work with them would include the following:
 - * Maintain a “pod” of consistent adults who work with these children.
 - * Encourage and remind the families of these children to maintain social distancing and limit social interactions to reduce potential exposure to COVID-19 outside of school.
 - * Consider regular intervals of COVID-19 testing of adults who are interacting with these children, similar to what is done in many congregate care settings.
- For children who may have difficulty expressing that there is something wrong or that they are not feeling well, having consistency in the adults who work with them could be helpful in recognizing behaviors or subtle differences that may suggest the child is not feeling well.
- To facilitate visualization of lip movement for speech therapy or for those with hearing impairments, communication partners should wear clear masks that show the wearer’s lip movements. A clear plexiglass barrier could also be considered.
- With use of appropriate PPE, inperson therapy services could be possible. These providers can also facilitate adjustments or alterations in classrooms and alterations of masks to help students successfully adhere to safety guidelines.
- For children who use gait aids, wheel chairs, or other mobility devices, it may be difficult to adjust a face mask while using their device. Possible considerations include having an adult escort who can adjust the mask and/or having a separate time for them to pass in the hallways unmasked.
- Transportation to and from school requires staff to assist in securing a child’s wheel chair or car seat. Face masks and safety glasses or face shields should be worn when closely interacting with students.
- Similar to playground equipment and common areas, protocols for cleaning and disinfecting of adaptive equipment (e.g. wheel chairs, walkers/gait trainers and standers) prior to and after use or upon arrival to school need to be created and adhered to. Once cleaned, equipment that is not being used should be labeled and placed in a separate area or covered to prevent handling or touching by others.
- To facilitate inclusion with peers, the number of students in a classroom may need additional reduction to permit space for sufficient adult staffing and/or space for the student’s equipment while maintaining separation between peers.
- For children in Special Education classrooms, consider use of fixed “pods” of individuals or small groups of two to five children who have similar educators, paraprofessional needs, therapy and other services in order to have the same adults interacting with them. The smaller groups may be more amenable to doing educational and therapy activities outside as weather permits.
- For many students who have significant medical and/or respiratory issues, IEPs have provisions for

homebound schooling during outbreaks of illness at school such as influenza. These provisions may need to be modified (such as using technology to allow them to be virtually present in the classroom) and utilized for the duration of the COVID-19 pandemic.

- For students who have a tracheostomy, are on ventilators, or require suctioning or other respiratory procedures consider the following:
 - * Have a designated area for respiratory procedures.
 - * Train core staff to do respiratory procedures to reduce staff exposure.
 - * Pay attention to use of appropriately fitted N95 masks, gowns, gloves, and eye protection for adults.

5. Conclusion

Children with disabilities have a right to be respected, included, and treated with dignity. This right must continue during a pandemic [40]. Providing and protecting a free and appropriate public education to all children with disabilities helps ensure this right. While coping with the ongoing COVID-19 pandemic, thoughtful school reopening plans can be created with input from key school stakeholders (e.g. parents, teachers, children, paraprofessionals, school therapists, school nurses, bus drivers, janitorial staff) along with medical and public health professionals to ensure access for all students. This publication provides a rationale and framework for policy makers at the school board, state and federal level to ensure this vulnerable population is not further disadvantaged by school re-entry in the 2020–2021 school year. The COVID-19 pandemic presents opportunities to promote inclusion and equity in the education of all children.

Conflict of interest

The authors have no conflicts of interest to report.

Funding

None.

