Twitter, COVID-19, and Disability: What worked and what didn't

At the onset of the COVID-19 pandemic, people looked to scientists and other leaders to understand the rate at which the virus spread. Much of this information, however, was not accessible to everyone.

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Crisis events like weather phenomena and pandemics trigger public health initiatives that dramatically affect people's lives. From shelter-in-place and stay-at-home orders to transitions from in-person to online transactions, crises force everyone to rapidly adapt to new and unknown circumstances. These changes often disproportionately impact people with disabilities—people who in typical circumstances already face many barriers to full participation in society. Consequently, people with disabilities are also poised to understand and critique these initiatives because of their extensive lived experiences negotiating health precarity and their roles as longtime advocates of some tools and strategies (i.e., remote learning) now widely used to properly conduct social distancing.

Take this famous “flatten the curve” graphic that was all the rage back in the Spring of 2020 (see Figure 1). This visual graph became both a symbol and a slogan for how social distancing can slow the spread of COVID-19, but the visual metaphor was typically shared without a textual description for people who were blind, until Naomi Rosenberg created a tactile version. The CDC did not provide alt text for this tweet, or any of their tweets for that matter.

SOCIAL MEDIA AS AN INFORMATION SOURCE

Social media platforms have long

since offered an avenue to document and understand the lived experiences of people with disabilities. They have used these platforms to advocate for increased disabled voter turnout, engage in dialogue with companies about inaccessible tools on their platforms (e.g., using hashtags like #accessibilityfail), create dialogue around suggested legislation to the American Disabilities Act, and organize large scale events (e.g., 2017 Disability March) in lieu of in-person protests to avoid many physically, environmentally, or socially inaccessible aspects. During natural disasters (e.g.

hurricanes) people turn to social media to find and share relevant information. People with communication disabilities and those who are deaf reported the highest use of social media during such emergencies [1].

To understand the impact of the COVID-19 pandemic on people with disabilities, we turned to Twitter to investigate its effect. As lockdowns and other stay-at-home orders proliferated in late March and early April of 2020, we did preliminary reading on how people with disabilities and high-risk individuals were affected. We started by conducting a general search of

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tweets in the English language from April 6th–12th. We used a broad search of keywords somewhat centered on hashtags like “#DisabilityC19” and “#HighRiskCovid19” as well as phrases such as “accessibility” and “disability.” At the time, there were around 30,000 COVID-19 cases in the U.S., around 5,000 cases in the U.K., about 1,000 in Canada, and around a hundred in Australia (see Figure 2).

We dug into this sample of tweets, coding the topics that people were discussing at the intersection of the pandemic and disability into broad categories. We identified three key

domains, at the time of our search, where technology and disability intersect in this crisis: product delivery, remote education, and public health information dissemination. We then conducted a second domain specific search from April 16th to the 22nd to collect a final sample of representative tweets for each domain: product delivery (7,877 tweets); remote education (1,244 tweets), and public health information (544 tweets).

CONSISTENCY OF PRODUCT DELIVERY

The rise in demand for online orders and grocery deliveries resulted

in product unavailability and/or service delays for all users. For people with disabilities, and other at-risk customers who previously relied on these delivery services, the shortages in delivery slots and the delays added a barrier to safe access to groceries.

What the tweets revealed. Four important themes emerged. First people were coming together to provide mutual aid and support each other in finding scarce goods or picking up and delivering items. For example, people offered free grocery pick-up services, donated to people in need, and shared how to contact

Figure 1. This inaccessible tweet posted by the U.S. Centers for Disease Control contains the common public health infographic about “flattening the curve.” The image was posted without alternative text, leaving it incomprehensible to screen reader users.

local mutual aid groups. Second, the increase in delivery usage led to issues where people with disabilities, who may have relied on those delivery services prior to the pandemic, were crowded out. People turned to Twitter to ask for help with finding specific items or receiving monetary support. Finally, people used Twitter to advocate for delivery services, tagging supermarkets and governments urging them to do more to ensure people with disabilities or who were at high risk could get products. Twitter users critiqued the need to provide proof of disability or high-risk status to get access to priority delivery services. Twitter users also praised delivery service providers when their policies included specialized shopping hours and delivery services without additional barriers. The range of negative and positive experiences shows inclusive policies require constant engagement with the community to identify local needs and contextual challenges.

