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Employment in Long-term Care. Report on Poland

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Contents

List of figures

List of tables

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Abstract

The report discusses the formal long-term care workforce in Poland. It presents past and future trends in the development of LTC employment. Authors collected scattered statistical information, estimated lacking data and projected future growth in the number of employed in care services. Performed analysis includes employment in the health and social sector and across various types of care. Projections of the demand for care and supply of the LTC workforce base on the demographic prognosis of the population size and changes in the age structure taking into account different scenarios for demographic development. Results show the growing gap between demand and supply in the LTC employment. The policy towards aging in Poland will must take up the challenge of growing care needs, family changes and lower opportunities for provision of informal care.

1. Introduction

The aim of this report is a deepened recognition of employment in long-term care (LTC). The LTC system in Poland is still being formed and the institution is being confronted with a growing need for care due to dynamic population ageing. On the one hand, the development of employment is conditioned by the supply of care institutions that are formulating specific requirements from people employed in care work, which is leading to the development of new paths of education in nursing and care jobs. On the other hand, employment in LTC is developing under the influence of manifested care needs. These are growing as a result of demographic changes as well as the growing institutionalization of care caused by changes in the labour market and family structure. The high demand for care services is not being satisfied by institutions. Access is thus strictly rationed. In spite of the introduction of limitations, there are more and more care and nursing services. Demand is growing both for highly qualified jobs (doctors, nurses, physiotherapists and psychologists) as well as care services that do not require such high medical qualifications.

This new and dynamic situation concerning employment in LTC has required statistical recognition, sometimes pioneering, as the information system on how LTC functions among the dispersed sectors is still being created. It required an analysis, which could become a basis for projection of employment both from the supply, as well as the demand perspective. The projections take into account only the impact of the demographic variable, population ageing, and only in relation to the public sector. Nevertheless, the forecast directs attention to the huge labour resources needed in care sectors in the coming two decades.

The report is divided into six parts. The first one concerns the organizational dimension of LTC in Poland. The second one is devoted to the workforce in LTC: employment scale, occupations, and the analysis of the structure of the employed. The third concerns the analysis of using LTC services, which is the basis for the demand assessment. The fourth and fifth parts present the results of the forecasts prepared from the demand and supply perspectives. The last part of the analysis is related to the assessment of the shortage of the care workforce in Poland. The report concludes with some recommendations concerning the policy of labour resources and employment development in LTC.

2. Organisation of LTC in the country, latest changes and reforms

In the field of social protection, Poland belongs to the group of EU countries with a family-based welfare model[1]. The relatively big importance of family in the creation of its members' welfare results from the economic development trajectory of the country and the influence of the Catholic church in its social life.

Industrialization, which began just before the Second World War, accelerated in the three post-war decades (the 50s, 60s and 70s) but did not have a positive influence on the social infrastructure development. Social goals were always subordinated to economic one. Education and health care only gained recognition in the planning decisions of the People's Republic of Poland (Golinowska 1990). In this situation, both care for children and the elderly was seen as a family responsibility. While day nurseries and kindergartens were created for children's care, albeit on a very insufficient scale[2], in the case of the elderly, the relevant infrastructure developed only in the most recent decade.

For centuries, the Catholic church promoted and highly appreciated the child-raising and care role of the family. Until now, the institutionalization of care of small and not yet self-reliant children was seen as an individually unethical and socially destructive solution, which was often 'justified' as a lack of political preferences for relevant infrastructure development and human resources education in this field. Only in recent years have socially acceptable decisions been undertaken concerning the revival of day-nurseries (day-nursery law 2011). There are also projects under way in the field of care for elderly. There is a modest discussion in the media justifying families' decisions to 'give' dependent elderly persons to the care institution.

Thus, the family is still identified as the main caregiver for elderly people with limitations on activities needed for daily living. Two indicators describe the relatively significant role families play in the care system: the 'co-residence index' (elderly parents residing with their children) and the 'non-working women aged 55-64' index'. The levels of both indicators

[1] Making a reference to Maurizio Ferrera's modified version of Gosta Esping- Adersen's welfare state regimes, it could be said that the Polish model of the welfare state leans both in the direction of the liberal model and the Southeast European model. The comparisons of the new emerging Polish welfare state as a similar to the South European model were formulated by Golinowska (2003, 2009, 2013) and Księżopolski (2004), independently.

[2] In communist times, childcare was only available in cities, especially where large and privileged industrial settings had developed.

situate Poland in an extremely high position in terms of family commitment (Reimat 2009, Kraus, Riedel at al 2012).

The development of a formalized non-family LTC is in initial stages and is similar in both sectors: medical and social. Only recently did the health care system reform of 1999 provide an opportunity for the development of public LTC institutions that are separate from hospitals. As a result, hospital departments were transformed into nursing and care institutions. Institutional care is simultaneously provided in the social sector. Stationary and semi-stationary homes are administered as part of the social assistance (welfare) scheme. They provide care for elderly people whose daily living activities are limited, and who do not have families or need institutional care for social reasons such as poverty or other very difficult circumstances in the family.

At the present stage of LTC development, there is no specific regulation that comprehensively covers the issues of care services for the elderly, the institutions providing these services, the rules of access to them, and the ways of financing them. The LTC category is used exclusively by experts in the health sector and the National Health Fund (NFZ – established in 2003), which, in its plans and reporting, has begun to separate contracts for nursing and care services in the out-of-hospital system. In such a situation, it is understandable that LTC in the health sector has a medical character: “LTC designates help and services for chronically ill or functionally impaired persons, including frail elderly, provided for an indeterminate period of time” (Bień, Doroszkiewicz 2006). In the social sector category, LTC is used very rarely because the new concept of social assistance (1991) emphasizes assistance that allows people to be independent. However in the social assistance sector, practice is often different from theory and legal assumption. In social assistance homes, the majority of residents are dependent people with a wide range of LTC needs.

Table 1. Comparison: Institutional framework of formal LTC in health and social sector

Items	Health sector	Social sector
Regulations	- Act on providing healthcare financed with public funds of 27 August 2004 - Regulation Nr 61/2007/DSOZ of the NFZ President from 19 September 2007 on conditions and contracts performing in LTC - Regulation of the Minister of Health of 30August 2009 on the guaranteed services included in the scope of nursing and care services under LTC, Dz. U. 140, item 1147 of 2009	- Act on social assistance of 12 March 2004 - Regulation of the Minister of Social Policy on specialist care services of 22 September2005 - Regulation of the Minister of Social Policy of 8 August 2012 on social assistance homes
Eligibility criteria	Independency test based on Barthel Index. Beneficiaries are those who obtain 40 points or less (from 100 points) on the evaluation test based on this Index, provided that they received a referral for long-term nursing care.	Social criteria based on the community interview according to the Act on Social Assistance (2004). The decision on granting this type of assistance is made by the Local Social Assistance Center operating in a given municipality. In practice, LTC services are received by: - a single person, who due to their age, health or other social reasons, requires assistance, yet lacks such assistance, - a family member requiring assistance but whose family cannot provide such assistance
Providers		
- Residential care	- Chronic medical care homes (zakład opiekuńczo-leczniczy), - Nursing homes (zakład pielęgnacyjno-opiekuńczy), - Psychiatric nursing homes (zakład pielęgnacyjno-opiekuńczy psychiatryczny) - Hospices	Social assistance homes: - for elderly people; - for chronically somatic ill persons; - for chronically mental ill persons; - for intellectually disabled adults; - for the physically disabled
- Home based formal care	- LTC nursing - LTC team for persons needing mechanic ventilation	Community based care provided by Local Social Assistance Centre for poor persons in need
Personnel employed - Residential care	In institutions financed by health insurance (NFZ): - Physicians - Nurses - Physiotherapist/rehabilitator - Medical workers - Psychologists - Nursing assistants	In social assistance homes therapeutic and care teams include: - Nurses - Social workers - Psychologists - Educational instructors - Physiotherapists /Rehabilitators - Dieticians
- Home based formal care	- Family community nurses - Physicians (from primary care institutions - POZ)	- Community carer - Physiotherapist - Assistant to person with a disability
Funding and financing	National Health Insurance Fund (NFZ) based on contracts with providers	Community Budget based on transfers from the state budget and additionally – local taxation

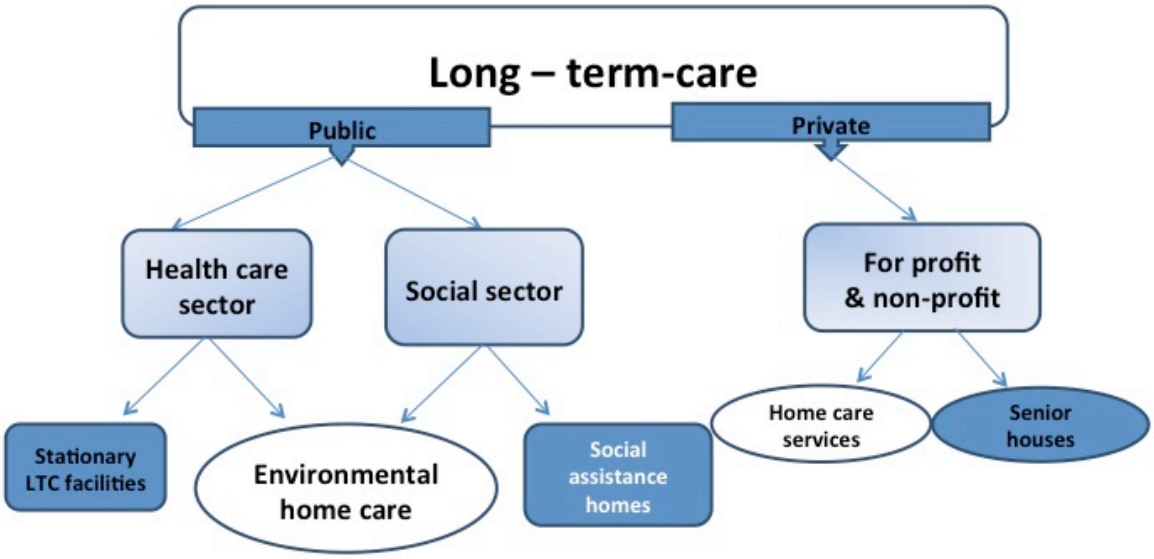
Source: Own estimations.

