An International Perspective on Long Term Care: Focus on Nursing Homes

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The world is facing an unprecedented growth of older adults, a sizable number of whom will require nursing home services. Although community-based care delivery systems strive to keep most of those in need at home, nursing homes are increasingly accommodating a more frail population that is straining available resources. This article focuses on common themes evident around the world regarding long-term care of the elderly. Issues related to service delivery, financing, and quality are highlighted. **(J Am Med Dir Assoc 2011; ■: ■–■)**

Keywords: Nursing home; international; quality; financing; demographics

Nursing homes (NH) comprise a key element of the long-term care continuum in most developed countries. Even in those countries where nursing homes have not yet achieved numerical prominence (ie, Korea, China), most health policy experts predict an increasing need for nursing homes in the future, even when factoring in alternative sites of care. The global demographics[1] speak for themselves:

- In 2000 there were 600 million older adults, triple the number of just 50 years earlier
- By 2050 there will be 2 billion older adults
- In developed countries almost one third of the population will be older than 60 years by 2050

In the words of the late Dr Robert Butler, "The experience of the few has been transformed to the destiny of the many."[2]

Contrary to widespread beliefs, population aging is not confined to wealthy countries. Of the 59 countries currently with subreplacement fertility rates, 18 are categorized as "developing." This portends not only a world that is rapidly aging and supported by a smaller tax base, but also one in which the total population may fall dramatically. One estimate by the United Nations is that by 2150, the global population will be half of what it is today![3]

The increasing numbers of older adults worldwide, coupled with diminishing social supports, highlights the need for increased long-term care (LTC) services.[4] This need may further increase depending on the prevalence of obesity, which has tempered recent gains in disability rates.[5] Even in countries renowned for filial devotion and unrivaled life expectancies, significant changes have been observed. In Japan, for example, recent reports have estimated that almost a quarter million centenarians thought to be alive and well in the community, are now missing and presumed dead. These statistics are not only a reflection of fraudulent reporting for financial gain but are also a revealing commentary on disintegrating family ties and/or indifference of the younger generation.[6] No wonder that in China, with an eighth of the population older than 60, new legislation has been proposed that would obligate children to attend to their elderly parents![7]

The review of long-term care that follows is not meant to be an exhaustive treatise but rather a reflection on the approaches different nations have taken with regard to nursing home care, from clinical practice to financing. Many of the comparisons reflect existing data that are most accessible through the Organization for Economic Cooperation and Development (OECD), currently boasting a membership of 33 nations.[8] Although the OECD is the richest repository of health system data from member nations, there are unfortunately relatively few head-to-head comparisons on important issues such as quality of care.

COMMON THEMES

All nations, and importantly specific cultures, recognize the desire of older adults to remain active in the community, leaving NH care as a last resort (short-term rehabilitation being an obvious exception). As a result, a variety of different housing and community-based care-delivery programs have been developed that provide alternative options to traditional NH care. The costs of such care, the mix between public and private contributions, and the array of services offered are quite variable and depend on the extant financing system as well as the health system infrastructure operative in a given locale.

Most of the physician care delivered in NHs is through generalist primary care practitioners, often with input/consultation from geriatricians or generalists with special training in the care of the elderly (personal communication, Bruno Vellas, President International Association of Geriatrics and Gerontology, January 18, 2011). The Netherlands is the

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Table 1. *Differences in Nursing Home Use in Selected Postindustrialized Countries*

Country	% 65 y and older in Nursing Homes
Australia	5.3
Austria	3.6
Canada	3.7
Germany	3.9
Ireland	4.6
Japan	3.2
Korea	0.2
Luxembourg	4.0
Netherlands	2.4
New Zealand	5.9
Norway	6.0
Sweden	7.9
Switzerland	7.0
United Kingdom	5.1
United States	4.3

