Marketization in Long-Term Care: A Cross-Country Comparison of Large For-Profit Nursing Home Chains

Health Services Insights
Volume 10: 1–23
© The Author(s) 2017
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1178632917710533

Charlene Harrington[1], Frode F Jacobsen[2], Justin Panos[3], Allyson Pollock[4], Shailen Sutaria[5] and Marta Szebehely[6]

[1]Department of Social & Behavioral Sciences, University of California, San Francisco, San Francisco, CA, USA. [2]Center for Care Research, Western Norway University of Applied Sciences, Bergen, Norway. [3]Graduate Program in Social and Political Thought, York University, Toronto, ON, Canada. [4]Institute of Health & Society, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK. [5]Centre for Primary Care and Public Health, Queen Mary University of London, London, UK. [6]Department of Social Work, Stockholm University, Stockholm, Sweden.

ABSTRACT: This article presents cross-country comparisons of trends in for-profit nursing home chains in Canada, Norway, Sweden, United Kingdom, and the United States. Using public and private industry reports, the study describes ownership, corporate strategies, costs, and quality of the 5 largest for-profit chains in each country. The findings show that large for-profit nursing home chains are increasingly owned by private equity investors, have had many ownership changes over time, and have complex organizational structures. Large for-profit nursing home chains increasingly dominate the market and their strategies include the separation of property from operations, diversification, the expansion to many locations, and the use of tax havens. Generally, the chains have large revenues with high profit margins with some documented quality problems. The lack of adequate public information about the ownership, costs, and quality of services provided by nursing home chains is problematic in all the countries. The marketization of nursing home care poses new challenges to governments in collecting and reporting information to control costs as well as to ensure quality and public accountability.

KEYWORDS: Ownership, profitability, cost, quality, accountability

RECEIVED: January 13, 2017. **ACCEPTED:** April 6, 2017.

PEER REVIEW: Six peer reviewers contributed to the peer review report. Reviewers' reports totaled 2510 words, excluding any confidential comments to the academic editor.

TYPE: Original Research

FUNDING: The author(s) received no financial support for the research, authorship, and/or publication of this article.

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

CORRESPONDING AUTHOR: Charlene Harrington, Department of Social & Behavioral Sciences, University of California, San Francisco, 3333 California Street 94118, USA. Email: Charlene.harrington@ucsf.edu

Marketization of health and social service organizations includes the ideas of privatizing funding streams and commercializing services.[1] The use of competing private providers to provide health services was widely supported by the concept of new public management that introduced new principles, practices, and regulations into the public sector in the 1990s.[1] These ideas of competition and customer choice have been widely adopted in the long-term care sector and have dramatically increased the growth of for-profit nursing homes. The provision of long-term care by for-profit providers, however, is a growing concern. For-profit incentives are directly related to poor quality,[2–4] where facilities operate with lower staffing and more quality deficiencies (violations) compared with nonprofit facilities.[5–7] In the United States, nursing homes with the highest profit margins have been found to have the poorest quality.[8]

Chains of nursing homes (ie, that own or manage 2 or more facilities) began to grow in the United States and Canada in the l970s, and they became a prominent organizational form in the 1990s.[9,10] Growth occurred primarily through the acquisition of existing facilities and other chains.[9,11] For-profit chains aim to improve profitability by economies of scale, standardization of services, brand name recognition and visibility, and organizational survival in competitive environments.[9–11] Increasingly owned by large private companies and private equity funds, for-profit nursing home chains have changed the amount, type, and quality of services delivered.[5–12]

Study Research Aims

Although previous studies have examined for-profit nursing home chains and marketization in individual countries, no study has examined the trends and variations across countries. This article first presents cross-country comparisons of contextual differences and trends in growth of for-profit nursing home chains in Canada, Norway, Sweden, United Kingdom, and the United States. Second, the study examined the 5 largest for-profit chains in terms of their (1) ownership, (2) corporate strategies, (3) costs, (4) quality, and (5) accountability. The study uses secondary documents from multiple public and private sources to describe chains across countries.

These 5 industrialized countries were selected because the authors are part of a larger international collaborative study of nursing homes with access to extensive documents and data from reliable sources. Because of the contextual variations in demographic trends, market structure, and government funding, we expected to find both differences and commonalities across the countries. Norway and Sweden have similar welfare models and marketization began later than other countries so that for-profit nursing home chains may have less impact on their nursing home services.

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).

Background: Growth of For-Profit Nursing Home Chains by Country

Canada had an industry of small owner-operated homes which began to change with the development of provincial government involvement in the licensing and payment for services. In Ontario, nursing homes were required to be licensed in 1966, and in 1972, hospital insurance was extended to cover nursing homes.[9] These changes encouraged the development of and reliance on for-profit nursing homes and chains because of economic restraints on government funding and government's limited role in the regulation and enforcement of quality.[9] For example, the Ontario government made policy changes that favored the growth of chains in the mid-1990s. These included accepting low bids for contracts, publicly financed capital funding, legislation that eliminated minimum staffing standards, and a revised payment system that allowed companies to maintain their profits without a return to government.[13]

Norway provides comprehensive health and social care services to its population, where hospital services are paid for at the national level and municipalities are responsible for primary care and long-term care (nursing homes, special housing, and home care).[14] This arrangement to give decentralized care responsibility to 429 municipalities was established in l982 and supported again in 2011, allowing municipalities flexibility on how to plan and organize services. In the late 1990s, inspired by new public management and the example of Sweden, the ideas of marketization promoted the separation of purchasers and providers, free choice, and benchmarking. Although a few nursing home services were contracted out in the late 1990s, only 7% of Norway's municipalities had outsourced nursing homes after competitive tendering in 2012.[14]

Sweden also provides health and eldercare services on a comprehensive, publicly financed basis for all its citizens according to their needs rather than ability to pay. The responsibility to organize care services rests with the 290 highly independent municipalities.[15] Since the early 1990s, the Swedish eldercare sector was influenced by new public management with legislation giving local authorities the freedom to determine their own organization and the ability to contract with private providers, which one-third of the Swedish municipalities chose to do in 2012. Since the 1990s, the private provision of publicly funded services has grown substantially including for-profit providers and chains.[15]

After World War II, the United Kingdom established the National Health Services (NHS) which provided free universal health care to the population in hospitals, primary care, and community health services, whereas local authorities provided means-tested social services including residential and home care.[16] In the 1980s, the government enacted policies which led to the closure of NHS long-stay hospitals and growth of the for-profit private nursing home sector. The NHS and Community Care Act of 1990 devolved the funding responsibility of long-term care to local authorities and continued to transfer previously free NHS care into means-tested social care. To manage the constraints of their budgets, local authorities targeted services to those with the greatest need.[16] These policies contributed to the growth of the for-profit industry and chains in the United Kingdom.[17] The trends were a product of the partial privatization of the NHS in the United Kingdom that ultimately resulted in increased costs, less efficient services, and the erosion of the principle of universal services free at the point of delivery.[17]

Nursing homes in the United States grew out of the almshouse system for the poor in the 1800s, which were converted to boarding homes in the 1900s for residents to pay their own care, especially after the enactment of the federal Old Age Assistance law in 1915 and the Social Security Acts in 1935.[18] Between the 1920s and the 1950s, the number of US nursing homes grew dramatically and ownership changed from small largely nonprofit providers to most of the for-profit companies. After 1965, the growth in nursing homes and the shift to for-profit companies were fueled by a steady source of revenues after the enactment of the Medicare and Medicaid programs and the Federal Housing Authority loan guarantee program.[18] Major growth occurred in the 1990s with many acquisitions and mergers by chains.[11,19]

Methodology

Specific research aims

This descriptive and explorative study had 2 specific research aims. The first aim was to describe the contextual differences and the privatization and the growth trends of nursing home chains in 5 industrialized countries in the 2005-2014 period. The second aim was to describe the 5 largest for-profit chains in each country in terms of their (1) ownership, (2) corporate strategies, (3) costs, (4) quality, and (5) accountability in the most recent period of 2015-2016. We included historical data on ownership since 2005 where data were available to identify trends. In each country, the 5 largest for-profit nursing home chains were selected based on number of beds, except in Norway only had a total of 4 chains.

Study design and data collection

For the first aim, descriptive data for 2005 and 2014 were collected from each country (the most recent available data). Background documents were obtained from government sources describing the population, nursing homes and beds, ownership/management, chains, occupancy rates, and government expenditures. For the second aim, we collected descriptive data on the 5 largest chains in each country using multiple secondary sources including public and private documents from government, corporate reports, market reports, media reports, and other sources for the most recent time period (2015-2016). The secondary sources of data collected were cited in the text and tables.

For profitability, we used standard financial measures including both the earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs (EBITDAR) which is the earnings before interest, tax, depreciation and amortization (EBITDA), which is EBITDAR minus lease expenses. Data on quality were only available in the province of Ontario, Canada, and the United States. In Canada, government reports were used to identify deficiencies (regulatory violations) to indicate quality. In the United States, publicly available government administrative data were obtained to examine staffing and deficiencies for each nursing home chain.[20]

Limitations

It should be noted that there were many limitations in the quality and the availability of data in each countries and from the largest nursing home chains because most data were not publicly available. Data from private industry reports could not be confirmed and data from the large nursing home chains often varied by source. Thus, the findings represented the authors' best efforts of compiling information on companies from recent sources.

It would have been desirable to have trend data over a longer time period by countries as well as data for the large chains. Unfortunately, historical trend data on nursing homes chains were not readily available except for publicly reported companies. Data on beds and homes were available for some chains in Canada and the United States for 2005 from private sources (not government) but were very limited for the United Kingdom. Some chain data on employees and revenue growth from private sources were available in Norway and Sweden, and several companies were new since 2005. It should also be noted that generally nursing homes do not report on homes that are owned and those that are managed so the term ownership in this article includes both homes that are owned and managed.

Data analysis

The overall trend data were analyzed separately for each country and for the 5 largest chains in each country. For each chain, we analyzed the following: (1) type of corporate owners and changes over time, their organizational structure if available, their growth since 2005, and their market share in each country; (2) corporate strategies including the separation of property from operational companies, diversification in companies and services;, location of services, and tax havens; (3) cost information including revenues and profitability; (4) quality indicators including government sanctions, staffing levels, and regulatory violations (deficiencies) (where available); and (5) public accountability and transparency in terms of access to ownership, financial, and quality information. Finally, the findings in each country were compared with identify commonalities and differences related to the growth and impact of the 5 largest for-profit chains and policy issues were discussed.

Findings

Comparative context

All 5 counties experienced growth in the population aged 65 years and above between 2005 and 2014, with the highest proportion of the aged population in the United Kingdom and Sweden (20%) (see Table 1). The number of nursing home beds per 1000 population, however, declined during period in all the countries with the greatest declines in Canada and Sweden. In 2014, the United Kingdom had the lowest overall rate of beds per 1000 aged population, and Norway and Sweden had the highest rates. Occupancy rates were highest in Norway (98%) and remained similar between 2005 and 2014 in all countries, except in the United States which declined to 82%.

In 2014, for-profit ownership of nursing homes was the highest in the United Kingdom (86%) and the United States (70%) and substantially lower in Canada (37%), Sweden (18%-19%), and Norway (6%) (see Table 1). The proportion of for-profit ownership increased in all countries between 2005 and 2014 except in Canada which fell by 20%. The largest increases in for-profit ownership were in Norway and Sweden. Government ownership of nursing homes fell between 2005 and 2014 in the United Kingdom and Sweden and remained similar in Canada and the United States. Data on ownership and management were combined, and some companies in Norway, Sweden, and the United Kingdom have contracts with local government to manage nursing homes. In 2014, government operation of nursing homes was 89% in Norway and 79% in Sweden compared with about 6% in the United Kingdom and the United States.

In 2014, for-profit nursing home chains were the dominant providers in the United Kingdom and the United States compared with 17% of homes in Sweden, 14.5% in Canada, and only 4% in Norway (Table 1). The growth in chains occurred in all countries where data were available, with a large increase in the United Kingdom (from 44% to 64% of homes) and over double the percentage in Sweden and almost double in Norway since 2005.

Total expenditures for nursing homes remained similar in Canada and the United States between 2005 and 2014, whereas increasing in the United Kingdom, Norway, and Sweden (Table 1). The proportion of nursing home residents funded by government was highest in both Norway and Sweden where 100% of residents are funded by government. In Canada, United Kingdom, and United States, the percentage of residents funded by government decreased slightly between 2005 and 2014, with the greatest decrease in Canada (from 86% to 77%).