The diagram below shows the complexities of formal care for dependent elderly people. Despite the impression of a multiplicity of solutions, access to public LTC is very limited.

This includes *de facto* only severely dependent people who require a range of medical services[3] and people in extremely difficult economic situations with many social problems.

Recently, a significant development of private senior houses for dependent people has been observed. Systematic information on this kind of LTC supply is not yet available.

Figure 1. Long-term Care



3. Employment in LTC services

Employment in LTC can be estimated based on administrative data and survey information from the Labour Force Survey. The information on the size and trends in LTC employment presented below refers to both types of data.

Because LTC services are provided separately in health and social sectors, administrative statistical information on LTC employment comes from different sources. Data on employment in the social sector are collected and published by the Ministry of Labour and Social Policy (MPiPS) and the Central Statistical Office (GUS). Data on employment in the health sector are collected by the Centre of Information Systems of Health Protection (CSIOZ) working under the Ministry of Health, the National Insurance Fund (at national and local level) and by the chief

[3] In Poland and in other the post-communist countries, the practice of providing health services related to the human body is strongly medicalized. According to custom and to regulations in the health sector, only licensed medical professionals can provide such services.

councils of selected medical occupations (like the chief council of nurses and midwives). Comprehensive information of the entire LTC services is scattered.

On the other hand, the Labour Force Survey provides comprehensive information on employment in different sections and subsections, including statistical information on employment related to LTC provision in subsections Q87 – residential care and Q88 – social work without accommodation. It also provides some information on the characteristics of the professional care personnel. It shows that care professions (nursing, personal care and related workers) are dominated by females (90%) and that the share of workers of preretirement age is significantly higher than it is in the total workforce (28% compared with 22% in 2008). This is not unique for Poland, but typical for European countries (Geerts 2011).

Below, we report and analyse the information on employment in residential care and home care. This is followed by an estimation of LTC employment in relation to the Q sector employment and total employment in the economy.

3.1 Residential care

Residential LTC services are provided separately in the health care sector and in the social sector. Consequently, employment principle and information are separated into both sectors. Below, LTC personnel in residential nursing in the health sector and social assistance homes are presented. The following types of personnel could be distinguished with respect to residential LTC:

- Administrative and technical personnel responsible for managering facilities and their technical preparation (maintenance, cleaning, etc.);
- Professional personnel, including medical personnel and care personnel.

Personnel requirements with respect to these two employment categories are formulated separately in each sector. The two types of personnel do not differ in terms of educational level as education requirements for medical occupations and care occupations are high (Hryniewicka, Herbst 2010).

The analysis below concentrates on professional personnel as this type of personnel is better covered with data. In the social sector, information at the level of administrative and technical personnel is provided and discussed. In the health sector, information at the level

of administrative and technical personnel is not available. It can only be estimated that the proportion of administrative and technical personnel to the professional personnel is similar to the proportion in the social sector.

Statistical information on LTC personnel in the health care sector is provided by the Centre for Information Systems in Healthcare (CSIOZ). These statistics include information on the number of personnel directly involved in the provision of care which is presented below. It also covers information on the work of volunteers. According to the Law on Public Work and Volunteering volunteers are covered with employment rights and are covered with social insurances. However, the number of volunteers involved in long-term residential care provision in the health sector is very unstable. According to the CSIOZ statistics, in the period of 2005-2011, it oscillated around 1.0 thousand volunteers and dropped to less than 40 in 2012 (CSIOZ 2005-2013).

Professional requirements for medical and care services in the health sector residential LTC are strictly defined in the National Health Fund guidelines for residential LTC in the health sector. According to the guidelines, professional personnel must include: physicians, nurses, social workers/social nurses, psychologists, physiotherapists/rehabilitators, educators and, if needed, dieticians.

Based on the information coming from the health sector[4], specialised LTC personnel in residential nursing care (physicians as well as nurses and other medical workers) has increased significantly in recent years; it almost doubled between 2004 and 2011: from 10.8 thousand workers to 20.2 thousand workers in 2011 (dropping again in 2012, mainly due to a decrease in the number of volunteers). The overall changes in employment levels were related to the growing need for care and the moving of older patients in need from hospitals to the new created LTC facilities due to the health care reform. As a result, the number of places in residential care supervised by the Ministry of Health grew from 17.8 thousand in 2004 to 23 thousand in 2011 (CSIOZ 2005-2012).

[4] Data on employment in residential LTC in the health sector has been published since 2004.

Table 2. Occupational structure of LTC professional personnel in residential care in the health sector, 2004-2012

Item	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2004-2010 (2004=100)	Change 2004-2012 (2004=100)
Residential nursing care, including:	**9933**	**12451**	**13155**	**13550**	**15152**	**16626**	**16691**	**18958**	**18812**	**168**	**189**
Physicians	810	1141	1125	1200	1457	1610	1929	2469	2407	**238**	**297**
Share (%)	8,2	9,2	8,6	8,9	9,6	9,7	11,6	13,0	12,8		
Nurses	5138	6385	6832	6882	7517	8309	8898	9758	9766	**173**	**190**
Share (%)	51,7	51,3	51,9	50,8	49,6	50,0	53,3	51,5	51,9		
Psychologists	171	255	293	302	359	495	581	654	692	**340**	**405**
Share (%)	1,7	2,0	2,2	2,2	2,4	3,0	3,5	3,4	3,7		
Educators	43	95	49	53	58	66	31	28	27	**72**	**63**
Share (%)	0,4	0,8	0,4	0,4	0,4	0,4	0,2	0,1	0,1		
Physiotherapists	589	748	817	874	1098	1102	495	398	385	**84**	**65**
Share (%)	5,9	6,0	6,2	6,5	7,2	6,6	3,0	2,1	2,0		
Medical workers	663	948	1108	1379	1694	1745	1699	2276	2482	**256**	**374**
Share (%)	6,7	7,6	8,4	10,2	11,2	10,5	10,2	12,0	13,2		
Social workers	239	283	306	307	336	324	249	279	254	**104**	**106**
Share (%)	2,4	2,3	2,3	2,3	2,2	1,9	1,5	1,5	1,4		
Nursing assistant	2280	2596	2625	2553	2633	2975	2809	3096	2799	**123**	**123**
Share (%)	23,0	20,8	20,0	18,8	17,4	17,9	16,8	16,3	14,9		

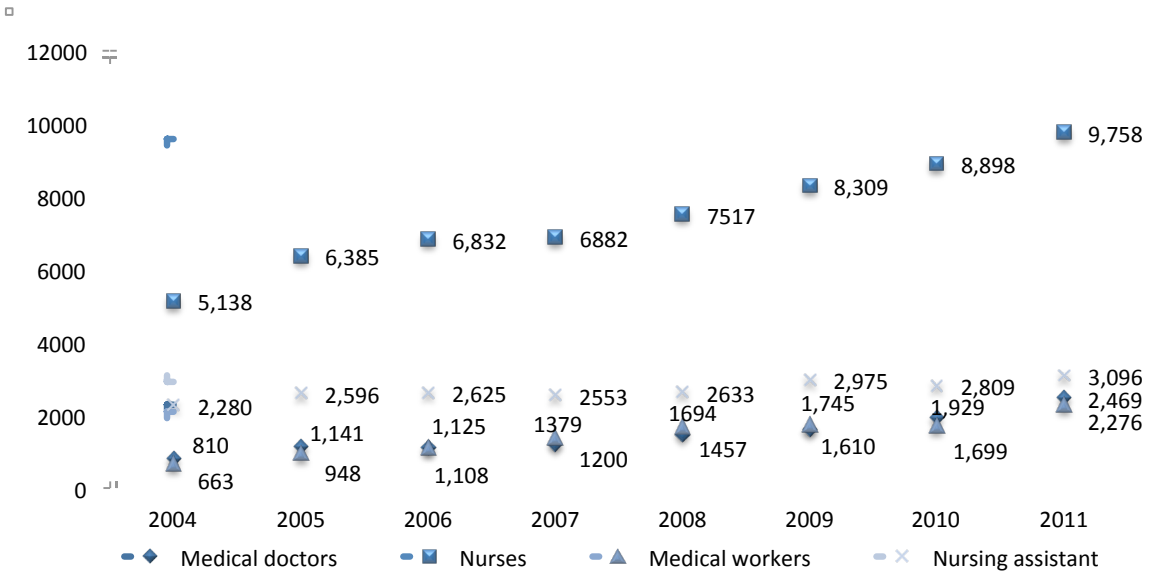
Source: Own calculations based on CSIOZ data 2005-2012.