NAVIGATING REMOTE EDUCATION AS THE ONLY AVAILABLE OPTION

The transition to remote education during the beginning of the pandemic often left accessibility accommodations and individualized education plans¹ behind, revealing a larger systemic tug-of-war between disabled people and education. People with disabilities have long advocated for the leveraging of online platforms for remote attendance. The 2020 government stay-at-home orders quickly ensured that remote attendance was the only option available. However, the rapid adoption of online education tools and programs meant the supposed benefits of remote education for disabled people were not always realized. For example, some special education programs didn't

¹ Individualized education plans (IEPs) are required by law in the United States in order to ensure access to special education programs, support, and services.

translate well to an online format as many of these programs require in-person interaction, and educators with little to no accessibility experience fumbled with learning new tools for remote learning.

What the tweets revealed. Many tweets shared resources on how to make online content accessible, but many other tweets revealed a larger systemic accessibility problem. Tweets critiquing institutions' unpreparedness to provide accessible remote instruction highlighted the need for a shift from a needs-basis accommodations model to a universal design approach. The pandemic seemed to reveal discriminatory accessibility policies that placed barriers on students with disabilities even before the pandemic. Twitter users shared stories on how their accommodation requirements were ignored before the arrival of COVID-19. Many tweets emphasized how disabled people have long advocated remote attendance options for events and lessons, but only now are remote options broadly available. Additionally, tweets were used to advocate for parents and students to assert their continued right to education and urge legislators to not approve any waivers that would excuse educators from ensuring safe translation of special education programs to at-home instruction for disabled students. The pandemic brought up challenges in education that invite us to reflect on our original approaches that ensure the safe access to education for all.

PUBLIC HEALTH INFORMATION DISSEMINATION DURING CRISIS

With health advice, government orders, and medical research changing at a rapid pace, it is necessary for everyone to have up-to-the-minute access to information. Public health knowledge impacts the health and safety of oneself and others, and it ensures compliance with rapidly changing social distancing policies. Yet, news reports and social media posts have questioned information communication methods, particularly impacting people with disabilities, as many governments are failing to provide accessible com-

Figure 2. A timeline of our Twitter searches, overlaid on a chart of new COVID cases per day (seven day rolling average) in the U.S., U.K., Canada, and Australia [2].

Timeline: Twitter Search Windows amid COVID-19 Cases

munication to people with vision impairments or who are deaf or hard of hearing (DHH).

What the tweets revealed. Access to up-to-date public health information is critical in a pandemic as people look for information to understand how to avoid the virus and how to prepare for closures. Nevertheless, only 12 health departments in all 50 U.S. states and the District of Columbia included accessible updates related to the pandemic. An analysis from The MarkUp showed that 48 of 50 state health department websites had accessibility issues. Twitter users also discussed sign language interpreters at daily COVID briefings, criticizing the lack of interpreters at the U.S. President and U.K. Prime

Minister briefings. In areas where interpreters were common at briefings, these accommodations were frequently reported in the media and shared on Twitter, thus helping spread accessible information and highlighting the scarcity of official interpreters. Since government communications carry authority and are a public source of information, the lack of implementation of accessibility features in their official communications leave a huge portion of the population behind.

LOOKING FORWARD

The pandemic both magnified systemic accessibility problems and revealed great possibilities and opportunities for more accessible practices. There is so much more we need to learn about the impact the pandemic had and is currently having on people with disabilities. While our tweet samples revealed challenges related to grocery deliveries, remote education, and public health information dissemination, we acknowledge that these are just a subset of many other challenges people with disabilities may have faced at the beginning of the pandemic. There is also a need for diverse methods to understand the holistic impact of the pandemic on people with disabilities.

The pandemic revealed opportunities to improve the access to products, education, and public health information. The pandemic also enabled

improvements, such as widely available remote attendance to a diversity of events, but the fact that it took a pandemic to get there reveals deeper systemic problems within how we approach accessibility. As we have learned in the past 20-plus months, we can adjust and changes so people can continue participating and contributing without compromising people's health. As many working in accessibility say, "Accessibility is not an add-on but a design principle, embedded from the start." We must ensure the accessibility practices we have adopted remain in place after the pandemic is over and we must also closely examine the flaws that have been exposed to fix them.

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References

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Biographies

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Lynn Kirabo is a Ph.D. student in the Human-Computer Interaction Institute at Carnegie Mellon University. Her research includes human-computer interaction, accessibility, global south, misinformation, and ethics. She is interested in understanding the role that context plays in technology design and adoption among different communities, such as people with disabilities and residents of the Global South. She completed her M.S. in information technology at Carnegie Mellon University Africa and a bachelor's in information technology at Makerere University in Kampala, Uganda. Between her undergraduate and graduate studies, she spent 10 years working in industry as a software and front-end web developer. Outside of work, Kirabo enjoys immersing herself in literary worlds and crocheting.

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