References

- [1] Van Lancker W, Parolin Z. COVID-19, school closures, and child poverty: A social crisis in the making. *Lancet Public Health*. 2020; 5(5): e243-e4. doi: 10.1016/S2468-2667(20)30084-0.
- [2] Nagel D. Updated List of Statewide School Closures with Closure Dates. *The Journal*. 2020.
- [3] National Center for Education Statistics. Fast Facts: Back to School Statistics 2019 Available from: https://ncesed.gov/fast-facts/display.asp?id=372#PK12_enrollment.
- [4] National Center for Education Statistics. Students with Disabilities 2020 Available from: https://ncesed.gov/programs/coe/indicator_cgg.asp.
- [5] Durkin MS, Yeargin-Allsopp M. Socioeconomic Status and Pediatric Neurologic Disorders: Current Evidence. *Semin Pediatr Neurol*. 2018; 27: 16-25. doi: 10.1016/j.spen.2018.03.003.
- [6] Berg KL, Shiu CS, Feinstein RT, Acharya K, McDrano J, Msall ME. Children with developmental disabilities experience higher levels of adversity. *Res Dev Disabil*. 2019; 89: 105-13. doi: 10.1016/j.ridd.2019.03.011.
- [7] Dooley DG, Bandealy A, Tschudy MM. Low-Income Children and Coronavirus Disease 2019 (COVID-19) in the US. *JAMA Pediatr*. 2020 May 13. doi: 10.1001/jamapediatrics.2020.2065.
- [8] Faith MA, Reed G, Heppner CE, Hamill LC, Tarkenton TR, Donewar CW. Bullying in medically fragile youth: a review of risks, protective factors, and recommendations for medical providers. *J Dev Behav Pediatr*. 2015; 36(4): 285-301. doi: 10.1097/DBP.0000000000000155.
- [9] Haegele JA, Aigner C, Healy S. Extracurricular Activities and Bullying Among Children and Adolescents with Disabilities. *Matern Child Health J*. 2020; 24(3): 310-8. doi: 10.1007/s10995-019-02866-6.
- [10] Houtrow AJ, Larson K, Olson LM, Newacheck PW, Halfon N. Changing trends of childhood disability, 2001-2011. *Pediatrics*. 2014; 134(3): 530-8. doi: 10.1542/peds.2014-0594.
- [11] Houtrow AJ, Okumura MJ, Hilton JF, Rehm RS. Profiling health and health-related services for children with special health care needs with and without disabilities. *Acad Pediatr*. 2011; 11(6): 508-16. doi: 10.1016/j.acap.2011.08.004.
- [12] Kerker BD, Zhang J, Nadeem E, Stein RE, Hurlburt MS, Heneghan A, et al. Adverse Childhood Experiences and Mental Health, Chronic Medical Conditions, and Development in Young Children. *Acad Pediatr*. 2015; 15(5): 510-7. doi: 10.1016/j.acap.2015.05.005.
- [13] *Brown v. Board of Education*. 347 U.S. 483. United States Reports, 1954.
- [14] Lipkin PH, Okamoto J. The Individuals With Disabilities Education Act (IDEA) for Children With Special Educational Needs. *Pediatrics*. 2015; 136(6): e1650-e62. doi: 10.1542/peds.2015-3409.
- [15] Jones N. The Individuals with Disabilities Education Act: Congressional Intent. In: *CRS Report for Congress 95-669*, editor. Library of Congress: Congressional Research Service, 1995.
- [16] Colker R. *Federal Disability Law in a Nutshell*. Sixth ed. St. Paul, MN: West Academic Publishing; 2019, 628 p.
- [17] Apling R, Jones N. The Individuals with Disabilities Education Act (IDEA): Overview and Selected Issues. In: *CRS Report for Congress RS22590*, editor. Library of Congress: Congressional Research Services, 2008.
- [18] Nganji JT, Brayshaw M, editors. *Personalizing learning materials for students with multiple disabilities in virtual learn-*