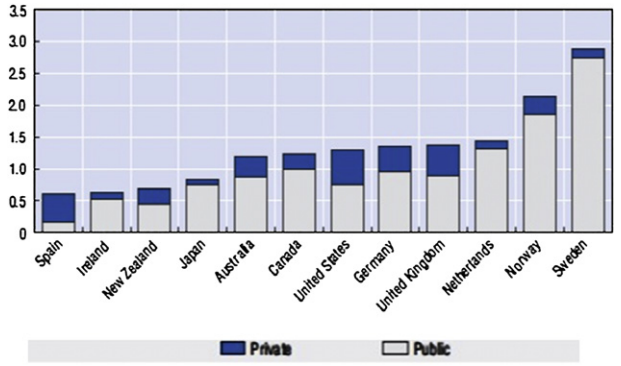

Fig. 1. *Public and private expenditure on long-term care as a percentage of GDP in 2000 in select postindustrialized countries. Figure reprinted with permission from OECD.*

exception to this rule, as NHs there rely exclusively on NH medical specialists.[9,10] In the United States, general internists and family physicians provide care to NH residents in near equal proportions.[11] Geriatricians in the United States, both internal medicine and family practice trained, are also more heavily involved in primary care delivery in NHs compared with other developed countries. Limited data suggest that physicians well trained in, and committed to, NH medicine improve quality.[12,13] Variability in nursing staff ratios between and within countries is another likely driver behind quality.[14]

The increasing acuity and complexity of NH residents appears to be a global phenomenon.[15] In addition, many nations continue to grapple with significant workforce shortages as well as a workforce that is aging and poorly trained in basic geriatric and long-term care principles.[16] To deal with the heterogeneity of the NH population, and to ensure the correct match between clinical needs and services, many countries have found value in standardized preadmission assessments.[16] These assessments vary in their level of comprehensiveness and are by no means universal.[17,18]

Variability of course goes beyond the patient population, staff training, and competency. Variability in services available in NHs, as well as existing care practices, differs both between and within countries.[19,20] In Canada, for example, NH care is designed and regulated by individual provinces, in contrast to the United States where NH oversight and regulation is federal in origin. Even within a given province in Canada, NH-eligible patients may not have equal access to basic services such as physical therapy, occupational therapy, and social work. In many countries, charges for lodging, nursing care, and personal care services are not uncommon, thus affecting accessibility.[16] As seen in Table 1, the percentage of adults 65 years and older residing in NHs is highly variable, from 0.2% in Korea to 7.9% in Sweden.[16,21] The average size of nursing homes is also variable. For example, 88% of NHs in England have fewer than 50 residents, whereas in the Netherlands the average home ranges from 150 to 200 residents and in the United States the average size is just over 100 beds.[17,22]

Table 2. *Dementia Diagnosis and Place of Death, %*

Country	Cause of Death	Home	Hospital	Nursing Home	Hospice
Belgium	Dementia	16.4	22.8	60.6	0.1
	Cancer	26.4	60.3	13.2	0.1
	Other	22.3	50.5	26.9	0.1
Netherlands	Dementia	4.7	3.0	90.7	0.7
	Cancer	40.3	29.7	25.3	3.5
	Other	21.9	40.0	36.1	0.9
England	Dementia	4.9	39.1	55.4	0.2
	Cancer	20.5	50.8	12.6	14.8
	Other	16.6	65.8	15.9	0.9
Wales	Dementia	3.3	52.8	43.8	0.0
	Cancer	20.5	60.9	9.8	6.7
	Other	15.2	71.7	12.5	0.2
Scotland	Dementia	7.3	37.6	54.9	0.3
	Cancer	21.9	58.3	19.7	0.0
	Other	17.1	67.6	15.2	0.1

