

Post-Acute Care for Older Patients: the Emerging Needs in Asia

Li-Ning Peng^{1,3,4} and Liang-Kung Chen^{1,2,4,*}

¹Aging and Health Research Center

²Institute of Health Welfare and Policy

³Institute of Public Health, National Yang Ming University

⁴Center for Geriatrics and Gerontology, Taipei Veterans General Hospital

Asia is aging fast, particularly eastern Asia, including Taiwan, China, Korea, and followed by southern Asia [1]. Health characteristics of older people differ extensively from adults, which deserves some specific designs in the healthcare system to ensure the quality of care. Modern healthcare system emphasizes reducing acute hospital length-of-stay to improve the efficiency of the whole healthcare system, but it may jeopardize the chances of frail older patients to receive sufficient rehabilitation [2]. It is generally agreed that older patients need a longer period of time to recover from the acute illnesses and the process of recovery requires multidisciplinary approach [3]. A common difference of healthcare system between Asian countries and western countries include the lack of well-established general practitioner system and post-acute service system [4]. Moreover, the Geriatrics is also a newly developed specialty in most Asian countries that currently only Taiwan, Hong Kong, Singapore and Japan have developed some specialty training programs [5-8]. Due to the health care needs of older people, acute care system and long-term care system have been developed in various forms across Asian countries, but not post-acute care services. To date, only Taiwan and Singapore have formally started post-acute services. However, due to the unavoidable needs, post-acute care services did exist in the healthcare systems of individual country with different names [9-11].

In recent years, a series of researches regarding post-acute care in Taiwan has been published internationally sharing important information of post-acute care to the world. Taiwan is one of the fastest aging countries in the world and the development of post-acute care services was started based on the British system, i.e. intermediate care. The concept of intermediate care was formally introduced in 2000 after the National Bed Enquiry in England, which has become a national standard in the National Service Framework for Older People of England afterwards [12]. Intermediate care provides integrated social and health care services close to home to promote functional independence and prevent unnecessary hospital re-admissions for older patients after acute illnesses. Several established models of intermediate care have been developed in England, e.g. hospital-at home, community hospital, rapid response team, hospital supported discharge team, community rehabilitation team and so on. Amongst, community hospital model has been considered the most cost-effective model [12], and so was the post-acute care service system built in Taiwan. Compared to intermediate care in England, post-acute care developed in the United States was more skilled nursing facility-based practice that aimed to shortened hospital length of stay in acute beds. Therefore, post-acute care services in the United States may mix with some acute care and sub-acute care, instead of the purely "post-acute" stage. Currently, in the United States, four types of post-acute care services have been developed, including skilled nursing facilities, home health agency services, inpatient rehabilitation facilities and long-term care hospitals [13].

In England, patients referred to the intermediate care services were evaluated by the primary care team and integrated with the discharge planning by preparing community-based care package for patients in need. Therefore, the determination of referrals for intermediate care

was made according to the care needs for individual patients, instead of disease entities. However, in the United States, the referral criteria for post-acute care were firstly categorized by disease entities, including stroke, traumatic brain injury, hip fractures and patients receiving arthroplasty. For patients with multiple complex medical conditions, e.g. chronic heart failure, chronic obstructive pulmonary disease, and osteomyelitis, they would be admitted to the long-term care hospitals in the United States. Nevertheless, main post-acute care services in the United States were delivered through skilled nursing facilities and home health agencies. Eventually, elderly patients may present with different functional deficits on top of the acute illnesses, which absolutely needs multidisciplinary team intervention after the success of treatment for acute conditions. Therefore, screening post-acute care needs for older patients should be based on the multiple complex care needs instead of specific disease care needs. Based on this scenario, the post-acute care services in Taiwan were screened and delivered by the comprehensive geriatric assessment (CGA) and the clinical outcomes were also evaluated by CGA [9]. In American models, evaluation of effectiveness and care problems identification of post-acute care were done by different instruments in different settings, e.g. using minimum data set in skilled nursing facilities. Nevertheless, these instruments were similar to CGA in clinical Geriatrics. In England, no specific instrument was implemented to evaluate care problems or clinical effectiveness but using clinical judgement of multidisciplinary team.

The development of post-acute care services for frail older patients is of great importance because nearly a third of older patients discharged from medical wards of acute hospitals may die within a year if no post-acute care was provided [3]. Moreover, every 3 months, a quarter of these patients may re-admitted to acute wards [3]. This discovery strongly demonstrated the significance of post-acute care for older patients, irrespective of disease entities. Taiwan started the post-acute care services in 2006 and 3 tertiary medical centers with 5 community hospitals (150 beds in total) participated in the pilot program. The patients were screened by CGA at tertiary medical centers or acute wards of the community hospitals. The intermediate care units of the community hospitals were refurbished and staffed according to the principles of elder-friendly hospitals to provide a home-like environment that equipped by a multidisciplinary care team. A universal practice guideline was introduced by the Intermediate Care

