Technology Strategy Board
Driving Innovation

Knowledge Transfer Network
HealthTech and Medicines

ANALYSIS OF UK LONG TERM CARE MARKET

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Technology Strategy Board

Driving Innovation

The Technology Strategy Board is the UK's innovation agency. Its goal is to accelerate economic growth by stimulating and supporting business-led innovation. Sponsored by the Department for Business, Innovation and Skills (BIS), the Technology Strategy Board brings together business, research and the public sector, supporting and accelerating the development of innovative products and services to meet market needs, tackle major societal challenges and help build the future economy.

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The Technology Strategy Board launched the Assisted Living Innovation Platform (ALIP) in November 2007 and it will run to until 2012, with the intention to deliver an impact for many years beyond. ALIP is delivering a wide ranging programme to enable the ageing population and those with long term health conditions to live with greater independence. The innovation platform is hosted on _connect, a powerful networking platform that helps facilitates open innovation, where people can network, share information and knowledge and work together securely.

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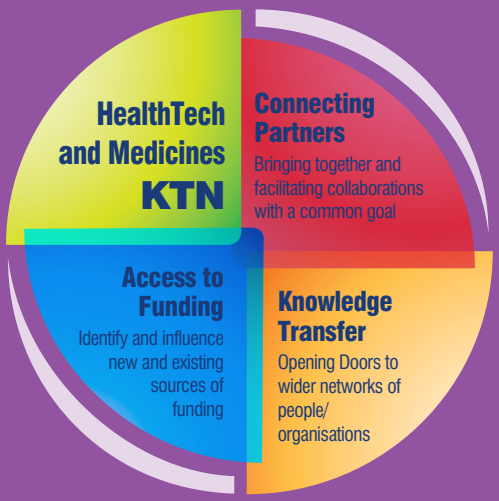
The HeakthTech and Medicines Knowledge Transfer Network (Health KTN) is a single front door through which members can find all the expertise and support they need across the innovation chain, from first idea, to patenting and packaging intellectual property, finding academic and industrial partners for product development and manufacturing scale up, meeting regulatory standards, and getting access to market. The Health KTN is dedicated to accelerating innovation and technology exploitation in the health industries sector. This includes the medical biotechnology, medical technology, diagnostics and pharmaceutical industries. The Health KTN will help you onnect with other organisations to catalyse innovation. It does this through running events and workshops for practitioners and innovation leaders in its priority areas and creates awareness of funding vehicles at the public-private sector interface.

The Health KTN has been responsible for leading the Knowledge Transfer Programme for the Technology Strategy Board's Assisted Living Innovation Platform.



For more information please visit www.healthktn.org

FOREWORD

This report has been prepared by Frost & Sullivan on behalf of the Technology Strategy Board and Assisted Living Innovation Platform, to support The Long Term Care Revolution programme launched on 8 April 2013. It sets out to examine the economic research in the current care market and to make some analyses/extrapolations of future market potential. It therefore forms one aspect of the business case to invest new research, development and innovation for radical change in care provision which opens up the potential for significant market growth in both products and services for the UK market and beyond.

Contents

OVERVIEW OF CURRENT LONG TERM CARE MARKET

Changing demographics are and will continue to have a significant impact on the long term care market in the UK. The ageing population will have a major impact on the organisation and delivery of health care and there will be a focus on chronic diseases, such as Alzheimer's disease, heart disease, and osteoporosis, rather than acute illnesses. Although a high proportion of older adults are helped by friends and family, many pay for their care whilst some are partly or fully covered by the government through local funding. Long term care (LTC) can range from a low level of care including cleaning and shopping support to high intensity care for older adults within care homes. The key trend is that the demand for care will continue to increase because of increasing life expectancy and ageing.

The current LTC funding model is generally thought to be outdated and has faced criticism for failing to adequately protect those individuals with limited wealth. With life expectancy increasing, disability rates are also likely to rise and as a consequence so will the cost of paying for long term care. There has been increasing concern that reforms are required to address how the UK should pay for long term care of older adults. The key issue is that long term care residential services are expensive, both for individuals and the government.

In the UK, long term care is provided by voluntary organisations, local councils, health authorities and private agencies. There are three types of institutional care:

- **Residential care homes**
- **Nursing homes**
- **Long-stay hospital provision (the formal distinction between residential care and nursing homes was removed from April 2002).**

There are different levels of care accommodation to suit different stages in life and the level of care required. Some residential homes are run by local authorities, but most residential care homes and all nursing homes are in the independent sector (approximately 90%). Many local authorities have outsourced care to the private sector in recent years in order to save costs.

In this report we will be looking at the public and private long term care market in the UK. The public long term care market includes care supplied by the local authority covering NHS long stay geriatric, NHS (older adults) mentally ill and local authority older adults and younger physically disabled. The private long term care market includes care supplied through private nursing, private residential, voluntary nursing and voluntary residential.

For the purpose of this report we are including three types of auxiliary services associated with residential long term care. These include training services, catering and laundry. This is a non-exhaustive list and the report does not cover all of the segments in the market.

The two segments covered in the report include residential and non-residential homes. Residential homes include care homes with and without nursing care. Care homes without nursing care are either for short or long term stays. In addition to the accommodation, they provide help and assistance with:

- Personal hygiene, including help with washing, bathing, shaving, oral hygiene and nail care
- Continence management, including assistance with toileting, skin care, incontinence laundry and bed changing
- Food and diet, including preparation of food and fulfilment of dietary requirements and assistance eating
- Counselling and support, including behaviour management, psychological support and reminding devices
- Simple treatments, including assistance with medication (including eye drops), applications of simple dressings, lotions and creams and oxygen therapy
- Personal assistance, including help with dressing, surgical appliances, mechanical or manual aids, assistance getting up or going to bed

Care homes with nursing care provide the same help and assistance with personal care as those without nursing care but they also have professional registered nurses and experienced care assistants in constant attendance who can provide 24-hour nursing care services for more complex health needs as prescribed by physicians. In addition to being registered to provide general nursing care, many homes also offer rehabilitation services which include different therapies, such as physical, speech and pain therapies and specialist health care including, dementia care, EMI nursing care, cancer care, services for younger people with physical disabilities (usually aged 18 - 64). These homes are for people who are very frail or for people who are unable to care for themselves and have numerous health care requirements. All facilities that provide nursing care would be grouped under this category for segmentation purposes.

Non-residential care is care, other than in a care home, usually in peoples own homes. This includes cases where care and accommodation are arranged separately. For example, care provided for those living in extra care housing and in Shared Lives arrangements. Extra care housing (also called independent living) offers a greater level of support. Residents will still live in self-contained flats but meals may be provided and care staff may be available to provide personal care or domestic support. Again, this housing could be offered through a local authority or it could be a private development of houses or flats which is available to rent or buy.

The number of care homes within residential settings, both in public and private has increased over the last few years. It is expected that the number of care homes will increase further in the future as a result of increasing demand. The amount of private payors will continue to grow and the private sector will see further growth potential. As a consequence, older adults will have greater choice and control of their care and services.

MARKET SIZE: CURRENT & FUTURE LONG TERM CARE MARKET

Frost & Sullivan estimates that demand for residential care stood at 420,107 people in 2011. Approximately 90% of the residential care demand comes from private settings. The average yearly fee for private residential care in 2011 was £33,124, compared to £29,224 in public settings. Frost & Sullivan estimates non-residential care demand to be 725,404 people in 2011. Approximately 80% of the non-residential care demand comes from public settings. For non-residential care the average yearly fee is lower at £9,724 for public and £6,708 for private.

CURRENT MARKET

Public Sector Providers And Provision

Public providers include both those managed by local authorities and also those managed by the NHS. A small percentage of homes in the UK are run by the public sector with the majority run by private sector providers. Many public companies were taken private in early 2000 because of poor market conditions.

Private Sector Providers and Provision

The top ten companies account for approximately 20% of the UK's private sector capacity. Table 2.1 shows the top ten providers ranked by number of beds in 2011. Four Seasons is the largest operator of care homes in the UK and Bupa is the second largest. HC-One Ltd is a new supplier which was formed by the care home NHP in association with care home management specialist Court Cavendish.

TABLE 2.1: TOP 10 PRIVATE SECTOR PROVIDERS OF CARE HOMES IN THE UK, 2011

Provider	Beds
Four Seasons Health Care Ltd	23,446
Bupa Care Homes	21,720
HC-One Ltd	12,683
Barchester Healthcare Ltd	11,430
Care UK	5,007
Methodist Homes	4,812
Anchor Trust	4,203
Orchard Care Homes	3,879
Bondcare Group	3,781
European Care Group	3,719

Source: Frost & Sullivan

Auxiliary Service Provision

For the purpose of this report, auxiliary service provision covers 3 main areas for residential care settings:

- Training - includes investment in courses, improving systems for nurses and support staff
- Laundry - includes the patient's laundry and bed linen. Calculated based on the average cost of laundry per person, which in most cases is included as part of the weekly fee.
- Food - the average weekly fee differs based on the type of food and this varies depending on the patient and nutrition required. Calculated based on the average cost of food per person, which in most cases is included as part of the weekly fee.

Overview of Long Term Care Conditions

TABLE 2.2: LONG TERM CONDITIONS IN THE UK, 2011, 2020, 2030 & 2040

	Population	Beds	2011	2020	2040
Total Population	Total Population in the UK	62,735,256	67,173,341	71,392,081	74,963,314
	Total Population 65+	10,508,000	12,671,247	15,494,107	17,715,471
Dementia	Total Population in the UK	781,432	922,410	1,129,481	1,384,951
	Total Population 65+	741,536	875,317	1,071,815	1,314,243
Cancer	Total Population in the UK	2,015,970	2,800,000	3,800,000	4,800,000
	Total Population 65+	1,350,700	1,905,894	2,794,180	4,096,470
Cardiac	Total Population in the UK	8,074,575	9,736,861	11,641,430	13,310,443
	Total Population 65+	3,552,813	4,284,219	5,238,644	5,989,699
Stroke	Total Population in the UK	1,277,230	1,367,585	1,453,474	1,526,181
	Total Population 65+	263,504	282,145	299,864	314,864
Diabetes	Total Population in the UK	2,912,657	3,907,949	5,416,015	7,507,992
	Total Population 65+	788,742	1,058,265	1,466,646	2,033,149

Source: OECD, National Statistics, Population Trends, Dementia UK, London School of Economics & Institute of Psychiatry at King's College London, Department of Health, NHS, British Heart Foundation, National Audit Office, The Health Foundation, Diabetes UK includes Frost & Sullivan extrapolations and analysis

Table 2.2 shows ageing population trends and key long term conditions forecasted to 2040. The impact of each is explained in detail below.

