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Post-hospital care of stroke patients in Taipei: Use of services and policy implications

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Abstract

Background and purpose: Population ageing in Taiwan is proceeding at an accelerating rate. The percentage of elderly is expected to increase from 9.7% in 2005 to 20% in 2025. As the population ages, more people will suffer from chronic conditions and will need more post-hospital care. Health policies need to adapt itself to meet the changing needs of society. The purposes of this study were to describe the use of post-hospital care among stroke patients in Taipei and to discuss policy implications.

Methods: This research used a longitudinal prospective study design, recruiting stroke patients from seven hospitals in the Taipei area. Patients were followed-up for 6 months after discharge with surveys at 1, 3, and 6 months. Information on their needs and uses of post-hospital care was collected.

Results: About 9% of patients were institutionalized at 1 month, and the percentage did not vary much throughout the 6 months of the study. Little movement occurred between institutions and homes within 6 months after discharge. Most patients relied on family members to provide assistance with activities of daily living. Little utilization of formal services occurred. The use of foreign care attendants was common, and it increased with time. Few unmet needs were observed for nursing care, while significant unmet needs were observed for rehabilitative services.

Discussions: Taiwan is not prepared to adequately meet the care demands of an ageing society. Continuing to support family members with additional home- or community-based services resources should be a policy priority. More efforts should be placed

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on educating family caregivers about the availability and benefits of community-based services during discharge planning. The use of foreign care attendants has become a mainstream practice. Regulations to protect the rights of foreign care attendants and to improve their quality of care need to be established.

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1. Introduction

The elderly population in Taiwan is expected to significantly increase in the next 30 years. As the population ages, more people will suffer from chronic conditions and will need care and assistance with activities of daily living after hospital discharge. The purposes of this paper are to provide a descriptive account of Taiwan's long-term care services, to provide a descriptive account of the actual use of post-hospital care and longterm care services by stroke patients after discharge, and to provide relevant policy recommendations. This study followed stroke patients after hospital discharge for 6 months and assessed the types and amounts of post-hospital care and long-term care services used by these patients. Stroke, being the second leading cause of death, is also a leading cause of disability among the elderly in Taiwan [1]. Several studies have reported the use of post-hospital care by stroke patients [2–6]. The pattern of service utilization can provide useful information to help identify possible problems with accessibility to care. Findings from this research can provide information for making policy recommendations for resource development and service delivery in Taiwan, as well as other ageing countries in Asia facing increasing demands for post-hospital care. Before presenting the actual study, a description on the current status of long-term care in Taiwan is provided below.

2. Backgrounds

Taiwan is currently in a demographic transition from a developing to a developed country [7]. Although it has only recently begun experiencing population ageing, its elderly population is increasing at a rapid pace. Due to a prior steep decrease in the fertility rate, the percentage of the elderly population is increasing at a rate much faster than that experienced by Western developed countries. The percentage of the elderly

population in Taiwan reached 7% in 1993, and was at 9.7% in 2005 [8]. It is expected to reach 14% in 2018, and 20% in 2025 [9]. It will take only 32 years for the percentage to increase from 7% to 20% in Taiwan, compared to about 95 years for the US, and 155 years for France [10]. The rapid ageing of the population leaves little time for Taiwan to adjust its long-term care policies and to develop relevant resources to face the increasing demands for care. The experience in Taiwan can provide useful information for other developing nations with similar cultural background in Asia such as China, which has also experienced significant decreases in fertility within a relatively short period of time due to its one-child policy.

The first law or regulation relevant to the provision of long-term care in Taiwan is stated in the Civil Code which requires children to respect and support their parents [11]. Failure to support one's own parents may lead to civil lawsuits. The Civil Code places the entire responsibility of caring for the elderly on the children. Public funding for elderly care was not available until 1980 when the Elderly Welfare Act (EWA) was enacted. EWA was the first legislation that allocated funding for public institutions to care for the elderly. However, from 1980 to 1990 only one public institution were established with the main purpose of providing long-term care to the disabled elderly. Thus, in the late 1980s as the demand for long-term care began to increase, private nursing homes and other non-skilled residential facilities began to emerge. Most of these facilities ranged from 30 to 50 beds. In 1993, regulations monitoring the provision of institutional services were amended into the Nursing Act. The Nursing Act covered nursing homes, day care, and home nursing care. The Elderly Welfare Act and the Nursing Act are mainly focused on providing institutional care, and the over emphasis on institutional care has led to a significant growth in the number of beds. During the 1990s, institutions significantly increased while home- or community-based long-term

care services were virtually non-existent. The number of nursing home beds increased from 580 in 1995 to 6838 in 2000 [12]. It was not until 1998 that the government began to place more emphasis on the development of community-based resources.