The largest (and continually expanding) group of LTC professional personnel in residential care in the health sector is made up of nurses, who constitute nearly half of LTC specialised employees. The number of nurses grew by 73% until 2010 and by 90% until 2012. In the last ten years, the educational requirements for nurses have changed. The most sound change was the requirement for nurses to complete higher education. At the same time, new professions have been introduced, including the specialization in nursing the chronically ill and disabled (the so-called LTC nurse). Nurses employed in the LTC sector need to complete qualifying courses in this field. According to the Center of Post-Secondary Education of Nurses and Midwives (CKPPP - Centrum Kształcenia Podyplomowego Pielęgniarek i Położnych), in 2007 there were 453 nurses with a specialization in nursing the chronically ill and disabled (Golinowska, Styczyńska 2012).

The following large groups of LTC professional personnel in the health sector residential care are nursing assistants and physicians. While the number of nursing assistants has been moderately growing, the number of physicians employed in residential nursing care has more

than tripled. Although smaller in absolute terms, other dynamically growing groups of employees are psychologists and medical workers. The profession of medical workers was established by law in 2007 in response to growing needs for care. Professional education in this field includes vocational education or a one year post-secondary school degree. Regulating the education path of this profession has resulted in a dynamic inflow of new personnel in this category.

Figure 2. Medical personnel employed in residential LTC in the health sector



Source: CSIOZ 2001-2012.

In addition to LTC nursing and care in the health sector, care for the elderly, chronically ill and other groups specifies above is provided in the social residential care homes.

Statistical information on employment in residential care in the social sector (mainly social assistance homes) is provided by the Ministry of Labour and Social Affairs. Additionally, fragmentary information about educational attainments can be found in the Ministry of Education database or educational centres of selected occupations (like for example in the above mentioned CKPPP).

Total employment in the residential LTC in the social sector amounted to 54 thousand employees in 2012, 29% of whom are administrative (4.4 thousand) and technical (11.2 thousand) workers. The number of administrative and technical personnel has been slightly decreasing over the past decade, from 18.1 thousand in 2001 to 15.5 thousand in 2012.

At the same time, the total number professional LTC personnel employed in residential care in the social sector grew by 24%. This increase is attributable to the increase in the number of therapeutic personnel as a result introducing three new specialised care occupations: care workers in residential social assistance homes, environmental care workers and assistants to disabled persons. Appropriate qualifications for these professions can be obtained in secondary vocational or post-secondary educational institutions (Golinowska, Styczyńska 2012).

Table 3. Professional LTC personel in residential care in the social sector, end of the year data, 2001-2011

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change 2001-2010 (2001=100)	Change 2001-2011 (2001=100)
Total employment in residential care (persons)	**29759**	**30842**	**31616**	**32044**	**33023**	**34052**	**34832**	**35475**	**35899**	**36693**	**36982**	*123*	*124*
In FTE	*28550*	*29626*	*30422*	*30849*	*31786*	*32784*	*33474*	*34023*	*34323*	*35100*	*35384*	*123*	*124*
***INCLUDING:* Medical and physiotherapist activities (persons)**	**9000**	**8803**	**8934**	**8717**	**8615**	**8437**	**8551**	**8001**	**7308**	**7119**	**7214**	*79*	*80*
In FTE	8537	8393	8541	8325	8226	8028	8107	7439	6699	6510	6620	*76*	*80*
Share in total (persons)	*30,2*	*28,5*	*28,3*	*27,2*	*26,1*	*24,8*	*24,5*	*22,6*	*20,4*	*19,4*	*19,5*	-	-
Care and therapeutic activities (persons)	**20759**	**22039**	**22682**	**23327**	**24408**	**25615**	**26281**	**27474**	**28591**	**29574**	**29768**	*142*	*143*
In FTE	20013	21233	21881	22524	23560	24756	25367	26584	27624	28590	28764	*143*	*144*
Share in total (persons)	*69,8*	*71,5*	*71,7*	*72,8*	*73,9*	*75,2*	*75,5*	*77,4*	*79,6*	*80,6*	*80,5*	-	-

Notes: FTE – full time equivalent.

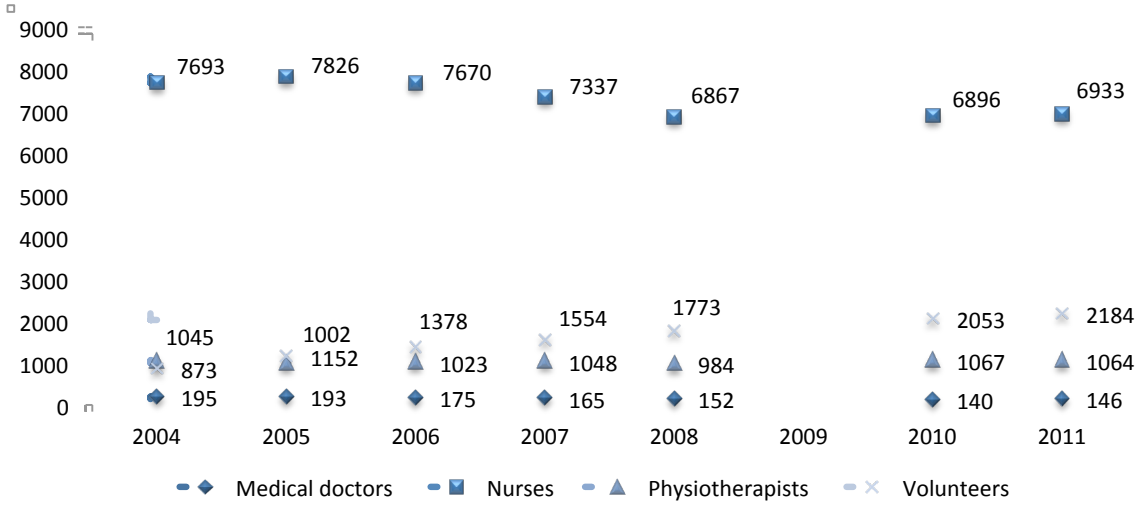
Source: Data from the Ministry of Labour and Social Policy, Social Assistance and Social Integration Department[5].

It should be noted, however, that the number of medical personnel has been decreasing. These changes are a result of changes in employment conditions. Until recently, in social assistance homes, physicians and nurses were employed as full-time permanent staff. At present, there is no unified way of ensuring nursing and rehabilitative care for residents of social assistance homes. Some physicians and nurses have permanent employment contracts but others have civil service contracts as separate private units (Golinowska, Styczyńska 2012). Qualitative research in social care homes indicates that primary care medical services are often outsourced by the social assistance homes (Golinowska,

[5] Data received thanks to the Directors of the Social Assistance Department and of the Division of Statistics, Analysis and Budget of the Social Assistance and Social Integration Department in the Ministry of Labour and Social Policy.

Sowa 2010). At the same time, the involvement of care personnel and volunteers in social assistance homes' activity increased.

Figure 3. Medical personnel and volunteers employed in social assistance homes, 2004-2011



Source: GUS 2005-2009, 2011.

3.2 Home care

Because home care is provided in two sectors, health care and social, information on LTC personnel is based on different occupational categories and is presented separately for each sector. In the health care sector, only information on the employment of family community nursing carers (further also referred to as home nursing care) is given. They often work with LTC teams, providing mechanical ventilation services, as presented in the comparison above. However, there is no statistical information on the employment of teams providing ventilation services in the LTC sector[6]. Administrative and technical personnel supporting home LTC is fully incorporated into the activities of the primary health care units.

Statistical information on employment in home nursing care is available from the Centre for Information Systems in Healthcare (Centrum Systemów Informacyjnych Ochrony Zdrowia - CSIOZ).

Home nursing care is provided by family community nurses in liaison with cooperation of primary care physicians. The number of family community nurses has not changed

[6] This category is not presented as a distinct category in the health care system statistics.

substantially in recent years. It has been fluctuating, reaching an employment peak in 2009 and slightly decreasing since then. Except for family community nurses employed in primary care units, home based nursing can be provided by nurses whose services are contracted out. In 2012, in the entire health care system, 5.9 thousand nurses were working based on the separate contractual basis. The number of such professionals with activities in home nursing care remains unknown.