Socio-Economic Changes and Ageing Population Impact	Continuing improvements to healthcare and changes to people's working lives are ensuring that an increasing number of the UK population lives well beyond retirement age. As longevity increases, the proportion of people who are very old will grow the fastest and their demand for care and support will increase, particularly due to age-related diseases. In addition, demographic changes mean that for some there is a lack of family support, which will place further burden on the long term care market in the future.
Dementia	Dementia is the collection of symptoms including a decline of memory, reasoning and communication skills and a gradual loss of skills needed to carry out daily activities. One in 5 people over 80 has a form of dementia. The total number of people with dementia in the UK is forecast to increase by approximately 40% in the next 15 years and by 150% in the next 45 years.
Cancer	Cancer prevalence increases steeply with age, above 65 years the most prevalent cancers are the prostate, lung, colon and rectum in males, and of the breast, colon and uterus in females. The large and increasing size of the population of living cancer patients emphasises the magnitude of the impact of cancer on peoples' lives, either as patients themselves or as relatives of cancer patients.

Cardiac	Heart and circulatory disease is the UK's biggest killer. Death rates from cardiac heart disease have been falling in the UK at one of the fastest rates in Europe. However, death rates in the UK still remain relatively high compared to some Western European Countries. The prevalence of chronic heart disease in the UK increases with age and is higher in men than in women. Some people are particularly predisposed towards developing atherosclerosis, due to inherited genetic factors. They may have a family history of people dying at a young age from coronary heart disease. An unhealthy diet, lack of exercise, diabetes, high blood pressure and smoking all increase the risk.
Stroke	Stroke is the third most common cause of death in England and accounts for 11 per cent of deaths each year. In addition, it is the leading cause of severe adult disability. Although deaths from stroke have fallen in the UK over the past 40 years, stroke accounted for around 46,500 deaths in England and Wales in 2008 (9% of all deaths). The decline in numbers is partly due to improvements in prevention, combined with an increase in healthy living public awareness. Older people who have strokes usually have atheroma and atherosclerosis in other parts of the body, and are likely to have co-existing peripheral vascular disease, and ischaemic heart disease. Because older people often have a variety of health problems, older people with stroke are more likely to have COPD (chronic obstructive pulmonary disease), eyesight difficulties, osteo-arthritis and other conditions, which increases their general frailty and vulnerability. However, research in the American Academy of Neurology Journal suggests that stokes are becoming more common at a younger age with about one in five victims now below the age of 55. A key reason for this trend could be a rise in risk factors such as diabetes, obesity and high cholesterol. Current UK health policy places great emphasis on reducing strokes. Key to this is the need for better management of vascular risk factors, including hypertension, obesity, high cholesterol, atrial fibrillation and diabetes.
Diabetes	The UK is facing a huge increase in the number of people with diabetes. By 2025, it is estimated that five million people will have diabetes. Most of these cases will be Type 2 diabetes, because of ageing population and rapidly rising numbers of overweight and obese people. Diabetes has become one of the biggest health challenges facing the UK today. In order to reduce the number of people dying from diabetes and its complications, there needs to be greater awareness of the risks, lifestyle changes and an improvement in self-management among people with diabetes as well as improved access to integrated diabetes care services.

MARKET SIZE IN VALUE AND FORECAST FOR LONG TERM CARE MARKET IN UNITED KINGDOM BY RESIDENTIAL & NON-RESIDENTIAL

- Public Sector - 2011-2020-2040
- Private Sector - 2011-2020-2040

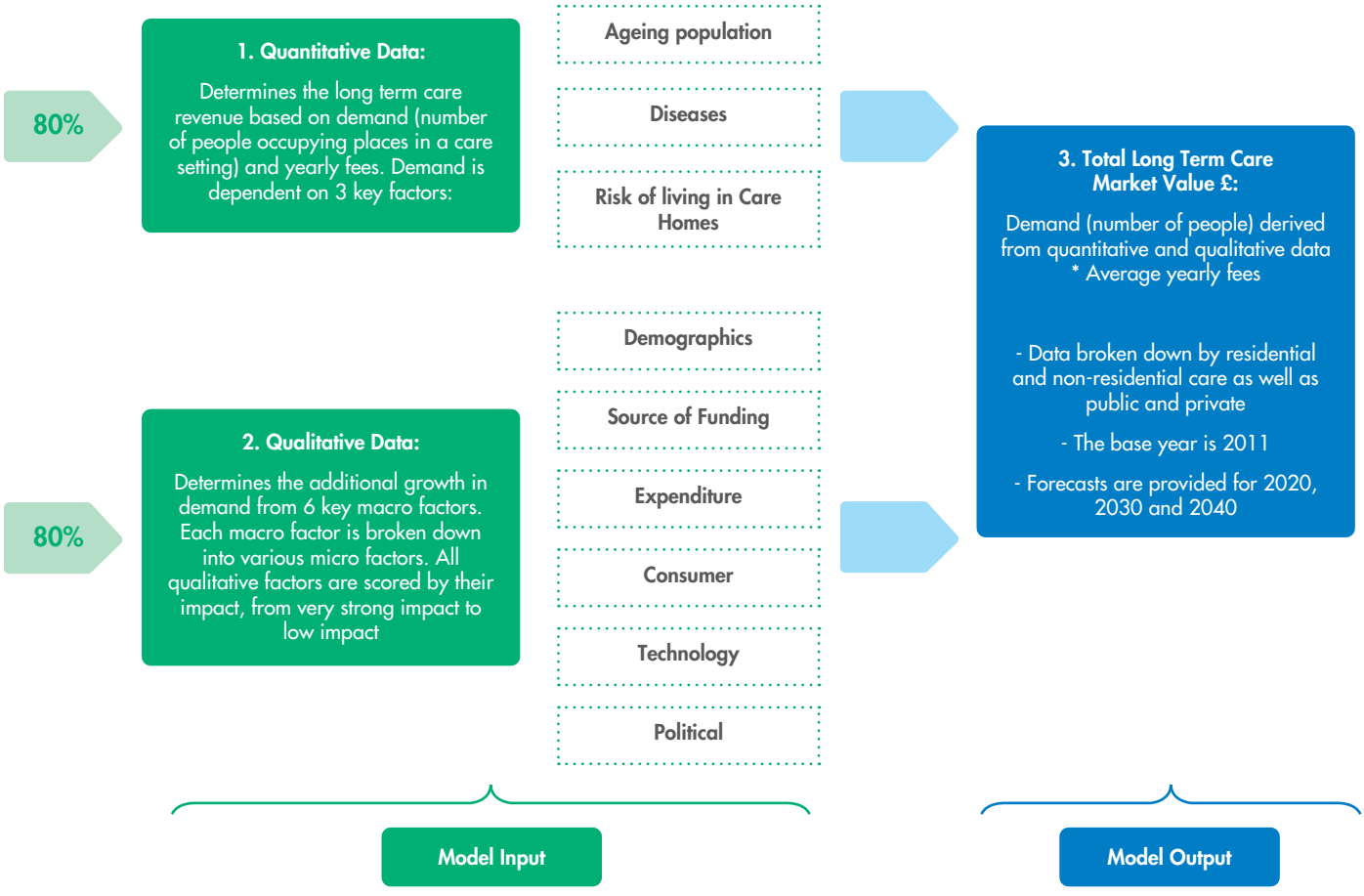
In order to assess the future of the long term care market in the UK, Frost & Sullivan have developed a market sizing model to forecast the ***demand*** for care and the ***average yearly fee*** to calculate the ***value of the residential and non-residential market, split by public and private.***

This model is held by the Technology Strategy Board for ongoing analyses and enhancement as more knowledge becomes available.

Figure 2.1 shows the basis of the forecast model for the long term care market in the UK. The model provides an assessment of the future market revenue of the long term care market in the UK by residential and non-residential care as well as by public and private. The revenue is based on demand and yearly average fees (derived from average weekly fees). The model takes into account volume of demand, which currently accounts for 89% of the UK's total capacity in the residential market.

It is understood based on ther research that demand is not only dependent on people's state of health and diseases but also influenced by a number of qualitative factors which over a period of time have a varying level of influence and emphasis.

FIGURE 2.1: FORECAST MODEL FOR THE LONG TERM CARE MARKET IN THE UK



Source: Frost & Sullivan analysis

Table 2.3 shows that overall the contribution of quantitative factors, which include demographic pressures, will have a greater weightage on demand in the long term care market compared to qualitative factors. Quantitative demand factors are expected to contribute to 80% of the total demand in the long term care market in 2020 and qualitative factors contributing to 20% of the total demand. Qualitative factors include sources of funding, technology, consumer expectations, regulation and political factors. The contribution of quantitative and qualitative factors will have various levels of impact during the forecasted time period and are based on current research. In 2030 the qualitative factors are expected to account for 25% of total demand, increasing to 30% in 2040.

TABLE 2.3: CONTRIBUTION TO DEMAND IN 2020, 2030 AND 2040

	2020	2030	2040
Quantitative demand factors	80%	75%	70%
Qualitative demand factors	20%	25%	30%

Source: Frost & Sullivan analysis

The number of care homes in residential settings; both public and private have increased over the last few years and are expected to increase in the future. Table 2.4 shows the demand for residential and non-residential care in the base year and forecasted period to 2040. Frost & Sullivan calculated demand (number of people) from prevalence and incidence statistics for various long term conditions (as seen in Table 2.2). The forecasted demand takes into account the trends and growth rates of these long term conditions in relation to total population growth.

