



Original Article

Provision of public funding for wheelchairs and postural support devices in Japan

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Abstract: [Purpose] For people with disabilities, public funding is the principal means by which assistive devices, such as wheelchairs and seating equipment, may be acquired. In the future, to make the system easier for beneficiaries, it is necessary to determine the actual utilization level in the current system. In this study, using statistical data provided by the Japanese government, we investigated the level of public expenditure on wheelchairs and postural support devices. [Methods] The number of devices (Wheelchairs, Powered Wheelchairs, Postural Support Devices, and Seating Furniture) provided each year from 1997 to 2016 was extracted and the annual trends were analyzed. [Results] In the last 20 years, the number of grants provided for wheelchairs has decreased, while the number of grants provided for seating equipment has increased. These changes may be due to the enactment of new legislation. [Conclusion] Based on the anticipated service life of various types of equipment, it is believed that approximately 970,000 assistive devices in the four categories are provided with public funding alone. As the number of people with disabilities increases, the use and importance of assistive devices is also expected to increase.

Key words: Assistive device, Public funding, Wheelchair seating

(This article was submitted Sep. 12, 2018, and was accepted Nov. 2, 2018)

INTRODUCTION

In preparation for the Olympic and Paralympic Games, which will be held in Tokyo in 2020, the attention given to persons with disabilities is increasing. In 2006, the Convention on the Rights of Persons with Disabilities (CRPD)¹⁾ was adopted by the United Nations (U.N.) General Assembly, and in line with this is the Global Disability Action Plan 2014–2021²⁾. One of the objectives of this plan is “To strengthen and extend rehabilitation, habilitation, assistive technology, assistance and support services, and community-based rehabilitation,”³⁾ clearly expressing the U.N.’s intent to expand and intensify the use of assistive technology. Japan ratified the CRPD in 2014, and in 2016, Japan passed a law (the Act on the Elimination of Discrimination against Persons with Disabilities), encouraging citizens to cooperate to achieve a society in which people can coexist regardless of disabilities.

By 2016, there were approximately 7,879,000 people with disabilities in Japan⁴⁾, corresponding to approximately 6.2% of the population. This figure can be broken down into 3,937,000 people with physical disabilities, 741,000 people with intellectual disabilities, and 3,924,000 people with mental disabilities; in addition, the total number of people with disabilities is increasing⁴⁾. Of those with physical disabilities, the provision of wheelchairs and postural support devices is of particular importance to people who have impaired mobility⁵⁾. Moreover, providing advice on selecting equipment and adaptation evaluation are important roles of physical therapists.

Generally, the expenses involved in acquiring these can be broadly categorized as being funded privately or publicly⁶⁾. In Japan, past recipients of such public funds have been people for whom aid was acknowledged to be necessary to improve their work and their other day-to-day circumstances. In 1949, the Disabled Persons Welfare Law⁷⁾ was enacted to encourage

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independence of persons with physical disabilities and their participation in socioeconomic activities. Some of the welfare services provided by the government were wheelchairs, seating furniture, and other assistive devices. Several revisions followed in the wake of this enactment, and powered wheelchairs were added to the list of eligible assistive devices in 1989. In 1990, the funding of more advanced postural support devices for cases in which ordinary seating furniture was insufficient was approved. Then, in 2010, assistive seating for use during transportation was officially added to the list of eligible items, and the use of such seating equipment became widespread.

For people with disabilities, public funding is the principal means by which such equipment may be acquired, and in the future, it will be necessary to ascertain the actual level of utilization of the current system to make the system easier for beneficiaries to use. At present, however, there is insufficient understanding regarding the use of the system, as data has not been analyzed.

In this research, based on statistical data released by the government of Japan, we aim to determine the state of public expenditure on wheelchairs and postural support devices and current trends. Changes in payments observed over the long term may indicate changes in the demand of these devices by users. This should provide a starting point for reviews of the public funding system for wheelchairs and postural support devices in Japan and may also be useful as reference material for public funding programs in other countries.

METHODS

In Japan, assistive devices that are eligible for funding under the support system are classified into 16 categories, such as prosthetics, walking aids, hearing aids, and so on⁸). We selected four categories for this study: wheelchairs, powered wheelchairs, postural support devices and seating furniture (for children only). The categories have changed several times since 1997, making detailed calculations difficult; therefore, in our investigation, we used these four categories only.