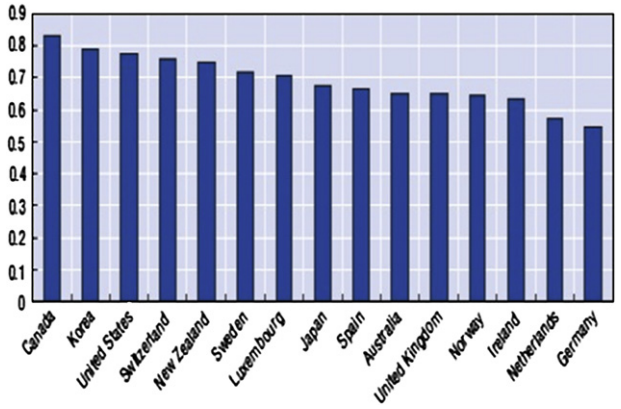

Fig. 2. *Share of spending on institutional care in total public long-term care expenditure in 2000 in selected postindustrialized countries. Figure reprinted with permission from OECD.*

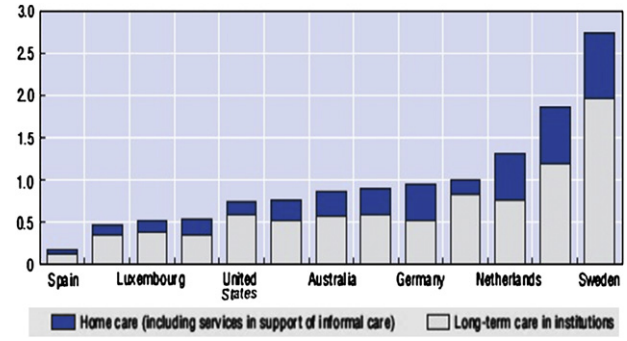

Fig. 3. *Public expenditure on long-term care as percentage of GDP in 2000 in selected postindustrialized countries. Figure reprinted with permission from OECD.*

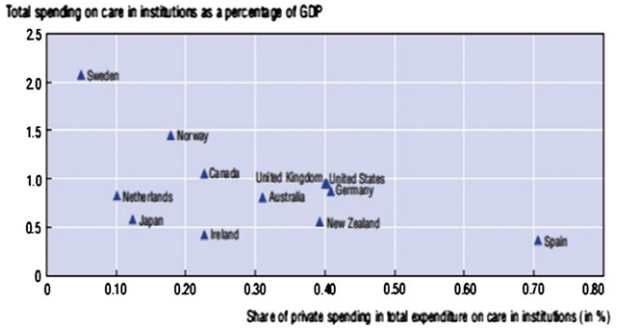

Fig. 4. *The role of private spending on care in institutions. Figure reprinted with permission from OECD.*

Table 2 highlights variability in underlying diagnosis as a cause of death in individuals dying in NHs among 5 countries. Notably, there is a twofold difference observed between Wales and the Netherlands with respect to dementia as an underlying cause of death.[23] Recognizing that NH residents of different countries differ significantly as regards length of stay, age, and physical and cognitive function, some commentators have gone so far as to posit that the "nursing home" as a venue of care does not "provide a sound basis for cross-national comparisons."[24]

FINANCING

Despite different funding mechanisms and systems of care, many nations appear to expend similar amounts on long-term care services, expressed as a percentage of GDP. As seen in Figure 1, most OECD countries are clustered in the range of 0.5% to 1.6% of GDP, with Norway, Sweden, and Spain being the exceptions.[16] The nature and extent of services provided is clearly a factor in explaining these differences.

As seen in Figure 2, spending on institutional care accounts for more than half of the LTC spending in the OECD.[16] Although specific countries may spend a similar amount of their GDP on LTC/NH services, similarities often end there. For example, although Spain and Ireland expend similar amounts, the former is faced with a much older population to care for. Further, financing for this older population in Spain originates primarily from private sources, whereas in Ireland public spending comprises five-sixths of all outlays.[16] Differences in costs between countries are multifactorial but, in part, can be attributed to the extent of administrative overhead. For example, the cost of health care administration for nursing homes differs by a factor of 2 between the United States and Canada ($62 versus $29 per capita) and by a factor of 3 as regards home care administration ($42 versus $13 per capita).[25]