TABLE 2.4: RESIDENTIAL & NON-RESIDENTIAL DEMAND, 2011, 2020, 2030 & 2040

Residential Demand	2011	2020	2030	2040
Public	33,008	54,447	67,466	82,652
Private	387,099	459,613	569,509	697,699
Total	**420,107**	**514,061**	**636,975**	**780,351**
Non-Residential Demand	**2011**	**2020**	**2030**	**2040**
Public	568,390	685,403	838,095	958,251
Private	157,014	189,338	231,518	264,710
Total	**725,404**	**874,741**	**1,069,612**	**1,222,961**
Total Demand	**2011**	**2020**	**2030**	**2040**
Public	601,399	739,850	905,561	1,040,903
Private	544,112	648,951	801,027	962,409
Total	**1,145,511**	**1,388,801**	**1,706,588**	**2,003,312**

Source: British Geriatrics Society, Community Care Statistics, UKHCA Summary Paper, Frost & Sullivan analysis

Residential Demand

The demand in residential care settings is expected to increase in the forecast period, mainly due to quantitative and demographic pressures as explained in Table 2.3. Other qualitative factors also contribute to growth and are explained further in Chapter 3: Demand Factors - Current & Future Impact on the Long Term Care Market. The qualitative demand factors which impact growth include demographics (household mix, older people in employment & risk of living in a care home), sources of funding and expenditure, consumer trends, technology trends, political trends and regulation trends.

The demand for residential care is the largest in the private setting. In the future the private residential sector will see increased growth as the public sector becomes less involved in the provision of care. In addition, a higher proportion of older adults will also self-pay, boosting the private sector further.

Non-Residential Demand

There has been a strong public policy to encourage non-residential care; however this has not resulted in a dramatic shift in this direction. Non-residential care is made up of a mixture of public and private care services. Over the most recent years there has been increased outsourcing to private providers by local authorities. Cuts in spending have affected residential care providers less than non-residential care providers in the private setting.

TABLE 2.5: AVERAGE YEARLY FEE £, 2011, 2020, 2030 & 2040

Residential £	2011	2020	2030	2040
Public	29,224	34,944	42,952	50,440
Private	33,124	39,572	48,620	57,096
Non-Residential Demand	**2011**	**2020**	**2030**	**2040**
Public	9,724	11,648	14,300	16,796
Private	6,708	8,060	9,880	11,596

Source: Personal Social Services Research Unit, Frost & Sullivan analysis

Table 2.5 shows the average yearly fee for the residential and non-residential sector. The average inflation rate is taken into consideration over time, in addition to the previous year trends to make projections for the future. Over the last 5 years the yearly average fee for the residential sector has risen due to inflation. The residential yearly average fee takes into account the cost of staying in a care home and the non-residential average yearly fee takes into account nursing hours, the nurse's time per resident and cost per hour of nurses.

TABLE 2.6: TOTAL RESIDENTIAL & NON-RESIDENTIAL REVENUE, £ MILLION, 2011, 2020, 2030 & 2040

Residential Revenue, £ million	2011	2020	2030	2040
Public	964,637,690	1,902,612,885	2,897,805,797	4,168,965,836
Private	12,822,253,790	18,187,819,568	27,689,534,864	39,835,820,063
Total	**13,786,891,480**	**20,090,432,453**	**30,587,340,662**	**44,004,785,899**
Non-Residential Revenue, £ million	**2011**	**2020**	**2030**	**2040**
Public	5,527,026,212	7,983,571,796	11,984,753,127	16,094,781,613
Private	1,053,249,005	1,526,062,584	2,287,396,378	3,069,579,306
Total	**6,580,275,217**	**9,509,634,380**	**14,272,149,505**	**19,164,360,919**
Total Revenue, £ million	**2011**	**2020**	**2030**	**2040**
Public	6,491,663,903	9,886,184,680	14,882,558,924	20,263,747,449
Private	13,875,502,795	19,713,882,153	29,976,931,242	42,905,399,369
Total	**20,367,166,697**	**29,600,066,833**	**44,859,490,167**	**63,169,146,818**

Source: Calculated using demand and average yearly fee, Frost & Sullivan analysis

Table 2.6 shows the revenue for residential and non-residential care in the UK. The residential market is expected to reach £44 billion in 2040 with the private setting contributing to 91% of revenues. The non-residential sector will still remain smaller than the residential sector in 2040 and is expected to reach £19 billion, with the public sector contributing to 84% of revenues.

Table 2.7 shows the additional growth for the long term care market in the residential and non-residential market derived from the qualitative demand factors. In 2020 there is the potential for 20% additional growth in the market from the qualitative factors (refer to Table 2.3). The six macro factors (demographics, sources of funding and expenditure, consumer trends, technology trends, political trends and regulation trends) are weighted according to their importance and contribution over time for residential and non residential care and public and private. Each qualitative demand factor is then ranked based on impact, from low to very strong, over the forecasted period to calculate the additional % growth for both the residential and non-residential sector. Table 2.7 shows that based on Frost & Sullivan's analysis, the qualitative demand factors will contribute to an additional 13.06% growth in demand in 2020. The additional growth is expected to contribute to 18.33% and 23.77% in 2030 and 2040 respectively.

TABLE 2.7: GROWTH DERIVED FROM QUALITATIVE DEMAND FACTORS, 2020, 2030 & 2040

2020	Residential		Non-Residential	
Total demand public versus private	2.87%	2.94%	3.69%	3.55%
Total demand residential versus non	5.82%		7.25%	
Total demand	**13.06%**			
2030	**Residential**		**Non-Residential**	
	Public	**Private**	**Public**	**Private**
Total demand public versus private	4.18%	3.86%	5.36%	4.93%
Total demand residential versus non	8.04%		10.29%	
Total demand	**18.33%**			
2040	**Residential**		**Non-Residential**	
	Public	**Private**	**Public**	**Private**
Total demand public versus private	6.19%	5.64%	6.09%	5.86%
Total demand residential versus non	11.83%		11.95%	
Total demand	**23.77%**			

Source: Frost & Sullivan analysis

In 2020, the factors with the strongest impact on the public residential market are spending capacity and attitudes towards funding. In 2030, additional factors impacting the market strongly include household mix, older people in employment, pension pot and weekly income of older households which all influence spending capacity. In addition, age, gender & marital status distribution and technology (internet and broadband availability) and regulation become more important.

By 2040 weekly income of older households and pension pot become stronger drivers for demand, as well as age, gender & marital status distribution and spending capacity. Technology makes a stronger impact compared to previous years.

For the private residential market the strongest impact in 2020 includes attitudes towards outsourcing to private and regulations to improve the services provided. By 2030 changing demographics become an important driver as well as care insurance and out of pocket expenditure, age, gender & marital status distribution and changing expectations of older consumers. In 2040, other factors gaining importance include access to care, technology (internet and broadband availability), political attitudes to outsourcing to private, attitudes to towards technology adoption and regulations to improve accessibility for patients. It is expected that pension pot, weekly income of older households, community based care, spending capacity and regulations to support increasing LTC facilities will have a lower impact in 2040.

Table 2.8 shows the final residential and non-residential demand for 2020, 2030 and 2040 after the qualitative demand drivers have been applied. Frost & Sullivan forecasted the total residential demand prior to the demand factors being applied to be 780,351 in 2040, increasing to 824,801 after the demand factors have been applied. Similarly, for the non-residential market in 2040 the additional growth factors change demand, but only marginally from 1,222,961 to 1,296,821.

TABLE 2.8: FINAL RESIDENTIAL & NON-RESIDENTIAL DEMAND BASED ON DEMAND FACTORS, 2011, 2020, 2030 & 2040

Residential Demand	2011	2020	2030	2040
Public	33,008	56,013	70,286	87,766
Private	387,099	473,130	591,486	737,035
Total	**420,107**	**529,142**	**661,772**	**824,801**
Non-Residential Demand	**2011**	**2020**	**2030**	**2040**
Public	568,390	710,721	883,021	1,016,604
Private	157,014	196,067	242,933	280,218
Total	**725,404**	**906,788**	**1,125,953**	**1,296,821**
Total Demand	**2011**	**2020**	**2030**	**2040**
Public	601,399	766,734	953,306	1,104,370
Private	544,112	669,196	834,419	1,017,253
Total	**1,145,511**	**1,435,930**	**1,787,725**	**2,121,622**

Source: Frost & Sullivan analysis

Table 2.9 shows the final revenue for residential and non-residential care in the UK. The residential market is expected to reach £46.5 billion in 2040 with the private setting contributing to 90% of revenues. The non-residential sector will still remain smaller than the residential sector in 2040 and is expected to reach £20.3 billion, with the public sector contributing to 84% of revenues.

TABLE 2.9: FINAL RESIDENTIAL & NON-RESIDENTIAL REVENUES, £ MILLION, 2011, 2020, 2030 & 2040

Residential Revenue	2011	2020	2030	2040
Public	964,637,690	1,957,310,722	3,018,903,170	4,426,904,755
Private	12,822,253,790	18,722,686,966	28,758,055,555	42,081,763,598
Total	**13,786,891,480**	**20,679,997,688**	**31,776,958,725**	**46,508,668,353**
Non-Residential Revenue	**2011**	**2020**	**2030**	**2040**
Public	5,527,026,212	8,278,478,551	12,627,195,819	17,074,876,558
Private	1,053,249,005	1,580,297,628	2,400,174,169	3,249,403,857
Total	**6,580,275,217**	**9,858,776,179**	**15,027,369,988**	**20,324,280,415**
Total Revenue	**2011**	**2020**	**2030**	**2040**
Public	6,491,663,903	10,235,789,273	15,646,098,988	21,501,781,314
Private	13,875,502,795	20,302,984,594	31,158,229,724	45,331,167,455
Total	**20,367,166,697**	**30,538,773,867**	**46,804,328,712**	**66,832,948,768**

Source: Frost & Sullivan analysis

Table 2.10 shows the summary of the growth rates based on the final residential and non-residential revenues. In summary, the residential sector will see higher growth over the forecasted period compared to the non-residential sector. The total market (residential and non-residential combined) will see a compound annual growth rate of 4% between 2030-2040, with the private sector growing faster than the public sector.