***Corresponding author:** Liang-Kung Chen, Center for Geriatrics and Gerontology, Taipei Veterans General Hospital No. 201, Sec. 2, Shih-Pai Road, Taipei, Taiwan, 11217, Tel: +886-2-28757830; Fax: +886-2-28757711; E-mail: lkchen2@vghtpe.gov.tw

Received February 16, 2012; **Accepted** February 20, 2012; **Published** February 22, 2012

Citation: Peng LN, Chen LK (2012) Post-Acute Care for Older Patients: the Emerging Needs in Asia. J Gerontol Geriat Res 1:e101. doi:[10.4172/2167-7182.1000e101](https://doi.org/10.4172/2167-7182.1000e101)

Copyright: © 2012 Peng LN, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Program Management Office in Taipei Veterans General Hospital that regulated the service model of all participating hospitals [14]. Overall, we found that nearly a quarter of elderly patients in the acute wards may possess certain functional problems that were suitable for post-acute care referrals (unpublished data). Moreover, current program significantly improved short-term physical and mental function in 4-week services [9], and this functional improvement was also beneficial to long-term mortality risk reduction for older patients [10]. Besides, we found a significant dose-dependent relationship between physical therapy and functional outcomes, which suggested the clinical benefits of the intensive physical re-ablement program in post-acute care settings. Meanwhile, less than 20% of patients admitted to intermediate care units may be re-admitted to acute wards due to various reasons, mainly infectious diseases, and some fall-related injuries (unpublished data). Post-acute care is sometimes being mistaken as part of long-term care services, which is not correct in many dimensions that post-acute care is designed mainly to promote functional recovery for frail older patients instead of maintaining function in long-term care settings. Therefore, post-acute care should be delivered within certain time limit. In England, intermediate care is usually no more than 6 weeks and in the United States it may extend to 100 days in some occasions. However, to draw a clear distinction of post-acute care between acute and long-term care is challenging and is dependent on the healthcare service systems in different countries.

In conclusion, older patients usually need a longer period of time to recover from acute illnesses but shortening acute hospital length-of-stay is a common solution for every country to reduce healthcare expenditure, which will definitely jeopardize the chances of rehabilitation for frail older patients. Therefore, introducing the post-acute services in modern healthcare systems is of critical importance to improve the efficiency of acute care system and to ensure the health of older patients. Since Asia is aging very fast, the establishment of post-acute care system should be initiated as soon as possible to cope with the healthcare challenges in the near future.

References

1. Lutz W, Samir KC (2010) Dimensions of global population projections: what do we know about future population trends and structures? *Philos Trans R Soc Lond B Biol Sci* 365: 2779-2791.
2. Young J, Forster A, Green J, Bogles S (2007) Post-acute transfer of older patients to intermediate care services: the sooner the better? *Age Ageing* 36: 589-592.
3. Young J, Robinson M, Chell S, Sanderson D, Chaplin S, et al. (2005) A prospective baseline study of frail older people before the introduction of an intermediate care service. *Health Soc Care Community* 13: 307-312.
4. Chen CY (2010) Meeting the challenges of eldercare in Taiwan's aging society. *J Clin Gerontol Geriatr* 1: 2-4.
5. Weiss BD, Mohler MJ, Fain MJ (2011) Geriatrics in Taiwan: what is the solution? *J Clin Gerontol Geriatr* 2: 93-95.
6. Arai H (2009) Geriatrics in the most aged society, Japan. *Arch Gerontol Geriatr* 49 Suppl 2: 1-2.
7. Choi H (2001) Present and future of Korean geriatrics. *J Korean Geriatr Soc* 15: 71-79.
8. Lin MH, Peng LN, Chen LK (2010) Developing geriatric services in Taiwan. *J Korean Geriatr Soc* (in press)
9. Lee WJ, Peng LN, Cheng YY, Liu CY, Chen LK, et al. (2011) Effectiveness of short-term interdisciplinary intervention on postacute patients in Taiwan. *J Am Med Dir Assoc* 12: 29-32.
10. Chen LK, Chen YM, Hwang SJ, Peng LN, Lin MH, et al. (2010) Longitudinal Older Veterans Study Group. Effectiveness of community hospital-based post-acute care on functional recovery and 12-month mortality in older patients: a prospective cohort study. *Ann Med* 42: 630-636.
11. Yap LK, Ow KH, Hui JY, Pang WS (2002) Premature discharge in a community hospital. *Singapore Med J* 43: 470-475.
12. Young J (2009) The development of intermediate care services in England. *Arch Gerontol Geriatr* 2: 21-25.
13. Prvu Bettger JA, Stineman MG (2007) Effectiveness of multidisciplinary rehabilitation services in postacute care: state-of-the-science. A review. *Arch Phys Med Rehabil* 88: 1526-1534.
14. Chen LK, Hwang SJ (2007) Intermediate care: the key to health care for older people. *Taiwan Geriatr Gerontol* 3: 1-11.