Table 4. LTC professional personnel in home nursing care in the health sector, 2004-2012

Type of employment	2004	2005	2006	2007	2008	2009	2010	2011	2012	*Change* *2004-2010 (2004=100)*	*2004-2012 (2004=100)*
Family community nurses	10962	11328	11337	11628	11735	12001	11727	11796	11690	*107*	*106*

Source: Own calculations based on CSIOZ data 2005-2012.

In addition to LTC nursing services in the health sector, home care services are provided in the social sector by social assistance employees.

Social assistance personnel working at Local Social Assistance Centres (OPS - Ośrodki Pomocy Społecznej) account for a large group, totalling 48 thousand people in 2012. The OPS employees differ in terms of their occupational background and include administrative staff responsible for management, technical workers, and numerous social workers representing various specializations including psychology, social work, physiotherapy, rehabilitation etc. (Hryniewicka, Herbst 2010). **Only a small number of workers** is involved in provision of LTC services. LTC personnel in the social sector (mostly social assistance) are recognised general and specialized carers providing services that are described in more detail in the following section of the report. Statistical information on the employment levels related to this type of care is provided on an annual basis by the Ministry of Labour and Social Policy.

The Ministry of Labour and Social Policy data shows that the number of employees providing nursing in social assistance facilities decreased by almost 10% (from 8 thousand employees to 7.3 thousand employees) between 2001 and 2010 and by almost 12% (from 8 thousand to 6.3 thousand employees) between 2001 and 2012. The decrease in the number of professional staff providing specialized care services was even more drastic. These changes cannot be fully explained by utilization changes as the number of general care services' recipients had first been growing and then decreasing since 2003/2004.

In 2012 the number of recipients of services was higher by 5 thousand than in 2001. The number of recipients of specialized services decreased during the entire period between 2001 and 2012.

Table 5. Professional LTC personnel in home care in the social sector, end of year data, 2001-2012

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2001-2010 (2001=100)	Change 2001-2012 (2001=100)
Total number of employees providing general care services and specialized care services	**8065**	**7626**	**7587**	**7436**	**7255**	**7160**	**7224**	**7167**	**7228**	**7286**	**6861**	**6299**	***90.3***	***78.1***
Employees providing general care services in social assistance	6861	6528	6549	6334	6224	6202	6279	6245	6350	6358	5874	5478	***92.7***	***79.8***
Share in total	*85.1*	*85.6*	*86.3*	*85.2*	*85.8*	*86.6*	*86.9*	*87.1*	*87.9*	*87.3*	*85.6*	*87.0*	-	-
Employees providing specialized care services in social assistance	1204	1098	1038	1102	1031	958	945	922	878	928	987	821	***77.1***	***68.2***
Share in total	*14.9*	*14.4*	*13.7*	*14.8*	*14.2*	*13.4*	*13.1*	*12.9*	*12.1*	*12.7*	*14.4*	*13.0*	-	-

Source: Own calculations based on data from the Ministry of Labour and Social Policy – Social Assistance Department.

Summing up, a comparison of different data on home and residential care in both the health and social sectors with the total Q sector and total employment is presented, explained and interpreted.

When the LFS data are compared with the administrative data, one can see that the administrative data on professional LTC personnel care account for approximately 56% of the LFS residential care subsection employment. This difference could be attributed to the fact that the administrative data does not include information on administrative staff in the health and social sector residential care or coverage of the private sector employment in the LFS data[7]. Professional LTC personnel in residential care, as estimated based on administrative data, accounts for about 6% of the Q sector employment, but it constitutes only 0.4% of employment in the total economy. Still, these shares have been slowly rising in recent years.

[7] If we include information on the administrative and technical personnel in the residential care social sector, the proportion increases to 80%.

When the social work sector is considered, the difference between data sources is much larger as administrative data include only 15% of the social work subsection. This is a result of the fact that the social work category includes not only the employment of personnel responsible for administering and providing care to the dependent elderly, but above all includes employment related to social assistance activities targeted at poverty relief and the provision of services due to other types of difficult situations as defined in the social assistance law. Thus this category provides a very general picture, while more insight into professional employment in LTC is given by detailed administrative data in both sectors. It is estimated, based on administrative statistics, that LTC professional personnel in home care provided in both (health and social) sectors accounts for only 2% of the Q sector and 0.1% of employment in the total economy.

Overall, the residential care and home care professional personnel accounted for 74.6 thousand employees in 2012 (compared to 71.8 in 2010, which is the base year for projections). It has increased by over 10 thousand since 2004. Despite the increase, it is only 8% of the Q sector and 0.5% of total employment in the economy.

Table 6. Comparison of LTC personel data on residential care and social work

Item	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total employment 15-64	13324.1	13834.2	14338.4	14996.5	15557.4	15629.5	15233	15312.8	15340.3
Q sector 15-64*	785.7	807.2	850.8	854.8	845.5	865.1	884.1	871.5	889.6
Share of the Q sector	.	.	.	.	*5.4*	*5.5*	*5.8*	*5.7*	*5.8*
Q87 - residential care	.	.	.	.	103.3	96.8	95.7	92.2	99.0
Residential care - administrative data	**42.0**	**45.5**	**47.2**	**48.4**	**50.6**	**52.5**	**53.4**	**55.9**	**.**
Share in the Q sector	5.3	5.6	5.5	5.7	*6.0*	*6.1*	*6.0*	*6.4*	*0.0*
Share in total employment	0.3	0.3	0.3	0.3	*0.3*	*0.3*	*0.4*	*0.4*	*0.0*
Q88 - social work	.	.	.	.	103.0	116.4	114.1	115.7	121.5
Home care - administrative data	**18.4**	**18.6**	**18.5**	**18.9**	**18.9**	**19.2**	**19.0**	**18.7**	**17.9**
Share in the Q sector	2.3	2.3	2.2	2.2	*2.2*	*2.2*	*2.2*	*2.1*	*2.0*
Share in total employment	0.1	0.1	0.1	0.1	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Total Q87+Q88	.	.	.	.	206.3	213.2	209.8	207.9	220.5
Residential and home care - administrative data	**60.4**	**64.1**	**65.7**	**67.2**	**69.5**	**71.8**	**72.4**	**74.6**	**.**
Share in the Q sector	7.7	7.9	7.7	7.9	8.2	8.3	8.2	8.6	.
Share in total employment	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	.

Note: * Until 2007, the Eurostat category health and social work is used; lack of data.
Source: Own calculations based on tables above and Eurostat online.

4. Demand for LTC

In Poland, LTC services are in the domain of informal care provided within the family and by privately paid carers. As described in the previous chapters of the report, public formal care is limited to persons in need of specialist nursing care due to a high level of dependency (health sector) and persons in difficult social situations due to poverty or other unfortunate family situations (social assistance sector). Others in need of care can obtain it either in the private sector, where commercial care homes have become prevalent, especially in cities, or from social organizations, mainly religious.

Table 7. Comparison: Types of LTC services

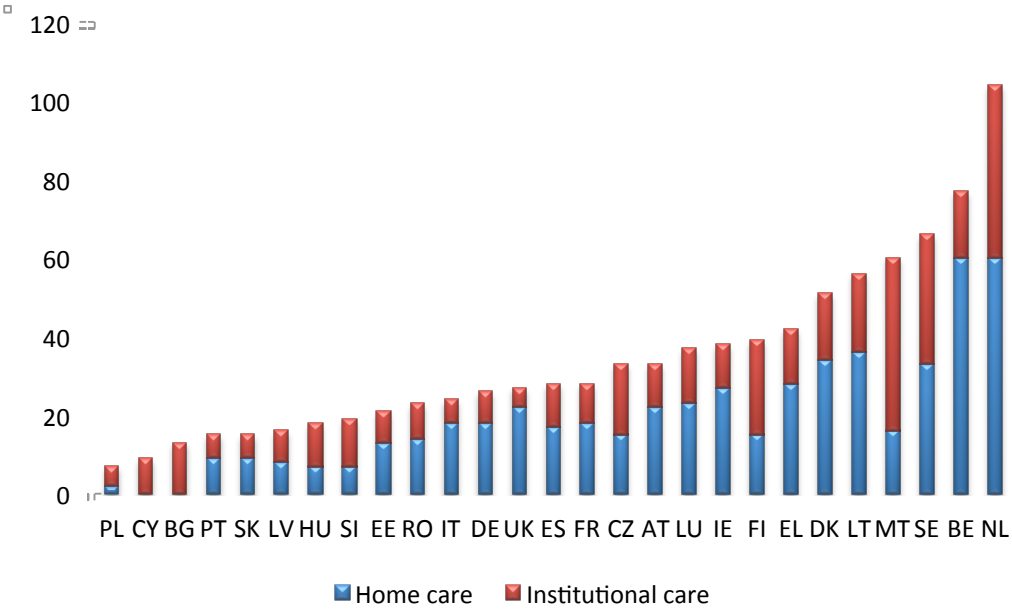
LTC services	Formal	Informal
Residential		
- Public	Nursing and care homes in health and social sectors	
- Non-public	Nursing and care homes: - Commercial - Non-profit	Unregistered care homes
Home care	Home care subsidized from public sources in the following sectors: - Health - Social - Support of family carer under the condition of giving up employment	Private home care - Family care - Privately paid care (often in shadow economy)

Source: Own estimations.

