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#### STEVEN JONES, ROGER MACKETT, AND JULIA CASTILLO

Jones is director of the Transportation Policy Research Center and a professor in the Civil, Construction, and **Environmental Engineering Department** at the University of Alabama in Tuscaloosa. Mackett is emeritus professor of Transport Studies at the University College London. Castillo is executive director of the Heart of Iowa Regional Transit Agency in Urbandale.

Which person has a disability? Although the man in the wheelchair is the obvious answer. he may not be the only person with a disability. Those with no visible impediments may have any nonapparent condition such as epilepsy, a traumatic brain injury, chronic pain from diabetes, severe asthma, anxiety, or another hidden condition that affects their mobility or cognition and can limit the usefulness of available transportation for them.

ost people are willing to assist others when there are visual cues of a disability, such as a wheelchair or guide dog. However, many individuals have disabilities that are not visible and can pose significant transportation accessibility challenges for them.

### What Are Invisible Disabilities?

Invisible disabilities include auditory impairments, color blindness, autism spectrum disorder, traumatic brain injury, learning disabilities such as dyslexia or attention deficit disorder, dementia, and conditions such as anxiety that limit the ability to recall and interpret information. Lung conditions such as asthma that make breathing difficult, as well as limitations imposed by long-term illnesses like cancer can increase fatigue levels during a journey. Conditions such as fibromyalgia can make standing for long periods painful.

To complicate matters, people with disabilities such as chronic pain may not use mobility aids on "good" days, and visual and auditory impairments can be difficult to identify in the absence of eyeglasses and hearing aids. Invisible disabilities-physical and mental-can affect the travel experience by reducing confidence in the ability and willingness to travel, thereby limiting overall mobility and accessibility.

While the successful deployment of engineering solutions, such as ramps and kneeling buses, has assisted people who use wheelchairs and tactile surfaces and audible traffic control devices have guided those who are visually impaired, most provide few benefits for individuals with invisible disabilities. There are, however, several examples of agencies recognizing the importance of making transportation more inclusive for those with invisible disabilities. This article gives a brief introduction to invisible disabilities within the context of transit accessibility and provides some key examples of programs throughout the world.

# Unseen Challenges, Seen Solutions

According to Disabled World, an independent health and disability news source, an estimated 10 percent of people in the United States have a medical condition that could be considered a type of invisible disability. This includes more than 32 million Americans. Travelers with invisible disabilities face many challenges, including the following:

- People with conditions, such as autism spectrum disorder, may have difficulty communicating with others, while dementia and acquired brain injury may affect the ability to interact.
   Hence, these individuals may avoid taxis and rideshare services.
- Some mental health conditions increase the propensity for anxiety and panic attacks while traveling, especially when taking busy urban transit.
   These may require the person to seek assistance or a quiet environment where they can recover or be recognized as being in need.
- Some invisible physical conditions
   (e.g., breathing difficulties or strokerelated symptoms) may require rest
   while traveling—on the street, at transit
   stations, and on transit vehicles.

These examples illustrate the complexity of challenges and the need for transportation professionals to be prepared to address them. Exemplary organizations that are addressing these challenges follow.

## Transportation Interventions

Several efforts in the United States have explicitly addressed invisible disabilities within the transportation context. Will You Stand-Up for Me? is a campaign launched by the University of Maryland on its campus buses to make riders aware of the potential need to offer their seats to others who might have an invisible

 $^{\mbox{\tiny $1$}}$  Learn more at https://www.disabled-world.com/disability/types/invisible/.

disability.<sup>2</sup> The campaign website encourages students to be inclusive by offering their own seats to others who may need to sit down. It also implores riders to ask others by using phrases such as "no explanation needed."

Other transit agencies have made efforts to be more inclusive. In 2018, New York City Transit initiated the Accelerate Accessibility Program to raise invisible disability awareness among riders and operators.3 Such efforts are not limited to college campuses and major cities. The Heart of Iowa Regional Transit Agency in Urbandale maintains an open policy for identifying and serving those with invisible disabilities. Agency employees are trained to take the stance that they are not to judge or determine if someone has a condition that requires assistance. Their goal is to provide a service to allow everyone to move freely within their community. If someone indicates they have a disability, even one that is not visible, the only appropriate response from any employee is "How may we/I assist you?" In this way, the agency creates an inclusive space—letting the rider know they are heard, believed, and will be assisted as indicated in its signage (Figure 1).