Largest For-Profit Nursing Home Chains in Canada

Ownership

Extendicare was the largest for-profit nursing home chain in Canada with 13 562 beds and 101 nursing homes in 2015

Table 1. Trends in nursing homes, beds, ownership, and expenditures.

	CANADA[50–52]		NORWAY[53]		SWEDEN[54–60]		UNITED KINGDOM[61–64]		UNITED STATES[64–67]	
	2005	2014	2005	2014	2005	2014	2005	2014	2005	2014
Population >65 years of age (and % of total)	4205501 (13.0)	5584592 (15.7)	678000 (14.7)	812000 (16.0)	1565000[54] (17.3)	1913000[54] (19.6)	9201345 (18)	11117000 (20)	36790113[64] (12.4)	46243211[64] (14.6)
No. of facilities	1630	1334	1002	979	Around 2600 in 2011[55]		4853	5144	16032[64]	15646[64]
No. of beds	173376	147926	38929*	40184	100400[56]	88712[57]	201200	217700	1717272[64]	1694462[64]
No. of beds per 1000 aged 65+years	41.2	26.5	60.5	49.5	64.2	46.4	21.9	19.6	46.7[64]	36.6[64]
Average no. of beds per facility	101.3	110.8	39	42	Around 40 (in 2011)[55]		45	50	107.1[65]	108.3[65]
Ownership by type (%)										
For-profit	46.9	37.4	3.3 (2009)	6.2	10-11[58]	18-19[58]	81.1	86.3	66.0[64]	69.8[64]
Nonprofit	22.3	30.7	4.6 (2009)	4.9	2-3	2-3	7.5	8.1	28.0[64]	24.0[64]
Government	30.8	31.9	92 (2009)	88.9	86.6[56]	79.1[57]	11.5	6.0	6.0[64]	6.2[64]
Chains (%) of all beds/homes	12.4% by beds[51] 11% by homes[51]	17% by beds[51] 14.5% by homes[51]	2.5%** by homes	4%** by homes	8%** by homes[58]	17%** by homes[58]	53.3% by beds 44% by homes	70.6% by beds 64.1% by homes	52.1% by homes[66]	55.9% by homes[65]
Occupancy rates (%)	96.1	97.1	98**	98	NA	NA	89.6	90	85.5[64]	82.4[64]
Total NH expenditures in US $	$8.7 Bil ($10.5 Bil Canadian)	$9.4 Bil ($10.4 Bil Canadian)	$3.2 Bil (NOK 27 Bil)	$5.5 Bil (NOK 46 Bil)	$5.7 Bil (SEK 50.3 Bil)[56]	$7.1 Bil (SEK 62.8 Bil)[59]	$8.77 Bil (£6.199 Bil)	$15.66 Bil (£8.466 Bil)	$112 Bil[67]	$115.6 Bil[67]
% of NH residents paid by government	86	77	100	100	100[61]	100	60	58	78[66]	77[65]
% of NH expenditures paid by government	74	69	88	87	96[60 (2003)]	97[60 (2012)]	NA	NA	60[67]	60[67]

Abbreviations: NA, not applicable; NH, nursing home.
*The number for 2005 includes a few beds in residential care wards in combined nursing home—residential care homes and the number of homes was adjusted for 2014 and includes a few retirement homes and homes for disabled.
**Estimated. http://www.ssb.no/en/helse/statistikker/pleie/aar-forelopige/2014-07-08#content; http://ssb.no/helse/statistikker/pleie/aar/2016-06-29?fane=tabell&sort=nummer&tabell=271503; https://www.ssb.no/statistikkbanken/SelectVarVal/Define.asp?MainTable=KostHelseTjen&;KortNavnWeb=helsesat&PLanguage=0&checked=true; https://www.fhi.no/en/hn/elderly-health/elderly-over-65-years-in-norway—f/; http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Population_age_structure_by_major_age_groups,_2005_and_2015_(%25_of_the_total_population)_YB16.png; http://www.ssb.no/a/histstat/tabeller/4-19.html; https://www.ssb.no/statistikkbanken/selectvarval/Define.asp?subjectcode=&;ProductId=&MainTable=KostHelTjenNy&nvl=&PLanguage=0&nyTmpVar=true&CMSSubjectArea=nasjonalregnskap-og-konjunkturer&KortNavnWeb=helsesat&StatVariant=&checked=true; http://www.ssb.no/offentlig-sektor/kommune-stat-rapportering/kostra-databasen.
**Estimated.

(Table 2). In 2013, it became a publicly traded company on the Toronto Stock Exchange (TSX). Sienna Senior Living Inc., the third largest firm, was also a publicly traded company. Chartwell Retirement Residences, the fourth largest chain, was owned by a trust and had public reporting. In contrast, Revera Inc. (the second largest), 100% owned by the Canadian Public Sector Pension Investment Board became a private company in 2007 and was delisted from the TSX. Schlegel Villages (the fifth largest) was privately owned by a family. As private companies, Revera and Schlegel Villages did not have detailed financial reports. One chain (Schlegel) had a holding company and all had complex corporate structures with subsidiaries and related party companies and/or divisions.

Three of the chains had changes in ownership and/or organizational structures over the past decade but the 5 chains retained the same relative size (rank order) since 2005. Three of the 5 companies (Extendicare, Sienna Senior Living Inc., and Chartwell) grew steadily in terms of nursing home beds and homes primarily by acquisitions and mergers between 2005 and 2015-2016. Revera Inc. had a reduction in beds and a slight reduction in facilities, and Schlegel Villages had a slight reduction in beds but doubled its nursing homes between 2005 and 2015-2016. The largest 5 chains controlled 23.8% of beds and 18.9% of nursing homes in Canada.

Corporate strategies

Canadian nursing home chains have been involved in real estate investment trusts (REITs). The Extendicare company was converted into a REIT (from 2007 to 2012) and then was converted to a publicly traded company in 2012. Both Revera Inc. and Chartwell jointly owned properties with Welltower (New York Stock Exchange [NYSE]: HCN), a REIT that owned more than 1400 properties in major, high-growth markets in the Canada, the United Kingdom, and the United States, with $29 billion in assets.[21] Three of the largest chains have separated their operating nursing homes from their property and used leaseback arrangements with property companies.

The 5 chains were all diversified in owning retirement homes, assisted living facilities, memory care, development companies, purchasing services, home health care, and 1 chain owned research institutes. Two of the 5 chains provided management services to their companies and other homes. Retirement homes and assisted living facilities were a major target for growth primarily because they focused on the private pay market and were less regulated in terms of both starting up companies and operations.

Reflecting Canada's sharp overall decline in nursing home beds and its low bed to population ratio, compounded by strict licensing laws in Ontario, all the nursing home chains showed high occupancy rates with little or no market competition. These chains have been able to take advantage of the limited bed supply and government funding and subsidies to rapidly expand their homes and beds. All but one chain operated in more than one Canadian province. None of the Canadian companies appeared to be located in tax havens.

Of the 5 largest Canadian for-profit chains, Extendicare and Revera owned nursing homes in the United States until they divested in 2015. Extendicare in the United States had 90 nursing homes and more than 12 000 beds (the ninth largest US chain) before it sold its homes in 2015.[22] The decision to sell may have been related to Extendicare's payment of $38 million to the US Department of Justice and 8 states to resolve allegations of billing Medicare and Medicaid for substandard nursing services and for medically unreasonable and unnecessary therapy and entered into a 5-year chain-wide Corporate Integrity Agreement with the government in 2014.[23]

Costs

Revenues ranged from $509 million to $980 million in Canadian dollars in the 3 Canadian chains that reported their financial data. Their net income showed high rates of return (8.8%, 13.2%, and 27.9%) for 2015-2016 (Table 2). These high profits had been sustained over time. From 2007 to 2012, Extendicare reported an average annual profit margin of 9.6%, Chartwell reported 12.6%, whereas Sienna Senior Living Inc. (Leisureworld) reported 11.8% from 2010 to 2012 (no table shown).

Quality

The quality of the largest for-profit chains was examined in Ontario where data were available. Corporate chains made up a larger share of the for-profit market in Ontario (82%) than in Canada overall and have a strong political influence.[24] Many chains have their headquarters in the greater Toronto area where the province has the largest population, has the TSX and a large Toronto financial district, and has a strong infrastructure for supplier networks that is well integrated with US Great Lakes region.

The 5 largest for-profit nursing home chains in Ontario had a total of 5759 deficiencies in their 154 nursing homes (37.4 deficiencies per home) in the 2011-2015 period compared with an average of 35.5 for all nursing homes. For-profit homes in total had an average of 37.3 deficiencies per home, 35.6 for nonprofits, and 33.5 for municipal homes in 2015 (the differences were not significant).

The findings in this study were consistent with a study in Ontario and British Columbia. The study found that for-profit-chain facilities had significantly higher rates of resident complaints compared with nonprofit and public facilities.[25] Another recent study of Ontario long-term care homes found that for-profit nursing homes, especially chains, provided significantly fewer hours of registered nurse and registered practical nurse care, after controlling for resident care needs.[26]

Table 2. Five largest for-profit nursing home chains in Canada in 2015-2016.

COMPANY	OWNERSHIP	NURSING HOMES BEDS	NURSING HOMES	% OF NURSING HOME BEDS	STATES OR COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES	FINANCIAL INFORMATION	EBITDA/ EBITDAR
Extendicare (Canada) Inc.[68]	A Canadian publicly traded company on the Toronto Stock Exchange. Extendicare Canada Ltd was formed in 1968 (named Crownx) with subsidies from Ontario. In 2007, it separated its assisted living from its nursing homes, which it converted into a REIT (the owner 2007-2012). It converted back to a corporation in 2012. In 2014, Extendicare Inc. sold its entire US operations (90 facilities) for $870 million to Formation Capital (private equity) to boost its Canadian operations and expand its continuum of care	8100 owned and 6426 under management 13562 total 10300 in 2005	58 owned and 43 managed 101 total 45 in 2005	9.4% beds; 7.4% of homes	4 provinces and home health in 6 provinces	In 2015, it purchased Home Health Acquisitions for $84.3 million (renamed ParaMed). It provides nursing care, home health, 6 private pay retirement living centers in 2 provinces, SGP purchasing partner network, and management and consulting services. Its plan is to expand and increase revenues from the private pay market. Its occupancy rate is 98%	23000	Total operating revenues of $979.6 million (increased by 20% over 2014). Assets of $1.026 billion. Net income margin $128 million	$86 million (8.8%) EBITDA
Revera Inc.[69]	100% owned by the Canadian Public Sector Pension Investment Board (PSP) since 2010. PSP is a global investment fund ($117 billion in assets) established in 1999. Revera, previously Retirement Residences REIT, was formed between 1997 and 2001 from a merger of VersaCare, VendorCo, Preferred Care Corporation, Central Care Corporation, and Central Park Lodges. After 2007, it was renamed Revera and delisted it from the Toronto Stock Exchange. It jointly invested with Welltower NYSE: HCN (formerly Health Care REIT until 2015) to own 97 Canadian retirement communities	9465 11000 in 2005	76 78 in 2005	6.6% beds; 5.6% homes	5 provinces	It owned or operated more than 500 properties across Canada, the United States, and United Kingdom including offering senior apartments, independent living, assisted living, memory care, and long-term care. It also owned 24 retirement communities in Quebec. Revera Inc. divested its US operations in 2015 by selling 24 nursing homes to Genesis It owns a 76% interest in Sunrise Senior Living Management Company	24150	NA	NA
Sienna Senior Living Inc. (SSL)[70]	Formerly called Leisureworld Senior Care, it was purchased by Australian infrastructure conglomerate Macquarie Power & Infrastructure Income Fund in 2005. It sold the operations to Counsel, a private equity firm in 2007 and became publicly traded in 2010 (SIA on the Toronto Stock Exchange). In 2013, it merged with Ontario-based chain Specialty Care Inc. with 6 homes. In 2015, it changed its name and ownership structure to Sienna Senior Living	5733 3147 in 2005	35 19 in 2005	4.0% beds; 2.6% homes	2 provinces	Provides nursing homes, 11 retirement homes with independent, assisted living and respite, management services for 1400 beds, consulting and educational services and owns Preferred Healthcare Services (home health). Occupancy rates were 98.7%. SSL Inc. is a holding company with subsidiaries wholly owned limited partnerships in Ontario	8170	Total operating revenues of $508.7 million; Assets of $951 million. Net income of $7 million in 2015	$67 million EBITDAR (13.2%)

Table 2. (Continued)