Although public spending remains the most important source of financing LTC services in most countries (Figure 3),[16] private spending plays a more important role for funding institutional LTC than home care (Figure 4).[16]

Table 3 highlights the source of funding for NH care in 13 OECD countries as well as the extent of private cost sharing.[16]

In view of the increasing numbers of frail older adults in need of NH care over the next several decades, many policy makers are struggling to find approaches that balance accessibility, cost, and level of service. In Ontario, Canada, for example, total health care costs in 2011 will consume 46% of the provincial budget, calling into question the viability of

Table 3. *Funding Sources for Nursing Home Care in Selected Postindustrial Countries*

Country	Source of Fund	Type of Benefits	Private Cost Sharing
Australia	General taxation	*In-kind	Standard charge plus means tested
Austria	General taxation	Cash	Pay difference between benefit and cost
Canada	General taxation	In-kind	Means tests vary between provinces
Germany	Insurance contribution	In-kind	Board and lodging not covered; service charges may apply
Ireland	General taxation	In-kind	Max of EUR 26,000
Japan	Insurance +	In-kind	Copayment of 10% cost
Korea	General taxation	In-kind	Free if on social assistance, otherwise means tested
Netherlands	Insurance contributions	In-kind	Income related copayments
Norway	General taxation	In-kind	Charged 80% of income
Sweden	General taxation	In-kind	Fees set by local government
United Kingdom	General taxation	In-kind	Free or charges per ability to pay
United States	Insurance (Medicare); General taxation (Medicaid)	In-kind	Rehabilitation stays up to 20 days; copayment for Medicaid dependent on financial status

* In-kind denotes delivery of goods and services without exchange of money.

Fig. 5. *Correlation between total long-term care spending and the population share of the very elderly in 2000 in selected postindustrialized countries. Figure reprinted with permission from OECD.*

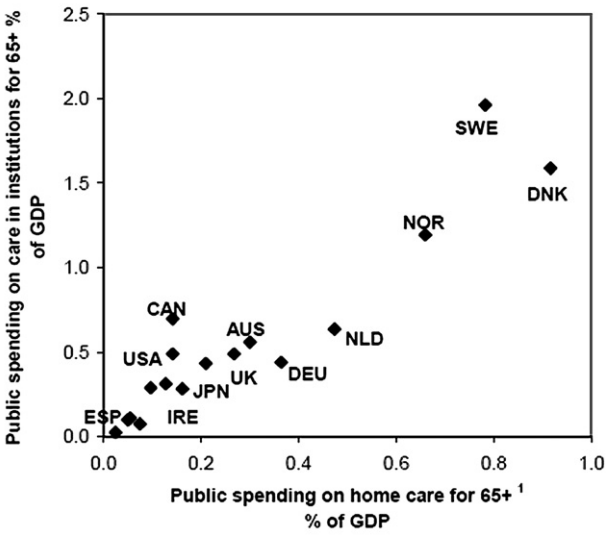

Fig. 6. *Public spending on home care versus institutional care for individuals 65 years and older as a percentage of GDP in selected postindustrialized countries.*

the existing care delivery system.[26] In these circumstances, it becomes even more difficult to expand services and enhance quality simultaneously. Interestingly, although there is a general correlation between the percentage of the population that is elderly and total LTC spending, exceptions to this rule (eg, Japan) again highlight differences in the level of services provided and overall access (Figure 5).[16]

QUALITY

Although concerns about quality appear to be universal, outcome measures remain underdeveloped. Even though several countries use Minimum Data Set-derived tools (ie, InterRAI),[27] comparisons between nations are relatively few. Frequently cited concerns regarding quality of care include pressure ulcers, malnutrition, restraints, pain management, neglect and abuse, accidents and hazards, incontinence, and resident rights/privacy.[16] Of the limited number of studies available for review, variability of quality between countries is evident. Interestingly, not-for-profit status is consistently and independently associated with improved quality and higher staffing ratios.[28]

