

BRIDGING THE TRANSPORTATION GAP FOR P.W.D. WITH A.T.

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AS WE BOLDLY AND RELENTLESSLY MOVE TOWARDS SELF-DRIVING TRANSPORTATION; PERSONS WITH DISABILITIES (PWD) AND SOME AGING DRIVERS, WHO MAY BE COPING WITH AGE RELATED CHALLENGES, NEED TO BE ABLE TO OPERATE THEIR MOTOR VEHICLES SECURELY AND WITH CONFIDENCE.

For some, being able to drive safely may require the utilization of some form of adaptive equipment or Assistive Technology (AT).

Statistics Canada's reported some in-

teresting statistical findings in its 2012 Canadian Survey on Disability (CSD). It stated that almost 14% of the Canadian population aged 15 years or older – 3.8 million individuals – reported having a disability that limited their daily activities. The prevalence of disability rates varied across the provinces and territories, with the lowest rate in Quebec (9%) and highest in Nova Scotia (18%).

The report also noted that, for disabilities related to pain, flexibility, and mobility, disabilities often co-occur. In fact, three out of four adults with disabilities reported more than one type of disability. More than 80% of persons with disabilities reported using at least one aid or assistive device and that use of aids or assistive devices increased with age.

It also noted that the average age at which persons with disabilities started to have difficulties associated with their main condition was 43. Men reported an

earlier age of onset than did women: 41.5 years versus 44.5 years. The prevalence of disability rose from 4% among 15- to 24-year-olds to 43% for persons aged 75 years or older. One in 10 people of working age (15 to 64 years) reported having a disability; among the senior population (65 years or older), the figure was 33%.

ACCOMODATING A VEHICLE FOR SOME AGING AND PWD DRIVERS

For some people, the very act of driving a vehicle may have more to it than just being behind the steering wheel – if there is one. Using an assistive device or technology is a must for special needs drivers in getting around. However, they may also enrol in an Assistive Technology Solutions Driver Rehabilitation Program. This program will evaluate their driving competence – through a series of clinical tests – to determine whether a person has the physical, visual and cognitive abilities



to drive safely.

Additionally, they may also seek the assistance of an Occupational Therapist or a Certified Driver Rehabilitation Specialist. The therapist or specialist will evaluate their special needs and requirements.

Afterwards they will issue a report recommending the appropriate assistive device or technology and/or a complete list of recommended vehicle modifications that the special needs driver should have done to their vehicle.

Devices or aids may run from the very straightforward; ignition key extender, adding additional grab handles to aid entry to and exit from the vehicle, torso support positioning belt, raised foot pedals, steering wheel spinner, gear shift & parking brake extensions, seat cushions to increase the drivers height to see above the steering wheel, air bag disconnect switch for those who sit close to the steering wheel, specially made add on side view mirrors, etc.

Or it may require the use of devices or aids that are a bit more complex; left sided gas or brake pedals, modifications to the seats that allow them to pivot and rotate to facilitate easier vehicle entry or exits, hand controls that correspond to the natural hand/arm movement of the driver, electric clutch systems that enable operation of the clutch via a hand operated switch, electronically assisted hand controls or hand controls that allows the driver to control accelerating and braking functions with their hands, etc.

THEN WE MOVE ON TO EVEN MORE ADVANCED DEVICES AND TECHNOLOGY:

Advanced Cruise Control – The vehicle automatically slows down or speeds up as it reacts to vehicles that are in front of it.

Adaptive Headlights – They swivel in the direction the steering wheel is turned to better illuminate the roadway through corners, etc.

Driver Drowsiness or Awareness Detection Systems – Monitors the driver and issues a visual and audible alarm that will alert the driver if it perceives that their attention is starting to wander or it detects they are becoming drowsy.

Predictive Pedestrian Protection System – Recognizes impending accidents with pedestrians and the system alerts the driver or, if needed, automatically applies emergency braking.

Automatic Collision Notifications – Will automatically send out an alert to emergency services if there is a collision and/or the driver has become incapacitated. Also, if the driver becomes lost,

disoriented or has a health emergency, the system can link the driver directly to a live person who can provide assistance.

ACCOMODATING AGING AND PWD DRIVERS

Not only are developers continuing their work on self-driving vehicles but they are also developing other forms of transportation for PwD. For example; The Kenguru – an electric car that reaches a top speed of 45 km/h – allows wheelchair users to drive their chair through a remotely operated rear hatch, lock in and then drive away.

One important sign that Canada is slowly moving towards a more inclusive society, can be seen in gas stations. Even though a large number of full-service gas stations have been converted to self-serve, various companies – i.e. Shell, Esso & Petro-Canada – have made it easier to find a full-service station via their websites.

Drivers with mobility challenges should still be able to fill up with assistance at these sites. They also state that even at some of their self-service locations, PwD or aging drivers can request help at the pumps and still be able to pay the self-service price.

Similarly a number of progressive car rental companies are now offering car rentals for drivers and passengers with special needs. Their cars – usually require an advanced booking to ensure proper car availability – come with special needs equipment and options. Some rental companies will even supply a designated surrogate driver at no extra cost. Also, some of these companies provide accessible parking in their car return areas.

WHILE NOT EXACTLY BEHIND THE WHEEL, IT IS WHEEL-ISH

With the swift and continual advancement of AT savvy PwD are not only taking advantage of technology in their vehicles but are also using it to get to and from their vehicles. Mobility assistive devices/aids or technology can be low tech like; canes, walkers to scooters and wheelchairs, etc.

Also they can be more space-agey, as in tiny GPS devies and cell phone apps that can provide PwD mobility assistance in some rather unique ways. For example, there are wayfinding apps that aid the user in identifying accessible pathways; the app can verbally announce streets names, intersections & landmarks. They can also show locations that are accessible to persons with vision challenges and for those who use walkers and/or wheelchairs.

For some older adults getting there is just part of the journey. Not all of their destinations are what they consider to be age friendly. There are apps available that can determine in advance the “age-friendliness” of different locations.

They can rate things like: general accessibility, seating and lighting levels, background music levels and even the attitude of the staff. Most of these apps also include an option for their users to add their own opinions and observations.

It was not that long ago that many persons with disabilities and some older adults would choose to stay at home. This was an easier option rather than face the challenges of getting – not only – from here to there but around, period.

Now-a-days, thanks to the many advances in Assistive Technology not only are we getting around more; but many more PwD and seniors are also once again becoming important workforce participants. And, others are taking on a more active involvement in social and service agencies.

WHERE CAN I FIND HELP TO MAKE MY VEHICLE ACCESSIBLE IN CANADA?

We know that for many Canadians accessible public transportation is not always reliable or available.

However, the costs of purchasing a new vehicle equipped with adaptive technology may be financially out of reach; or even modifying their existing vehicle can prove to be unaffordable for many persons with disabilities.

However, there are several programs that are available to provide advice, assistance or even financial support for PwD and their families. Additionally, there are also some non-profit agency programs or charitable grants that may be offered locally to help fund vehicle modifications. Be sure to check out local government and non-profit agency websites for more information.

Various new car manufacture and dealerships, recognizing a previously underdeveloped target market, are now offering different types of Mobility Assistance Programs to those qualified persons who purchase or lease a new vehicle from them that requires adaptive equipment or conversion.

Chrysler, Ford, GM, Toyota, Honda, Volkswagen, etc. are some of the manufactures supporting the mobility needs of drivers and passengers with physical disabilities. Some of the offered adaptive equipment may include; wheelchair or other lift equipment, hand or other driving controls, and lifts or cart storage. 🚗