Statistical information on the utilization of LTC is restricted to formal care. Still, this information remains incomplete, lacking data on care provided in private care homes. Information on informal care is based on survey research. The largest one is from 2007 (AZER). It indicates that over 80% of the people in need of care received it in family settings.

As a result of high levels of informal family care and a limited supply of public formal care services, the utilization of formal care is relatively low in Poland. However, the utilization trend is growing. If it is assumed that the proportions between formal and informal care in Poland are similar to the ones observed in Southern European countries (Fujisawa, Colombo 2009), it could be estimated that the formal sector accounts for only a small percentage. The level of utilization of formal care is lowest in Poland as compared to other European countries. According to the European Commission, formal home care services cover 2% of the dependent population and formal residential care cover 5% of the dependent adult population (Lipszyc et al. 2012).

Figure 4. Coverage rate of the adult dependent population with LTC



Source: Lipszyc et al. 2012.

4.1 Residential care

Residents of nursing and care facilities in the health and social sectors are in the most difficult life circumstances. They usually suffer from chronic diseases, have severe activity limitations and often face difficult family and economic situations. This results from the eligibility criteria, which limits eligibility for residential care to such persons. The table below presents a comparison of information on the use of formal residential care in the health and social sectors. Currently, the number of care recipients is similar in both sectors, amounting to 70 thousand recipients per sector. In the not so distant past, the social sector dominated. The dynamics of the increase in the number of recipients are higher in the health sector. This is occurring regardless of the access limitations introduced in 2007, which lowered the access criteria from 60 to 40 points on the Barthel test.

If only elderly aged 60+ are taken into account, the number of care recipients would lower by about 40% in the social sector. The share of elderly depends, however, on the type of social assistance facility. In the health sector, elderly living in residential homes account for over 90% of patients.

Table 8. Utilization of residential care financed from the public sources

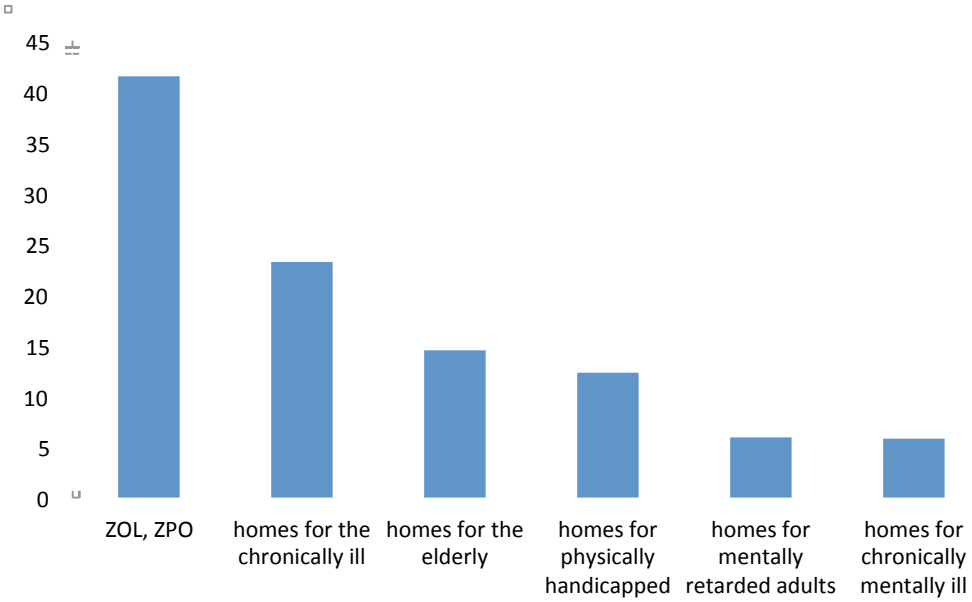
	Patients of health sector residential care				Residents of social assistance homes						
	ZOL and ZPO (care and nursing facilities)	Psychiatric care	Hospices	**Total**	For the elderly	For the chronically ill with somatic disorders	For the chronically mentally ill	For the adult with intellectual disability	For the physically disabled	**Total**	**Total, in both sectors**
2004	40078	1747	11182	**53007**	14173	25095	16764	14697	1149	**71878**	**124 885**
Female (%)	*27.1*	.	.	**.**	*65.0*	*60.9*	*45.6*	*46.0*	*51.1*	***54.9***	**.**
2005	41374	4343	12520	**58237**	14027	23788	17178	14824	1103	**70920**	**129157**
Female (%)	.	.	.	**.**	*65.3*	*60.1*	*45.9*	*45.4*	*51.3*	***54.5***	**.**
2006	48015		13056	**61071**	14523	22912	17476	14878	1133	**70922**	**130 604**
Female (%)	.	.	.	**.**	*65.7*	*58.8*	*44.5*	*44.7*	*54.5*	***53.7***	**.**
2007	48553		13005	**61558**	14043	21245	19248	14324	1788	**70648**	**132206**
Female (%)	.		.	**.**	*64.7*	*57.6*	*44.8*	*39.8*	*53.5*	***51.8***	**.**
2008	43988	.	14469	**58457**	15010	20442	19899	14724	1579	**71654**	**130111**
Female (%)	*67.3*	.	*48.7*	**.**	*62.5*	*57.6*	*42.8*	*38.4*	*50.8*	***50.4***	**.**
2009	44353	5833	14141	**58474**	15085	19687	20044	14170	1548	**70534**	**129028**
Female (%)	*45.0*	.	*48.8*	**.**	*61.8*	*56.7*	*44.2*	*41.2*	*53.0*	***51.0***	**.**
2010	47018	6201	14988	**68207**	15677	19534	20342	14360	1659	**71572**	**139779**
Female (%)	*67.3*	.	*48.7*	**.**	*62.4*	*55.0*	*43.2*	*38.3*	*45.9*	***48.3***	**.**
2011	47744		17100	**64844**	15480	19264	20676	14458	1703	**71 581**	**136 425**
Female (%)	*66.9*	.	*49.2*	.	*60.7*	*53.9*	*41.0*	*38.4*	*45.9*	*48.3*	**.**

Notice: This chart does not include social assistance homes for children and mentally handicapped youth due to lack of data.

Source: GUS 2005 – 2011 and unpublished GUS data.

The share of individuals in the poorest health status, who are bed-ridden and thus in need of constant care, is the highest in the nursing and care facilities of the health sector, followed by social assistance homes for the chronically ill with somatic disorders and then finally, in homes for the elderly. Individuals suffering from mental illnesses are usually mobile, thus requiring less constant care.

Figure 5. Share of bed-ridden persons per type of care institution



Source: GUS 2010.

Men receive residential LTC more often than females, although female longevity is higher; the average life expectancy of females at the age of 50 is 32.3 more years and the average life expectancy of males at the age of 50 is 25.6 years (EU SILC 2012). At present, females constitute 67% of patients in health sector residential care facilities and about 50% of residents in social assistance homes. In social assistance homes for the elderly and for the chronically ill with somatic disorders, females are the majority (60%). Meanwhile, there are more men in social assistance homes for persons with mental disorders.

4.2 Home care

Home care services, targeted at the elderly and supporting formal carers from public sources are not common in Poland. Home nursing and care recipients in the health and social assistance sectors accounted for 151 thousand people in 2011.

The most common types of home care used by the elderly are general care services in the social assistance sector. These services are targeted at the single, dependent elderly in difficult situations (poverty) who cannot receive care from family members. General care services aim at providing assistance to the elderly, who often suffer from activity limitations in fulfilling everyday needs, including personal hygiene and socializing. The number of users of this type of care from social assistance was between 80-90 thousand people in 2004-2012. However, the utilization trend in the period of the crisis is decreasing.

The social sector also offers specialized therapeutic care services. These are provided by professional personnel: nurses, psychologists, and therapists are suited to the specific needs of the dependent arising from health status or disability. The number of recipients has varied over the years; it dropped to 4,000 in 2012.

Table 9. The number of recipients of home nursing care in the health sector and care services in the social assistance sector

Year	Social sector		Health sector	Total
	General care services	*Including: specialized care services*	Nursing care services	
2004	80650	*4736*	.	.
2005	81993	*4571*	.	.
2006	88525	*6891*	.	.
2007	90016	*4682*	.	.
2008	92470	*5619*	.	.
2009	91311	*5127*	.	.
2010	89298	*4754*	59754	149052
2011	87212	*4972*	63394	150606
2012	85545	*4045*	64586	150131

Note: . Lack of data.
Source: Wyrwicka, Łukasik 2009, MPiPS-03 2010-2012, NFZ unpublished data 2010-2012.