The long-term care system in Taiwan is highly fragmented. Details about the organization and delivery of services have been described in other articles [13.14]. In brief, services are monitored and regulated by three government offices, the Department of Health (DOH), the Ministry of Interior Affairs (MIA), and the Veteran Affairs (VA) offices. These government offices provide funding for infrastructures and service delivery, and are also responsible for licensing and monitoring an array of services. The DOH monitors skilled nursing homes, home nursing care, institutional respite care, day care, and home rehabilitative services. The MIA monitors non-skilled nursing facilities, long-term care residential facilities, home respite care, personal assistant services, residence improvement programs, and on-line emergency reporting services. The VA monitors veteran homes and other veteran-hospital-based nursing homes. Eligibility for services reimbursed by the MIA tends to be means-tested, while eligibility for services reimbursed by the DOH is needs-tested. Thus, some elderly with functional disabilities may receive too few services, while other low-income elderly without functional disabilities may be eligible for more than needed services from the MIA.

Among services reimbursed by the DOH, home nursing care is the most frequently used service. It is reimbursed by the National Health Insurance for two visits per month. A patient required physician authorization to utilize this service, and every two month the patient needs to be reevaluated for eligibility. Among the services reimbursed by the MIA, the most frequently used services are institutional services and personal assistant services. For institutional services, if an elderly person has been granted a "low-income" status, regardless of functional ability, the person may apply for free admission into a retirement home, nonskilled nursing facility, or other long-term care facility supervised by the Ministry. Reimbursement for institutional care has been in place since 1980. The provision of personal assistant services only began in 1998. The amount of services reimbursed depends on the level of function in activities of daily living (ADL). It also varies from county to county. In general, with disabilities in four ADL functions, one may receive up to 18 h of services a month. If qualified for low-income status, the hours may increase up to 36. Nevertheless, the amount of services is still inadequate to provide sufficient care for an elderly person residing at home.

Thus, for some families who did not want to send their elderly members to institutions, a new option gradually emerged. Since 1992, there has been a steady stream of foreign workers from the Philippines, Thailand, Indonesia, and Vietnam to work in Taiwan as household helpers or personal assistants for the disabled elderly. Those who provide care services to the elderly are called "foreign care attendants". At the end of 2005, there were more than 140,000 foreign care attendants in Taiwan [15]. The foreign care attendants have a price advantage over domestic workers, demanding only about half of the wages of domestic workers. Eligibility to employ for a foreign care attendant is determined by an evaluation team in the many authorized hospitals. If eligible, the elderly can apply to hire a foreign care attendant through several private manpower agencies. Over the years, foreign care attendants have become part of the mainstream of long-term care service providers in Taiwan.

3. Subjects and methods

This research used a prospective study design to follow stroke patients for 6 months after being discharged from the hospital. Stroke patients were recruited from neurology wards at seven hospitals in the Taipei area from July 1999 to June 2000. Patients were eligible to participate in this study if diagnosed with stroke based on the International Classification of Disease (ICD-9-CM) codes 430–434 and 436–438. Information was collected from patients through face-to-face interviews while the patients were still hospitalized for stroke and through telephone surveys at 1, 3, and 6 months after hospital discharge.

During the data collection period, the trained interviewers conducted a systematic search of stroke patients from hospital admission registries and from neurology ward registries twice a week. Interviewers would then visit a stroke patient prior to discharge and conduct an in-hospital face-to-face interview. The time of the in-hospital interview was arranged to be as close to the day of discharge as possible, so that

the collected information would reflect patient's condition at discharge. During the in-hospital survey, physical function was assessed, and only stroke patients with disabilities in activities of daily living (ADL) or instrumental activities of daily living (IADL) at the time of discharge were included in the follow-up telephone surveys. Those who had regained all of the ADL and IADL functions prior to hospital discharge were excluded from follow-up, since most of them had no need for post-hospital care. After the patients were discharged, additional follow-up surveys via telephone were conducted at 1, 3, and 6 months after discharge.

