

# Use of home-and community-based services in Taiwan's National 10-Year Long-Term Care Plan



The proportion of Taiwan's population that is aged 65 years and older increased by 30% in the past decade, from 10.21% in 2007 to 13.55% in 2017 (*Ministry of the Interior in Taiwan, 2018*). In 2007, which was a landmark year during which the proportion of elderly people in Taiwan first surpassed 10%, the government introduced the National 10-Year Long-Term Care (LTC) Plan. The National 10-Year LTC Plan is a government-subsidized action plan that provides home- and community-based services (HCBSs) that help elderly people age in place. The HCBSs offered through Taiwan's National 10-Year LTC Plan include personal care services, adult day care services, home-based respite care, institution-based respite care, nurses visits, home-based rehabilitation, and transportation (*Ministry of Health and Welfare in Taiwan, 2007*). The initial version of the National 10-Year LTC Plan in Taiwan has now been in place for 10 years, and an understanding of the care recipients' profiles and HCBS use patterns under Taiwan's first National 10-Year LTC Plan can inform the creation of practical guidelines for further policymaking in Taiwan.

Our research team collected nationally representative data from 2010 to 2013 from the Long-Term Care Service Management System in Taiwan (N

= 78,205) and used latent class analysis to statistically identify potential subgroups of HCBSs used by Taiwan's National 10-Year LTC Plan participants. The results showed that three patterns of HCBS use were identified, namely, (1) home-based personal care (home-based PC; 52.86%); (2) multiple nonpersonal care services (multiple non-PC services; 25.94%); and (3) home-based personal and medical care (home-based PC/MC; 21.20%).

In the first subgroup, compared with the care recipients in the other two subgroups, the users of home-based PC were more likely to live alone, to live in less urban areas and to have higher levels of instrumental activities of daily living (IADL) disability but better basic activities of daily living (BADL) functionality and cognitive function. This finding was in line with governmental reports that revealed inequalities in the delivery of LTC services among different administrative areas in Taiwan (*Ministry of Health and Welfare in Taiwan, 2007*). This geographic inequity worsened when users in the home-based PC group accessed multiple HCBSs. Methods of alleviating the barriers mentioned above and promoting access to more integrated HCBSs need to be identified by the Taiwanese government.

In the second subgroup, the

multiple non-PC services group, the care recipients received adult day care services and did not simultaneously receive any personal care services. In Taiwan, most adult day care services focus exclusively on promoting cognitive abilities and do not routinely provide personal care, such as bathing services and personal hygiene. However, personal care services are considered fundamental services in LTC. The inability to access personal care services for the care recipients in the multiple non-PC services subgroup indicated that either family caregivers or foreign care workers assumed the responsibility for providing personal care. We recommend that care professionals and case managers consider promoting the use of multiple services when recommending HCBSs for elderly adults; strategies that combine recommendations for both home-based PC and community-based adult day care services, which are common in integrated LTC models (*Morikawa, 2014*), require further development in Taiwan.

In the third subgroup, the home-based PC/MC group, care recipients were more likely to have a primary caregiver than those in the home-based PC and the multiple non-PC services subgroups. The presence of a primary caregiver played an important role in determining whether the



care recipients in this study used medical-related HCBSs, such as nurse visits and home-based rehabilitation. Informal caregivers, especially family caregivers in Taiwan, take responsibility not only for helping individuals perform daily activities but also for managing and coordinating the care for their disabled family members within the formal LTC system (Lu, 2005). These findings might indicate that our LTC system heavily relies on family caregivers. Whether and how the formal LTC services integrate with the care provided by family caregivers and alleviate the burdens placed on caregivers merit further investigation.

The study findings needing further attention are the following: (1) geographic inequalities were found in recommending the use of integrated HCBSs in Taiwan; (2) care recipients who received adult day care services did not simultaneously receive any personal care services; and (3) the LTC system relies too heavily on family caregivers. It is well known that using integrated services and multiple services has been shown to be important for people with LTC needs. Past studies have shown that the receipt of multiple care services can reduce unnecessary health care utilization and the risk of dying at home for both frail elderly people and their family caregivers. In two recent studies, we found that the use of more than one HCBS had a positive association with a faster recovery in terms of performing activities of daily living (ADLs). The use of a single service was not associated with the recovery of performing ADLs (Chiu, 2018). Additionally, when dementia care recipients received a single LTC service, caregivers of people with

dementia had more emergency visits and higher total costs than caregivers of people without dementia. However, when care recipients received multiple LTC services, caregivers of people with dementia used health care services at a similar level as caregivers of people without dementia, while paying lower outpatient costs (Chan, 2018). In the current study, having access to multiple non-PC services and home-based PC/MC are considered better service use patterns and should be able to more successfully meet care recipients' and caregivers' needs. However, using multiple services normally requires a person to coordinate those services, which is a task commonly performed by family caregivers in Taiwan. As the new 10-Year LTC Plan Version 2.0 aims to promote integrated HCBSs and the use of multiple HCBSs (Ministry of Health and Welfare in Taiwan, 2016), improved methods of coordinating HCBS services that do not rely on family caregivers need to be identified and implemented in the National 10-Year LTC Plan Version 2.0 in Taiwan.

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