TABLE 2.10: GROWTH RATES BASED ON THE FINAL RESIDENTIAL & NON-RESIDENTIAL REVENUES, 2020, 2030 & 2040

Residential Growth Rate %	2020	2030	2040
Public	50.7%	35.2%	31.8%
Private	31.5%	34.9%	31.7%
CAGR	**2011-20 5.2%**	**2020-30 4.9%**	**2030-40 4.3%**
Non-Residential Growth Rate %	**2011**	**2020**	**2030**
Public	33.2%	34.4%	26.0%
Private	33.4%	34.2%	26.1%
CAGR	**2011-20 5.2%**	**2020-30 4.8%**	**2030-40 3.4%**
Total Growth Rate %	**2011**	**2020**	**2030**
Public	36.6%	34.6%	27.2%
Private	31.7%	34.8%	31.3%
CAGR	**2011-20 5.2%**	**2020-30 4.9%**	**2030-40 4.0%**

Source: Frost & Sullivan analysis

GROWTH IN AUXILIARY SERVICES

TABLE 2.11: AUXILIARY SERVICES: TRAINING INVESTMENT - ANNUAL COST £, 2011, 2020, 2030 & 2040

	2011	2020	2030	2040
Private Residential	8,379,411	10,520,159	12,873,180	15,259,944
Public Residential	3,045,685	3,823,789	4,679,047	5,546,570

Source: Frost & Sullivan analysis

TABLE 2.12: AUXILIARY SERVICES: LAUNDRY – ANNUAL COST PER RESIDENT £, 2011, 2020, 2030 & 2040

	2011	2020	2030	2040
Private Residential	541	679	831	985
Public Residential	437	548	671	795

Source: Frost & Sullivan analysis

TABLE 2.13: AUXILIARY SERVICES: LAUNDRY – ANNUAL REVENUE BASED ON DEMAND £, 2011, 2020, 2030 & 2040

	2011	2020	2030	2040
Private Residential	209,420,339	312,060,035	473,161,890	687,138,396
Public Residential	14,424,674	29,858,589	45,273,168	65,746,910

Source: Frost & Sullivan analysis

The growth in training investment is calculated using inflation and other growth factors that support training. Table 2.11 shows the growth in annual training investment in the base period and forecasted period. The largest growth will occur in the private residential sector. Currently, there are many staff requiring training but are not trained due to financial constraints in the current climate.

The growth in laundry service is calculated using inflation and other growth factors that relate to laundry. Table 2.12 and 2.13 show the annual cost per resident and annual revenue based on demand for laundry. The annual cost per resident is higher for the private residential market compared to the public. The private residential auxiliary service market is expected to contribute to 91% of the annual revenues in 2040.

TABLE 2.14: AUXILIARY SERVICES: FOOD – ANNUAL COST PER RESIDENT £, 2011, 2020, 2030 & 2040

	2011	2020	2030	2040
Private Residential	1,529	1,827	2,245	2,636
Public Residential	2,163	2,585	3,176	3,729

Source: Frost & Sullivan analysis

TABLE 2.15: AUXILIARY SERVICES: FOOD – ANNUAL REVENUE BASED ON DEMAND £, 2011, 2020, 2030 & 2040

	2011	2020	2030	2040
Private Residential	591,930,218	839,853,155	1,278,791,978	1,839,023,330
Public Residential	71,398,715	140,736,079	214,290,042	308,169,268

Source: Frost & Sullivan analysis

The growth in food service is calculated using inflation and other growth factors that relate to food. Table 2.14 and 2.15 show the annual cost per resident and annual revenue based on demand for food. The annual cost per resident is higher for the public residential market compared to public. However, due to demand, the private residential auxiliary service market is expected to contribute to 86% of the annual revenues in 2040.

COMPETITION IN THE UK

Intensity of Competition

The care home market in the UK is fragmented and competitive. Within the private sector, approximately 60% of the market is led by the major players and the remainder is run by smaller businesses. There is increasing activity of further consolidation amongst the top players in the future. The level of market concentration in the home care market has been increasing over the last 20 years with many providers now owning multiple care homes. Despite these trends, the market is still very much decentralised, therefore the level and impact of competition is considerable.

Key Factors Influencing Barriers to Entry and Exit for Long Term Care Providers

In the UK care home market, home closures have remained relatively low in recent years. In previous years, many small scale homes had already exited the market. As a consequence many small care homes have survived, despite the conditions in the current economic climate. There are approximately home closures occurring at a rate of 4,000 to 5,000 beds per year (1% of existing capacity).

Despite the closures, there has been new registration of care homes which exceeds the loss of capacity that is occurring in the care home market.

The cost to enter the care home market will continue to be a barrier, particularly for new and smaller operators. The main barrier is the high equity required and more cautious lending policies in recent years. However, the rate of new care development has been higher despite the difficult economic environment which involves more complications in banks lending and local authority fees being squeezed. The key reason for this is that new homes are targeting the private self-pay market where people have more disposable income and live in affluent areas.

COMPARISON OF UK LONG TERM CARE MARKET TO GLOBAL MARKETS

Public long term care cost is expected to double or potentially triple by 2050 in Europe, United States and Japan. Table 2.16 shows that Japan has the highest expected growth in public long term care expenditure compared to Europe and the United States. The key reason, as show in Table 2.17 is that by 2025, Japan will have a significantly higher old-age dependency ratio compared to any other country in the world.

TABLE 2.16: PUBLIC LONG TERM CARE EXPENDITURE AS A SHARE OF GDP

	2007	2050 (Low)	2050 (High)
EU-OECD	1.2%	2.2%	2.9%
United States	1.0%	1.7%	2.6%
Japan	1.4%	3.5%	4.4%

Source: OECD calculations and 2009 Ageing Report, European Union, Frost & Sullivan

TABLE 2.17: OLD-AGE DEPENDENCY RATIOS

	Japan	Canada	France	Germany	Italy	UK	U.S
2000	27	20	28	25	28	27	21
2025	47	41	36	36	43	36	33

Source: U.N. World Population, Frost & Sullivan

United States

In the US, the ageing population combined with the retirement of the baby boom generation (the largest generation in history) has led to an increase in demand for long-term care. There are 40.3 million age 65 and older (about 13% of the total US population) and 5.5 million aged 85 years and older (almost 2% of the total population).

The number needing long-term care is expected to increase from approximately 12 million today to 27 million in 2050. Between 2011 and 2029, baby boomers will turn 65 at a rate of approximately 10,000 per day. By 2030, the number of people aged 65 and over is projected to be about 72 million (about 19% of the total US population). By 2050, the number of people aged 65 and over is projected to be about 89 million (about 20% of the total US population). Those aged 85 and older are expected to grow by more than 25% by 2030 and by 126% by 2050.

The US has two government programmes that pay for LTC services, Medicare and Medicaid. Medicare is the federal health insurance programme for older adults (age 65 and older) and younger people with disabilities, those with end stage renal failure and end-of-life care (via the hospice benefit). It spreads the financial risk (associated with illness) across society to protect everyone. It is funded through payroll tax and covers acute care services and pays only for medically necessary skilled nursing home and home health services. Stays in nursing homes are covered for 100 days with a co-payment for days 21 to 100. Home health care is only paid on a limited basis (i.e. only if skilled care is required). It does not pay for custodial care (i.e. personal/social care). To be eligible you need to have worked at least 10 years and be 65 years of age or older. In 2010 48 million people were covered by Medicare with 40 million for those age 65 and older and 8 million for younger people with disabilities. It covers about half of the healthcare costs for those who are eligible.

Medicaid is the largest source of funding for medical and health-related services for people with limited income in the US and is the primary payer of LTC services with a bias towards institutional care. It is a medical assistance programme jointly funded by the states and the federal government. It is funded through general taxation and is a means-tested welfare-based system. It is managed by the individual states and as a result differences in budgets and coverage decisions give rise to different services and spending decisions across the states.

Those with low-incomes and few assets rely on Medicaid which operates as a "safety net programme". The wealthy can afford to fund their care needs themselves or can purchase LTC insurance. Those in the middle tend to rely on informal care provision by family members or friends.

Private LTC insurance in the US provides coverage for both institutional and non-institutional care. The claims trigger is generally based on a combination of activities of daily living or cognitive impairment. They offer benefit periods from up to a few years to lifetime and an elimination period of zero days up to 90 days. Their products also offer inflation protection.

In the United States many long term care nursing care providers are paid based on performance. There is also the aim of providing care in the right care setting by avoiding using acute-health care services for long term care purposes where financial measures are in place. In the US there has been a decline over the last 20 years in the use of nursing homes by those aged 85+, similar trends have been seen in the UK too. The key driving factors for this in the US are cost containment by public sector payors (Medicaid and Medicare) and the development of alternatives to institutional care. This has also been similar for the UK.

Japan

Japan has high life expectancies and low birth rates which combined lead to an ageing population.

Informal care at home is also reducing which is putting greater pressure on formal care. Japan now has five social insurance programmes which cover medical care, pension insurance, unemployment, occupational accidents and long-term care. Providing care and public assistance to older adults is seen as a national responsibility in Japan. Japan created its LTC social insurance programme in 2000 responding to the difficult demographic challenges such as high life expectancies, low birth rates and a restrictive immigration policy. It covers home care and institutional care but there are no cash benefits.

It is a nationally administered programme where the price and benefits are set by the national government but the assessments are made locally. Their reforms were aimed at meeting the following key objectives:

- Increasing the level of independence for frail older adults
- Reducing the burden of home care on their families
- More closely aligning benefits and premiums
- Providing more comprehensive care by integrating medical and long-term care programmes
- Reducing the number of hospitalised older adults.

It provides coverage to all people aged 40 and over. The coverage for ages 40 to 65 is for age-related diseases such as Parkinson's disease, pre-senile dementia or stroke. It provides benefits based on the level of services required. There are five levels with one being the lowest and five the highest. The levels are based on the amount of time necessary to provide the services. There are monthly caps for home care and daily caps for institutional care. There is a comprehensive assessment of medical and physical status and it is reviewed every six months. They vary by region and are conducted by experts appointed by local government. The programme is designed as a pay-as-you-go system. 90% of the cost of care (regardless of the type of service) is reimbursed provided the services are rendered by a certified provider. The remaining 10% is an out-of-pocket copayment subject to a maximum which can vary by income level. The 90% is split between a mandatory contribution from those age 40+ and tax revenue (national and local government). The mandatory contribution varies by region and is means tested. For ages 40-64 it is about 1% of salary and for ages 65+ it was $27 per month in 2010. There is minimal private LTC insurance in Japan. It is mainly supplemental coverage as Japan works largely within a publicly funded system.