In some cases, programs directly tailor services to people with invisible disabilities. For example, buses in Great Britain are required by law to display signs that dynamically indicate upcoming stops in addition to any audio announcing upcoming stops. Working in partnership with transit operators, the British government launched a campaign with the slogan "It's everyone's journey" to encourage members of the public to show consideration toward other travelers. including those with invisible disabilities.4 The campaign uses images of cartoon "creatures of habit" and sloganssome of which are intended to raise



FIGURE 1 Inclusive signage reminds passengers to consider others. (Source: Heart of Iowa Regional Transportation Agency.)

awareness of the needs of those with invisible disabilities. For example,

- Cartoon hyenas with the reminder, "Let's try to keep the noise down.
  Loud behavior can be overwhelming
  for some people, including those with
  mental health conditions. Remember,
  some people don't just want quiet,
  they need it."
- A cartoon chameleon with the message, "Please don't pull a disappearing act. An unexpected delay can be especially difficult for people with conditions like autism. So, if someone looks a little stranded, let's be ready to help."

Several UK transit operators issue travel support cards that users can show to staff to indicate their disability or particular needs.<sup>5</sup> Cards either have preprinted messages such as, "I have a hidden disability," or a blank space for users to write their own messages to the bus driver. Transport Ireland and Invisible Disability Ireland recently initiated the awareness campaign, Please Offer Me a

<sup>&</sup>lt;sup>2</sup> For more information, go to https:// transportation.umd.edu/about-us/updates/ will-you-stand-up-for-me.

<sup>&</sup>lt;sup>3</sup> Read about this program at https://fastforward. mta.info/accelerate-accessibility.

<sup>&</sup>lt;sup>4</sup> See the cartoon at https://everyonesjourney.campaign.gov.uk/.

<sup>&</sup>lt;sup>5</sup> Find a sample card at https://content.tfl.gov.uk/using-a-travel-support-card.pdf.



**FIGURE 2** Awareness campaign materials in Ireland help people with disabilities to ask for a seat. (Source: Invisible Disability Ireland.)

Seat (Figure 2).<sup>6</sup> A program by the same name was launched in Australia. To foster inclusivity, the Land Transport Authority in Singapore distributes lanyards to riders with disabilities stating, "May I have your seat?"

# Creating Safer, More Inclusive Experiences

In addition to its onboard accommodations, the Heart of Iowa Regional Transit Agency conducts transit travel training programs. Many people with invisible disabilities have no experience riding the bus or train and benefit from targeted instruction—as well as practice—tailored to meet individual needs. Other programs, such as the Bradford Safe Place Scheme<sup>7</sup> in the UK, use cards that say, "Help I'm Lost." These cards contain a message explaining that because the bearer has a learning or communication difficulty, they may not be able to understand questions or to make themselves understood. The card also asks for help and provides a blank space for the bearer's name and the phone number of an emergency contact.

### **Moving Toward Solutions**

Although there are myriad examples of individual agencies doing good work to be inclusive and accommodating persons with invisible disabilities, a wider understanding and acceptance is needed. Organizations like the Invisible Disabilities Association in Parker, Colorado, are working to create awareness campaigns, educational campaigns, and legislative support throughout the United States to improve the quality of life for those living with invisible disabilities. This development and promotion of information is targeted at public transit users.

Perhaps more importantly, the Invisible Disabilities Association is pursuing legislation in every state to allow for voluntary disclosure on government identification cards for anyone with any disability, illness, or chronic pain, as well as a nationally recognized invisible disability identification card.

#### **Moving Forward**

In the public transit context, full inclusivity will require staff and the traveling public to be aware of invisible disabilities

and to understand how to accommodate them. To help achieve this, the following actions are suggested:

- Implement awareness campaigns describing the needs and behavior of people with invisible disabilities.
- Offer transit travel training programs to anyone wishing to increase their confidence when traveling.
- Train all transit personnel to help all riders, regardless of whether they appear to have a disability.
- Provide transit travel assistance cards to help riders request appropriate assistance.
- Offer information about transportation stops through multiple means, including communication boards, audio, and text displays.
- Provide audio and visual information about the route, final destination, and next stop on all buses and trains.
- Use display signs on all transit, encouraging other riders to offer their seats to people in need and empower people with invisible disabilities to request seats when needed.
- Consult with riders with disabilities to develop street signage around transit stops to improve navigation and accessibility.
- Introduce safe places and use "Help, I'm lost" cards to enable people with invisible disabilities to obtain appropriate support when traveling.
- Include maps with quiet routes for walking through noisy urban areas to assist people who find noise stressful.

Developing and evaluating comprehensive programs is a critical step. Transit agencies can work with researchers to conduct focus groups and collect data to evaluate what techniques work so that lessons learned can be documented and, ultimately, guidance and regulations can be drafted to ensure that everyone has access to inclusive transportation.

<sup>&</sup>lt;sup>6</sup> Learn more at https://www.invisibledisabilityireland.com/.

<sup>&</sup>lt;sup>7</sup> Find out about this organization at https://www.snoopcharity.org/services/after-school-care/.

<sup>&</sup>lt;sup>8</sup> Read more at https://invisibledisabilities.org/.