COMPANY	OWNERSHIP	NURSING HOMES BEDS	NURSING HOMES	% OF NURSING HOME BEDS	STATES OR COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES	FINANCIAL INFORMATION	EBITDA/ EBITDAR
Chartwell Retirement Residences[71]	Chartwell is an unincorporated, open-ended trust that formed in 2003 and specializes in the complete continuum of care under the laws of Ontario, Canada. Long-term care is 17% of Chartwell's Canadian operations. In 2015, it completed the sale of its US portfolio for $847 million and used funds to purchase 13 Canadian properties and other projects	3742 2543 in 2005	24 owned and 4 managed 13 in 2005	2.6% of beds; 1.8% of homes	4 provinces	It also owns 154 retirement homes and manages 3 for 22 249 beds. The retirement homes provided independent living, supported, and assisted living and memory care Its LTC home occupancy rate is 98.7%. Welltower (NYSE: HCN) (formerly Health Care REIT) purchased interests in Chartwell	13 500	Total operating revenues of $685.87 mil; assets of $2.6 billion in 2015	$191.6 million (27.9%)
Schlegel Villages Inc.[72]	A regional chain operation in Toronto and the Greater Horseshoe area. Schlegel is a family-run private care home that has grown to one of Canada's largest care networks since 1998. It is wholly owned by a holding company RBJ Schlegel Holding Inc., owned by the Schlegel family. It is located in Kitchener, Ontario. The family is also involved in the pork and poultry industry	1819 2000-2500 in 2005*	16 7 in 2005	1.3% of beds; 1.2% of homes	1 province	It first opened a village continuum of care model in 1998 and 6 of 16 are village models with independent, assisted living, memory care, and long-term care services. The RBJ Schlegel Holding owns Canada's large mental health and addiction services, Homewood Health with 4500 staff and 2 research institutes	NA	NA	NA
Total		34 321	256	23.8% of beds and 18.9% of homes					

Abbreviations: EBITDA, the earnings before interest, tax, depreciation and amortization; EBITDAR, earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs; NYSE, New York Stock Exchange; REIT, real estate investment trust.
Data not available for nursing homes in Quebec.

Public accountability

As noted above, only 3 of the largest chains had public reporting so that annual reports were available. Although government data on individual facility deficiencies were available for analysis by chains, government reports on specific chain ownership, costs, and quality were not available.

Largest For-Profit Chains in Norway

Ownership

In 2015-2016, there were only 4 chains in Norway with 26 nursing homes and 1819 beds (Table 3). Two of 4 Norwegian chains were privately owned (Aleris and Norlandia) (although Norlandia had private equity owners), 1 (UniCare) was owned by a private equity company, and 1 was publicly traded (Attendo) with some private equity owners. These large for-profit chains accounted for 4.8% of total nursing home beds and almost 70% of the for-profit nursing home beds.

Since 2005, there has been a gradual shift away from a dominance of private equity companies primarily because of nursing home scandals and rumors of stricter government regulations. In 2011, Adecco, a Swiss-operated for-profit chain operating some homes in Norway, was reported by care workers, trade unions, and the media to be systematically violating worker's rights for overtime and holiday pay and pensions, and staffing levels for unskilled workers were lower than their contract agreements. All of Adecco's nursing homes were forced out of the care sector by municipalities in Norway in 2011.

After Swedish-based Carema Care also was involved in a major scandal in 2011 regarding understaffing and poor care, it sold its Norwegian branch of nursing homes to UniCare, a Norwegian company formed in 2008. In addition, after Norlandia's nursing homes in Norway were also involved in a scandal regarding nonpayment of nursing overtime and staffing issues, its private equity owner sold its shares to the Adolfsen Group (another private equity company) in 2011.

The 4 chains were characterized by multiple changes of ownership. The Swedish company Attendo was rather typical. Originally called Partena Care, it first contracted to provide nursing home care in Norway in 1997. Attendo bought Capio Care in 2004, a company running 3 nursing homes in Norway. In 2005, Attendo was sold to the British private equity fund Bridgepoint. Bridgepoint, in turn, sold Attendo to the Swedish private equity fund Industri Kapital in 2006. In 2015, Attendo became a limited company and publicly traded. Data on growth in beds and nursing homes were not available, but all 4 companies reported a substantial growth in revenues and employees over the past 5 to 10 years.

The chains also had complex ownership structures. For example, Norlandia reported multiple individual and corporate owners, subsidiary companies, holding companies, and related companies. A major Norwegian union, Fagforbundet, has recently been campaigning for public disclosure of what their spokespeople label "the real owners."

Corporate strategies

The 4 nursing home chains had diversified their services by operating companies involved in health and social care, child protection, preschools, patient hotels, and other services. They each had operations in 2 to 4 countries. Previously Attendo and Aleris had reported they were based in tax havens, but current data were not available.

Costs

The 4 companies reported employees ranging from 2300 to 14500 in 2015-2016 and revenues that ranged from NOK/SEK 1 to 8 billion. Profit margins (EBITDA) were listed at 6% to 9.5% for 3 companies, and 1 company did not report data.

Quality

Following the scandals in for-profit chains described above, the city governments of Oslo and Bergen, the 2 biggest cities in Norway, decided in 2015 not to renew management contracts with for-profits in the care sector. For this reason, the share of for-profit nursing home beds in Norway is expected to decline in the near future. In contrast to Sweden, nursing home buildings and property in Norway are owned by municipalities. None of the for-profit chains owned buildings or other material assets in Norwegian residential care, which makes it easier to end contracts.

Public accountability

Only 2 of the largest chains (Norlandia and Attendo) made public reports available in English. The other 2 chains made reports available on an industry Web site in Norwegian. Some municipal governments have contracts with private companies to provide nursing home services, but they do not make ownership, financial, and quality data publicly available on individual nursing homes or chains.

Largest For-Profit Nursing Home Chains in Sweden

Ownership

In Sweden, large international corporations increasingly dominate the market. Starting in 2005, these corporations were bought up by private equity firms (Table 4). Attendo was the largest chain in total beds and the only company that was publicly traded, starting in 2015. Vardaga/Ambea became the second largest chain after Carema was purchased by Triton to be part of Ambea Group in 2010 through a competitive process from the 3i company on a partnership basis with another private equity company. In 2011, Carema faced a significant media scandal when it was reported to have inadequate numbers of

Table 3. Five largest for-profit chains proving residential care/nursing home care in Norway in 2015-2016.

COMPANY	OWNERSHIP	NURSING HOME BEDS	NURSING HOMES	% OF ALL NURSING HOME BEDS	COUNTRIES	SOCIAL AND HEALTH CARE ACTIVITIES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES	FINANCIAL INFORMATION	EBITDA
Aleris (1)	In 2005, EQT Expansion Capital I acquired ISS Health Care, a Swedish Health Care company, and Carepartner, a leading Nordic senior care operator, to create Aleris AB. It was owned by EQT (private equity company) from 2005 to 2010; in 2010, Aleris was bought by Swedish Investor for SEK 4.4 billion	544	9	1.38 % of all beds; 20.8% of for-profit beds	Sweden, Norway, Denmark (2/3 in Sweden)	Mainly health care, eldercare, and social care in all 3 countries	10000 employees in the Nordic countries 1000 in 2004	SEK 8.5 billion in revenues and 7.0 billion in 2013) Had SEK 928 million in 2005	SEK 485 million (5.7%)
UniCare (2)	Established in 2008 as a Norwegian owned company, it went into eldercare in 2012 when Swedish-owned Carema Care sold its Norwegian branch. Since 2016, it is a holding company, owned by G Square, a private equity company	543	6	1.38% of all beds; 20.8% of for-profit beds	Norway and Sweden (from 2016)	Eldercare, psychologist services, company health service, rehabilitation services, child protection	2300 employees in Norway and Sweden	NOK 1.1 billion in revenues (growth from 0.15 in 2010)	Not available
Norlandia Care (3)	Founded in 1997, the company was acquired by FSN Capital in 2007 and Hospitality Invest when each took a 44.75% stake, with remaining 10.5% shareholding held by management. Hospitality Invest AS is a Norwegian private hotel company. FSN Capital sold its shares of Norlandia Care to the Adolfsen Group in 2011 after a scandal regarding nonpayment of nursing overtime and staffing issues	424	5	1.07% of all beds; 16.2% of for profit-beds	Sweden (49%), Norway (43%), Finland (5%), Netherlands (3%)	Eldercare (52%), preschools (44%), patient hotels (4%). It increased in size in 2015 mainly because of its acquisition of Kosmo—a Swedish chain with 28 eldercare units and a Swedish preschool chain with 15 units	5735 employees (increased from 3415 in 2014) 2339 in 2010	NOK 2.984 billion in revenues; NOK 2.05 billion assets and 1.5 billion liabilities; 27 million taxes NOK 945 million in revenues in 2010	NOK 272 million (9.1%)
Attendo (4)	Founded in1985, it was owned by Bridgepoint (private equity) in 2005-2006. In 2006-2015, it was owned by IK Investment Partners (private equity). In 2015, it became a publicly traded company on the Nasdaq stock exchange, Stockholm (SEK 8.0 billion). Its current parent company is Attendo AB (publ.) and the largest owners include Augustus International S.A.R.L., Nordstjernan AB (PE), Swedbank Robur Fonder (bank), and Didner & Gerge Fonder (investment manager)	308	6	0.8% of all beds; 11.8% of for-profit beds	Sweden (52%), Finland (43%), Norway (3%), Denmark (2%)	Eldercare (all 4 countries); disability services (Sweden and Finland); health care (Finland); social services people with substance abuse problems or with other social/psychiatric problems, and for asylum seekers (Sweden). It has 510 units with 24 000 clients in the Nordic countries	14 500 total employees; 6690 in 2004	SEK 5.1 billion in Sweden; SEK 9.8 billion total revenues in 2015 Increased from SEK 7.3 billion in 2011, 2.5 billion in 2007, and SEK 1.871 billion in 2004	Total: SEK 933 million (9.5%) in 2015
Total		1819	26	4.8% of beds/70% of for-profit beds					

Abbreviations: EBITDA, the earnings before interest, tax, depreciation and amortization; IK, Industri Kapital.
All information was gathered from the companies' Web sites, annual reports, www.largestcompanies.com and Statistics Norway; www.ssb.no.; http://ssb.no/helse/statistikker/pleie/aar/2016-06-29?fane=tabell&sort=nummer&tabell=71503. The beds include permanent and temporary beds. Historical data from Stolt and Jansson. https://www.diva-portal.org/smash/get/diva2:196545/FULLTEXT01.pdf.
1. https://www.eqt.se/Portfolio-Companies/Divestments/Aleris/; https://www.eqt.se/news/Press-Releases/2010/EQT-III-sells-Aleris/; https://www.brreg.no/home/.
2. http://www.largestcompanies.com/company/Unicare-Bab-AS-281824/closing-figures-and-key-ratios?currency=NOK; https://www.brreg.no/home/.
3. http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=23378451; http://www.norlandia.se/sv/resources/NCG_AR2015.pdf; http://norlandiacare.com/en/eldreomsorg#!&country=Norge&;area=; http://norlandiacare.com/en/om-oss; http://www.newsweb.no/newsweb/search.do?messageId=397325; https://www.healthcarebusinessinternational.com/ceo-to-leave-low-margin-norlandia/; http://www.unquote.com/nordics/official-record/63626/fsn-capital-exits-norlandia-care-to-founders; http://realdeals.eu.com/article/22641; http://www.largestcompanies.com/company/Norlandia-Care-AB-263181/closing-figures-and-key-ratios?currency=SEK; http://www.norlandiacare.com/en/om-oss.
4. http://investors.attendo.com/afw/files/press/attendo/201604146586-1.pdf.

Table 4. The largest for-profit chains in residential care/nursing homes in Sweden in 2015-2016.