Germany

Germany has high life expectancy at 77.8 years for males and 82.4 years for females (2011). Around 20% of the population was aged over 60 (2010) with this percentage projected to exceed 30% by 2050. In 2009 there were 2.4 million of the population with care needs at some level of whom 750,000 were in nursing homes and the remainder at home cared for by relatives (66%) or by care agencies (34%).

The German long term care system is a mixture of different insurance structures including both social insurance funds and private insurance schemes. Social insurance, based on health insurance rather than life insurance principles, was introduced as a compulsory insurance in 1995 with subsequent reform to the structure to enhance the benefits in 2008. In 2010 there were 69 million of the population covered by the compulsory social insurance. As an alternative to the social insurance coverage the high income earners (above 49,000Đ in 2011), civil servants and the self-employed may opt for private compulsory insurance coverage instead of the social insurance. 10 million of the population had private compulsory insurance in 2010. Benefit levels (2012) depend on the care needs. For nursing care the benefit varies between 1,023Đ per month to 1,850Đ per month although a higher benefit of 1,918 may be payable in hardship cases. For care in the home the benefit levels vary between 235Đ per month and 700Đ per month as a cash allowance. Additional benefits are provided for those with cognitive impairment. Contributions to the social insurance are 1.95% of income or 2.2% if aged between 23 and 65 with no children of which 0.975% is paid by the employer. There is a maximum premium of 3,713Đ per month. Contributions to the private compulsory insurance vary by age from 18.87Đ per month at age 30 to 59.51Đ per month (from 2010) with 50% paid by the employer.

Private insurers offer products on both a life insurance basis and a health insurance basis. From 1992 a generation of products were offered including waiver of premium benefits, immediate long term care annuities and deferred long term care annuities. Health insurance products were also introduced in 1985 providing daily cash benefits and/or reimbursement of long term care cost.

From 1994 further products were introduced to provide top up benefits of additional cost reimbursement and services to the compulsory long term care insurance benefits. Since the introduction of the long-term care insurance, the number of home-based care providers has risen. However, the long-term care insurance is orientated towards the performance of basic daily activities rather than other aspects of care which are particularly important when caring for people with dementia e.g. general supervision and attention, and social and emotional support.

The structure of the provision for long term care does enable both public and private systems to exist together but the private system sits alongside, rather than integrated with the public system.

Sweden

Over 17% of the Swedish population, or about 1.6 million persons, are age 65 or older. At approximately 5%, Sweden already has the highest proportion of older adults aged over 80 in Europe. In 2060, this number is expected to double to 10% of the population.

Although the population in Sweden is increasing, population ageing will have a negative impact on the old-age dependency ratio, putting pressure on the population of working age to support an increasing number of older adults.

Care of older adults in Sweden is based on the aim of providing support to live a high quality, independent life for as long as possible. The management and planning of care for older adults is split among three authorities – the central government, the county councils and the local authorities. Each unit has a different but important role in the welfare system of Sweden. They are represented by directly elected political bodies and have the right to finance their activities by levying taxes and fees within the frameworks set by the Social Services Act.

Any person with permanent residency in Sweden and who has impediments is eligible for care, solely determined by an assessment of needs. To avoid financial exploitation of the individual, a maximum monthly fee for long term care is set by the central government with further conditions imposed, depending on the financial situation of the individual. This guarantees that all older adults in need of care are able to receive treatment in Sweden. Since the welfare system was established and some of the former responsibilities of the individual (or the family) have been taken over by the state, Swedes have come to trust and rely on the state to take care of older adults, to the extent that the discussion of informal care begun just some 15 years ago has only recently been considered in political decision-making. Yet the rapidly ageing population has increasingly turned policy-makers' attention towards care provided by relatives or friends as a partial solution to the anticipated demographic problems.

Nonetheless, this does not mean that formal care has diminished in importance as formal care is still the backbone of care for older adults in Sweden and is expected to remain so. Home-based care, however, is still largely left behind. The available kinds of formal care in Sweden are institutional care, home care and home nursing care. Day activities, meal services, personal safety alarms, home adaptation and transportation services are additional services supplied by the municipalities and are also regulated by law.

As the social welfare system in Sweden is highly dependent on tax contributions to maintain the public services, it is sensitive to any changes that may alter the balance between the population in the labour force and those who stand outside it. Thus, one of the main issues discussed concerning care for older adults in Sweden today is the sustainability of long-term care in Sweden in view of the changing demographic structure.

DEMAND FACTORS: CURRENT & FUTURE IMPACT ON THE LONG TERM CARE MARKET

DEMOGRAPHICS

House Hold Mix: Trends in men and women living alone, owner occupiers, housing trends

TABLE 3.1: FAMILIES BY FAMILY TYPE IN THE UK, 1996 AND 2012 (MILLIONS)

	With or without dependent children	1996	2012
Married or civil partner couple family	With dependent children	5.2	4.6
	Without dependent children	7.4	7.6
Cohabiting couple family	With dependent children	0.5	1.1
	Without dependent children	0.9	1.8
Lone parent family	With dependent children	1.6	2.0
	Without dependent children	0.8	1.0

Source: Office for National Statistics, Frost & Sullivan

Table 3.1 shows the most common family type in the UK in both 1996 and 2012 was a married or civil partner couple family without dependent children. The next most common family type was a married or civil partner couple family with dependent children, of which there were 4.6 million in 2012. This was the only family type to decrease in number since 1996.

TABLE 3.2: PERCENTAGE OF HOUSEHOLDS IN THE UK BY HOUSEHOLD SIZE IN 2012

People per household	Percentage
One person	29
Two people	35
Three people	16.5
Four or more people	19.6

Source: Office for National Statistics, Frost & Sullivan

The number of married couple families has decreased between 1996 and 2012. In addition, there is a trend towards smaller household sizes. Table 3.3 shows the proportion of households containing one person increased from 27.8 to 29.0 per cent, or by 1.0 million to 7.6 million between 1996 and 2012.

TABLE 3.3: PEOPLE LIVING ALONE IN THE UK: BY AGE GROUP, 1996 TO 2012 (MILLIONS)

	Age Group				
Year	16-24	25-44	45-64	65-74	75 +
1996	0.27	1.59	1.59	1.37	1.78
1997	0.25	1.60	1.59	1.36	1.85
1998	0.24	1.64	1.64	1.31	1.88
1999	0.21	1.66	1.70	1.32	1.95
2000	0.24	1.68	1.77	1.31	1.95
2001	0.21	1.73	1.78	1.32	1.99
2002	0.21	1.83	1.91	1.30	1.97
2003	0.23	1.82	1.91	1.29	2.00
2004	0.21	1.74	1.92	1.30	2.03
2005	0.20	1.76	2.00	1.27	1.97
2006	0.20	1.69	2.10	1.27	2.00
2007	0.19	1.72	2.16	1.27	2.06
2008	0.20	1.68	2.24	1.29	2.06
2009	0.21	1.65	2.27	1.32	2.03
2010	0.22	1.61	2.34	1.31	2.03
2011	0.23	1.61	2.37	1.35	2.01
2012	0.21	1.60	2.42	1.38	2.02

Source: Office for National Statistics, Frost & Sullivan

In 2012, 7.6 million people in UK households lived alone. For those aged 65 or over, the majority of people living alone (69%) were female. Table 3.3 shows the number of people living alone in the UK, by age group between 1996 and 2012. The largest change in people living alone is in the age group 45-64, increasing by 53% between 1996 and 2012. The increase in those living alone also coincides with a decrease in the percentage of those in this age group who are married (from 79% in 1996 to 69% in 2012), and a rise in the % of those aged 45 to 64 who have never married, or are divorced (from 16% in 1996 to 28% in 2012).

Owner occupation among older adults continues to be on the increase, primarily among middle income people who are increasingly likely to have private pensions and other forms of financial security in place. Over 75% of this group (aged 65-79) are owner-occupiers, compared with 50% aged 80 years+. *(Source: Retirement Security Limited)*

Older Adults in Employment: People aged from 50 to state pension age in employment, people aged 65+ in employment

7,368,000 people aged from 50 to state Pension age (currently 60 for women and 65 for men) are in employment.

849,000 people aged 65+ were employed in July-September 2011, a rise of 0.1% from last year. The majority of those aged 55+ would prefer to be working full time than not working at all. It is common for older people to view working as the 'ideal' situation for them and want to keep working. The average age at which workers over 50 retire reached its highest level for men (64.6 years) since 1984. For women comparable figures showed an increase from 60.7 in 1984 to 61.9 in 2008. *(Source: Age UK; Labour Market Statistics)*

Changes in family structure as seen previously, from increasing divorce rates and remarriage to smaller family sizes as well as higher female participation rates in the workforce are expected to reduce the role of women caring for older adults / relatives.

Risk of Living in a Care Home or Long Stay Hospital by Age: % of UK population living in care homes or long stay hospital setting by age (<65, 65-74, 75-84, 85+)

Older women outnumber older men, with life expectancy at birth in the UK being 77.3 years for men and 81.5 years for women. The majority of older people with disabilities are women. 69% of people aged 85 and over, 56% of those aged 75Ð85 and 40% of those aged 65Ð74 in the UK have a disability or a limiting long standing illness (Source: DWP 2009).

As the percentage of over 85+ is expected to more than double by 2040 the risk of living in a care home or long stay hospital will increase further in the future as the rate of disability and dependence rises with old age. The ageing population will continue to impact the long term care market.

SOURCE OF FUNDING AND EXPENDITURE

Impact of Care Insurance and Out of Pocket Expenditure: Sources of finance including self-pay, local authority funding or NHS funding

Over the recent years there has been a decline in those people which are funded by local authorities in private sector homes and an increase in those which self-pay or are NHS funded. Those which self-pay are the ones typically paying the highest fees. There is a rising trend in self-payers and this is expected to increase further in the future as local authority funding decreases. There is increasing pressure on the public sector because of government spending cuts. This is expected to impact the non-residential sector more than the residential sector.

