Introduction

Stroke care in disability necessitating long-term care. Understanding how patients are cared for following stroke is important to ensure adequate provision for patients and support for informal caregivers.

Objectives

The aims of this structured literature review were to:

i. Determine the relative contributions of informal and formal caregivers to the long-term care of stroke patients in Asia

ii. Quantify the financial burden of informal care in Asia

iii. Evaluate if there are any differences between countries in Asia with respect to the above outcomes

Methods

• MEDLINE, MEDLINE IN-PROCESS and Embase were searched on 24th February 2016, with no date restrictions.

• Terms for stroke, care, and Asian countries were combined with terms such as “contribution” and “time” to identify studies describing the amount of informal or formal care received. Economic search terms were also used to find studies on the financial burden of caregiving.

• Only studies published in English were included.

Results

Targeted Literature Search

• The database searched yielded 266 results, of which 23 were ultimately relevant.

• Eight studies reported the proportion of patients receiving informal versus formal care, or the proportion of patients receiving care in informal (e.g. at home) versus formal (e.g. in an institution) care settings.

• Ten studies described the financial burden of care, measured as hours of care per day, long-term duration of care, or direct medical and/or indirect costs.

• Five studies reported data relevant to both the proportion of informal/formal care and the financial burden of care.

• Taiwanese data were excluded as the largest number of included studies (6) were studies, but studies from India, Japan, China, South Korea, Hong Kong, Singapore and Thailand were also identified.

Post-stroke Care Setting

• Substantial heterogeneity was seen in the reported post-stroke care setting, both within and between countries in the Asia-Pacific region (Figure 1). Post-stroke care settings were based on the included studies for the following categories of patient:

  - Care setting following discharge from a rehabilitation unit (4 studies).
  - Care setting following discharge from a hospital (2 studies).
  - Care setting after stroke (1 study).
  - Care setting relevant to elderly long-term care users who had had a stroke (1 study).
  - In all 4 studies assessing the care setting among patients discharged from a rehabilitation unit, the majority of patients were reported to be cared for in the home.

Time Spent Caring

• Daily time spent caregiving by informal caregivers, a proxy measure for the financial burden of informal care, was also included in the studies assessed (Figure 2).

Caregiving Duration

• Little information was reported on the duration of post-stroke caring. One study reported that the mean duration of informal caregiving in China was 81.88 months (equivalent to approximately 0.8 years standard deviation [SD]: 69.9 months). In Japan, the mean duration of caregiving among 100 informal caregivers was recorded as being 4.76 years (SD: 5.75 years).

Discussion

This research provides a useful overview of the nature of caregiving in Asia following stroke.

Among patients discharged from a rehabilitation unit, a greater proportion received care at home than in any other setting.

This observation has several possible explanations:

i. Patients showing greater signs of recovery in the period immediately after stroke might be thought to be more likely to benefit from rehabilitation, and therefore might be more likely to be admitted to such a unit. As such, even before rehabilitation, these patients could be comparatively less affected by stroke and consequently more likely to be sufficiently independent to live at home after discharge.

In the future, it may be expected that rehabilitation programmes will have a positive impact on patient recovery and independence, allowing patients to subsequently be cared for at home.

iii. Patients who were discharged from rehabilitation units to acute care hospitals were excluded from two of the studies, potentially biasing the results.

Interestingly, studies of the countries with the highest gross domestic product per capita purchasing power parity (Cina, Hong Kong, Japan and Singapore) reported a majority of patients being cared for at home after stroke. However, this could be attributed to studies from these countries reporting the care setting among patients following discharge from a rehabilitation unit.

Seven studies reported data describing the costs of patient care (Table 1). However, differences in patient populations, cost outcomes reported, and time horizons, amongst other factors, prevented direct comparisons between the data from different studies and countries.

Conclusions

Across Asia, substantial heterogeneity was seen in the results for care setting and time spent caring following stroke. This may have been due to differences in study design, but could also have been influenced by country-specific practices and patient treatment pathways following stroke.

References


7. Costello Medical Consulting Ltd, Cambridge, UK, †Costello Medical Singapore Pte Ltd, Singapore

Figure 1 | Proportion of patients receiving care at home versus institutional care following stroke

Figure 2 | Mean daily time spent caregiving by informal caregivers

Table 1 | Care setting following discharge from a rehabilitation unit in Asia

Table 2 | Proportion of patients receiving care at home versus institutional care following stroke in Asia

Table 3 | Daily time spent caregiving among informal caregivers in Asia following stroke.