In addition to the basic manual type, we included attendant-controlled wheelchairs and wheelchairs with manual tilt/recline functions in the wheelchair category. In the powered wheelchair category, we included basic powered wheelchairs, wheelchairs with attached motor units, power-assist wheelchairs, and electric tilt/recline wheelchairs. With postural support devices, along with fixed and castor-equipped types, we included manual and powered wheelchairs with postural support devices and standing and recumbent postural support aids. Seating furniture is constructed more simply than postural support devices; we included seating furniture for use in vehicles since 2010.

In this study, we used Statistical Reports on Social Welfare Administration and Services published by the Ministry of Health, Labour and Welfare (MHLW). This data is prepared by the MHLW so that the actual state of administration in the various prefectures, designated cities, and core cities after the enactment of social welfare-related legislation can be quantified and the social welfare activities of the state and local public entities can be managed. This data is made available through the Statistics of Japan (e-Stat⁹) Internet portal. At the time of our investigation, the data covered the 20 years from 1997 to 2016.

The number of assistive devices provided was extracted from tables in the abovementioned report. New grants in each year from 1997 to 2016 were collated into four categories (wheelchairs, powered wheelchairs, postural support devices, and seating furniture). As adults and children were recorded separately up to 2006, the corresponding figures were combined for analysis.

RESULTS

Table 1 shows the number of grants that were provided during each year from 1997 to 2016. In the 20 year period we investigated, there were a total of 694,252 grants provided for wheelchairs, 69,684 for powered wheelchairs, 176,726 for postural support devices, and 22,551 for seating furniture.

Figure 1 shows the annual change in the number of grants for wheelchairs. The number of grants fell rapidly after exceeding 80,000 in 1998 and continues to fall slowly (2006 will be discussed in detail below). Figure 2 shows the annual change in the number of grants for powered wheelchairs. The number of grants showed a tendency to increase until 2003 and has remained stable since. Although the ratio of grants for powered wheelchairs to manual wheelchairs in 1997 was 1:10, this ratio has increased to 1:2.5. Figure 3 shows the annual change in the number of grants for postural support devices. The number of grants has been fairly stable overall. Figure 4 shows the annual change in the number of grants for seating furniture. The number of grants doubled in 2010, and this figure was maintained until 2016.

DISCUSSION

The sharp drop in grants that was observed in all four categories in 2006 occurred because the legal system for grants was revised. The laws (Services and Supports for Persons with Disabilities Act)¹⁰ that applied to grants for children or people with physical, intellectual, or mental disabilities—which had all been separate until that point—were unified, and the statistics only reflect the period from October to March. In addition, the 2011 data show that due to the impact of the Tohoku Earthquake, there was a period that was not tallied in the afflicted area.

The number of grants for manual wheelchairs reached 80,000 in 1999 but declined by almost half in 2000. This is thought

Table 1. Number of new grants (Units: Cases)

Year	Wheelchairs	Powered wheelchairs	Postural support devices	Seating furniture
1997	68,900	4,057	6,704	671
1998	74,492	4,698	7,500	717
1999	81,714	4,855	7,951	1,061
2000	42,012	3,629	7,891	788
2001	33,901	3,439	8,639	638
2002	31,550	3,769	9,511	766
2003	32,948	3,753	10,654	698
2004	31,105	3,435	10,696	736
2005	31,934	3,594	11,366	595
2006	10,599	1,353	2,817	261
2007	25,737	3,050	8,956	650
2008	26,484	3,109	10,473	515
2009	26,263	3,555	10,545	589
2010	26,856	3,490	10,157	1,641
2011	26,866	3,430	9,577	2,104
2012	26,330	3,436	9,833	2,334
2013	25,617	3,357	9,711	2,418
2014	24,627	3,164	9,624	2,383
2015	23,631	3,251	9,751	2,548
2016	22,686	3,260	9,687	2,583
Total	694,252	69,684	182,043	24,696

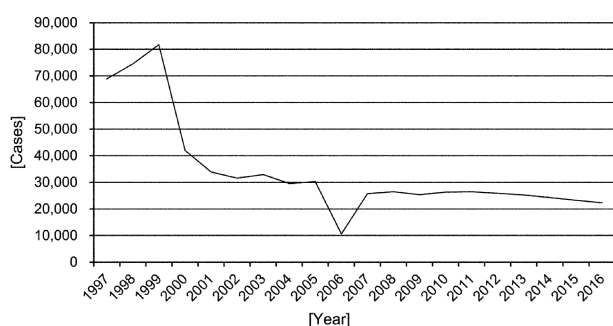


Fig. 1. Changes in the number of grants for wheelchairs. The solid line indicates the annual change in the number of new grants for wheelchairs.