Pension Pot: Level of pension paid regularly to a person, following retirement

Although the impact of projected pension shortfalls on the timing of retirement is not clear, the concern about financial security is likely to bring a further rise in working past statutory pension age. There is increasing concern about pensions as 55-65 year olds are currently finding out that their pensions will not be adequate to support them later in life.

Table 3.4 shows that the UK compared to the rest of Europe will suffer a deficit in public pension spending between 2000 and 2040 at -0.5%, compared to the European average (3.2%).

TABLE 3.4: FORECAST CHANGE IN PUBLIC PENSION SPENDING 2000-2040 (%)

Country	% Change
EU	3.2%
Germany	4.8%
Sweden	2.4%
UK	-0.5%

Source: Age UK, Frost & Sullivan

Weekly Income of Older Households: Gross weekly income distribution of older households

During January-March 2012, there were 7.4 million people aged 50-64 in employment and 0.9 million people aged 65 and over (an employment rate of 65.5% and 8.7% respectively). The median hourly pay for workers in their 50s is £12.00 and £10.00 for workers aged 60+, as opposed to £13.03 for workers in their 30s. (Source – Office for National Statistics) The average (median) net income after housing costs for pensioners is £260 a week (£372 for couples and £188 for single pensioners) for the last reported year (2010/11). *(Source: Age UK)*

Community Based Care: Increasing options for community based care programs

Community based approaches enable people with the most complex needs, previously confined in institutions, to lead ordinary lives in their communities. Crucially, these community services are cheaper than the institutional ones they replaced. These approaches enable people to live valued lives and avoid institutional care. However, there has been concern that good quality, community based approaches are not affordable in the current financial climate.

The Joseph Rowntree Housing Trust (JRHT) in the UK is a good example of community based care. JRHT provides housing, care homes, retirement and supported housing, and demonstrates new approaches in these areas. JRHT provides a number of sheltered housing schemes for older people in York and surrounding areas. Sheltered housing provides the opportunity for older people to live independently within a small community and access help and support when required. In the future, the UK will see increasing community based care options.

Over the next three years, the Joseph Rowntree Housing Trust (JRHT) will spend £14 million on new services for older people at Red Lodge in New Earswick and £23 million in developing Derwenthorpe, which will eventually have 540 new homes to rent, part-own or buy. This is an example of developing a "dementia-friendly city" where people with dementia play a central role in informing plans.

The work at Red Lodge will see the accommodation being rebuilt and extra care services for older people in New Earswick developed through funding from the Homes and Communities Agency (HCA). In the next three years, JRF also plans to lead the way in developing and evaluating examples of neighbourhoods where people feel less lonely, based on its practical work in York and Bradford, and to develop neighbourhoods which are good places to live for all generations.

CONSUMER

Age, Gender & Marital Status Distribution: Age and gender distribution of people in care homes for older adults or physically disabled people, Population estimates by marital status

37% of men and 40% of women aged 65+ in the UK have at least one functional limitation (seeing, hearing, communication, walking, or using stairs). This increases to 57% and 65% respectively in those aged 85 and over. *(Source: Age UK)* Table 3.5 shows the risk of people being in care homes (nursing and residential) by age, gender and marital status.

As the majority of care home residents are single, widowed or divorced these particular trends will mean increased demand for residential services in the future as there is less support to keep them at home. As women 85+ are more likely to be in a care home compared to men, these changing trends will mean further demand for care homes in the UK.

TABLE 3.5: RISK OF PEOPLE BEING IN CARE HOMES (NURSING AND RESIDENTIAL) BY AGE, GENDER AND MARITAL STATUS, ENGLAND AND WALES 2001

	MALES		FEMALES	
Year	Married	Non-married	Married	Non-married
Less than 65	0.03%	0.25%	0.03%	0.20%
65 – 74	0.23%	2.44%	0.26%	1.59%
75 – 84	1.19%	5.45%	1.67%	5.92%
85 plus	5.51%	15.72%	9.66%	22.52%
ALL AGES	0.20%	0.62%	0.20%	1.67%

Source: Office for National Statistics, Frost & Sullivan

Changing Expectations of Older Adults: Increasing expectations for high quality care

At the higher end of the market there are still many areas in the UK, for example the South East, where there is demand for high quality homes where people pay for their care. There is expectation for higher standards of care as older adults are increasingly willing to use their own funds rather than pass them onto their family. There are also a larger proportion of older adults who are wealthier because of higher owner occupation, enabling them to pay for premium home care.

Spending Capacity: Changing spending capacity of the population above 65+

Average weekly expenditure for one-person households mainly dependent on state pensions is £164.70, which is £20 more than the average weekly disposable income for that group.

Households headed by someone aged 65+ contribute to approximately £109 billion of spending power every year.

On average, 75+ households spend more of their annual expenditure on housing and fuel, over 17%, compared to an all-age average of 12.5%. However, the typical amount saved on a monthly basis is £29 which is below the amount saved at the same time last year (£34 in Aug 2011) and significantly below the amount saved in the previous quarter (£45 in May 2012). *(Source: Office for National Statistics)*

TABLE 3.6: DISTRIBUTION OF HOUSEHOLD DISPOSABLE INCOME BY HOUSEHOLD TYPE, 2008/09 (%)

	Bottom fifth	Second fifth	Middle fifth	Fourth fifth	Top fifth	All (millions)
Pensioner couple	20	24	21	18	16	7.9
Single pensioner	27	31	22	14	7	4.7
Couples with children	18	20	22	21	19	20.7
Couples without children	11	9	16	26	38	11.3
Single with children	39	31	18	9	4	5.0
Single without children	21	18	20	22	20	10.6
All individuals	**20**	**20**	**20**	**20**	**20**	**60.3**

Source: DWP, Office for National Statistics, Frost & Sullivan

Equivalised household disposable income before deduction of housing costs has been used to rank the individuals into quintile groups.

Table 3.6 shows the household type can be related to position within the income distribution. During 2008/09 pensioners living alone were more concentrated at the lower end of the income distribution (27 per cent in the lowest fifth). Pensioner couples were more evenly spread across the income distribution. In the future, because of changing demographics there will be greater pressure on pensioners living alone because of lower disposable income.

In 2010, the over 65s made a net contribution of £40 billion to the UK economy through, amongst other contributions, taxes, spending power, provision of social care and the value of their volunteering. In spite of future costs around providing pensions, welfare and health services to a larger and longer living population of older people in the UK, **over 65s' net economic contribution will actually grow to £77 billion by 2030.** *(Source: WRVS)*

Intellectual Knowledge: Proportion of 65+ population which are skilled and unskilled

The number of people of state pension age and above in employment has nearly doubled over the past two decades, from 753,000 in 1993 to 1.4 million in 2011. *(Source: Office for National Statistics)* Men working later in life tend to stay on in higher skill roles while women tend to stay on in lower skill roles. As older adults are working longer, there will be more skills available and these could offer some potential for long term care providers in terms of how they are utilised.

Access to Care: Ease of access to social care by referrals from hospitals, self, family etc

In terms of access to care and the decision to enter a home, the majority of the time when the person is self-paying, the decision is not made by the resident alone they are helped by relatives or carers to make choices. In other instances dramatic events such as hospitalisation, death of a spouse or a domestic crisis cause the move into a care home. When looking at local authority funded care, half of referrals come from hospitals and community social workers and then friends and relatives are the next most common referrer.

As the prevalence of many key diseases increases further between 2020 and 2040 the amount of people becoming more dependent will increase. In the future there will be greater involvement from local authorities as care needs involve chronic conditions. There will be increased referrals direct from hospitals to nursing homes.

TECHNOLOGY

Internet Penetration: *Internet penetration enabling independent living among older population*

In 2011, 19 million households in Great Britain had an Internet connection. This represented 77% of households, up from 73 per cent in 2010. Despite the growth in household Internet connections over recent years, there were still 5.7 million households which were without an Internet connection. Some householders suggested that specific barriers were preventing them from investing in a household Internet connection; for example 19% indicated that equipment costs were too high, while 21% stated that lack of skills prevented them from getting the Internet. However, half of those without a household Internet connection said they did not have one because they "don't need the Internet". *(Source: Office for National Statistics).*

Internet Usage: *Internet usage in the UK*

Among those aged 65-74, over half of this age group (55%) have internet access at home. However, still only a small minority (26%) of those aged 75+ have the internet at home compared to 85% of those aged 25-34. *(Source: Age UK, from Ofcom).*

There are currently three main barriers to the digital inclusion of older and disabled people. They do not see the relevance and value of Internet use; they do not have the skills and confidence necessary to use a PC and browser to access the Internet; and many of them cannot afford the equipment and/or broadband connection required. However, internet usage is expected to increase further in this age group in the future with increased user confidence and affordability.

Broadband Availability: *Broadband take-up in the UK, speed and availability*

The UK Government aims to have the best superfast broadband network in Europe by 2015 by providing all homes and businesses in the UK with access to at least 2Mbit/s broadband and that superfast broadband should be available to 90% of people in each local authority area. There will be a particular focus on making sure that people in remote, as well as urban areas, get good online access. *(Source: Technology Strategy Board)*

Some of the key technology drivers for the development of independent living services in the future include cheaper equipment which offers greater processing speed and memory and broadband communication available to all.

Mobile Internet: Internet use over a mobile phone

Younger adults are more likely to have a mobile phone (98%) whereas only 64% of over 65s (51% of over 75s) have one. Younger adults aged 16-24 are much more likely to use a mobile phone than a fixed line and older people, particularly those aged 75+, are far more likely to use a fixed line (94%) than a mobile (61%). However, 85% of people aged 65-74 live in a household with a mobile. 27% of adults aged 16+ have a smartphone, compared with just 7% of people aged 55+.