Formal approval of the study was obtained from each of the participating hospitals. Patients and their families who expressed interest were given a written statement describing the purpose of the study, the right to withdraw from the study at any time, and the right to refuse to answer any questions. Contact information of the principle investigator was also given in the statement. Verbal instead of written consent was obtained from each participant before the interview. If a patient was cognitively impaired, verbal consent was obtained from the next of kin. In situations when a patient was unable to respond to the questionnaire, the available caregiver was selected as the proxy respondent, with the consent of the stroke patient or the next of kin.

3.1. Measurements

Information on basic sociodemographic characteristics, physical functions, and use of post-hospital care were collected. Basic sociodemographic characteristics included age, sex, educational attainment, monthly income, number of children, caregiver age, caregiver sex, and spousal caregiver. Information on age and sex was obtained from the hospitalization records in the ward. Age was grouped into the four categories of <50, 50–64, 65–74, and \geq 75. The level of education was measured by the number of years of formal education. It was grouped into no formal education, 1–6 years, and >6 years of formal education. Monthly income was the total household income. It was grouped into low (NT\$ <30,000), middle (NT\$ 30,000–79,999), and high income (NT\$ \geq 80,000) categories. The exchange rate was about NT\$ 33 to US\$ 1.00 at the time of the interview. The number of children was the total number of offspring still alive. Its categories included 1 or 0, 2 or 3, and 4 or more children. Caregiver age was grouped into the four categories of <45, 45-54, 55-64, and ≥ 65 .

Physical function at discharge was assessed using the Katz index of independence in activities of daily living [16]. It involved assessing patients' ability to perform the following six activities: eating, dressing, bathing, transferring, toileting, and walking indoors. Post-hospital care was categorized by the location in which care was provided and the type of services received. Location of care included institutions (skilled or non-skilled nursing homes) and patient's residence. If a patient returned to his/her residence, information on the use of nursing care, physical therapy, formal community-based care, and informal care was collected. The use of nursing care included wound care, and care of a tracheotomy, Foley catheter, nasogastric (N-G) tube, and other intrusive nursing procedures. Physical therapy included outpatient therapy only. For nursing care and physical therapy, respondents were asked if they needed these services, and if they had received such services. Formal community-based services included personal assistant services, day care, and respite care. Information on the frequency of use and reasons for not using the services were also collected. Informal care included care provided by a family caregiver or a hired helper. The amount of care, in terms of hours and days of care provided by family caregivers, was reported. Hired helpers were privately employed and were not under any government regulations, and thus, were treated as informal care. Information on hired helpers included whether he/she was a fulltime or part-time worker, whether the helper was a foreign care attendant, and whether the patient or caregiver was satisfied with the services provided.

3.2. Statistical analysis

Descriptive statistics were used to display patient characteristics. Numbers and percentages of patients receiving various types of long-term care services at each data collection point are presented. In addition, transitions between services are presented with figures. We used t-test and χ^2 -test to compare characteristics between groups of stroke patients. Statistical calculations were carried out using SPSS 10.0 software. The level of significance for all tests was set at 0.05.

Table 1 Comparison of characteristics during hospitalization between the study sample and the missing cases

Characteristics of stroke patients	Percentage of study sample $(n = 375)$	Percentage of non-sample $(n=46)$
Age		
≤50	8.5	4.3
50-64	23.7	10.9
65-74	27.5	37.0
≥75	40.3	47.8
Sex		
Male	55.7	56.5
Female	44.3	43.5
ADL dependency		
Eating	53.3	63.0
Transferring	72.0	82.6
Walking indoors*	77.9	93.5
Dressing	78.9	76.1
Bathing	83.7	82.6
Using the toilet	74.4	84.8
Nasogastric tube	29.6	30.4
Foley catheter	19.2	8.7
Tracheotomy	0.5	0.0

ADL: activities of daily living. p < 0.05.

4. Results

The number of patients who agreed to participate in the study was 714 out of 726 patients who were contacted. Among the 714 patients, 58.7% were men. The average age was 71.2 years. The percentages of elderly in the <65, 65-75, and ≥ 75 groups were 27%, 29%, and 44%, respectively. Of the 714 patients, 421 first-time stroke patients still had ADL limitations before being discharged from the hospital. After excluding another 46 patients who did not complete the follow-up interviews, the final number of patients included in the analysis was 375. Table 1 shows the characteristics of the study sample during hospitalization. The study sample averaged 70 years. Most of them were over 65. The <50 and 50–64 age groups made up 8.5% and 23.7% of the study sample. There were more males (55.7%) than females (44.3%). Overall, the level of ADL dependency was high. The average number of ADL dependencies was 4.4 of 6 items. The ADL activity with the highest dependency rate was bathing (83.7%), followed by dressing (78.9%), walking indoor (77.9%), using the toilet (74.4%), transferring (72.0%), and eating