In a cross-sectional study of 14,504 LTC facilities in Canada, Finland, Hong Kong, Switzerland, and the United States, the prevalence of antipsychotic use ranged from 11% in Hong Kong to 38% in Finland.[29] In this same study, the prevalence of physical restraint use ranged from 6% (Switzerland) to 31% (Canada). Significant variations also were noted within individual countries with case mix and organizational characteristics not being predictive. In a study comparing Minimum Data Set assessments among the United States, Denmark, Ireland, Italy, and Japan, no one country consistently outperformed the others. For example, in residents with poor physical and cognitive function, 7.4% had pressure ulcers in Italy versus 0.7% in Ireland; 35.7% were restrained in Italy versus 7.8% in Denmark; there was a 14.6% prevalence of falls in Denmark versus 1.9% in Japan.[30] In an analogous study of home care quality in Europe, no single country consistently scored worst or best on a variety of quality parameters.[31]

Approaches to quality improvement run the gamut from regulatory oversight with strict performance goals to less punitive programs that attempt to incentivize performance through peer comparisons or by means of payment reform.[16 (p71),32] Standards and associated regulations may derive from a central or local level.[16] The "culture change" movement that emphasizes resident-centered care is gradually moving from its US roots to other nations around the world and will likely grow in importance as a moderator of quality.[33]

Is Home Care the Answer?

Although the availability of community-based services can clearly delay or prevent institutionalization, the equation linking the two is complex.[34] For example, there may be a limit regarding the cost-effectiveness of home care as the level of disability increases, the need for both informal and

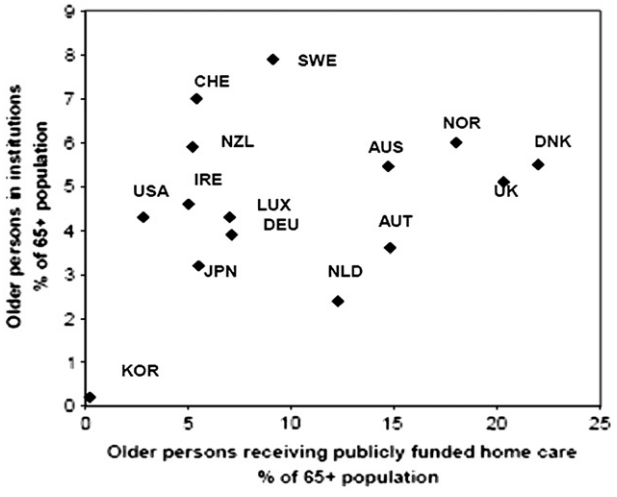

Fig. 7. *Percentage of individuals aged 65 and older who are receiving publically funded home care as a function of the percentage of individuals aged 65 and older who are institutionalized in selected postindustrial countries.*

Table 4. *Characteristics of Older Adults Who Receive Community Care in Selected European Countries*

Status	Finland	Norway	United Kingdom	Italy	France
Married	10.4	24.2	22.1	42.7	37.0
Widowed	55.2	63.9	63.1	44.8	55.3
Living alone	83.8	73.5	64.7	12.8	39.1
CPS score*	0.7	0.7	1.0	2.0	2.2
ADL score†	0.2	0.7	1.6	2.8	2.4
IADL score†	0.5	0.6	1.1	2.2	1.8
Hours of formal care	2.2	2.2	3.3	1.3	3.0

* Cognitive Performance Scale: higher scores denote increasing cognitive disability.
† Activities of daily living and instrumental activities of daily living: higher scores denote increasing functional dependence.

formal care increases, and the overall efficiency of delivering home care services lessens.[35] Thus, the presumption that increasing home care services will invariably lessen the need for NH care has not been consistently observed, as seen in Figure 6 (ie, lack of an inverse correlation).[36] Interestingly, the percentage of "low-care" residents in US nursing homes (ie, potential candidates for community discharge) is higher in states with lower investments in community alternatives.[37]