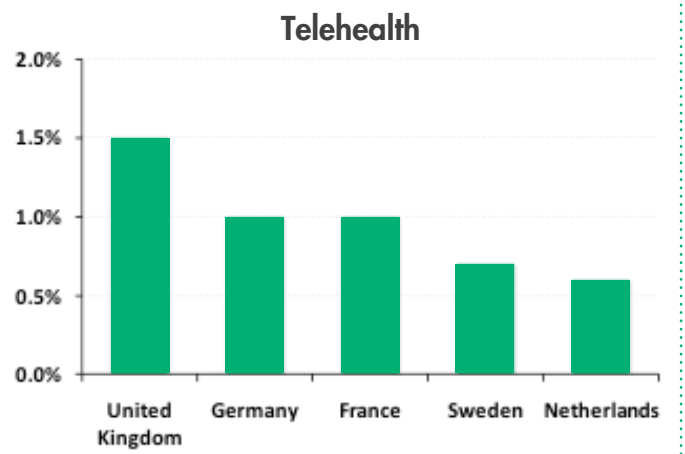
Older people (aged 65+) are the most likely to have their mobile phone switched on only when they need to use it (23%) or generally switched off (24%). Over half of all adults under the age of 34 use the internet on mobile phones, compared to just 2% of over-65s. *(Source: Age UK)*

Telehealth Penetration: *Use of independent living technologies which allow people to live at home and independently*

Telehealth is less mainstream than telecare at present. Some countries do have at least some examples of mainstream implementations of varying scope and scale, although in many cases these are quite localised initiatives involving just one provider or cluster of local providers.

Home telehealth for older people and others with chronic conditions is growing in the UK, typically for specific hospital services and medical conditions. Some health-related devices/services have also been implemented within the broader approach to 'telecare' in the UK. Telehealth programs for NHS patients in Scotland, Wales, England and Northern Ireland have implemented the RemoteNurse Telehealth system. Northern Ireland will invest about $63.5 million in telemedicine services to support chronic disease management.

FIGURE 3.1: TELEHEALTH PENETRATION



Source: Frost & Sullivan

In 2012, the UK spent around £155 million in telecare, one of the largest in Europe and it is expected to grow to £251 million in 2015. The telehealth and telecare market is very fragmented with over 80 players. Approximately 90% of telehealth spending in the UK is public with the remaining 10% private.

The Department of Health predicts the telecare market to be worth £7.15 billion by 2020, a growth of 19% from 2010. The private market could grow more than this as local authorities are outsourcing to private.

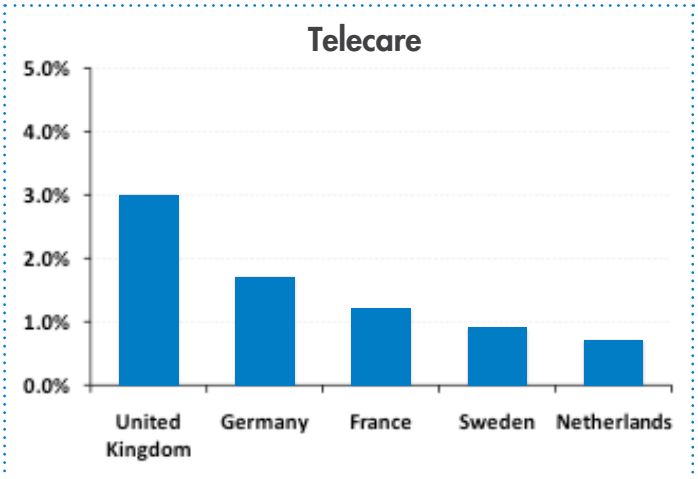
Telecare: *Use of independent living technologies which allow people to live at home and independently*

Telecare services involve the delivery of social care or monitoring services to older and disabled people at home from a remote location. In the future there will be a shift from alarm-based telecare systems to systems which use more continuous life style monitoring. Telecare services provide help to older people when they are outside their home. This support could be through SMS reminders, navigation services and services to locate dementia sufferers who wander and become lost. This has helped increase the availability of informal carers as it allows alarms to be sent immediately to their mobile devices and gives informal carers a greater peace of mind and greater flexibility in providing care. In addition they allow people to live at home independently.

For telecare solutions, only the UK is approaching a mainstreamed level. The central government initiatives such as the Preventative Technology Grant have led to a situation where the majority of local authorities have offered some form of telecare service to social care clients, building on the well-established social alarm infrastructure already in place. The government is and has encouraged the use of telecare to provide innovative models of care.

In the next 5-10 years telecare services will enable older and disabled people to live independently at home for longer with greater freedom e.g. intelligent transport systems which enable car drivers to drive more safely allowing older people to keep driving safely for longer.

FIGURE 3.2: TELECARE PENETRATION



Source: Frost & Sullivan

TABLE 3.7: ACTUAL NUMBER OF PEOPLE AGED 65 OR MORE, WHO USE ICT APPLICATIONS (TELECARE)

	UK	Germany	France	Sweden	Netherlands
2009	297,140	285,460	125,460	14,700	17,350
2009 *(Including Social Alarms)*	1,913,740	839,560	282,260	186,200	92,950
2015	367,910	368,650	178,930	21,970	29,460
2015 *(Including Social Alarms)*	2,218,810	1,032,250	393,630	219,670	128,160

Source: Frost & Sullivan

Note for table: Frost & Sullivan has identified the main critical factors that could have a big impact on the penetration of ICT for the elderly care sector in the United Kingdom, as funding and regulations.

The forecast figures presented here have been calculated under the assumption of different penetration scenarios. These assumptions were then applied to individual elderly population projections for each country.

Care for older adults is an important development throughout Europe, as evidenced by several investment programs. Figure 3.3 shows the development milestones in the UK.

FIGURE 3.3: INVESTMENT PROGRAMMES IN THE UK

2004	2005	2006	2007	2008	2009	2010	2011
Announcement of £80m grant funding	Building Telecare in England (BTiE) Preventative Technology Grant (PTG) 1.4m users Aim for +160,000 older people	PTG Yr 1 +£30m allocated Aim for +60,000 users White Paper - "Our Health..."	PTG Yr 2 +£50m allocated Aim for +100,000 users	PTG outcomes +175,000 users WSD ans ALIP commences	Teleceare moving into mainstream Up to 50 PCTs with telehealth plans Interoperability becoming important	WSD Outcomes Connectivity to medical records New NHS PASA contract Mobile health	Interoperability developments Impact on price ALIP outcomes P (Personal Health)

WSD - Whole system Demonstrator programme
ALIP - Assisted Living Innovation Platform

Source: Frost & Sullivan

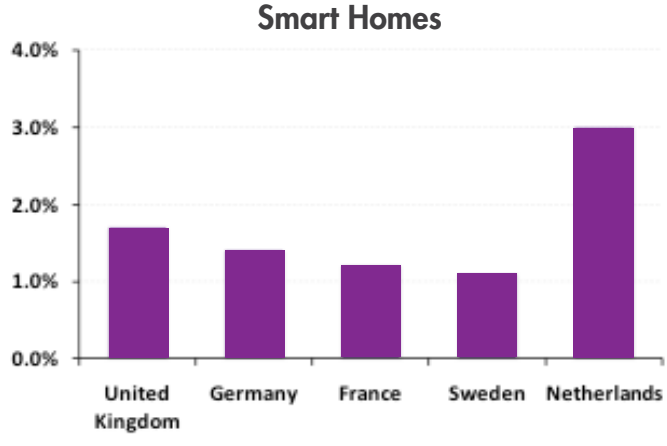
Smart Homes: *Communications network that connects the key electrical appliances and services in homes, allowing them to be remotely controlled, monitored or accessed*

A smart home is defined as a one that has an internal communications network with access to external broadband connectivity. Around 90% of UK housing has access to broadband services but only a small proportion has an internal network for distributing voice, data and video signals throughout the home. At the present time only about 2000 new homes per year can really be called smart homes, accounting for just 1% of new stock, although smart homes offer huge benefits.

They provide the potential for interactive monitoring and management of energy and water use; the same systems can also be used for remote monitoring and management. The widespread availability of communications systems also provides a means to radically change the way healthcare is delivered, for example, to facilitate the delivery of telecare and to monitor homes susceptible to fuel poverty during the winter.

Available evidence suggests that the extent on provision and take-up of ICT-based assistive technologies for purposes of independent living varies considerably across countries, with the Nordic countries generally seen as being more advanced in this regard. Figure 3.5 shows that at the smart home end of the spectrum, there are a lot of R&D projects, trials and demonstrators but no advanced mainstreaming till date with the exception of Netherlands.

FIGURE 3.4: SMART HOMES PENETRATION



Source: Frost & Sullivan

TABLE 3.8: ACTUAL NUMBER OF PEOPLE AGED 65 OR MORE, WHO USE ICT APPLICATIONS (SMART HOMES)

	UK	Germany	France	Sweden	Netherlands
2009	166,200	235,080	125,460	17,960	74,340
2015	220,750	313,360	178,930	25,630	97,220

Source: Frost & Sullivan

Community equipment or assistive technology, in support of independent living, from telecare dimension has been gaining significance recently. Major investment is being made to integrate and prioritise community equipment services by modernising and expanding services and setting targets to increase the number of people benefiting from these services. Many initiatives for independent living have begun under the Assisted Living Innovation Platform (ALIP). This is a programme of the Technology Strategy Board (TSB) delivered in partnership with The Department of Health (DH), the Engineering and Physical Sciences Research Council (EPSRC) and the Economic and Social Research Council (ESRC).

Note for table: Frost & Sullivan has identified the main critical factors that could have a big impact on the penetration of ICT for the elderly care sector in the United Kingdom, as funding and regulations.

The forecast figures presented here have been calculated under the assumption of different penetration scenarios. These assumptions were then applied to individual elderly population projections for each country.

POLITICAL

Attitudes to Outsourcing to Private: *Outsourcing services to independent sector providers*

There is been a significant shift in attitudes towards outsourcing to private. In 1992, independent sector providers delivered 2% of state-funded home care in England; by 2008 they were providing 81%.

However, 91% of care services in England run by councils or charities were rated as good or excellent by the Care Quality Commission in 2010, compared with 80% in the private sector.

The main issues outsourcing to private is that price competitiveness can impact quality. In the UK, England, Scotland and Wales there are many care providers in large numbers. However, in Northern Ireland the country's care provision is handled by five regional health and social care trusts, with relatively little contracted out to independent providers. In the future as local authorities continue to see a downward trend in spending for the older and physically disabled population, there will be further outsourcing to the private sector to sustain the volume of care homes in the UK.

