

*F.R. DEFANTIE SOUZA, M. RIBEIRO MARQUES, C. SILVA SANTANA.* **Mobility supports for older adults in Brazil.** *Gerontechnology* 2012;11(2):339; doi:10.4017/gt.2012.11.02.596.00 **Purpose** The increasing number of older adults in the population, and a growing dependence on technology in most social contexts, has created a need for systematic studies on technology and aging<sup>1</sup>. The purpose of this study is to survey the assistive technology designed to aid mobility for the elderly. The goal is to survey, describe and classify these products, indicating the restrictions of the use of the devices due to the limitations of the elderly. **Method** This was a descriptive, exploratory study that seeks to make an inventory of products and technologies designed for mobility and transportation for the elderly and that are available on the Brazilian market. After a survey of the companies that produce and import these kind of technologies, catalogs were requested, and the products and technologies were classified according to the Code of the International Classification of Functioning, Disability and Health (ICF)<sup>2</sup> e120 - Products and Technology for personal mobility and transportation environments, internally and externally. Classificatory tables on products were developed with the following categories: products (subcategory name, subject, character, value, and manufacturer) and purpose statement (subcategory purpose/objective of limitation). **Results & Discussion** We found 306 products, 47 personal mobility devices (walking frames, canes, crutches), 44 transfer devices (plates, disks, winches, brackets), 14 special vehicles (vans and buses), 20 adapted vehicles (adapted pedals and seats), 155 wheelchairs (motorized or not), and 26 mopeds. The personal mobility device prices ranged between US\$40 and US\$400. The price for transfer devices ranged between US\$60 (grab bars) and US\$8,000 (transfers). The non-motorized wheelchairs price ranged between US\$400 and US\$8,000, while the price of motorized wheelchairs ranged between US\$8,000 and US\$34,000. Other products did not have a price listed in the catalogue. Notable is the significant production of devices for mobility and transport found in the present study; among these it was possible to identify products aimed exclusively at older adults population. Older adults with functional limitations have specific characteristics such as alterations in the constitution of skin; fragility of the tissue and muscle mass must be taken into account when choosing a wheelchair for long-term use. The presence of chronic rheumatologic disorders, which can alter the hand grips and strength to use a walker among others, are often different from other conditions that cause disability. These aspects should be considered in the development, display, and use of technological appliances, so that successful use of these devices is guaranteed. Therefore, selecting a machine with technical characteristics that correspond to the physical and functional needs of older adults is difficult. Gerontechnology has expanded into product development for this sector of the population: being able to find walkers with a retractable bench for rest when covering long distances, or an objects carrying case, swivel cushions to facilitate the exit of the elderly car seat, and grab bars to help with sitting down and standing up, among many other devices. This equipment assists in overcoming limiting conditions of motor function caused by the aging process but are not yet configured for neuro-motor disability. More complex devices such as wheelchairs, scooters, and adapted vehicles have the highest price and for this reason they are often ignored in the choice of product. This is the first study to present, through an exploratory investigation of products and companies, a list of devices and services for the mobility of older adults in Brazil. The product developed for older adults in the domestic market need to be made available and accessible for the effective improvement in the quality of life of older people. This can be done through support for studies in the field of Gerontechnology seeking to understand the demands of this specific audience; development of incentive policies that facilitate the acquisition of this equipment, and tailoring services to the national picture of the aging in Brazil today.

### References

1. Carvalho JAM, Garcia RA. The aging of the population: A demographic approach. *Book of Public Health* 2003;19(3):725-33; doi:10.1590/S0102-311X2003000300005
2. World Health Organization. International Classification of Functioning, Disability and Health – ICF; 2003; [www.who.int/classifications/icf/en/](http://www.who.int/classifications/icf/en/); retrieved April 17, 2012

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