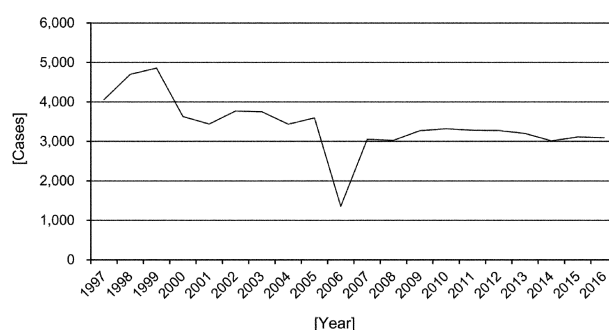


Fig. 2. Changes in the number of grants for powered wheelchairs. The solid line indicates the annual change in the number of new grants for powered wheelchairs.

to have been caused by the Long-Term Care Insurance Act, which applies to insurance benefits for elderly people who require nursing care. Under that system, assistive products are loaned to elderly people to help them lead independent lives in their own homes; manual wheelchairs were one of the products provided. It is supposed that the grants in the other three categories showed no decline because they were not eligible at the time. The number of grants for seating furniture almost doubled after 2010, compared with previous years. Because grants for additional vehicle seating commenced in 2010, it is believed that the increase was caused by people who utilized such funding for adaptive vehicle seating for supporting individual parts of the anatomy (head, trunk, pelvis, thighs, etc.), according to the level of each person's disability. In addition, since 2006, the cost of prosthetic equipment that is publicly paid in Japan will be divided by the ratio of national 50/100, prefecture 25/100, municipal 25/100, thereby reducing the burden on users (10% in principle). The cost is a mandatory expense, and it is not supposed to be affected by a shortage in local government finances. Alternatively, it may be necessary to consider the possibility that it was discretionary expenses before 2005 and may have been influenced by the shortage in local governments' financial resources.

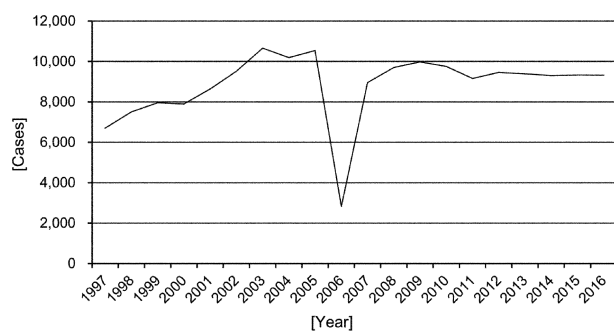


Fig. 3. Changes in the number of grants for postural support devices.

The solid line indicates the annual change in the number of new grants for postural support devices.

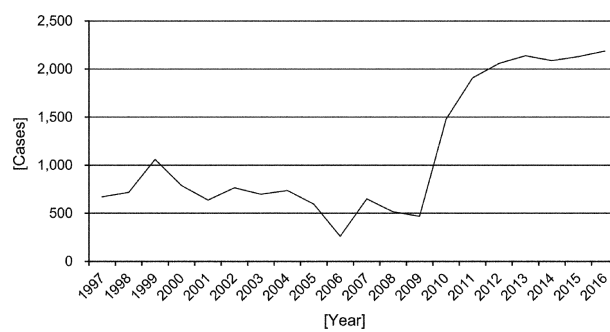


Fig. 4. Changes in the number of grants for seating furniture.

The solid line indicates the annual change in the number of new grants for seating furniture.