COMPANY	OWNERSHIP	BEDS	NURSING HOMES	% OF NURSING HOME BEDS	COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES	FINANCIAL INFORMATION	EBITDA (OPERATING PROFIT)
Attendo (1)	Founded in 1985, it was owned by Bridgepoint (private equity) in 2005-2006. In 2006-2015, it was owned by IK Investment Partners (private equity). In 2015, it became a publicly traded company on the Nasdaq stock exchange, Stockholm (SEK 8.0 billion). Its current parent company is Attendo AB (publ.) and the largest owners include Augustus International S.A.R.L., Nordstjernan AB (PE), Swedbank Robur Fonder (bank), and Didner & Gerge Fonder (investment manager)	5024 (4250 in 2012)	92 (36 privately owned + 10 under construction with 700 beds)	5.3% of all beds 27.9% of private beds	Sweden (52%), Finland (43%), Norway (3%), Denmark (2%)	Eldercare (all 4 countries), disability services (Sweden and Finland), health care (Finland), social services for substance abuse or other social/psychiatric problems, and asylum seekers (Sweden). It had 510 units with 24 000 clients in the Nordic countries. Attendo builds units with real estate owners and then leases from the real estate owners	14 500 total employees; 6690 in 2004	SEK 5.1 billion revenues (turnover) in Sweden; SEK 9.8 billion in total in 2015 Increased from SEK 7.3 billion in 2011, 2.5 billion in 2007, and SEK 1.871 billion in 2004	Total: SEK 933 million (9.5%) in 2015
Vardaga/ Ambea (2)	Originally called Carema, the Swedish company was involved in a major scandal in 2011 regarding understaffing and poor care. The company was rebranded in 2013 to Vardaga (eldercare) and Nytida (disability services). The parent company Ambea was owned by 3i (private equity) 2005-2010. In 2010, it was purchased by Triton & Kohlberg, Kravis, and Roberts & Company (KKR) (private equity companies). Ambea AB (formerly known as H-Careholding AB) changed its name to Ambea AB in 2007 and is based in Solna, Sweden, and a subsidiary of Actor S.C.A. (Luxembourg). Plans to become publicly traded in 2017	3358 (3940 in 2012)	77 (23 privately owned + 6 under construction)	3.5% of all beds 18.6% of private beds	Vardaga only in Sweden; Ambea big in health care in Finland	Ambea Sweden: eldercare, disability services + staffing services (nurses and doctors). Until 2016, Ambea was the parent company of Finnish health care company Mehiläinen (7000 employees). The companies are now separated but both are still owned by Triton & KKR. In 2015, it had (400 units) in Sweden. The company completed new acquisitions in 2016	7000 in eldercare + 7000 in disability services (3000 in eldercare in 2005) 3000 in 2005	Vardaga + Nytida: SEK 4.3 billion in revenues; Ambea total SEK 8.5 billion in SE + FI in 2015 Had SEK 1.4 billion revenues in 2005 (as Carema)	Ambea: SEK 723 million (8.4%)
Förenade Care (3)	Started as cleaning company in Denmark 1959, it is owned by a Danish private company. Förenade Care AB operates as a subsidiary of Forenede A/S	1597	31 (2 privately owned)	1.7% of all beds 8.9% of private beds	Sweden and Denmark (only 4 nursing homes)	Mainly nursing homes but also some units of home care, palliative care, and social care	2500 in Sweden 1000 in 2004	SEK 1.3 billion in revenues (in Sweden) Had SEK 488 million in revenue in 2004	SEK 35 million (6.3%)

Table 4. (Continued)

COMPANY	OWNERSHIP	BEDS	NURSING HOMES	% OF NURSING HOME BEDS	COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES	FINANCIAL INFORMATION	EBITDA (OPERATING PROFIT)
Norlandia Care (4)	Founded in 1997, it was acquired by FSN Capital in 2007 and Hospitality Invest when each took a 44.75% stake, with remaining 10.5% shareholding held by management. Hospitality Invest AS is a Norwegian private hotel company. FSN Capital sold its shares of Norlandia Care to the Adolfsen Group in 2011 after a scandal regarding nonpayment of nursing overtime and staffing issues in its Norwegian homes	1551	31 (2 privately owned)	1.6% of all beds 8.6% of private beds	Sweden (49%), Norway (43%), Finland (5%), Netherlands (3%)	Eldercare (52%), preschools (44%), patient hotels (4%). It increased in size mainly from the acquisition of Kosmo—a Swedish chain with 28 eldercare units and a Swedish preschool chain with 15 units)	5735 (increase from 3415 in 2014) 2339 in 2010	NOK 2.984 billion in 2015, NOK 2.05 billion in assets and 1.5 billion in liabilities, 27 million in taxes NOK 945 million in revenues in 2010	NOK 272 million (9.1%)
Aleris (5)	In 2005, EQT Expansion Capital I acquired ISS Health Care, a Swedish Health Care company, and Carepartner, a leading Nordic senior care operator, to create Aleris AB. It was owned by EQT (private equity company) from 2005 to 2010. In 2010, Aleris was bought by Swedish Investor for SEK 4.4 billion	1404 (1030 in 2012)	31 (7 privately owned + 2 under construction)	1.5% of all beds 7.8% of private beds	Sweden, Norway, Denmark (2/3 in Sweden)	Provides mainly health care, eldercare, and social care in all 3 countries	In total, 10 000 employees in the Nordic countries Had 3000 in 2005	In total: SEK 8.5 billion in revenues (growth from 7.0 billion in 2013) Had SEK 928 million in 2005	SEK 485 million (5.7%)
Total		12 934	262	13.5% of all beds; 71.8% of private beds					

Abbreviation: EBITDA, the earnings before interest, tax, depreciation and amortization; IK, Industri Kapital.
Information was gathered from the companies' Web sites, annual reports, www.largestcompanies.com, and the Swedish Health and Social Care Inspectorate, www.ivo.se. The table includes all permanent and temporary care beds. In 2015, there were 87 903 beds for permanent care and 7686 beds for temporary care = 95 589 total; of which 18 011 were privately provided (for-profit or nonprofit) (Socialstyrelsen, 2016, *Statistics on Elderly and Persons with Impairments—Management Form 2015*). In Table 1, we report beds for permanent care for the sake of comparison with previous years. SEK = Swedish kroner. Historical data from Stolt and Jansson: https://www.diva-portal.org/smash/get/diva2:196545/FULLTEXT01.pdf.
1. http://investors.attendo.com/afw/files/press/attendo/201604146586-1.pdf.
2. http://www.ambea.com/ http://www.triton-partners.com/investments/private-equity/ambea/; http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=41570535; https://www.ambea.com/ambea-intends-to-list-its-shares-on-nasdaq-stockholm/.
3. http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=23378451.
4. http://www.norlandia.se/sv/resources/NCG_AR2015.pdf; http://norlandiacare.com/en/eldreomsorg#!&country=Norge&;area=; http://norlandiacare.com/en/om-oss; https://www.healthcarebusinessinternational.com/ceo-to-leave-low-margin-norlandia/; http://www.unquote.com/nordics/official-record/63626/fsn-capital-exits-norlandia-care-to-founders; http://realdeals.eu.com/article/22641; http://www.largestcompanies.com/company/Norlandia-Care-AB-263181/closing-figures-and-key-ratios?currency=SEK; http://www.norlandiacare.com/en/om-oss.
5. https://www.eqt.se/Portfolio-Companies/Divestments/Aleris/; https://www.eqt.se/news/Press-Releases/2010/EQT-III-sells-Aleris/; http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=20373998; http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=20373998.

registered nurses, undernourished residents, and a high number of resident deaths. The poor quality of care and scandal was followed by internal turmoil and employee turnover. Triton's restructured the business and sold underperforming services and the rebranded Carema as Vardaga/Ambea, with 2 distinct divisions: Vardaga for elderly care and Nytida for disabled care in 2013.[27] Since then, Ambea Sweden was separated from the Finnish Mehiläinen Group into an independent entity and it announced plans to become publicly traded in 2017. All the companies have a complex ownership structures.

Of all nursing home care in Sweden, 12 934 permanent and temporary beds (13.5% of all beds) were provided by the 5 largest chains in 2015. This corresponded to 71.8% of the private beds and the 10 largest chains provided 86.8% of the private beds.[28] Half of the beds in for-profit homes were run by the 2 largest corporations, Attendo (92 homes, 5024 beds) and Ambea (77 homes, 3358 beds) (Table 4).

Attendo had 19 000 total employees, Ambea had 14 000, and Aleris had 10 000. The number of employees has more than doubled for Attendo, Ambea/Vardaga, Förenade Care, and Aleris. Revenues have grown considerably from all types of activities and in the Nordic countries since 2004-2005[29] (see Table 4). Data on growth in beds and nursing homes over the past 10 years were not available.

Four in the top 5 in 2015-2016 (Attendo, Vardaga/Ambea, Förenade Care, and Aleris) have changed names since they were founded.[29] Norlandia was not active in Sweden in 2005, but the company grew rapidly after they purchased a company with 28 nursing homes in Sweden (see Table 4). These large chains have grown mainly by acquisition of other companies.

Corporate strategies

Nursing home chains increasingly have been building their own nursing homes and selling beds to various municipalities. For example, Attendo has built its own care homes in cooperation with construction and real estate companies that own the properties, and lease the buildings to Attendo, normally for 10 to 15 years. Attendo contracts with municipalities to provide nursing home care and have the municipalities pay for the building costs. The building of private homes is a new phenomenon in Sweden. Currently, the 2 largest chains have built more than one-third of the privately owned homes, and they have another 16 homes under construction.

Previously, virtually all privately provided residential care was outsourced after competitive contracting (tendering), which made it relatively easy for a municipality to end a contract if they were not satisfied with the quality. If municipalities want to end contracts with privately owned homes, they must find new homes for residents, similar to the situation in Canada, the United Kingdom, and the United States. The more facilities built by private companies, the more dependent the municipalities are on their contribution. Consequently, it is more difficult for the government to prohibit profit-making in residential care, and a government commission is presently studying this issue.

All the 5 largest chains operated in 2 to 4 countries. Three of the top 4 companies (Attendo, Aleris, and Norlandia) were among the top 4 in Norway, and in both countries, they have been increasingly active in other areas such as health care, disability services, and recently arrived minors seeking asylum. Three companies (Attendo, Ambea, and Aleris) were previously reported to be based on tax havens, but current data were not available.

Costs

Some large companies reported low assets, high debt, and paid minimal taxes (eg, Norlandia). Financial data were not publicly available except for Attendo (a public company) and Norlandia. Revenues for the 5 largest companies ranged from SEK 1.3 billion to 9.8 billion. Profit margins (EBITDA) for the 5 companies were reported to range from 6% to 9.5% in 2015-2016. These large profit margins have raised political concerns in Sweden where a government commission is investigating the possibilities of limiting profit-making in welfare services.

Quality

No public data were available on quality in Swedish nursing home chains for this study. A recent study of nursing homes operated by private equity companies found that they had higher revenue growth and profit margins than other nursing homes.[28] These companies had lower numbers of employees per resident and higher proportions of staff employed on an hourly basis, but specific differences in quality were not identified.[28] The previous scandals in care quality at Carema (now Vardaga/Ambea), Norlandia, and other for-profit homes in Sweden, however, suggest that staffing and quality problems may be an ongoing concern to the municipalities.

Public accountability

As noted above, 3 of the largest chains (Attendo, Ambea, and Norlandia) publicly reported on their companies, and one other company made its annual report available on an industry Web site. Some municipal governments have contracts with private companies to provide nursing home services, but they do not make ownership, financial, and quality data publicly available on individual nursing homes or chains.

Largest For-Profit Nursing Home Chains in the United Kingdom

Ownership

The 5 largest providers of residential beds in the United Kingdom (Four Seasons Health Care, Bupa Care Homes, HC-One Ltd, Barchester Healthcare, and Care UK Health and Social Care Investment) accounted for 35.3% of available residential beds in 2015-2016 (Table 5). All except Bupa Care

Table 5. Five largest for-profit chains providing residential/nursing home care in the United Kingdom in 2015-2016.