Figure 7 highlights the disconnect between the number of persons receiving publicly funded home care services versus those receiving NH care.[36]

These data, in part, likely reflect differences in how services are funded between countries as well as the case mix characteristics of specific populations. For example, in the "Aged in Home Care Project," southern European countries (Italy, France) appeared to have home care populations that were significantly more disabled (functionally and cognitively) than their northern European neighbors (Table 4).[38] This, in part, reflects cultural norms that emphasize the care of frail elderly at home rather than in an institutional setting.[39]

FUTURE DIRECTIONS

Regardless of existing funding mechanisms, the need to more fully integrate systems of care has become a priority for countries facing the "geriatric tsunami." Cost and quality are better served when an individual's needs are specifically targeted in a timely manner and preferably in a location that is easily accessible. Examples of care integration are noted in Table 5, many emphasizing care management and the use of interdisciplinary teams.[16] More recent initiatives such as the "Medical Home" in the United States and the "Virtual Ward" in Ontario, Canada, speak to government's focus on care coordination and interdisciplinary collaboration.[40,41]

Specific types of services remain difficult to access and, at times, limit the effectiveness of community-based interventions. These include respite care, transportation, counseling, recreation, and the training of informal caregivers.[16] Self-directed care, wherein individuals are given the opportunity to purchase services, has been shown to increase satisfaction, and enhance access to needed services while at the same time maintaining cost neutrality and quality of life.[42]

The debate in many developed countries is now focusing on how to fund growing LTC expenditures in the face of already high taxes and, in some cases, a shrinking tax base.[3] While demanding more "out-of-pocket" contributions may be an option, it risks shifting the burden onto individuals and their families and negatively impacting their overall standard of living. Private LTC insurance in the United States, once thought to be a viable buffer to personal risk, has been disappointing regarding its overall acceptance and durability as an insurance product.[43]

Although cost savings and enhanced quality are continually sought through new and innovative approaches to care (Table 6), the need for increased numbers of well-trained health care professionals looms large.[44]

The bold agenda for clinical research and quality of care in nursing homes recently articulated by the International

Table 5. *Examples of Care Integration in Selected Postindustrial Countries*

Country	National Strategic Framework	Integrated Delivery Structure
Australia	National Strategy for an Aging Australia	Care assessment teams; home- and community-care program
Canada	Collaborative strategy for home and community care (2002); Aging at home (Ontario-2010)	CHOICE (Alberta); SIPA (Montreal); Virtual Ward (Ontario)(interdisciplinary teams providing services when and where needed)
United Kingdom	National service framework for older people (2001)	Care management by local governments; single assessment process
Japan	Gold plan 2 (2000)	Coordination by care managers
United States	Demonstrations	Social Health Maintenance Organization; PACE (capitation); Medical Home (incentivized care requiring team approach)

Table 6. *Future Directions*

- Person-centered care
- Redefinition of caregiver roles
- Deinstitutionalization (eg, Greenhouses)
- Integration of families into care (shared responsibilities)
- Quality of care definitions broadened to embrace quality of life
- Change in regulatory framework to promote use of best practices without fear of punishment
- Prevention/delay in disability
- Optimizing care through technology

Association of Gerontology and Geriatrics is a clarion call to action.[45] A global focus on leadership competency, evidence-based quality of care indicators, practitioner education, and research within the nursing home setting holds the key to success for the coming years. We can only hope that Robert Browning's inspiring quote is our future… "grow old along with me, the best is yet to be."

