

Adaptive and Assistive Innovations for People with Intellectual and Developmental Disabilities (IDD) During and Post- COVID-19 Pandemic

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Learning Objective and Aims

The aim of our presentation is about the innovations assisting the IDD population worldwide pre- and post-pandemic regarding healthcare, education, and wellness.

Background and Methods

People with IDD are limited in their routine functions and adaptive behaviors. 10% of the global population and 6.5 million individuals in the U.S. have an intellectual disability. The onset of the pandemic with consequent closures or limited access to health, home, and community services have exacerbated the inequities for this group. Furthermore, they have experienced greater exposure to COVID-19 and poorer outcomes than the general population. However, new technologies and protocols have alleviated this to some extent. We conducted literature reviews regarding revolutionary methodologies and technological transformations pre- and post-pandemic. The data stressed this population's vulnerability and the importance of their inclusion in Phase 1 vaccination.

Innovations

Healthcare protocols across the world have been adjusted in light of this pandemic. Since COVID-19, there has been a greater shift to Telehealth, video/phone consultations and clinical interventions. This has shown benefits in reducing isolation, loneliness, and anxiety-provoking face-to-face interactions. In addition, hospital and dental office pre-visit phone screenings, triage monitoring, and post-op care have kept patients from unnecessary exposure and emergency hospital visits. At NYU College of Dentistry, utilization of mobile vans was expanded to maintain provision of care during COVID-19. With the temporary suspension and reduction of general anesthesia (GA), there has been a call for a wider promotion of Dental Conscious Sedation (DCS) training and research. Existing Assistive and Adaptive Technologies have shown to be particularly useful for people with IDD. These include Assistive computer gadgets, auxiliary robots, smart watches and home assistance (Siri and Alexa), as well as Adaptive Technologies i.e. text-to-speech synthesizers and smartphone apps. Mental health and wellness during COVID-19 lockdown has been made accessible through Audio-Sedation app and wearable technologies (FitBit). Educational developments, such as Remote Audio Coaching (RAC) and Parent Implemented Language Intervention(PILI), have improved conversational abilities in autistic children. Furthermore, innovations in computer gaming, virtual reality, and artificial intelligence are being tested in therapeutic, diagnostic, and educational interventions for people with IDD.



Discussion & Conclusion

One of the advantages of telehealth was the creation of multidisciplinary task forces. New technologies offered the opportunity of making professional expertise accessible to more people, and removing barriers that create health disparities. In addition, increased mental health services, bereavement counselling, and peer support became more accessible, while teledentistry provided screening, prescription refills, and follow-up post-op care. Technological advancements during COVID-19 have not been without their downsides, as they are inefficient and inadequate in the long run. Telehealth cannot aptly replace preventative care and face-to-face therapy, and video conferencing may feel invasive for patients because of their invasion of privacy. Additionally, people with IDD who do not have access or the skills to utilize such technologies are at a greater disadvantage. Physical handicap and socioeconomic disparities (insurance, race) exacerbate the healthcare inequity. There is also evidence of adverse effects of increased screen time on populations with Autism Spectrum Disorder and COVID-19 related impacts of reduced services for families of young children with IDD. Furthermore, their family members have reported significantly higher levels of anxiety and depression compared to their pre-pandemic time. COVID-19 and the disruption of support systems has made us aware of the need to redesign healthcare services with greater advocacies, resources and stronger governmental policies for the IDD population. There is a gap in research for the IDD population, which has created inefficiencies in identifying strategies to support and immunize the IDD population. Commitment to a social-justice oriented agenda will ameliorate health disparities for these individuals.