COMPANY	OWNERSHIP	NURSING HOME BEDS[a]	NURSING HOMES[a]	% OF NURSING HOME BEDS[b]	COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES[c]	TOTAL EMPLOYEES	FINANCIAL INFORMATION, £ MILLIONS[c]	EBITDA/ EBITDAR[c]
Four Seasons Health Care (1)	Started as a small company in Scotland until it expanded in 1987. Alchemy bought it and merged and acquired other homes. It was sold to Allianz Capital (private equity group) in 2004 and then to Three Delta LLP (Qatar Investment Authority) in 2006 for £1.6 billion and was overloaded with debt and restructured in 2008. In 2011, it took over 140 homes from Southern Cross when it financially collapsed. In 2012, it was acquired by Terra Firma (private equity group) for £825 million. It is a complex group of more than 185 companies in 15 tiers in the United Kingdom and tax havens. Elli Investments is its Guernsey holding company. Four Seasons is also a subsidiary of London 58 in the Cayman Islands	23 488 19 800 in 2006	440 416 in 2006	10.8% of beds;11.4% of private beds	Scotland, England, Northern Ireland, Guernsey	It operated 80 high-end elderly care private pay homes (Brighterkind), 40 mental health and brain injury homes (Huntercombe Group), and 350 general care homes (Four Seasons). It owned 55% of its sites and rented the rest. It has 87.5% occupancy rates. It plans to increase private payers, high dependency services, and occupancy levels. It completed strategic acquisitions (such as acquiring Majesticare in 2014) and sold 20 homes in 2014 and aims to sell another 53 care homes	31 000	£712.8 million in revenues (turnover) in 2014 and down to £688 in 2015. Assets written down by £224 million (1/3) to £505 million and £500 million in losses in 2015	£65 million (9%) EBITDA £114 million (16%) EBITDAR in 2014 and £38.7 million in 2015
BUPA Care Homes (2)	Owned by the for-profit arm of British United Providence Association, it entered the care home market in 1996 with acquisition of 30 care homes and purchased Community Nursing Homes (181 homes) in 1997 from Goldsborough Healthcare Group and Care First Group. BUPA is a global health insurance health care company founded in 1947 in the United Kingdom. BUPA wrote down the value of its care homes by about £300 million in 2016	20 862 21 000 in United Kingdom and 2400 Spain 2005	285	9.6% of beds; 10.2% of private beds	United Kingdom In 2008, added 39 homes in Spain, 70 Australia, and 60 in New Zealand	Large range of care including nursing home, residential care, day care, palliative care and learning disability care, health insurance, primary and dental care, diagnostic services, hospitals, and clinics. BUPA reported they planned sell-off of 200 care homes in 2015. Bupa divested its home care business to Celesio in July 2016	More than 20 000 care home employees and 84 000 total	£55.4 million in revenues in 2015 Total BUPA UK revenue was £2.858 billion, with profit rising 4%. £182.6 million in 2015 £540 million in revenues in 2005 on care homes	£1.2 million loss in its UK care home business in 2015 compared with a £16.2 million profit in 2014
HC-One Ltd (3)	Formed in 2011 by partnership of NHP, a property company, and Court Cavendish Ltd. When it took over one-third of Southern Cross' homes after the company collapsed under £50 million of debt in 2011. Southern Cross, owned by Blackstone (private equity), had 28 000 beds. In 2016, Court Cavendish acquired its parent company NHP for £477 million with funds from Formation Capital (private equity) and Safanad, a global investment firm. NHP had 275 properties. Libra Intermediate Holdco Ltd founded in 2011 in the Channel Islands and FC Skyfall Lower Midco Ltd founded in 2014 in London are associated with Formation Capital	12 887	246	5.9% of beds; 6.3% of private beds	England, Scotland	HC-One operated care homes across the United Kingdom. General care and residential homes specialist homes including dementia, mental health, and palliative care homes. It has diversified into home care and integrated health and social care	14 000	£314.6 million in revenues in 2015	10.7 million (3.4%) EBITDA 47.4 million (15%) EBITDAR in 2015

(Continued)

Table 5. (Continued)

COMPANY	OWNERSHIP	NURSING HOME BEDS[a]	NURSING HOMES[a]	% OF NURSING HOME BEDS[b]	COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES[c]	TOTAL EMPLOYEES	FINANCIAL INFORMATION, £MILLIONS[c]	EBITDA/ EBITDAR[c]
Barchester Healthcare (4)	Founded by Mike Parson in 1992, it acquired Westminster Healthcare in 2004 (£525 million). Overall ownership is the private equity group Grove Limited, which also owns shares in Ravenshill real estate investment group that owns freeholds of Barchester's homes. Barchester's is reported to be a subsidiary of Grove Ltd, registered as a company in Bailiwick of Jersey	12 445	200	5.7% of beds; 6.1% of private beds	England, Scotland, Ireland	It has premium care and specialist care homes with a focus on the private pay market. It provided nursing care, assisted living, respite, dementia care, hospitals and complex services and serves aged, children, and disabled. It built 19 new care homes, 1 hospital, and 3 small retirement communities over the last 5 years and was updating its existing homes. It has multiple subsidiaries and separate home health and health care real estate	17 000	£535.6 million in 2015 and £110 in assets £495.5 in losses in 2014	£41.9 million (8.4%) EBITDA £150 million (30.3%) EBITDAR
Care UK Health and Social Care Investment Limited (5)	Acquired by private equity group Bridgepoint in 2010, it was delisted from London Stock Exchange. Bridgepoint is an international company with £20 billion in capital previously named Warwick 1 Limited. Bridgepoint and Care UK established an independent company—Silver Sea Holdings—to build, oversee, and lease new care homes to Care UK. They also leased most buildings from NHS properties. The company began as Anglia Secure Homes in 1982 with residential care homes and grew by mergers and joint ventures	7092 3400 beds in 2010	112 59 homes in 2010	3.3% of beds; 3.5% of private beds	England Scotland	It provided nursing homes, residential care, dementia, day clubs, end-of-life and respite care as well as 9 hospitals, 50 elective surgical treatment centers, and primary care services. Its new care homes construction focused on private pay market	9000 for care homes	£686 million in revenues £443.7 million in liability and £53.8 in net assets in 2015	£48.9 million (18.7%) EBITDA in 2015
Total		76 774	1283	35.3% of beds; 37.5% of private beds					

Abbreviations: EBITDA, earnings before interest, tax, depreciation and amortization; EBITDAR, earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs; NHS, National Health Services.
[a]Number of homes/beds of any type (nursing, residential and specialist) managed by company, data obtained from company Web site and published financial accounts.
[b]Percentage of all privately owned beds managed by company, data obtained from Laing and Buisson Care of Elderly Market Report 26th Edition (2015a).
[c]Data obtained from latest published financial accounts available (via http://beta.companieshouse.gov.uk) and other published sources (Financial Times, Laing and Buisson).
1. Four Seasons: http://www.fshc.co.uk/; https://www.theguardian.com/business/2016/apr/27/four-seasons-health-care-reports-264m-annual-loss, Burns et al.[30]
2. https://www.bupa.co.uk/care-services/care-homes; https://www.bupa.com/corporate/about-us/our-history; https://www.ft.com/content/9eca70fa-6cdc-11e5-aca9-d87542bf8673; https://www.bupa.com/sharedcontent/articles/bupa-agrees-sale-of-bupa-home-healthcare-to-celesio; http://www.carehomeprofessional.com/bupa-writes-down-value-of-uk-elderly-care-business-by-almost-300-million/; https://www.bupa.com/~/media/files/site-specific-files/our%20performance/pdfs/financial%20results%20-%20historical%20financial%20info/archive%20group%20annual%20reports%20and%20accounts/annual-report-and-accounts-2005.pdf.
3. http://www.hc-one.co.uk/; http://www.hc-one.co.uk/about/company-information/; http://www.carehome.co.uk/news/article.cfm/id/1565811/hc-one-care-homes-477m.
4. https://www.barchester.com/; https://www.barchester.com/company-profile; https://www.duedil.com/company/02792285/barchester-healthcare-limited, Burns et al.[30]
5. http://www.careuk.com/; http://www.bridgepoint.eu/en/investors/investor-profile/; http://www.careukgroup.com/sites/group/files/Care_UK_Health_%26_Social_Care_Investments_Limited_Risk_Factors_FY2015.pdf; http://www.careukgroup.com/sites/group/files/Care_UK_Health_%26_Social_Care_Investments_Limited_Business_FY2015.pdf; http://www.bridgepoint.eu/.

Homes were private limited companies, ultimately controlled and owned by private investment and equity groups registered in tax havens such as Guernsey, Jersey, and Cayman Islands. Bupa Care Homes was owned by the for-profit arm of the British United Province Association, a global insurance company.

Most of the growth of the large UK chains was in the early 2000s. Prior to 2008, expansion was driven by mergers and acquisitions funded by debt, with private equity groups attracted by stable government-funded income, increasing property prices of homes and advantageous demographic changes in 2015-2016. In 2011, the largest UK nursing home chain, Southern Cross (founded in 1995), went bankrupt after its purposeful build-up of large debt to fund growth resulted in unsustainable debt repayment. Most of Southern Cross' facilities were sold to Four Seasons making it the largest chain. A third of Southern Cross' facilities were also purchased by HC-One Ltd, a new private company founded with equity investors in 2011.

Although historical data were not available for Barchester and HC-One was a new company, 2 companies showed growth (Four Seasons and Care UK) and BUPA had a growth in beds between 2005 and 2015-2016. BUPA had a loss in its UK care business in 2015 and reported a plan to sell most of their care homes (Table 5). The 5 companies all had complex organizational structures with the most prominent being Four Seasons, which reportedly has more than 185 companies with holding companies registered in Guernsey and the Cayman Islands.[30]

Corporate strategies

The largest chains have used sale and leaseback arrangements, by splitting the operating and property companies in to separate groups and the leasing the property from the property companies sometimes at artificially high rates.[30] After the 2008 global financial crisis, with a fall in property prices and income, the focus has been on diversification and restructuring—separating operations and property ownership and selling of less profitable care homes and the development of new care homes in more affluent areas. Moreover, recent strategies have been to focus on serving the private pay market.

The companies have diversified and expanded into independent living and residential care, day care, palliative care, and other long-term care services. Some companies also provide primary care, hospitals, and clinics. The 5 large companies operated homes in England, Scotland, and Ireland, whereas BUPA had operations in Spain, Australia, and New Zealand.

All except BUPA Care Homes were private limited companies owned by private investment and equity groups registered in tax havens such as Guernsey, Jersey, and the Cayman Islands. For example, Barchester Healthcare was a subsidiary of Grove Ltd, registered in the Bailiwick of Jersey where funds can be shifted from the nursing homes to chains with holding companies and subsidiaries in tax haven.[30] Moreover, these large companies had shifted their financing from equity to debt funding where the interest payments are nontaxable and deducted before profits are taken.[30]

Costs

The revenues ranged from 55 million pounds at BUPA for its care homes although total BUPA revenues were 2.86 billion pounds in 2015-2016. Other chains reported revenues of 315 to 713 million pounds in 2015-2016. BUPA reported a loss of 1.2 million on its care homes and HC-One had a 3% profit (EBITDA) in 2015. The other 3 companies had 8% to 9% profits (EBITDA) and 15% to 20% EBITDAR profits in 2015.

Quality

Multiple concerns regarding the quality of care homes owned by corporate chains have arisen after scandals were widely reported by the media in Southern Cross' facilities.[31] Recently, the Care Quality Commission (2016) care home inspection reports found that 9% of homes provided inadequate care and 32% required improvement, and the Commission has received multiple allegations of abuse of the frail elderly.[31,32,33] Unfortunately, the Commission's quality reports were not available by owners and by chains.

Public accountability

Because the largest nursing homes are private companies (except for BUPA), there were no requirements to publish financial data, limiting financial transparency and accountability for government funds which pay about half of the revenues for care homes. Financial crises in local authority funding for nursing home care in the United Kingdom have been reported to be exacerbated by the policies that have safeguarded health care spending but not social care. This has resulted in large cuts in social spending over the 2010-2015 period.[30,33] Government policy has not attempted to collect data on costs or quality nor to limit further growth and marketization of large care home chains.[30]

Largest For-Profit Nursing Home Chains in the United States

Ownership

In 2015, the 5 largest for-profit nursing home chains in terms of beds in the United States are shown in Table 6. Genesis HealthCare was the largest for-profit chain and the only 1 of 5 listed on the NYSE, although its controlling stock was owned by Formation Capital (a private equity company). The others were owned by private equity firms including the Carlyle Group, Fillmore Capital Partners, and National Senior Care Inc. Only Life Care Centers of America (LCCA) was privately owned by an individual.[29] Over the decade, 4 of

Table 6. Five largest for-profit nursing home chains in the United States in 2015-2016.