REFERENCES

1. World Population Ageing 1950–2050. Available at: www.un.org/esa/population. Accessed December 10, 2010.
2. Ageism in America. Report from the International Longevity Center 2006 Available at: http://ebookbrowse.com/ageism-in-america-the-ilc-report-pdf-d40429911. Accessed January 15, 2011.
3. Longman P. Think again-global aging. Foreign Policy November 2010;53–58.
4. Frankenberg E, Duncan T. Global aging. In: Binstock R, George L, editors. Handbook of Aging and the Social Sciences. London: Academic Press; 2011:73–90.
5. Alley V, Chang V. The changing relationship of obesity and disability, 1988–2004. JAMA 2007;298:2020–2027.
6. Flackler M. Japan, Checking on Its Oldest, Finds Many Gone. Available at: http://www.nytimes.com/2010/08/15/world/asia/15japan.html. Accessed January 15, 2011.
7. China law to make children visit parents. Available at: http://www.bbc.co.uk/news/mobile/world-asia-pacific-12130140. Accessed January 8, 2011.
8. List of OECD Member countries. Ratification of the Convention on the OECD. Available at: http://www.oecd.org/document/58/0,2340,en_2649_201185_1889402_1_1_1_1,00.html. Accessed January 15, 2011.
9. Koopmans R, Lavrijsen J, Zuidema S. The physician's role in nursing homes: The Dutch experience. Arch Int Med 2010. Available at: http://archinte.ama-assn.org/cgi/content/full/170/15/1406. Accessed January 12, 2011.
10. Schols J, Crebolder F, van Weel C. Nursing home and nursing home physician: The Dutch experience. J Am Med Dir Assoc 2004;5:207–212.
11. Katz PR, Caprio T, Karuza J. The state of physician practice in nursing homes: Results from national physician practice surveys. Paper presented at the annual meeting of the American Medical Directors Association in Long Beach, CA, March 13, 2010.
12. Katz PR, Karuza J, Intrator O, Mor V. Nursing home physician specialists: A response to the workforce crisis in long-term care. Ann Intern Med 2009;150:411–413.
13. Johnson M. Changing the culture of nursing homes: The physician's role. Arch Intern Med 2010;170:407–409.
14. Zhang NJ, Unruh L, Liu R, Wan T. Minimum nurse staffing ratios for nursing homes Nursing Economics, March-April, 2006. Available at: http://findarticles.com/p/articles/mi_m0FSW/is_2_24/ai_n17212514/pg_4/. Accessed January 15, 2011.
15. Kasper J, O'Malley M. Changes in Characteristics, Needs, and Payment for Elderly Nursing Home Residents: 1999 to 2004. Washington, DC: Kaiser Family Foundation; 2007. Available at: www.kff.org/medicaid/upload/7663.pdf. Accessed January 13, 2011.
16. Huber M, Hennessey P, Izumi J, et al. Long term care for older people—The OECD Health Project. Paris: OECD Publishing; 2005.
17. Conroy S, Van Der Cammen T, Schols J, et al. Medical services for older people in nursing homes—comparing services in England and the Netherlands. J Nutr Health Aging 2009;13:559–563.
18. Community care access centers. Available at: http://www.ccac-ont.ca. Accessed January 16, 2011.
19. Mitchell SL, Teno JM, Roy J, et al. Clinical and organizational factors associated with feeding tube use among nursing home residents with advanced cognitive impairment. JAMA 2003;290:73–80.
20. Laakkonen M, Finne-Soveri H, Noro A, et al. Advance orders to limit therapy in 67 long term care facilities in Finland. Resuscitation 2004;61:333–339.
21. Ribbe MW, Ljunggren G, Steel K, et al. Nursing homes in 10 nations: A comparison between countries and settings. Age Ageing 1997;26-S2:3–12.
22. CDC Fast Stats-Nursing Home Care. Available at: http://www.cdc.gov/nchs/fastats/nursingh.htm. Accessed Jan 15, 2011.
23. Houttekier D, Cohen J, Bilsen J, et al. Place of death of older persons with dementia. A study in five European countries. J Am Geriatr Soc 2010;58:751–756.