Attitude Towards Technology Adoption: *Government encouragement for the use of new, innovative models of care (telecare, telehealth)*

There is an increasing drive from the Governments to adopt ICT for care of older adults. Promotion by equipment and commercial service providers has made the supply and adoption in UK one of the highest in Europe. The UK Preventative Technology Grant launched in July 2004 and was aimed at encouraging the adoption of telecare and telehealth. The grant addressed the social care need for frail elders. However, the use of these technologies to support health needs has been very slow.

Figure 3.5 shows the level of uptake of ICT applications is relatively high in the UK compared to other countries.

FIGURE 3.5: LEVELS OF MAINSTREAMING AND UPTAKE FOR ICT APPLICATIONS IN CARE FOR OLDER ADULTS VARIES CONSIDERABLY ACROSS COUNTRIES AND SEGMENTS

Level of Mainstreaming	UK	Germany	France	Sweden	Netherlands
Social Alarms	Fully Mainstreamed	Fully Mainstreamed	Fully Mainstreamed	Fully Mainstreamed	Fully Mainstreamed
Telecare	Partially Mainstreamed	Partially Mainstreamed	Partially Mainstreamed	Partially Mainstreamed	Partially Mainstreamed
Telehealth	Pilot/Trial Activity	Pilot/Trial Activity	Little Or No Activity	Little Or No Activity	Little Or No Activity
Smart Homes	Pilot/Trial Activity	Not much concerted focus*	Not much concerted focus**	Not much concerted focus	About 70,000 Smart Homes

**There are some demo/trial efforts available on the market but yet not mainstreamed*
*** Lots of interest from housing organisations, private companies, counties and municipalities*

Level of Mainstreaming	UK	Germany	France	Sweden	Netherlands
Social Alarms	Very High (16.1%)	Moderate (3.3%)	Moderate (1.5%)	High (10.5%)	Moderate (3.1%)
Telecare	High (3.0%)	Moderate (1.7%)	Moderate (1.2%)	Low (0.9%)	Low (0.7%)
Telehealth	Moderate (1.5%)	Moderate (1.0%)	Moderate (1.0%)	Low (0.7%)	Low (0.6%)
Smart Homes	Low (1.7%)	Low (1.4%)	Low (1.2%)	Low (1.1%)	Moderate (3.0%)

Source: Frost & Sullivan

Attitudes Towards Funding: *Providing channels for funding care*

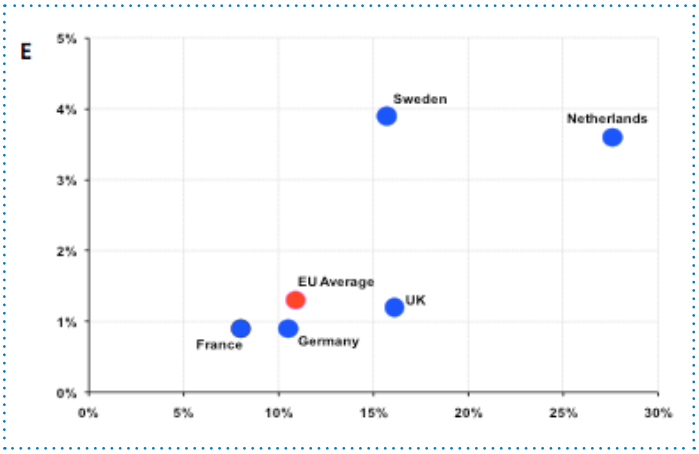
Over the past five years spending on services for people with learning disabilities has risen by 20% and for those with physical disabilities by nearly 14%. However, spending for older people has increased by less than 3% and has not kept pace with demographic change.

Spending on social care and continuing health care for older people in England is projected to rise from £9.3 billion in 2010 to £12.7 billion in 2022.

This represents a rise in percentage of GDP from 0.74% to 0.78% and assumes that current patterns of care and population projections keep pace with expected demographic and unit cost pressures. This level of growth will occur unless unprecedented productivity gains can be made over the next decade, or public finances improve enough to allow health funding to increase faster than inflation.

Figure 3.6 shows that the UK spends just below the EU average on care for older adults as a % of GDP, however a higher % of 65+ receive care services.

FIGURE 3.6: RELATION BETWEEN EXPENDITURE ON CARE FOR OLDER ADULTS AND SHARE OF PEOPLE 65+ BENEFITING FROM IT, 2010



REGULATION

Overview of regulation, standards, guidelines and certification and its influence on the dynamism of the market

Regulations to Support Increasing Long Term Care Facilities: *Policies and legislations to increase LTC places both Public and Private*

The number of care homes in residential settings; both public and private have increased over the last few years. It is expected that the number of care homes will increase further in the future. The private sector is larger than the public sector and will see increased growth in the future as the public sector becomes less involved in the provision of care in the future. In addition, more private payers mean additional growth from the private sector.

There has been a strong public policy to encourage non-residential care; however this has not resulted in a dramatic shift in this direction. Over the most recent years there has been increased outsourcing to private providers by local authorities.

Regulations to Improve Types of Services Provided: *Policies and legislations to improve services and provide alternative options for social care services*

The adult social care sector has been fluid and dynamic over recent years, changing as new types of provision develop to enable more people to live at home for longer. There has been expansion in models of provision, such as Extra care housing and short-term nursing care in homes, which is replacing extended stays in hospital.

The new health and social care regulator, the Care Quality Commission (CQC), is responsible for assuring the quality of all health and social care services provided in England. It instils common quality standards throughout all services and helps to improve standards by regularly reviewing them. Regulation and standards for care and support services are particularly important to protect those people who are not able to complain, or who are worried about what might happen if they do complain. *(Source: Department of Health)*

The 3millionlives campaign in the UK is aimed at improving the lives of 3 million people over next 5 years through the use of telecare and telehealth services in the social care sector. The main objectives for the UK government and industry are to work together to remove entry and delivery barriers for companies, to create an environment to support adoption, for example, to reward organisations for adopting and integrating technologies and for the industry to work with the NHS to simplify procurement. In addition, there is also the Delivering Assisted Living Lifestyles at Scale (dallas) programme which supports adoption of these technologies and is redesigning services enabled by technology to support people living in their own homes for longer. The reimbursement regulations in the UK are likely to progress over time. The direct payments and individual or personal budgets with respect to telecare and telehealth reimbursement are increasing. This gives end users and carers, more choice on the social care services available to them. Promotion by equipment and commercial service providers has made the supply and adoption in the UK one of the highest in Europe.

Regulations to Improve Accessibility for Patients: *Regulations and policies to improve better access to care and choice of care*

The demand for residential care is the largest in the private setting. In the future the private residential sector will see increased growth as the public sector becomes less involved in the provision of care. There is potential for better access to care and choice of care as the private sector expands and new companies and service providers enter the market.

Regulations to Quicken the Process of Service Provision: *Regulations and policies to improve market entry of private players and outsourcing to private players*

Continued outsourcing from local authorities to the private sector means further opportunities for private players within the long term care market. As the government and local councils continue to cut costs to make savings, further opportunities for outsourcing will be seen in the future.

CONCLUSIONS

The residential market is expected to reach £46.5 billion in 2040 with the private setting contributing to 90% of revenues. The non-residential sector will still remain smaller than the residential sector in 2040 and is expected to reach £20.3 billion, with the public sector contributing to 85% of revenues.

In summary, the residential sector will see higher growth over the forecasted period compared to the non-residential sector. The total residential market will see a compound annual growth rate of 4.3% between 2030 and 2040, with the private sector growing faster than the public sector.

The number of care homes in residential settings; both public and private have increased over the last few years and are expected to increase in the future. Frost & Sullivan forecast the total residential demand in 2040 to be 824,801 and non-residential demand in 2040 to be 1,296,821. The total population over 65 in 2040 is forecasted to be 17,715,471. The demand for residential care is the largest in the private setting. In the future the private residential sector will grow further as the public sector becomes less involved in the provision of care. In addition, a higher proportion of older adults will also self-pay, boosting the private sector further. There is a high potential for new players and service types in the private sector.

There has been a strong public policy to encourage non-residential care; however this has not resulted in a dramatic shift in this direction. Over the most recent years there has been increased outsourcing to private providers by local authorities. Cuts in spending have affected residential care providers less than non-residential care providers in the private setting.

A key trend seen by major players in the market is that they have diversified into speciality areas of care. They key benefit is it offers greater financial benefits and higher revenues. Many providers have launched niche products catering for specific market segments. For example, Sunrise Assisted Living have used their US models and transferred them into the UK offering very high specification facilities offering independent living, dementia care and nursing care. Another trend is high price residential hotels or residences which could possibly be registered as residential homes and aimed at the higher end of the market to capitalise on the growing private residential market.

There are a number of opportunities that companies can capitalise on when delivering care and services to older adults. There is a large proportion of older adults that continue to work beyond retirement age and want to continue to keep active both physically and mentally. Their skills could be used effectively post retirement age and they could potentially become a valuable part of a supportive workforce. Therefore the changing lifestyle of retirement is an area which companies could focus on in the future, particularly as older adults have different priorities and needs when in the same age bracket. This can provide new interests and opportunities. In addition, those with more disposable income would be keen to carry on and pay for services which provide an interest for them.

Other emerging models of independent living include:

- close care
- housing with care
- extra care
- very sheltered housing

The key benefit for older adults is that they maintain their independence with their own accommodation.

As new technologies make a greater impact in the future (telecare, telehealth), there is greater opportunity for new providers to enter the market. They would not only provide equipment but provide services around the technologies. This means older adults will have more choice and freedom when living in residential and non-residential settings because of greater interaction and easier connection with family and friends. This leads to a better and more pleasant experience, particularly in residential settings.

The government has an important role to play in order to attract new players, service types and supply chains. As the care home market in the UK is fragmented and competitive, the government needs to provide specific criteria for vendors in order to ensure greater choice for older adults. The type of services needs to be widespread in order to ensure older adults have enough choices.

In conclusion, the long term care market will benefit from various demand factors, mainly ageing population trends. The other drivers in the market which will influence the demand of services range from changing demographics, sources of funding and expenditure, consumer trends, technology trends, political trends and regulation trends. There are opportunities not only for care home companies, but also technology and service companies to support the growing private residential sector in the UK.

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