COMPANY	OWNERSHIP	NURSING BEDS	NURSING HOMES	% OF NURSING HOME BEDS	STATES OR COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES 2015	FINANCIAL INFORMATION	EBITDA/ EBITDAR
Genesis HealthCare Inc. (NYSE: GEN)[a] (1)	Established in 1985 and publicly traded until bankruptcy in 2000. FC-GEN Operations Investment LLC formed in 2005 as the parent holding company (in Kennett Square, PA). Formation Capital LLC and JE Roberts (private equity companies) purchased 58% of shares in 2007 for $1.25 billion and 42% of shares are publicly held. In 2011, it sold its senior housing and care facilities to Welltower Inc. (NYSE: HCN) for $2.4 billion with a leaseback. In 2012, it purchased Sun Healthcare Group (seventh largest chain) and Skilled Healthcare (Nasdaq; SKH) (the 11th largest chain) in a $5.5 billion stock swap in 2015 and purchased 24 nursing homes and rehab from Revera (Canadian)for $240 million	58 046 skilled nursing; (3985 assisted living) 77% are leased; 13% owned; rest are managed 25 380 in 2005—ranked #3	475 skilled nursing (and 56 assisted living) 198 homes in 2005	3.4% of beds and 3% of homes	34 states	It provided rehab. and therapy in 1700 locations in 47 states, DC, and China; physician services in long-term care; dementia care; CareerStaff Unlimited services; home health; hospice; dialysis; management services. Has 10 federally insured loans. Has 14 companies in Delaware	95 000	Total revenues of $5.6 billion. Assets of $6 billion, and net loss of $426 million. Occupancy of operating beds was 86.8%	EBITDA $547.5 million (9.7%) EBITDAR $697.8 million (12.4%)
HCR ManorCare[a] (2)	Health Care and Retirement Corporation of America (HCR) (started in 1991) (NYSE publicly traded company) acquired ManorCare (started in 1968) in 1998. Purchased by the Carlyle Group (global private equity) in 2007, it became private with separate operating and property LLCs. In 2011, it sold 338 properties to HCP (NYSE) (a REIT) for $6.1 billion with a lease back and also set up a separate REIT in 2016. HCR ManorCare Inc. is a holding company for HCR Health Care LLC, HCR Properties LLC, and HCR operating company and is based in Toledo, OH	34 539 37 906 in 2005—ranked #1	255 276 in 2005	2% of beds and 1.6% of homes	30 states	It owned Heartland Companies, Arden Courts, Heartland Therapy, Heartland Rehabilitation, and Heartland Hospice. It has memory care, assisted/independent living, outpatient care, home health, and IV care. Has 18 companies in Delaware	59 500	Total revenues of $4 billion. Assets of $8.5 billion (2014)	NA
Golden Living[a] (3)	Beverly Enterprises, founded in 1963, became the largest US nursing home in 1977 and was publicly traded (NYSE: BEV). It divested companies in 1998 and almost bankrupt in 2000. Fillmore Capital Partners (a private equity REIT) purchased it for $1.85 billion in 2006 and changed it to Golden Living. Fillmore Strategic Management LLC and Fillmore Strategic Investors LLC own Drumm Investors LLC which owns Golden Living's properties and Geary Properties. Golden Gate National Senior Care (GGNSC) LLC (a holding company) owns the Golden Living operations in San Francisco, CA. In 2011, Drumm Investors LLC refinanced its properties for $1.575 billion	30 267 35 839 in 2005—ranked #2	295 342 in 2005	1.8% of beds and 1.9% of homes	21 states	GGNSC Holdings owned Golden Gate Ancillary LLC (GGA), which owned Aegis Therapies, AseraCare Hospice and Home Health, 360 Healthcare Staffing, Ceres Purchasing Solutions, Vizia Healthcare Design Group, and GGHSC administrative services. Has 4 companies in Delaware	42 000	Total revenues of $3.05 billion, assets of $3 billion	NA

Table 6. (Continued)

COMPANY	OWNERSHIP	NURSING BEDS	NURSING HOMES	% OF NURSING HOME BEDS	STATES OR COUNTRIES	SOCIAL AND HEALTH CARE SERVICES, COMPANIES, AND STRATEGIES	TOTAL EMPLOYEES 2015	FINANCIAL INFORMATION	EBITDA/ EBITDAR
Life Care Centers of America (LCCA) (4)	LCCA, a privately held company since 1970 in Cleveland TN. Forrest Preston is the sole shareholder and the CEO/Chairman. LCCA owns nursing homes and 8 divisions that provide: Alzheimer care, nursing care, assisted living, rehabilitation, campus care, retirement care,	28 414 4508 in 2005—ranked #27	213 69 in 2005	1.7% of beds and 1.4% of homes	28 states	LCCA also provided home health, home care, day care, hospice, and wound care and specialty services. Has some on-site physicians. Is incorporated in Delaware	40 000	$3.05 billion in revenues (2015)	NA
Sava Senior Care, LLC[a] (5)	Aramark Corporation (ARA) (began in 1973) and became Living Centers of America (LCA in 1992 and merged to become GranCare and then Mariner) (publicly traded on the NYSE) and became bankrupt in 2002. National Senior Care LLC (a private equity), owned by a holding company National Senior Care Inc., purchased Mariner HealthCare in 2004 for $1.055 billion. It changed the name to SavaSeniorCare and established separate LLCs for the property and operations including SSC Equity Holdings LLC	24 154 23 508 in 2005—ranked #5	200 185 in 2005	1.4% of beds and 1.3% of homes	22 states	It has clinics, outpatient services, hospitals, office management, pharmacies, metal products, and manufacturing. SavaSeniorCare Administrative Services provided support services. Has 6 companies in Delaware	22 000	Total revenues of $1.29 billion for the related companies	NA
Total		175420	1438	10.3% of beds; 9.2% of homes					

Abbreviations: EBITDA, earnings before interest, tax, depreciation and amortization—EBITDAR minus lease expenses; EBITDAR, earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs—net income before depreciation, amortization and interest expense and income taxes; LLC, limited liability company; NA, not available; NYSE, New York Stock Exchange; REIT, real estate investment trust.

[a]Private equity owner.

1. Genesis HealthCare (2015). Genesis HealthCare Reports: http://www.genesishcc.com/; http://www.genesishcc.com/business-partners/business-services, SEC Annual Report 10-K (December 31, 2015); https://www.sec.gov/Archives/edgar/data/1351051/000155837016004101/gen-20151231x10k.htm; https://www.sec.gov/Archives/edgar/data/1351051/000155837016004101/0001558370-16-004101-index.htm; http://www.welltower.com/wp-content/uploads/2016/02/10-K_2015.pdf.
2. *Provider Magazine*. 2016 top 50 largest nursing facility companies. *Provider Magazine*. June 2016:48-51. *Provider Magazine*. 2005 signs of recovery. *Provider Magazine*. June 2006:41-45. http://www.hcr-manorcare.com/about-hcr-manorcare/our-history/; http://media.corporate-ir.net/media_files/IROL/67/67541/(ii)%202014%20Annual%20Report.pdf; http://www.bloomberg.com/news/articles/2016-05-09/hcp-to-spin-off-hcr-manorcare-portfolio-into-independent-reit-inzuko9m; http://www.advfn.com/stock-market/NYSE/HCR/financials.
3. http://www.fillmorecap.com/index.php/about_us; http://listings.findthecompany.com/l/19083540/Golden-Gate-National-Senior-Care-Llc-in-Fort-Smith-AR; http://www.goldenliving.com/home.aspx?showpage=true; https://www.sec.gov/Archives/edgar/data/1236736/000089882207000667/exhibit993.htm; http://www.forbes.com/companies/golden-living/.
4. http://listings.findthecompany.com/l/5115590/Life-Care-Centers-Of-America-Inc-in-Cleveland-TN; http://www.hoovers.com/company-information/cs/company-profile.Life_Care_Centers_of_America_Inc.6146f2099cb2811e.html; http://www.forbes.com/companies/life-care-centers-of-america/.
5. http://www.hoovers.com/company-information/company-search.html?term=savaseniorcare; http://www.hoovers.com/company-information/cs/company-profile.savaseniorcare_llc.0d3cc73de160d155.html.

the 5 largest chains remained in the top 5 in 2015 although they changed positions, and Kindred was replaced by LCCA. Overall, the 5 largest for-profit chains had 10.3% of all nursing home beds and 9.2% of homes in 2015. The 4 of the 5 largest chains (except LCCA) had complex ownership structures with multiple owners, holding companies, and subsidiary companies.

Corporate strategies

The 4 of the 5 large chains had moved their property ownership to either a separate REIT or a real estate company with leaseback arrangements. Their growth strategy was to acquire and merge with other nursing homes, and 3 chains showed a steady growth in beds and homes between 2005 and 2015-2016.

All the nursing home chains had diversified horizontally to include a full range of long-term care companies and services including assisted living, rehabilitation, home health, hospice, and other services. One chain established a physician group practice to care for long-term care patients and other businesses such as dialysis, whereas another offered on-site physician services. Three of the 5 chains provided management services to its own nursing homes as well as other nursing homes.

The 5 large chains had nursing homes in 21 to 34 states. Each of the 5 chains was incorporated in the state of Delaware, known as the most favorable US state in terms of taxes (a tax haven). Delaware allows companies to lower their taxes in another state by shifting royalties and similar revenues to holding companies in Delaware where they are not taxed.[34]

Costs

The 5 chains had large revenues ranging from $1.3 billion to $5.6 billion and 2015-2016. Because of the private ownership by 4 of the 5 companies, only Genesis had to publicly disclose its finances and its profits (EBITDAR of 12.4% in 2015-2016).

Quality

In recent years, all 5 of the largest chains had been charged with fraudulent practices by the US Department of Justice (USDOJ) and either had made large settlements with the government or had pending cases. In 2015, Genesis reached a settlement for failure to provide services ordered and recorded and a $52.7 million settlement for improper hospice billing and fraud and abuse in its therapy services, and it was under investigation for staffing and quality of care violations.[35] HCR ManorCare was charged by the USDOJ for providing unreasonable and unnecessary services to government payers during 2006-2012.[36] Golden Living was charged with filing false claims for hospice patients and reached a settlement for providing inadequate wound care in 2013.[37] Life Care Centers of America settled a nationwide fraud case for filing of false claims for therapy services not medically reasonable and necessary (for $145 million with monitoring for 5 years).[38] SavaSeniorCare LLC was also charged with false Medicare billing for unnecessary therapy.[39]

Using federal government data on nurse staffing and deficiencies for all US nursing homes, we examined the 5 largest for-profit chains in 2014. Registered nursing (RN) hours per resident day were significantly lower in Golden Living and SavaSeniorCare facilities than the national average. Total nursing hours were also significantly lower in 4 of the 5 chains compared with the national average. The 5 largest chains all had higher percentages of Medicare postacute patients than average so that these patients need more nursing and therapy hours than other patients. When staffing hours were adjusted for the percentage of Medicare patients, the actual RN hours were significantly lower than expected hours in 3 of the chains and total nursing hours were lower than expected in all 5 of the largest chains. With low staffing, it was not surprising that all the chains (except Golden Living) had significantly higher quality deficiencies than the national average during 2009-2014.

Public accountability

As noted above, only 1 of the largest chains had public reporting with annual reports available. Although government data on individual facility staffing and deficiencies were available for analysis for each chain, government reports on specific chain ownership, quality, and costs were not available.

Discussion

Despite similarities in the growth of elderly population in all 5 countries, the number of beds per 1000 over 65 has fallen in all countries. These trends and the low occupancy rates in the United Kingdom and the United States may indicate a preference for alternative services delivered in the home and in the community. High occupancy rates in Norway and Canada may indicate a lack of competition or a lack of alternative options for individuals.

Nursing homes owned or operated by chains were 64% in the United Kingdom (with a rapid growth in the last decade), 56% in the United States, and 17% in Sweden and Canada in 2014. In the context of the Scandinavian tradition of universal, tax-financed care services, centered on public provision, the recent wave of marketization, and the increasing role of for-profit companies in residential care for older people were unexpected. Sweden and Norway, however, with fairly similar welfare models were not affected to the same extent. In Norway, 5% nursing home beds were operated by for-profit chains compared with 17% in Sweden. Thus, the growth was considerable

Table 7. Comparison of the largest for-profit chains in 2015-2016 by country.