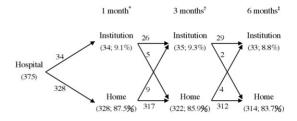


Fig. 1. Numbers and percentages of patients at home and in institutions within 6 months of discharge. (*) Thirteen patients (3.5% of the total study sample) had died; (†) 13+3 (institutionalized at 1 month) + 2 (home bound at 1 month) = 18 patients (4.8% of the total study sample) had died; (†) 18+4 (institutionalized at 3 months) + 6 (home bound at 3 months) = 28 patients (7.5% of the total study sample) had died.

(53.3%). Percentages of patients with an N-G tube, Foley catheter, and tracheotomy were 29.6%, 19.2%, and 0.5%, respectively. Comparisons with patients who had discontinued the study in terms of age, sex, and ADL dependency showed that the study sample was younger, and had a higher percentage of males and more ADL dependencies, but these differences did not reach statistical significance.

4.1. Use of post-hospital care

Fig. 1 shows the movements of patients between the home and an institution after discharge. At 1 month, 87.5% of patients remained at home, 9.1% were in institutions, and 3.5% had died. The percentage of patients at home decreased to 85.9% at 3 months, and further decreased to 83.7% at 6 months. The percentage of patients in institutions remained steady over 6 months at around 9%. The mortality rate increased from 3.5% at 1 month to 4.8% at 3 months, and to 7.5% at 6 months. The institutionalized had more ADL dependencies than those patients returning home. About 73.5% of them still had limitations in 5-6 ADL activities at 1 month. Compared to the institutionalized, patients returning home had better ADL functions. At 1 month, the percentages of patients returning home with 0, 1-2, 3-4, and 5-6 items of ADL dependencies were 43.6%, 9.5%, 24.7%, and 22.3%. Although their dependency level was not as severe as the institutionalized, nearly half of them still required assistance with 3 or more ADLs at 1 month after discharge. The percentages of patients with ADL limitations at 1, 3, and 6 months are given in Table 2.

Percentage with activities of daily living dependencies at 1, 3, and 6 months after discharge for patients in institutions and at home^a

Number of dependencies	1 month		3 months		6 months		
	Institution $(n = 34)$	Home $(n = 328)$	Institution $(n = 35)$	Home $(n = 322)$	Institution $(n = 33)$	Home $(n = 314)$	
0	0.0	43.6	0.0	49.7	0.0	56.4	
1–2	11.8	9.5	8.6	15.6	3.0	9.9	
3–4	14.7	24.7	17.1	16.1	9.1	14.0	
5_6	73.5	22.3	74.3	10.6	87.0	10.7	

a Those deceased were not included.

Table 2

In general, movements between the home and an institution were rare. The probability of relocation decreased with time after hospital discharge. Between 1 and 3 months, 14 of 362 live patients changed the location of care, while only 6 of 357 live patients did the same between 3 and 6 months after discharge. More patients moved from the home to an institution than the other way around. Time spent in institutions was compiled, and the total number of person-days in an institution within 6 months after discharge for the 375 stroke patients was estimated to be 5760 days, or an average of about 15 days per patient.

The use of formal long-term care services, such as personal assistant services, day care, or respite care by stroke patients who returned home was very limited. In the 6-month period, none had used any respite care, only two patients had reported using personal assistant services, and only one patient had reported using day care. The most common reasons for not using the services were "did not need it" and "did not know about it". For the three services, the percentages reported "did not need it" ranged from 81.6% to 87.9%, and the percentages reported "did not know about it" ranged from 7.8% to 11.6%.

Most patients received care from informal sources such as family members or from a live-in helper. Family

caregivers were mostly female (69%) and unemployed (58%). About 86% of them lived with the patients. In terms of relationship with the patient, 42.9% were spouses, 32.8% were sons or daughters-in-laws, 21.0% were daughters or sons-in-laws, and 3.2% were other relatives. A substantial proportion (20%) of stroke patients had a caregiver who was also elderly. About 58% of the family caregivers reported having to care for patients at least 12 h a day and 7 days a week.