- ing environments. 2015 Science and Information Conference (SAI); 28-30 July 2015.
- [19] Lazar J, Jaeger P. Reducing barriers to online access for people with disabilities. *Issues in Science and Technology*. 2011; 27(2): 69.
- [20] Tandy C, Meacham M. Removing the Barriers for Students with Disabilities: Accessible Online and Web-Enhanced Courses. *Journal of Teaching in Social Work*. 2009; 29(3): 313-28. doi: 10.1080/08841230903022118.
- [21] Ford S, Buscemi J, Hirko K, Laitner M, Newton RL, Jr., Jonassaint C, et al. Society of Behavioral Medicine (SBM) urges Congress to ensure efforts to increase and enhance broadband internet access in rural areas. *Transl Behav Med*. 2019; 10(2): 489-91. doi: 10.1093/tbm/ibz035.
- [22] Mardis MA. What it has or what it does not have? Signposts from US data for rural children's digital access to informal learning. *Learning, Media and Technology*. 2013; 38(4): 387-406. doi: 10.1080/17439884.2013.783595.
- [23] National Center for Education Statistics. Disability Rates and Employment Status by Educational Attainment 2017 [updated May 2017]. Available from: https://nces.ed.gov/programs/coe/indicator_tad.asp.
- [24] Ashbury K, Fox L, Deniz E, Code A, Toseeb U. How is COVID-19 affecting the mental health of children with Special Educational Needs and Disabilities and their families? PSYARXiv Preprints. 2020, doi: 10.31234/osf.io/sevyd.
- [25] Osborne LA, McHugh L, Saunders J, Reed P. Parenting stress reduces the effectiveness of early teaching interventions for autistic spectrum disorders. *J Autism Dev Disord*. 2008; 38(6): 1092-103. doi: 10.1007/s10803-007-0497-7.
- [26] Cuzzocrea F, Murdaca AM, Costa S, Filippello P, Larcian R. Parental stress, coping strategies and social support in families of children with a disability. *Child Care in Practice*. 2016; 22(1): 3-19. doi: 10.1080/13575279.2015.1064357.
- [27] American Academy of Pediatrics. COVID-19 Planning Considerations: Guidance for School Re-entry 2020 [updated 6/25/2020]. Available from: <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>.
- [28] Sholas MG, Apkon SD, Houtrow AJ. Children with Disabilities Must Be More Than an Afterthought in School Reopening. *JAMA Pediatr*. 2020 Accepted.
- [29] Menard J, Wilson A. Summer learning loss among elementary school children with reading disabilities. *Exceptionality Education International*. 2014; 23(1): 72-85.
- [30] Allinder RM, Eicher DD. Bouncing Back. *Special Services in the Schools*. 1994; 8(2): 129-42. doi: 10.1300/J008v08n02_07.
- [31] Brunsting NC, Sreckovic MA, Lane KL. Special education teacher burnout: A synthesis of research from 1979 to 2013. *Education and treatment of children*. 2014: 681-711.
- [32] Nowicki EA, Brown JD, Dare L. Educators' evaluations of children's ideas on the social exclusion of classmates with intellectual and learning disabilities. *J Appl Res Intellect Disabil*. 2018; 31(1): e154-e63. doi: 10.1111/jar.12356.
- [33] Zimmermann P, Curtis N. Coronavirus Infections in Children Including COVID-19: An Overview of the Epidemiology, Clinical Features, Diagnosis, Treatment and Prevention Options in Children. *Pediatr Infect Dis J*. 2020; 39(5): 355-68. doi: 10.1097/INF.0000000000002660.
- [34] Wu JT, Leung K, Bushman M, Kishore N, Niehus R, de Salazar PM, et al. Estimating clinical severity of COVID-19 from the transmission dynamics in Wuhan, China. *Nat Med*. 2020; 26(4): 506-10. doi: 10.1038/s41591-020-0822-7.
- [35] Dong Y, Mo X, Hu Y, Qi X, Jiang F, Jiang Z, et al. Epidemiology of COVID-19 Among Children in China. *Pediatrics*. 2020; 145(6): e20200702. doi: 10.1542/peds.2020-0702.
- [36] Shekerdemian LS, Mahmood NR, Wolfe KK, Riggs BJ, Ross CE, McKiernan CA, et al. Characteristics and Outcomes of Children With Coronavirus Disease 2019 (COVID-19) Infection Admitted to US and Canadian Pediatric Intensive Care Units. *JAMA Pediatr*. 2020; Published online May 11, 2020. doi: 10.1001/jamapediatrics.2020.1948.
- [37] American Academy of Pediatrics. Caring for Children and Youth With Special Health Care Needs During the COVID-19 Pandemic 2020 [updated 09/01/2020]. Available from: https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/caring-for-children-and-youth-with-special-health-care-needs-during-the-covid-19-pandemic/?fbclid=IwAR0Bme4GL_zPd1jhP4QJlrxg2dSfa2a9F75mvNn5dk3INGoYD62h37PBDQU.
- [38] Centers for Disease Control and Prevention. Protect Yourself [updated April 24, 2020]. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>.
- [39] World Health Organization. Transmission of SARS-CoV-2: implications for infection prevention precautions 2020 [updated July 9, 2020]. Available from: <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>.
- [40] Schiariti V. The human rights of children with disabilities during health emergencies: the challenge of COVID-19. *Dev Med Child Neurol*. 2020; 62(6): 661. doi: 10.1111/dmcn.14526.