	CANADA (5 CHAINS)	NORWAY (4 CHAINS)	SWEDEN (5 CHAINS)	UNITED KINGDOM (5 CHAINS)	UNITED STATES (5 CHAINS)
Ownership					
Type of owner	2 public, 1 trust fund, 2 private	1 public, 1 PE, 2 private	1 public, 2PE, 2 private	4 PE, 1 private	1 public, 2 PE, 2 private
Multiple ownership changes and/or mergers	5 of 5 chains	4 of 4 chains	4 of 5 chains	5 of 5 chains	4 of 5 chains
Growth since 2005	3 of 5 chains	3 of 4 chains	5 of 5 chains	2 of 5 chains	3 chains
Market share	24% of all beds	5% of all beds	13.5% of all beds	35% of all beds	10% of all beds
Corporate strategies					
Property separate from operations	3 of 5 chains	Property owned by municipalities	Some property owned by municipalities	5 of 5 chains	4 of 5 chains
Diversified	5 of 5 chains	4 of 4 chains	5 of 5 chains	5 of 5 chains	5 of 5 chains
Many locations	1 to 4 provinces	2 to 4 countries	2 to 4 countries	2 to 6 countries	21 to 34 states
Tax havens	None	2 of 4[a]	3 of 5[a]	3 of 5 chains	5 of 5 in Delaware
Costs					
High revenues	$509 to $980 million	NOK 1 billion to SEK 8.5 billion	SEK 1 billion to 8.5 billion	£55 to £713 million	$1.3 to 5.6 billion
High profitability EBITDA	3 = 9% to 28% 2 = NA	3 = 6% to 9.5% 1 = NA	5 = 6% to 9.5%	1 = loss 1 = 3% 3 = 8% to 19%	1 = 10% 4 = NA
Quality					
Low staffing	NA	NA	NA	NA	5 of 5 chains[b]
Many quality violations	5 of 5 chains	NA	NA	NA	4 of 5 chains[b]
Government legal actions	None	None	None	None	5 of 5 chains
Accountability					
Public reporting	3 of 5 chains	4 of 4 chains	4 of 5 chains	1 of 5 chains	1 of 5 chains

Abbreviations: EBITDA, net income before depreciation, amortization and interest expense and income taxes minus lease expenses; NA, not available; PE, private equity; public, publicly traded.
[a]Estimated.
[b]Significant difference.

given that were no for-profit actors in Scandinavia before the beginning of the 1990s.[1]

Ownership

Table 7 shows the comparisons for the key findings across the countries. In the 5 countries, the largest for-profit nursing home chains were primarily owned by private equity companies and investors. The exception was in Norway and Sweden where some private equity firms left the market. Overall, only a few for-profit chains were found to be publicly traded (2 in Canada, 1 in Norway and Sweden, none in the United Kingdom, and 1 in the United States). Some of the publicly traded companies also had private equity shareholders. Private equity companies are managed by partners in the funds for a fee or a percentage of the profits where capital gains made by the funds are not necessarily taxed. These companies are not required to publicly report on their financing and operations in contrast to publicly traded companies. There is a lack of clear ownership and financial transparency information on the large private companies in the 5 countries.

The largest for-profit nursing home chains generally had grown over the past decade by purchasing and/or merging with smaller companies that often involved a change of ownership and names (Table 7). The chains in this study showed a growing complexity of ownership patterns with many holding companies and subsidiaries.

The findings show that many nursing home chains have developed limited liability corporations (LLCs) or general or limited-partnership structures to limit the risk of financial loss

to the amount invested. This is in contrast to partnerships or sole owners, where the owners are personally responsible for all business liabilities.[30] As Burns et al[30] has pointed out, where financial risks are limited, there is an incentive for corporate risk-taking. This was illustrated with the collapse of Carema in Sweden and Southern Cross in the United Kingdom.

Corporate strategies

Most of the large chains had separate legal entities for property companies or REITs and care operations (see Table 7). This is attractive to investors because the companies can be bought and sold separately.[30] Taxes for property companies are generally lower than for other types of companies and interest rates on loans, and property rental rates can be artificially inflated to benefit the property owners.[30,40] In addition, operating companies with few assets consider that they have protection from malpractice litigation and government sanctions particularly in the United States, but research is not available on this issue.[41,42]

Often the large REITs that specialize in nursing home chains use triple-net lease agreements that make individual nursing homes solely responsible for 3 types of costs: net real estate taxes on the leased assets, net building insurance, and net common area maintenance.[30] These types of lease agreements have been problematic for some large chains as in the example of Southern Cross' bankruptcy in the United Kingdom. Some chains have leases structured to include a proportion of the quarterly net income of the nursing home as a way of reducing taxes on profits and lowering the profit reports.[40]

The largest for-profit nursing home chains are often heavily debt financed by obtaining cash through loans from banks or investors consistent with previous studies in the United Kingdom and the United States.[30,40] Interest payments are nontaxable and are deducted before profit is declared.[30] In addition, Table 7 shows that many of the large nursing home chains used tax havens, which offered investors low or no taxes on profits (except for those chains in Canada).

The findings showed that almost every large for-profit chain across the 5 countries owned and operated a range of related long-term care companies (Table 7). This allows nursing home chains to purchase services from their own related companies to enhance profit taking. Using the practice of horizontal ownership, the chains are able to capture a full range of long-term care business to reduce market competition and improve corporate stability. A few large nursing home chains provided physician services to the clients across their long-term care network. Other large chains, particularly in Norway and Sweden, were found to be expanding into providing preschools as well as expanding into mental health, developmental disabilities, substance abuse, and refugee reception centers. Some companies reported a strategy to expand into the private pay market rather than relying on government payments for clients.

Some of the large chains in Canada, the United Kingdom, and the United States offered management services to their own nursing homes as well as other nursing homes. By creating separate management companies or services, the costs of management services can be charged to individual nursing homes at rates set by the parent company to offset its administrative costs.[5–7] Nursing homes may have higher administration costs when they pay their parent companies for management services.[41]

Costs

Clearly, nursing home companies have been attractive to private investors because they often have high rates of return. Many of the large nursing home chains had revenues in the billions of dollars. With a few exceptions, the profits by the largest nursing home chains were high ranging from 6% to 28% across the 5 countries, despite financial market fluctuations (Table 7). The high profit margins were an expectation of private investors. One UK industry firm reported criticizing local governments because payment rates were not high enough to achieve the industry's expected profit margins. As Burns and colleagues noted, this has resulted in an industry-supported narrative demanding greater government funding for nursing homes.[43]

Research has found that private equity companies often have higher operating and total income margins, as well as higher operating costs compared with other nursing home chains, but these may not be financially sustainable over the long term.[30] A lack of stability in many chain owners and investors was found in this study by the frequent buying and selling of companies, nursing homes, and businesses in all 5 countries.

The profits of nursing home chains may be underreported and hidden in chain management fees, lease agreements, interest payments to owners, and purchases from related party companies.[41] When owners take cash out of nursing homes by use of loans, fees, administrative costs, and other methods, the profitability margins of companies are hidden.[30] Moreover, declared profits of chains and their operating subsidiaries can be manipulated over time to reduce taxes and pay dividends.[30] Previous studies have found that government payers in the 5 countries have not established financial limits on administration and profits and have not required public financial transparency of administrative costs and profits by individual nursing homes or their corporate owners.[44,45]

Quality

Where data were available on quality, the large nursing home chains did not provide high-quality services. In Canada, for-profit homes had poorer quality of care than nonprofits and municipal homes based on violations (deficiencies) judged by government inspections (not significant).[24-25] Four of the largest US chains also had significantly more quality violations than the average nursing homes and they all had charges

of fraudulent billing practices pending or settled. The findings of higher deficiencies were consistent with previous studies of the poor quality of for-profit chains.[6,11,41,46,47] The findings also showed scandals regarding quality of care in Norway, Sweden, and the United Kingdom, as well as US government legal actions against 1 large Canadian chain and the 5 largest chains in the United States for poor-quality and fraudulent practices.

In the United States, the 5 largest nursing home chains provided significantly less registered nursing staff hours and total staffing than the level expected based on their resident acuity. The findings of low nurse staffing levels, especially RN staffing levels, in the largest US for-profit chains were consistent with previous studies in Canada, Sweden, United Kingdom, and the United States.[26,28,48] Because nursing homes are labor-intensive, chains seeking high profit levels often reduce nurse staffing costs, especially RN costs, and cut wages, benefits, and pensions.[30,31,49] As chains have become major providers of nursing home care, we conclude that countries need to focus greater attention on collecting and analyzing the quality of care and quality oversight of nursing home chains.

Public accountability

Overall, we found a lack of government information on the ownership, costs, and the quality of services provided by nursing home chains. Although Canada and the United States had quality data available on individual nursing homes that could be analyzed by chain, other countries did not have quality data available for nursing homes by owners and chains. When large nursing home chains can have such a major impact on the access, cost, and quality of nursing home residents, public accountability should be given a high priority by local, state, and country governments.

Policy and regulatory issues

As large nursing home chains and companies grow in dominance in the marketplace and political arena, countries have less control over the amount, type, and quality of nursing home and related long-term care services. Because of municipal ownership of nursing home properties, Norway is currently able to limit the growth of for-profit chains and control its contracts for nursing home services. As governments become more dependent on large nursing home chains for services, they are less able to terminate contracts, remove residents from poorly performing facilities, ensure that standards are maintained, and control the costs of care.

Governments should reconsider their policies of privatization of ownership in the context of increasing costs and quality problems. They should focus on the changing needs for ownership, financial, and quality reporting and oversight to address the challenges of privatization and marketization of nursing home and other long-term care services.

Acknowledgements

The authors wish to acknowledge support from the Canadian Social Sciences and Humanities Research Council, Collaborative Research Initiative for the research initiative reimaging long-term residential care: An International Study of Promising Practices, Pat Armstrong, PI, York University, Toronto, Canada. The authors also would like to acknowledge William Hirst, Medical Student at Barts and the London School of Medicine and Dentistry, London, UK, for his research assistance.

Author Contributions

CH, FFJ, JP, AP, SS, and MS planned the paper; contributed sections to the paper including the background, findings, tables, and the analysis of the findings; contributed to editing the paper; agree with the manuscript results and conclusions; and reviewed and approved the final manuscript. CH wrote the first draft of the manuscript.

Disclosures and Ethics

The authors have confirmation of compliance with legal and ethical obligations including but not limited to the following: authorship and contributorship, conflicts of interest, privacy and confidentiality. There were no human and animal research subjects involved. The authors have read and confirmed their agreement with the ICMJE authorship and conflict of interest criteria. The authors have also confirmed that this article is unique and not under consideration or published in any other publication, and that they have permission from rights holders to reproduce any copyrighted material.

REFERENCES

1. Meagher G, Szebehely M. *Marketisation in Nordic Eldercare: A Research Report on Legislation, Oversight, Extent and Consequences* (Stockholm Studies in Social Work 30). Stockholm, Sweden: Stockholm University; 2013.
2. 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*. 2009;339:b2732.
3. Hillmer MP, Wodchis WP, Gill SS, Anderson GM, Rochon PA. Nursing home profit status and quality of care: is there any evidence of an association? *Med Care Res Rev*. 2005;62:139–166.
4. Ronald LA, McGregor M, Harrington C, Pollock A, Lexchin J. Observational evidence of for-profit delivery and inferior care: when is there enough evidence for policy change? *PLoS Med*. 2016;13:1–12.
5. Grabowski DC, Feng Z, Hirth R, Rahman M, Mor V. Effect of nursing home ownership on the quality of post-acute care: an instrumental variables approach. *J Health Econ*. 2013;32: 12–21.
6. Harrington C, Olney B, Carrillo H, Kang T. Nurse staffing and deficiencies in the largest for-profit nursing home chains and chains owned by private equity companies. *Health Serv Res*. 2013;47:106–128.
7. Stevenson D, Bramson JS, Grabowski DC. Nursing home ownership trends and their impacts on quality of care: a study using detailed ownership data from Texas. *J Aging Soc Policy*. 2013;25:30–47.
8. O'Neill C, Harrington C, Kitchener M, Saliba D. Quality of care in nursing homes: an analysis of relationships among profit, quality, and ownership. *Med Care*. 2003;41:1318–1330.
9. Baum JAC. The rise of chain nursing homes in Ontario, 1971-1996. *Soc Forces*. 1999;78:543–583.
10. Baum JAC, Li SZ, Usher JM. Making the next move: how experiential and vicarious learning shape the locations of chains' acquisitions. *Admin Sci Quart*. 2000;45:766–801.
11. Banaszak-Holl J, Berta WB, Bowman D, Baum JAC, Mitchell W. The rise of human service chains: antecedents to acquisitions and their effects on the quality of care in US nursing homes, 1991–1997. *Manage Decis Econ*. 2002;23:261–282.