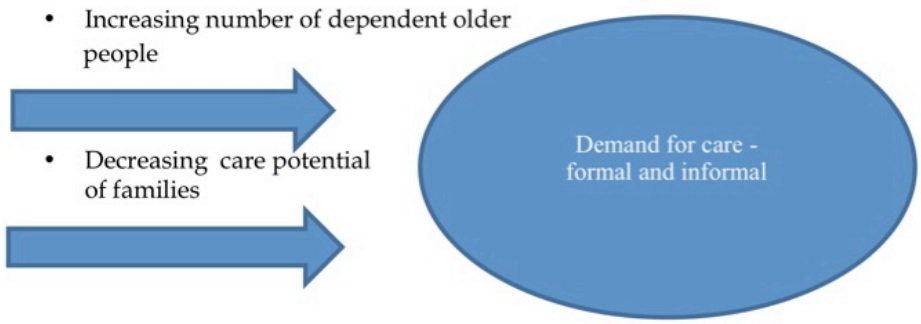
Home nursing care is also provided in the health care sector. The care is granted based on the decision of primary care physician who determines which patients are in need of long-term nursing care based on their health condition. As in residential care, health status is evaluated based on the Barthel test. In 2010-2012, over 60,000 patients received this type of care each year. It is financed from public health insurance.

5. Impact of demographic change

5.1 Factors influencing the demand for care

In a country like Poland, which has a very high rate of population ageing and a very high share of informal care for dependent elderly, two reinforcing processes of change have affected the increase in demand for formal long term services: the growing amount of older people who need care and the decreasing availability of family care. The latter is a result of institutional changes of the labour market and social security as well as the “modernization” of the family.

Figure 6. Demand for care - formal and informal



In terms of institutional changes in the area of labour and social security, the restriction of early labour market exit and the increase in the retirement age reduces the possibility of family care for the elderly. This policy began in Poland recently and will have effects over the next three decades. In the next 10 years, the retirement age for women and men will be aligning to 65 years. Then the process of raising the retirement age to 67 will begin for both sexes. In the future, these changes will be stimulated by changes in the family structure as well. Families are becoming increasingly smaller and relationships with older generations are becoming weaker. Older parents usually live in their own homes and use formal care, whether home or stationary, only in the last stage of life.

These changes can already be confirmed by several indicators;

- An increasing share of small families with older heads of the family and individual households of people aged 65+ (lone-elderly households). According to the 2011 National Population and Housing Census, there was an increase in households with only older people to 20%; in the former 2002 census, the figure was 19%. At the same time, there was an increase in single elderly households of people over 65 years of age. They are already much more than 50% of all individual households in Poland.
- An increasing share of elderly families whose children have migrated for a longer period of time or are permanently abroad, especially in the largest emigration regions, such as Opolskie and Świętokrzyskie Voivodships.
- An increase of the employment rate of women aged 55 - 69 years (i.e. the period of ability to provide care in the family). Currently, the employment rate of women aged 55 - 64 years is approximately 24% (GUS BAEL 2012).

- The emigration of women to western EU countries to work in the area of care for the elderly, driven by high demand in these countries and the relatively good salary in the social sector compared to other income opportunities (compared to the possibilities of other family members as well).
- The reduction of the care indicator (the relation between the number of women aged 50 - 69 years and the number of people aged 80 years and over)[8]. This ratio is equal to about three women to one elderly person now, but it will decrease to 1.5 over the next two decades as a result of demographic changes. If the care indicator took into account the number of working women aged 50 - 69 years, not just the size of the cohort, the decrease would also be a result of the decision concerning the increase in the retirement age. Although a significant number of women aged 50 + combine care with work, research shows that it is very inconvenient for everyone (including the persons in need of care and employers) and requires changes (Perek-Bialek, Stypińska 2011).

5.2 Prognosis of care due to demographic changes

The forecast for care utilization has been prepared on the assumption that in the future, the share of beneficiaries in a given age group will be the same as in the base year (2010 was chosen as the base year). An explanatory variable in this case is the share of age cohorts in the population and their size. The development of the explanatory variable was determined by the population projection by age used in the Neujobs project (EUROPOP 2010), for which two scenarios were assumed: friendly and tough. These were associated with different assumptions regarding fertility, mortality and migration. The table below reviews these assumptions:

Table 10. Comparison of assumptions of demographic variants used

	Fertility		Life expectancy males		Life expectancy females		Net migration numbers (in thous.)	
	2010	2030	2010	2030	2010	2030	2010	2030
Europop		1.46		76.4		83.5		3.2
Neujobs friendly	1.38	1.69	72.1	79.2	80.7	85.7	-1.2	91.7
Neujobs tough		1.38		74.9		82.6		-85.3

Source: Compilation based on ECFIN 2012, Neujobs D10.1.

[8] It is used sometimes in demography, i.e. in the report "Green book on LTC in Poland" [*Zielona księga opieki długoterminowej w Polsce*] (Augustyn et al. 2010) and in the article in *Polityka Społeczna* by Piotr Błędowski and Anna Wilmowska (2010).

The prognoses were prepared separately for formal health and social sectors, for stationary LTC and home care.

5.3 Residential care

The table below contains the results of the utilization of stationary LTC services prognosis influenced by future changes in the age structure of the population.

Table 11. Prognosis of stationary care due to future demographic changes

Year	Health sector		Social sector		Total	
	Friendly scenario	Tough scenario	Friendly scenario	Tough scenario	Friendly scenario	Tough scenario
2010	68207		71572		139779	
2015	75398	74325	75110	74497	150508	148822
2020	82562	77855	79149	76576	161711	154431
2025	91773	81358	85617	79908	177390	161266
2030	104419	86306	93652	83520	198071	169826

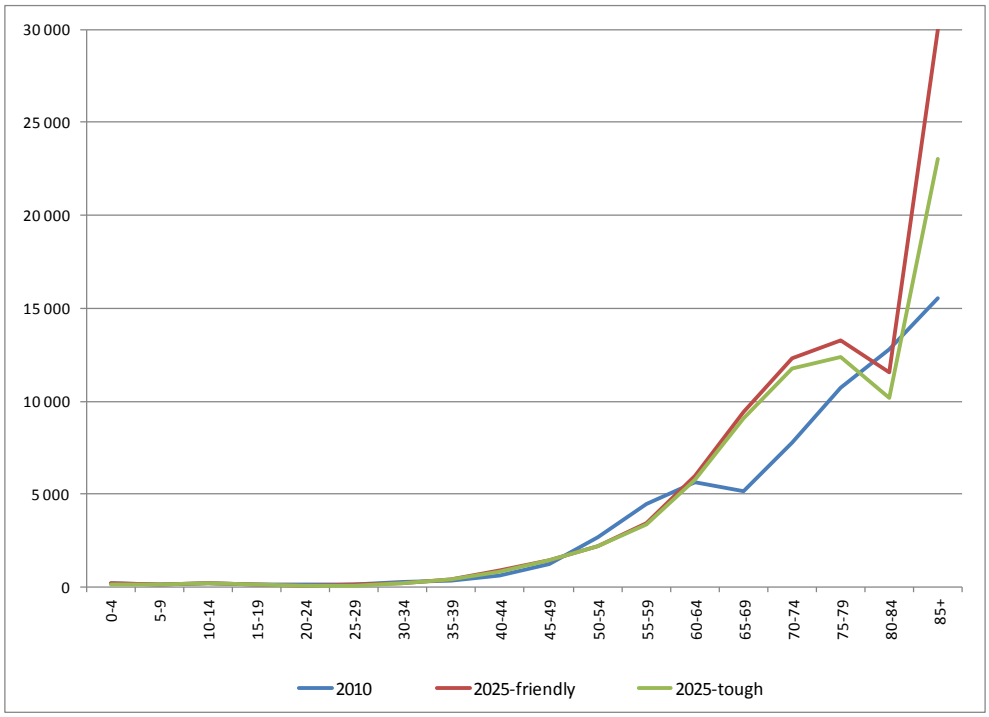
The results contain the utilization of services regardless of age. If we take into consideration the older population only (60+), they represent 84.4% of utilization in the health sector and 62.4% in the social sector (2010).

Source: Own estimations.

The forecast results indicate two important features of stationary LTC services utilization in the future. First, the growth rate of use of stationary services in the health sector is higher than in the social (152% versus 130% in the friendly variant) and nursing and care services are mainly used by people with high levels of disability and dependency. Second, the differences in the results due to the accepted scenario of demographic change are significant. If there is further improvement of positive (friendly) features of demographic changes (i.e. increase in life expectancy for males and females, positive net migration and improvement in total fertility rate), care needs will be significantly higher than in the case of a worse demographic scenario – especially with the slowed growth of life expectancy and negative net migration rate.

The graph below shows the trends in the development of long-term stationary care services depending on age. The forecast results are not linear. Two age ranges characterized by the largest increase are visible, including a slightly younger population group (born after the World War II - baby boomers) and the oldest group of 85+ (who were born just before the World War II). This is a consequence of historic demographic changes, namely the war birth gap and post-war birth compensation, leading to the phenomenon known as “double ageing”.

Figure 7. Prognosis of stationary care by age due to future demographic changes compared to the situation in 2010



Source: Own estimations.

