

## Dementia care mode

The concept of dementia specialized care unit was developed in America in the seventies, in the aim to provide better care to people with dementia. There are no concrete standards on how a dementia specialized care unit should equip itself, while the units claim measures specifically designed for people with dementia such as physical design, program, staff training etc.<sup>1</sup> Previous studies comparing benefits of specialized care units on people with dementia versus integrated care setting resulted in discrepancies in benefits or effectiveness, while the major trend of published studies skew towards confirming that specialized care units benefit some cohorts of people with dementia in some areas. This literature review documented some previous studies in the recent decade examining the advantages of specialized care unit, and added views on what an integrated care setting has been investigated to help people with dementia.

A study conducted by Kopetz et al.<sup>2</sup> on the demographic characteristics of 981 people with dementia in various settings revealed that residents in dementia specialized assisted living facilities were usually with lower cognitive functioning, average mini mental state examination (MMSE) score being 12.0 (n=144), residents in dementia specialized nursing home were with average MMSE score as 5.7 (n=92), which was lower than those in non dementia specialized assisted living facilities (average MMSE = 14.9, n=63) and those residing at home (average MMSE = 16.9,  $p < .001$ , n=682). Another study conducted by Abbott, Bettger, Hampton, & Kohler<sup>3</sup> examining feasibility of measuring social network of people with dementia showed a discrepancy of MMSE of samples that subjects from assisted living facility (setting integrating both people with dementia and people with non-impaired cognitive functioning) were with average MMSE being 25.8, while subjects from dementia specialized care units were with average MMSE being 17.2. The studies quoted for this literature review were mainly targeting people with advanced dementia or people with dementia with impaired daily living skills capability. This might partly be attributed to the tendency of such cohort admitted to specialized care units.

Previous studies indicated that a specialized care setting casts benefits to people with advanced dementia, who need more long-term care. A study<sup>4</sup> examining the quality of life of residents with advanced dementia in special care unit located in Boston, US, stated that residents with advanced dementia obtained better end-of-life care such as better treatment of dyspnea, and less tube feeding, while health care proxy working in special care units claimed a higher work satisfaction, compared with non specialized nursing homes. A longitudinal study onto people with moderately severe dementia also confirmed that people with advanced



dementia may benefit from a specialized care setting in terms of better quality of life, manifested by less decline in daily living activities and less negative emotion such as anxiety<sup>5</sup>; Wimo, Mattsson, Krakau, Eriksson, & Nelvig<sup>6</sup> also indicated that people with mild dementia, after admitted to dementia day care service, showed more cheerfulness and less death wishes than those not admitted. The less decline in daily living activities was echoed by the findings from the national nursing home survey conducted by Luo, Fang, Elliott, & Zhang<sup>7</sup>, in which a significant difference was observed between specialized care units and nursing homes without specialized care units in terms of provision of continence management and use of catheters.

The study conducted by Morgan, Stewart, D'Arcy, & Werezak<sup>8</sup> on people with moderately severe dementia further explained how specialized care units resulted in such benefits. First, specialized care setting usually was equipped with small space and vacancies, thus staff would provide better awareness, orientation, safety, and regulation of stimulation to its residents, than non specialized care setting. In addition, small resident size caused less noise, and specialized care setting usually decorated itself to be home-like environment, therefore residents in such setting were less likely to experience over-stimulation. Second, specialized care setting put more concern on controlled access, and usually less restraint was adopted, which was a finding also observed by Nobili et al.<sup>9</sup>. Gruneir, Lapane, Miller, & Mor<sup>10</sup> and Luo et al.<sup>7</sup> did not observe significant difference in restraint use onto people with dementia with moderately impaired to severely impaired activity of daily living or decision-making capability regarding tasks of daily life between specialized care units and non specialized care units in their studies, but observed less use of bed rails in specialized care units. Third, staff in specialized care setting, compared with non specialized care setting, claimed greater caring competence; this might also result in the above-stated benefits to the residents.

In terms of benefit to the public healthcare system, both studies of Cadigan et al.<sup>4</sup> and Luo et al.<sup>7</sup> indicated that specialized care units helped reduce hospitalization of people with dementia, thus easing the burden to the public healthcare system. The study of Wimo et al.<sup>6</sup> confirmed that people with mild dementia benefited from dementia day care service in terms of reduced incidents and cost of institutionalization.

Logsdon, Pike, Korte, & Goehring<sup>11</sup> examined efficacy of specialized dementia adult day services to people with moderate dementia and their caregivers in terms of quality of life, mood and emotional well-being, behavior, and functioning status. The findings indicated an effect over time that, at the 3-month time point, there was no significant difference observed between the intervention group and the control group in the measured parameters, but at

6-month time point, the intervention group, compared with the control group, showed significantly fewer depressive behavior, fewer total behavioral problems, and their caregivers also showed significantly less distress on behavioral problems.

As for local setting, a study conducted by Kwok, Young, Yip, & Ho<sup>12</sup> examined the effectiveness of dementia specialized day care centre in Hong Kong onto mild to late stage dementia (majority of the study subjects being with mild-to-moderate dementia). The study revealed that such setting benefited users in terms of cognitive function and quality of life, while caregivers' burden was reduced. Another study<sup>13</sup> also supported that dementia day care centre helped reduce caregivers' overload and depression up to a one-year period than caregivers of care recipients not admitting to any day care service. This time span was supported by a pilot study conducted by Chiu<sup>14</sup> indicating that users of dementia specialized care services had better improvement in terms of disturbing behaviors, daily functioning, and caregivers' burden. The study also suggested that admission period should be about 12 months.

Luo et al.<sup>7</sup> pointed out that residents in non specialized care setting experience less falls, but stating that further studies were needed to examine the reason of this finding. Cadigan et al.<sup>4</sup> stated that non specialized nursing homes performed better on pain management, and prescribed less antipsychotic medication to their residents. The latter findings might be attributed to the admission criteria of specialized care setting versus non specialized care setting, which people exhibiting more behavioral problems, thus with greater demand of antipsychotic medication, were more likely to be admitted to specialized care setting. The study by Nobili et al.<sup>9</sup> also revealed that those with behavioral problems are more prone to be admitted to specialized care unit than non specialized care setting, this difference in baseline characteristics might affect the result of comparison.

The above findings reveal that there are a number of factors affecting the effectiveness of specialized care unit, including the physical or environmental design of the setting, what training are provided to both the clients and staff, and admission criteria etc. The findings of the quoted studies may also be affected by these factors, while thus far there is evidence to support that dementia specialized care unit may be beneficial to people with advanced dementia, who need more care, assistance, and training on daily living skills. Clients at specialized care unit may be benefited from the setting because they have a relatively calm environment for their daily activities. In addition, some specialized care units may manage to reduce use of restraint in one form or another, these findings may correlate to that staff at specialized care units reported relatively higher competence and work satisfaction.



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