12. Harrington C, Hauser C, Olney B, Rosenau PV. Ownership, financing, and management strategies of the ten largest for-profit nursing home chains in the US. *Intern J Health Serv*. 2011;41:725–746.
13. Panos J. Crisis in care: Ontario pioneers the privatization of long term care. *Briarpatch Magazine*. November 1, 2011. https://briarpatchmagazine.com/articles/view/crisis-in-care.
14. Vabo M, Christensen K, Traetteberg HD, Jacobsen FF. Chapter 5. Marketization in Norwegian eldercare: Preconditions, trends and resistance. In: Meagher G and Szebehely M, eds. *Marketisation in Nordic Eldercare: A Research Report on Legislation, Oversight, Extent and Consequences* (Stockholm Studies in Social Work 30). Stockholm, Sweden: Stockholm University; 2013.
15. Erlandsson S, Storm P, Stranz A, Szebehely M, Trydegard GB. Chapter 2. Marketizing trends in Swedish eldercare: competition, choice and calls for stricter regulation. In: Meagher G and Szebehely M, eds. *Marketisation in Nordic Eldercare: A Research Report on Legislation, Oversight, Extent and Consequences* (Stockholm Studies in Social Work 30). Stockholm, Sweden: Stockholm University; 2013.
16. Harrington C, Pollock AM. Decentralization and privatization of long-term care in UK and USA. *Lancet*. 1998;351:1805–1808.
17. Pollock AM. *NHS Plc.: The Privatization of Our Health Care*. 2nd ed. London, England: Verso; 2005.
18. Kaffenberger KR. Nursing home ownership: an historical analysis. *J Aging Soc Policy*. 2000;12:35–48.
19. Kitchener M, Harrington C. The U.S. long-term care field: a dialectic analysis of institution dynamics. *J Health Soc Behav*. 2004;43:87–101.
20. US Centers for Medicare and Medicaid Services. *CASPER/OSCAR Federal On-Line Survey and Certification System Data Sets*. Baltimore, MD: CMS; 2015.
21. Welltower. New York Stock Exchange. Annual 10-K report, 2015; New York, NY, 2016. http://www.welltower.com/wp-content/uploads/2016/02/10-K_2015.pdf.
22. *Provider Magazine*. Top 50 largest nursing facilities companies. *Provider Magazine*. June 2016:48–51.
23. US Department of Justice. Extendicare Health Services Inc. agrees to pay $38 million to settle false claims act allegations relating to the provision of substandard nursing care and medically unnecessary rehabilitation therapy [press release]. Washington, DC. https://www.justice.gov/opa/pr/extendicare-health-services-inc-agrees-pay-38-million-settle-false-claims-act-allegations. Published October 10, 2014.
24. Panos J. Care for sale: privatizing long-term care in Ontario. In: 4th International Conference on Evidence-based Policy in Long-Term Care, Invited Symposium Presentation; London School of Economics, London, England; September 5, 2016.
25. McGregor MJ, Cohen M, Stocks-Rankin C-R, et al. Complaints in for-profit, non-profit and public nursing homes in two Canadian provinces. *Open Med*. 2011;5:183–192.
26. Hsu AT, Berta W, Coyte PC, Laporte A. Staffing in Ontario's long-term care homes: differences by profit status and chain ownership. *Can J Aging*. 2016;35:175–189.
27. Triton. Ambea was acquired by Triton Fund III in March 2010 [press release]. http://www.triton-partners.com/investments/private-equity/ambea/. Published 2010.
28. Arfwidsson J, Westerberg J. *Profit Seeking and the Quality of Eldercare* [Master thesis]. Stockholm, Sweden: Stockholm School of Economics; 2012.
29. Stolt R, Jansson P. *The Private Eldercare Market—Establishment, Development and Competition*. Stockholm, Sweden: University of Stockholm; https://www.diva-portal.org/smash/get/diva2:196545/FULLTEXT01.pdf. Published 2006.
30. Burns D, Cowie L, Earle J, et al. *Where Does the Money Go? Financialised Chains and the Crisis in Residential Care*. Manchester, UK: Centre for Research on Socio-Cultural Change (CRESC); March 2016.
31. Lloyd L, Banerjee A, Harrington C, Jacobsen FF, Szebehely M. It is a scandal! Comparing the causes and consequences of nursing home media scandals in five countries. *Intern J Social Soc Policy*. 2014;34:2–18.
32. Casalicchio E. Social care system failing workers—CQC chief inspector. *Politics Home*. August 9, 2015. https://www.politicshome.com/news/uk/health-and-care/news/68099/social-care-system-failing-workers-cqc-chief-inspector.
33. Burchardt T, Obolenskaya P, Vizard P. The Coalition's record on adult social care: Policy, spending and outcomes 2010–2015. Working Paper 17, Centre for Analysis of Social Exclusion, London School of Economics, London, UK; January 2015.
34. Wayne L. How Delaware thrives as a corporate tax haven. *New York Times*. June 30, 2012. http://www.nytimes.com/2012/07/01/business/how-delaware-thrives-as-a-corporate-tax-haven.html.
35. US Department of Justice. Arlington nursing home agrees pay $600,000 to settle false Claim Act Violations [press release]. Washington, DC. https://www.justice.gov/usao-edva/pr/arlington-nursing-home-agrees-pay-600000-settle-false-claim-act-violations. Published December 23, 2015
36. US Department of Justice. Government sues skilled nursing chain HCR ManorCare for allegedly providing medically unnecessary therapy [press release]. Washington, DC. https://www.justice.gov/usao-edva/pr/government-sues-skilled-nursing-chain-hcr-manorcare-allegedly-providing-medically. Published April 21, 2015
37. US Department of Justice. Golden living agrees to pay over $600,000 to settle claims of inadequate care [press release]. Washington, DC. 2013. https://www.fbi.gov/atlanta/press-releases/2013/golden-living-nursing-homes-settle-allegations-of-substandard-wound-care; http://www.justice.gov/opa/pr/us-files-complaint-against-national-chain-hospice-providers-alleging-false-claims-medicare.
38. US Department of Justice. Life Care Centers of America Inc. Agrees to pay $145 million to resolve false claims act allegations relating to the provision of medically unnecessary rehabilitation therapy services [press release]. Washington, DC. https://www.justice.gov/opa/pr/life-care-centers-america-inc-agrees-pay-145-million-resolve-false-claims-act-allegations. Published October 24, 2016.
39. US Department of Justice. Government intervenes in lawsuits alleging that skilled nursing Chain SavaSeniorCare provided medically unnecessary therapy [press release]. Washington, DC. https://www.justice.gov/opa/pr/government-intervenes-lawsuits-alleging-skilled-nursing-chain-savaseniorcare-provided. Published October 29, 2015.
40. Pradhan R, Weech-Maldonado R, Harman JS, Laberge A, Hyer K. Private equity ownership and nursing home financial performance. *Health Care Management Rev*. 2013;38:224–233.
41. Harrington C, Ross L, Kang T. Hidden owners, hidden profits, and poor nursing home care: a case study. *Int J Health Serv*. 2015;45:779–800.
42. Stevenson D, Grabowski D. Private equity investment and nursing home care: is it a big deal? *Health Aff (Millwood)*. 2008;27:1399–1408.
43. LaingBuisson. *Fair Price for Care: Calculating a Fair Price for Nursing and Residential Care for Older People and People With Dementia October 2014– September 15*. 6th ed. London, England; 2015; http://www.laingbuisson.com/.
44. Harrington C, Ross L, Mukamel D, Rosenau P. *Improving the Financial Accountability of Nursing Facilities*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured; 2013.
45. Harrington C, Armstrong H, Halladay M, et al. Nursing home financial transparency and accountability in four locations. *Ageing Int*. 2016;41:17–39.
46. Grabowski DC, Hirth RA, Intrator O, et al. Low-quality nursing homes were more likely than other nursing homes to be bought or sold by chains in 1993–2010. *Health Aff*. 2016;35:907–914.
47. US Government Accountability Office. *CMS's Specific Focus Facility Methodology Should Better Target the Most Poorly Performing Facilities Which Tend to Be Chain Affiliated and for-Profit* (GAO-09-689). Washington, DC: GAO; August 2009; http://www.gao.gov/new.items/d09689.pdf.
48. Harrington C, Schnelle JF, McGregor M, Simmons SF. The need for minimum staffing standards in nursing homes. *Health Serv Insight*. 2016;9:13–19.
49. Harrington C, Stockton J, Hoopers S. The effects of regulation and litigation on a large for-profit nursing home chain. *J Health Polit Policy Law*. 2014;39:781–809.
50. Government of Canada, Statistics Canada, Canadian Socio-Economic Information Management System (CANSIM). Tables 051-0001, 107-5502, 107-5501, 107-5509, 107-5512, 107-5502, 107-5512. Ottawa, Ontario. 2016. http://www5.statcan.gc.ca/subject-sujet/theme-theme.action?pid=40000&lang=eng&more=0&MM. Accessed December 2016. Excludes Quebec.
51. Canadian Institute for Health Information 2014. Health Spending on Nursing Homes 2013 *Residential Long-term Care Financial Data Tables 2013*. Ottawa, ON: CIHI (in Canadian dollars) https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2740 and Chartwell Senior Housing REIT Annual Information Form, 2006.
52. UK Office of National Statistics. *Population Estimates for UK, England, Wales, Scotland and Northern Island*. Newport, NSW; 2016.
53. Statistics Norway. *Nursing and Care Services*. Oslo, Norway. July 2014 (in Norwegian Kroner). Nursing and Care Services. July 2014 (in Norwegian Kroner).
54. Statistics Sweden, *2016 Database, Population by Age, Sex and Year*. Stockholm, Sweden. 2016. http://www.statistikdatabasen.scb.se/pxweb/en/ssd/?rxid=5ac9ea98-5967-477e-9db3-a8de0f7c4f88.
55. Bergman M, Jordahl H. *Goda år på ålderns höst?* Ministry of Finance, ESO-Report. 2014;1:29.
56. Socialstyrelsen. Vård och omsorg om äldre—lägesrapport 2007. 2007:20, 24, and 32.
57. Socialstyrelsen. *Statistics on Elderly and Persons with Impairments—Management Form 2015*, Table 10. 2016.
58. Swedish statistics only differentiate between public and private provision. The proportion provided by chains has been calculated by the authors.
59. Socialstyelsen. Vård och omsorg om äldre—lägesrapport 2015. 2016:18.
60. Socialstyrelsen. *Avgifter inom äldreomsorgen*. 2014:32. All nursing home residents are subsidized by public monies.
61. LaingBuisson, *Care of Older People UK Market Report*. 27th ed. London, England: LaingBuisson; 2016.

62. LaingBuisson, *Care of Elderly People, UK Market Survey 2009*. London, England: LaingBuisson; 2009.
63. Care Quality Commission (CQC). Independent Regulator of Health and Social Care in England. *Data for care homes*. Newcastle: CQC. http://www.cqc.org.uk/content/care-homes. Accessed November 22, 2016. Includes nursing homes and dual registered homes, data for local authority nursing beds/homes unknown but estimated <500 beds, excludes National Health Service (NHS) facilities but includes long-term NHS beds for geriatrics. Chains are defined as private companies, individuals/partnerships with 3 or more homes or any listed company.
64. US Centers for Medicare and Medicaid Services. *Nursing Home Data Compendium 2015 Edition*. Baltimore, MD: CMS; 2015. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandComplianc/Downloads/nursinghomedatacompendium_508-2015.pdf.
65. Harrington C, Carrillo C, Dowell M, Tang PP, Blank BW. *Nursing Facilities, Staffing, Residents and Facility Deficiencies, 2005–2010*. San Francisco, CA: University of California; 2011.
66. Harrington C, Carrillo H, Garfield R. *Nursing Facilities, Staffing, Residents and Facility Deficiencies, 2009 Through 2014*. The Kaiser Commission on Medicaid and the Uninsured; August 2015.
67. US Centers for Medicare and Medicaid Services. *National Health Expenditure Data Historical*. Baltimore: MD; 2015. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html.
68. Extendicare. *Annual Report*; 2005-2016. https://www.extendicare.com/investors/about-extendicare/.
69. Revera. Revera expends investment agreement with health care REIT to share ownership of 23 retirement communities across Canada. *News Release*, April 2, 2015; CBRE. Revera completes divestiture of United States skill nursing centers to Genesis HealthCare, December 1, 2015. http://www.reveraliving.com/; http://www.investpsp.com/pdf/info-source-revera-en.pdf; http://www.investpsp.com/pdf/PSP-AR-2016-complete.pdf; http://www.welltower.com/about-us/welltowers-history/; http://www.welltower.com/wp-content/uploads/2016/02/10-K_2015.pdf; Retirement REIT. *Annual Information Report*; 2006:4.
70. Sienna Senior Living. *Management Discussion & Analysis*. 2016. http://www.siennaliving.ca/; http://www.sedar.com/CheckCode.do; Leisureworld from Macquarie Power & Infrastructure Income Fund, *Annual Information Form*; 2005:3.
71. Chartwell. *Management's Discussion & Analysis*, http://chartwell.com/index; June 30, 2016. http://investors.chartwell.com/Cache/1001207528.PDF?Y=&O=PDF&D=&fid=1001207528&T=&iid=4100072. Chartwell, *Annual Information Report*; 2006:16.
72. Schlegel Villages. http://schlegelvillages.com/about-us; http://www.rbjschlegel.com/. Data for 2005 from 2011 Web site: https://web.archive.org/web/20110315072657/; http://www.schlegelvillages.com/about-us. BRE (2015) *Seniors Housing & Healthcare*; 2015. Market Outlook, February 10.