5.4 Home care

Home care has a larger scale than stationary (about 20% higher utilization), and is more widely covered in the social sector than in the health sector (about 50% more). Future growth in the utilization of home care due to demographic changes will be similar in the health and social sectors (157 - 158%). Results of projection are significantly different between the scenarios of population prognosis used (friendly or tough). The difference accounts to about 25% in home care and is even higher than in stationary care.

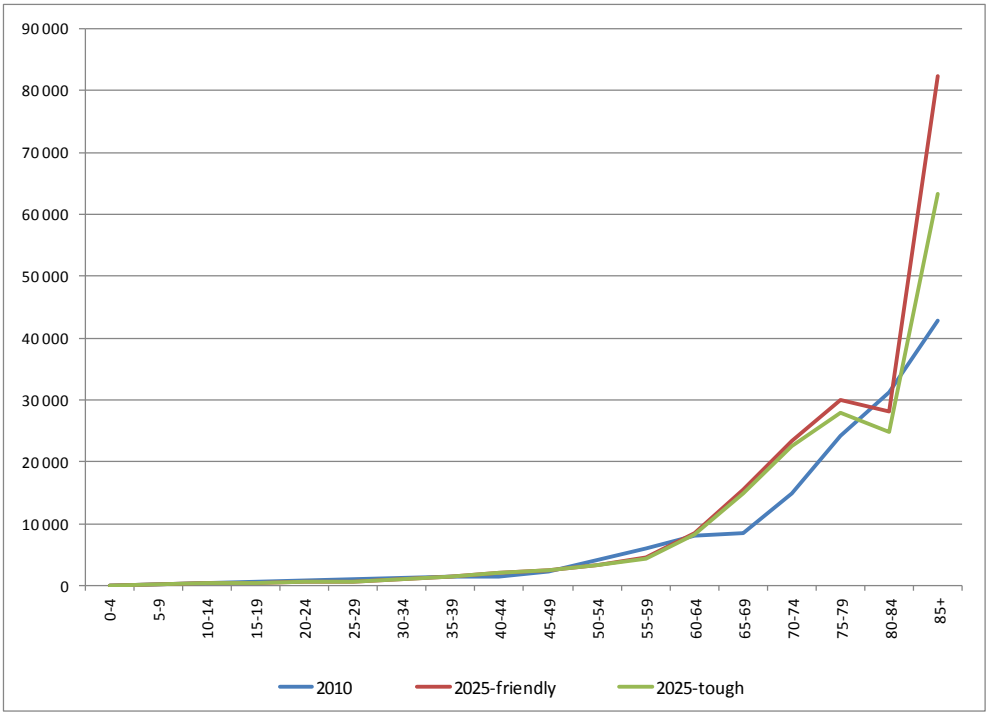
Table 12. Prognosis of home nursing care in the health sector and home care in the social sector

Year	Health sector		Social sector		Total	
	Friendly scenario	Tough scenario	Friendly scenario	Tough scenario	Friendly scenario	Tough scenario
2010	59754		89298		149052	
2015	65746	99878	98253	65746	99878	148822
2020	68664	109787	102614	68664	109787	154431
2025	71690	123046	107136	71690	123046	161266
2030	76382	141786	114147	76382	141786	169826

The elderly group (60+) represented about 87% of utilization in health and social sector in 2010.
Source: Own estimations.

Looking at the results of the forecasts of home care by age shows a similar regularity, as in the case of stationary care, namely the interruption of the upward trend in care utilization as a result of a decline in cohorts born during the Second World War.

Figure 8. Prognosis of home care by age due to future demographic changes compared to the situation in 2010



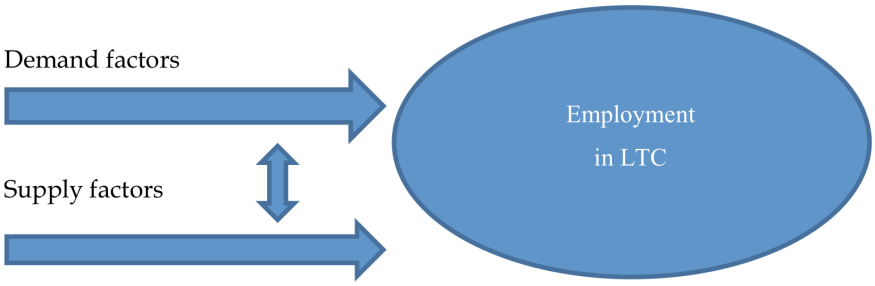
Source: Own estimations.

6. Prognosis - Impact on employment

Employment in LTC is influenced by the following demand factors: (a) the demand for care services, which are increasing due to demographic changes such as population ageing, and (b) the degree of institutionalization and professionalization of LTC and supply factors. Supply factors include the number of people of working age and the relation between the total employment rate and employment in LTC. The supply of nursing and care personnel is also being affected by demographic changes; the workforce is also ageing, along with the beneficiaries of LTC.

The employment forecasts have been prepared on the assumption that the current rules and regulations, both in the health and social sector, are maintained. The impact of prices of services and payment for LTC on employment is also ceteris paribus.

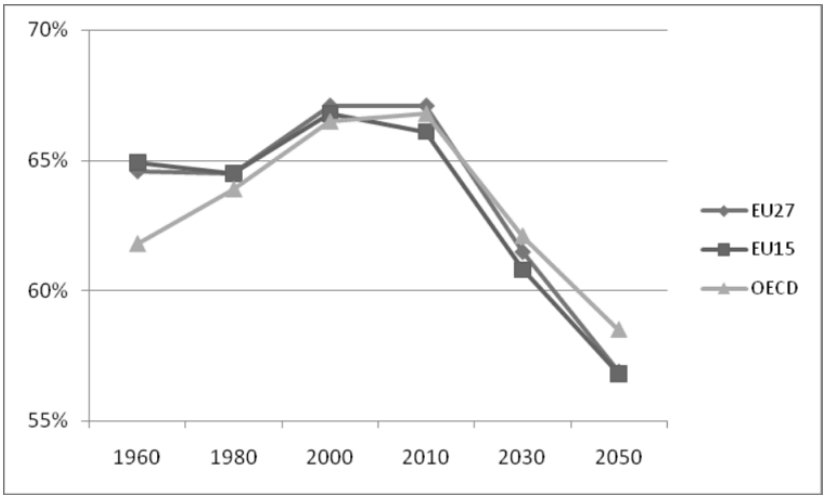
Figure 9. Employment in LTC



6.1 Prognosis of workforce for LTC – supply approach

When forecasting future labour supply in LTC we assume that the share of employment of professional staff in LTC in total employment in the economy will remain constant. At the same time, the overall trend in the share of population of working age (15-64) in the total population will be dramatically falling in all western countries (OECD 2009 and 2011).

Figure 10. Share of working-age population (aged between 15 and 64) in OECD and EU countries, 1960-2050



Source: OECD data base.

It is assumed, however, that the share of those employed in LTC services will not have the same decreasing trend as the total working population. It remains at the same level, though in many countries it is simply growing (Geerts 2011, Schultz 2012). The assumption of maintaining participation in LTC is therefore a conservative one. In Poland, the share of employees in LTC in the total number of employees was rising until 2008 (LFS data base -

Geerts 2011). During the financial crisis (2008 - 2012), this increase slowed down. Therefore, the prepared projections based on the 2010 data may show underestimated results.

6.1.1 Residential care

The share of professional staff employed in residential LTC in total employment in the Q87 sector (residential care activities) in the base year of 2010 is presented in the table below. The data indicates the fundamental share of nurses in residential LTC (highly qualified nurses and subsequently nursing assistants).

Table 13. Relation of employment in residental LTC (both sectors: health and social) to employment in sector Q87 by occupation

Occupations in LTC	Health sector As a share of residential Q87	Social sector As a share of residential Q87
Residential LTC care - total	17.69%	.
Physicians	1.92%	0.14%
Nurses	8.84%	6.85%
Psychologists	0.58%	.
Educators	0.03%	.
Physiotherapists	0.49%	1.06%
Medical workers	1.69%	.
Social workers	0.25%	.
Nursing assistants	2.79%	.

Source: Own calculations on the basis of previously presented administrative and LFS data.

The results of the prognosis, assuming the constant relation to total employment, show the relatively low effect of the employment increase in residential LTC facilities, of about 7%, and only in a friendly scenario of future population changes in Poland. There is a decrease in employment in a tough scenario forecast.