A total of 970,675 cumulative grants were provided for products in the four categories during the 20 year period that was investigated. According to the MHLW, the expected service life of a manual wheelchair or a powered wheelchair is 6 years and that of an article of postural support devices or seating furniture is 3 years⁸⁾. If they are only to be used for the duration of their service lives, then there are 149,757 manual wheelchairs, 19,898 powered wheelchairs, 29,062 items of postural support devices, and 7,514 items of seating furniture in use at present. These figures only include products provided under the public funding system and do not include products provided under the Long-Term Care Insurance Act¹¹⁾ to elderly people or products that users purchased out-of-pocket. According to a survey regarding the level of funding for long-term care under the Long-Term Care Insurance Act¹²⁾, 668,300 wheelchairs were being lent as of April 2016. By combining this figure with the number of manual wheelchairs being provided with public funds, it is possible to estimate that there could be as many as 818,057 manual wheelchairs in use in Japan. Assuming that there is one user for each wheelchair, wheelchair users comprise 0.64% of the population of Japan. As national statistics show that the number of people with disabilities is increasing⁴⁾, it is possible that the prevalence and importance of assistive devices will increase even more in the future.

We investigated the status of grants provided for wheelchairs, postural support devices, and others. In the last 20 years, the number of grants provided for manual wheelchairs decreased and the number of grants provided for seating furniture increased. It was thought that an important factor behind these changes is the enactment of new legislation. The number of grants for postural support devices or powered wheelchairs changed relatively little compared with grants for items in the other two categories. Based on the anticipated service life of various equipment—data provided by the government—it is believed that the total number of assistive devices in the four categories provided with public funding alone is approximately 970,000. As the number of people with disabilities is on the rise, the use and importance of assistive devices could increase in the future.

Funding

This study was conducted as part of the FY2017 Health and Labor Sciences Research Grant-funded Comprehensive Research Project on Disabled Persons Policy (Physical and Intellectual Disabilities Sector), specifically with funding assigned for the “Investigative study concerning the categorization structure of the funding system for assistive products and the establishment of reference prices”.

Conflict of interest

There are no conflicts of interest to declare.

REFERENCES

- 1) Division of Social Policy and Development Disability: United Nations: Convention on the Rights of Persons with Disabilities (CRPD). <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html> (Accessed Sep. 11, 2018)
- 2) World Health Organization: WHO global disability action plan 2014–2021. http://apps.who.int/iris/bitstream/10665/199544/1/9789241509619_eng.pdf (Accessed Sep. 11, 2018)
- 3) Act on the comprehensive support for the daily and social life of persons with disabilities: (7 November 2005, Law No. 123). <http://law.e-gov.go.jp/htmldata/H17/H17HO123.html> (Accessed Sep. 11, 2018)
- 4) Cabinet Office: Government of Japan: White Paper on People with Disabilities 2016. <http://www8.cao.go.jp/shougai/english/annualreport/2016/index-pdf.html> (Accessed Sep. 11, 2018)

- 5) O'Sullivan SB, Schmitz TJ, Fulk G: Physical rehabilitation 6th ed.: The prescriptive wheelchair. New York: F.A. Davis, 2013, pp 1403–1444.
- 6) Batavia M: The wheelchair evaluation. A clinician's guide. 2nd ed.: Massachusetts: Jones and Bartlett Publishers, 2010, p 9.
- 7) Act on welfare of physically disabled persons: (1949, Law No. 283). http://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=324AC1000000283 (Accessed Sep. 11, 2018)
- 8) Ministry of Health, Labour and Welfare: Overview of funding system for assistive technology. <http://www.mhlw.go.jp/bunya/shougaihoken/yogu/gaiyo.html> (Accessed Sep. 11, 2018)
- 9) e-Stat Internet portal, Statistics of Japan (e-Stat): <https://www.e-stat.go.jp/en> (Accessed Sep. 11, 2018)
- 10) Act on the comprehensive support for the daily and social life of persons with disabilities: (7 November 2005, Law No. 123). http://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=417AC000000123 (Accessed Sep. 11, 2018)
- 11) Long-term care insurance act: Law number: Act No. 123 of 1997. <http://www.japaneselawtranslation.go.jp/law/detail/?vm=04&re=01&id=94> (Accessed Sep. 11, 2018)
- 12) Survey regarding the state of the provision of funding for long-term care under the long-term care insurance act. <http://www.mhlw.go.jp/toukei/list/45-1.html> (Accessed Sep. 11, 2018)