The use of a privately hired helper was common. The percentages of patients who had a full-time helper were 21.1%, 17.3%, and 23.7% at 1, 3, and 6 months after discharge. Most of the hired helpers were foreign care attendants. All of the foreign care attendants lived with the disabled patients. At 1 month, 25% of hired helpers were foreign care attendants. At 6 months, it increased to 80%. In terms of patient satisfaction, most patients reported being "satisfied", while about 10% of the patients reported being "less than satisfied" with the services provided by the foreign care attendant.

4.2. Use and needs for nursing care and rehabilitative services

Unlike patients in institutions, those at home required additional arrangements to meet their needs

Table 3 Needs for and use of nursing care and physical therapy among patients in the community at 1 and 6 months after discharge

	At 1 month $(n = 328)$				At 6 months $(n=314)$			
	Need for		Use of		Need for		Use of	
	\overline{n}	%	\overline{n}	%	\overline{n}	%	\overline{n}	%
Wound care	8	2.4	7	2.1	4	1.3	3	1.0
Care of a tracheostomy, Foley catheter, or nasogatric tube	30	9.1	28	8.5	22	7.0	20	6.4
Other invasive nursing procedures	13	4.0	12	3.7	9	2.9	5	1.6
Physical therapy	168	51.2	68	20.7	130	41.4	26	8.3

for nursing care and rehabilitative services. Table 3 shows that the percentages of patients at home needing nursing care ranged from 2.4% for wound care, to 9.1% for care of an a tracheotomy, N-G tube, or Foley catheter. Most patients needing care were able to receive such services. There were few unmet needs. Over the 6-month period, the need for nursing care decreased. In contrast to nursing care, the need for rehabilitative services was much higher, and unmet needs were reported more frequently. Of the 168 patients who reported needing rehabilitative services at 1 month, only 68 had received any services. About 60% of all those who needed the services had unmet needs. At 6 months, the prevalence of unmet needs had increased to about 80% among those requiring rehabilitative services.

5. Discussions and policy implications

This research provides a profile of the use of posthospital care and long-term care services after hospital discharge. Issues such as the over reliance on the family, low utilization of community-based services, the use of foreign care attendants, and unmet needs have been identified. Relevant policy implications are discussed below.

Family members were the primary source of care for disabled persons after hospital discharge. In this study, about 75% of patients at home relied solely on family members for care. A large percentage of family caregivers cared for the patient at least 12 h a day, 7 days a week. While this may be viewed as a sign of traditional value of filial piety, there are concerns about caregiver burdens, and how long a family can sustain the level of care without formal assistance. The negative effects of caregiver burdens on caregiver's health and well-being have been reported in numerous studies summarized by Low et al. [17]. While the use of formal services can reduce caregiver burdens, the traditional value of caring for one's own elderly can at times prevent a caregiver from seeking formal assistance. Studies have demonstrated that the use of formal community-based services can sometimes bring a social stigma upon caregivers. Caregivers at times are reluctant to use the services for fear of being criticized by other family members [18].

Another question is how long the family members can remain the main source of care. Despite the emphasis on traditional family values, there is no reason to expect that family care will continue indefinitely. The sense of obligation to care for the elderly in the family is likely to diminish over time as families become more westernized. The percentage of elderly not living with their children has increased from 38.7% in 1992 to 49% in 2002 [19]. More elderly are expected to live alone in the future. The role of family members in the provision of long-term care should gradually decrease. The challenges in post-hospital care and long-term care policy in Taiwan and in other Asian countries with similar cultural values are in how to shift the reliance on family members to formal sources of community-based care, yet at the same time, maximizing the role of families in supplementing the care provided through formal resources.

The use of community-based care is very limited in Taipei. The percentage of home- or community-based care users in our research was much lower than those reported in developed Western countries [20–22]. Community-based services are a recent phenomenon in Taiwan [23]. Data have shown that public awareness of community-based services is low, but after being informed of the services, the willingness to use them is quite high [24]. A care management system or an effective discharge planning program may help connect users and services, and more emphasis should be placed on educating patients and caregivers about the availability and benefits of community-based resources and how to acquire these services.

In this study, about 10% of stroke patients ended up in institutions, similar to other studies conducted in Western countries [2,6,25]. Beginning in 1995, institutional beds have significantly increased as a result of government subsidies [24]. Based on data from the Department of Health and the Ministry of Interior Affairs, currently there are more than 71,765 institutional beds [26]. After including beds in uncertified institutions and long-term care beds in hospitals, there is an averages of about 3.2 institutional beds per 100 elderly.