24. Fries B, Schroll M, Hawes C, et al. Approaching cross-national comparisons of nursing home residents. Age Ageing 1997;26.2:13–18.
25. Woolhandler S, Campbell T, Himmelstein D. Costs of health care administration in the United States and Canada. N Engl J Med 2003;349:768–775.
26. Browarski S, Stewart M. Conference board of Canada: 2010 Ontario Budget: Restraint to Come…Tomorrow. Available at: www.conferenceboard.ca/topics/economics/budgets/ontario_2010_budget.aspx. Accessed January 15, 2011.
27. InterRAI. Home page. Available at: http://www.interrai.org/section/view/. Accessed January 15, 2011.
28. Comondore VR, Devereaux PJ, Zhou Q, et al. Quality of care in for-profit and not-for-profit nursing homes: systematic review and meta-analysis. BMJ online 2009. Available at: http://www.bmj.com/content/339/bmj.b2732. Accessed January 14, 2011.
29. Feng Z, Hirdes JP, Smith TF, et al. Use of physical restraints and antipsychotic medications in nursing homes: a cross-national study. Int J Geriatr Psychiatry 2009;24:1110–1118.
30. Carpenter G, Hirdes J, Ribbe M, et al. Targeting and quality of nursing home care. A five nation study. Aging Clinic Exp Res 1999;11:83–89.
31. Bos JT, Frijters DH, Wagner C, et al. Variations in quality of home care between sites across Europe, as measured by home care quality indicators. Aging Clin Exp Res 2007;19:323–329.
32. Castle NG, Ferguson JC. What is nursing home quality and how is it measured? Gerontologist 2010;50:426–442.
33. Koren MJ. Person-Centered Care for Nursing Home Residents: The Culture-Change Movement. Available at: http://content.healthaffairs.org/content/early/2010/01/07/hlthaff.2009.0966.abstract. Accessed January 16, 2011.
34. Lo Sasso A, Johnson R. Does informal care from adult children reduce nursing home admissions for the elderly? Inquiry 2002;39:279–297.
35. Hebert N, Dubuc N, Buteau M, et al. Resources and costs associated with disabilities of elderly people living at home and in institutions. Canadian Journal on Aging 2001;20:1–21.
36. Lundsgaard J. OECD Health Working Papers No. 20 Consumer direction and choice in long term care for older persons. Available at: http://www.oecd.org/dataoecd/53/62/34897775.pdf. Accessed November 10, 2010.
37. Mor V, Zinn J, Gozalo P, et al. Prospects for transferring nursing home residents to the community. Health Aff 2007;26:1762–1771.
38. Carpenter I, Gambassi G, Topinkova E, et al. Community care in Europe. The Aged in Home care project (AdHOC). Aging Clin Exp Res 2004;16:259–269.
39. Bernabei R, Landi F, Zuccala G. Health care for older persons in Italy. Aging Clin Exp Res 2002;14:247–251.

40. Person-centered medical home. July 2006. Available at: http://www.acponline.org/advocacy/where_we_stand/medical_home/. Accessed January 15, 2011.
41. Ministry of Health and Long Term Care. The Virtual Ward. Available at: http://www.health.gov.on.ca/en/ms/ecfa/pro/picb/ward.aspx. Acce ssed January 16, 2011.
42. Alakeson V. International development in self-directed care. Issue Brief (Commonw Fund) 2010;78:1–11.
43. Lieber R. The trouble with long term care insurance. Available at: http://bucks.blogs.nytimes.com/2010/11/12/the-trouble-with-long-term-care-insurance/. Accessed January 15, 2011.
44. Katz PR, Karuza J, Lawhorne L, Schnelle J. The nursing home physician workforce. J Am Med Dir Assoc 2006;7:394–398.
45. Tolson D, Rolland Y, Andrieu, et al. International Association of Gerontology and Geriatrics: A global agenda for clinical research and quality of care in nursing homes. J Am Med Dir Assoc 2011;12:184–189.