Since Taiwan has placed most of its long-term care funding toward developing institutional resources, there are few affordable community-based services available. The emphasis on institutions contradicts the traditional values of filial piety. Thus, for those families who desire to keep the patient at home, foreign care attendants have become a very attractive option.

It is highly price competitive. As indicated in the study, most of the local care attendants were gradually replaced by foreign care attendants within 6 months after discharge. A patient may use a local care attendant after hospital discharge, but tended to switch to a foreign care attendant if the need for care persisted. In a way, local and foreign care attendants have each developed their own market niches. Foreign workers serve those with long-lasting disabilities, while local workers are utilized for those needing short-term care.

As more people turn to foreign care attendants as a source of long-term care, regulations to ensure the quality of care should be established. Foreign care attendants should meet similar criteria as local workers and should be subjected to similar regulations. At present, language proficiency and basic caregiver training are not required for foreign attendants, while local care attendants are required to undergo 80 h of training. Foreign care attendants are currently categorized as informal care. This has produced several disadvantages. Like most migrant workers, they are easily taken advantage of by manpower agencies and employers. Several reports have already documented the exploitation of foreign workers in Taiwan [27]. Through a process of formalization, the training requirements, rights, and obligations of foreign workers can be clearly specified. This can serve to improve the quality of care for the disabled and to protect foreign care attendants from exploitation.

In this study, unmet needs were observed in rehabilitative services but not in nursing care. This is probably due to differences in reimbursement policies. The National Health Insurance in Taiwan covers two home nursing visits per month, but not for in-home rehabilitation services. Only outpatient rehabilitation services are reimbursed. For stroke patients, a trip to an outpatient rehabilitation clinic poses significant transportation challenges. The problem is worse if the caregiver is also elderly. The service delivery process of rehabilitative services ought to be reassessed. Barriers, such as difficulties in acquiring transportation or the lack of caregiver escort, should be addressed. The National Health Insurance Bureau should also consider if inhome rehabilitative service should be covered in order to improve access to care. Another possible reason for unmet needs in rehabilitative services could be the insufficient supply of therapists. In 2003, the number of licensed therapists in Taiwan was 2659 [28]. It was estimated that about 4100 physical therapists are needed to serve persons 50 years or older alone [29]. National human resource development policy should adapt to meet the increasing demands resulting from population ageing.

There are several limitations to this study. The number of subjects who discontinued their participation before the 6-month follow-up was about 10.9%. Although these subjects did not differ significantly from the study sample, they were older and had greater ADL dependency. Thus, this study probably slightly underestimated the use of institutions, since age and ADL dependencies are correlated with institutionalization. Most of the patients were from the vicinity of Taipei City, where post-hospital care and long-term care resources are more abundant than in other areas of Taiwan. If similar studies were carried out in other areas of Taiwan, the use of post-hospital care would likely be less, and more unmet needs would likely be observed. Data in the study were self-reported, collected through face-to-face and telephone interviews. Some information, such as unmet needs, is subjective, based on the viewpoint of patients or caregivers. Such information might not be medically valid, but it can still indicate a problem with accessibility, i.e. patients feel that they need services, but cannot access them.

In the future, hospitals are likely to discharge stroke patients more quickly due to financial pressures as the National Health Insurance Bureau moves to shorten length of stays. Caregivers will have a shorter time to locate care resources, to identify care alternatives, and to make care decisions. The delivery of post-hospital care is becoming an important issue in Taiwan, as well as in many developing countries in Asia. With the number of elderly rapidly increasing and more people suffering from chronic conditions, many Asian countries will face an increase in demand for post-hospital care and long-term care. This study presents a profile on the use of post-hospital care in Taiwan. It also points out what can be expected in other Asian countries with similar sociocultural backgrounds. Many of the problems in Taiwan can be avoided with some foresight in planning, and other developing countries can learn from our experience in Taiwan. Continuing to support family members caring for their own elderly with additional home- or community-based services should be a policy priority. The acceptance of community-based services is high, but the volume of use in community-based services may be small at first due to unfamiliarity with the services. More efforts can be placed on educating family caregivers during discharge planning. The delivery of rehabilitative services and policies in the development of rehabilitative manpower should be reassessed to reduce unmet needs. The extensive use of foreign care attendants as a source of informal care will lead to issues of quality and exploitation. The government should resolve these issues through formalizing foreign labors in Taiwan.

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