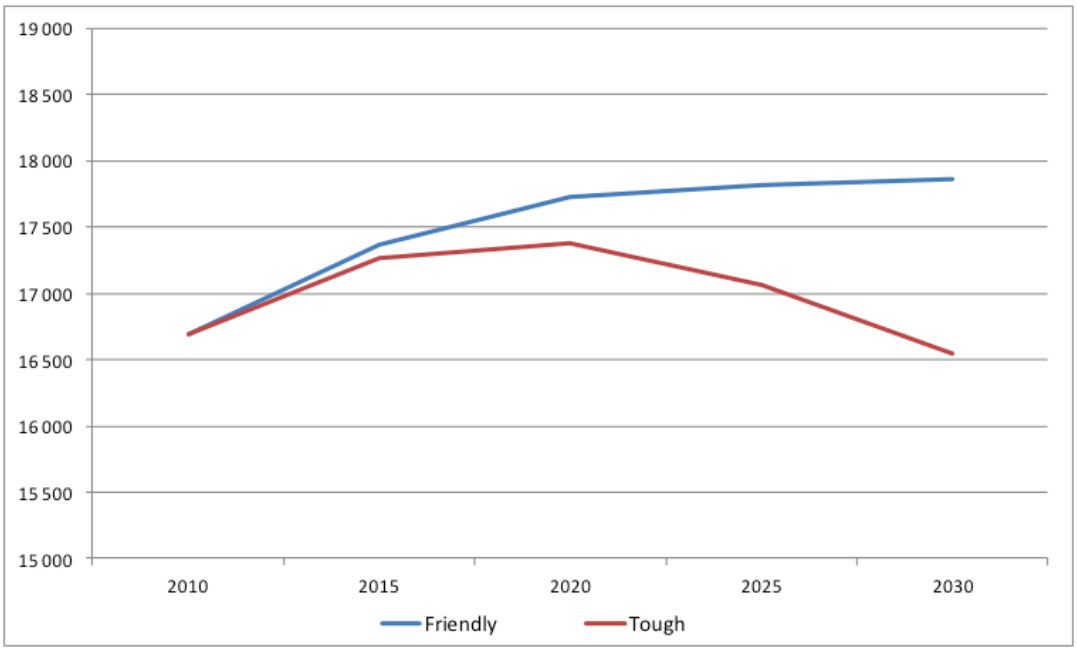
Table 14. Prognosis results of employment of residential LTC by occupation in the health sector

Occupations	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Physicians	1929	2007	1996	2048	2008	2059	1973	2064	1913
Nurses	8898	9258	9206	9449	9263	9499	9099	9522	8822
Psychologists	581	604	601	617	605	620	594	622	576
Educators	31	32	32	33	32	33	32	33	31
Physiotherapists	495	515	512	526	515	528	506	530	491
Medical workers	1699	1768	1758	1804	1769	1814	1737	1818	1684
Social workers	249	259	258	264	259	266	255	266	247
Nursing assistants	2809	2923	2906	2983	2924	2999	2872	3006	2785
Total	**16691**	**17366**	**17270**	**17724**	**17376**	**17818**	**17068**	**17861**	**16549**

Source: Own estimations.

This low employment growth of nursing and care staff in residential LTC facilities is presented in the graph below.

Figure 11. Prognosis results of employment in the residential health sector of LTC by demographic scenarios



Source: Own estimations.

Employment in residential LTC in the social sector is higher and different in structure than employment in the health sector. The dominated professions are non-medical: caregivers and therapists. With the same assumptions, the development forecast of future employment is similar to that of the health sector; the increase will be small in the demographic scenario and even negative in the tough scenario.

Table 15. Prognosis of employment of professional workforce in residential LTC of social sector

Employment groups	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Medical and physiotherapist workers	7119	7407	7366	7560	7411	7600	7280	7618	7058
Care and therapeutic workers	29574	30769	30599	31404	30788	31571	30242	31647	29322
Total	**36693**	**38176**	**37965**	**38964**	**38199**	**39170**	**37522**	**39265**	**36380**

Source: Own estimations.

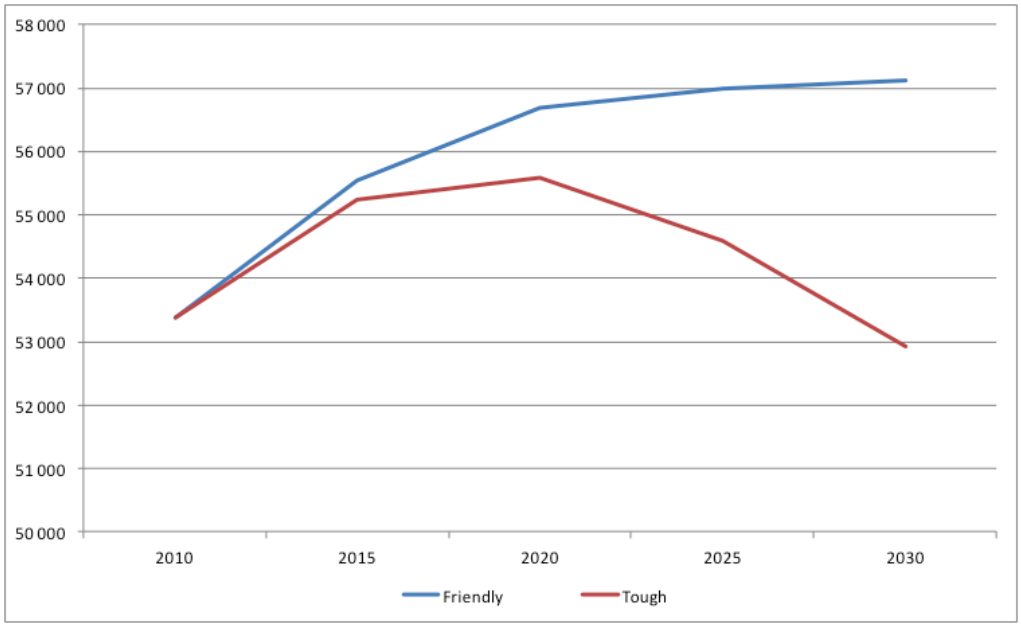
Following the similar development of employment in the health and social sectors, the forecast of employment in residential care facilities in total shows a similar development. This is presented by the table and figure below.

Table 16. Prognosis of employment in residential LTC care in both sectors: health and social

Sector	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Health	16691	17366	17270	17724	17376	17818	17068	17861	16549
Social	36693	38176	37965	38964	38199	39170	37522	39265	36380
TOTAL	**53384**	**55541**	**55234**	**56687**	**55576**	**56988**	**54590**	**57126**	**52928**

Source: Own estimations.

Figure 12. Prognosis of employment in residential LTC care in both sectors together (health and social) by friendly and tough demographic scenario



Source: Own estimations.

6.1.2 Home care

Employment in home care provided by professional staff in the public health and social sectors has no similar pattern of development. As shown in Part 2, in the last decade, employment in home care in the social sector has decreased significantly, especially during the 2008-2012 financial crisis. Meanwhile, employment of LTC nurses in the health sector is increasing. As a result, the number of long-term home care staff in the social sector is currently equal to 62% of the same kind of employment in the health sector only. As shown in the table below, the share of those employed in home care in the social sector represents 6% of total employment in the Q 88 sector, while in the health sector, it is equal to 10%.

Table 17. Employment in home care in the social and health sectors as a share of employment in Q 88

Sector	As a share of Sector Q88
Health care sector – family community nurses	9.75%
Social sector – home care services	6.06%

Source: Own calculations.

As a result of a significant reduction in employment in the home care social sector, the forecast of the total number of employees in home care in both sectors presents only an insignificant increase in the forecast period - 5%, and only in the case of friendly demographic scenario. However, in the case of the tough scenario, the results show a decline in employment.

Table 18. Prognosis of employment in home care LTC in both sectors: health and social

Sector	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Health care sector – family community nurses	11727	12206	12136	12429	12181	12347	11813	12342	11419
Social sector – home care services	7286	7584	7540	7722	7568	7671	7340	7668	7095
Total	**19013**	**19790**	**19676**	**20150**	**19749**	**20019**	**19153**	**20011**	**18513**

Source: Own calculations.

6.2 Prognosis of workforce for LTC – demand approach

The LTC employment forecast in the demand approach is based on information about the utilization of care services. It was assumed that the ratio of the number of different professional working groups to the number of beneficiaries would be the same as in the base year - 2010.

6.2.1 Residential care

As mentioned above, employment in residential LTC in Poland is regulated by law; professions needed in different LTC facilities and qualification requirements and abilities necessary for employment in a given occupational group are well-defined. Occupational groups employed in the health sector are different from those employed in the social sector, but the crucial ones are similar: nurses, doctors and physiotherapists. In the social sector we have more care personnel without special medical skills (except physiotherapists) and a larger share of therapeutic workers with psychological and pedagogical skills.

Table 19. Employment in LTC by occupation per 1000 persons using care

Occupation	Health sector	Social sector
Physicians	28.3	2.0
Nurses	130.5	96.4
Psychologists	8.5	.
Educators	0.5	.
Physiotherapists	7.3	14.9
Medical workers	24.9	.
Social workers	3.7	.
Nursing assistants	41.2	.
Total	**244.7**	**512.7**

Source: Administrative data from NFZ and MPiPS.

The employment forecast prepared on the base of the indicator showing the number of persons employed per persons using care shows an increase higher than 50% in the friendly variant of demographic development. In a tough scenario, the increase is lower and is about 25%.

Table 20. Prognosis results of employment in residential LTC in the health sector by occupation - demand side

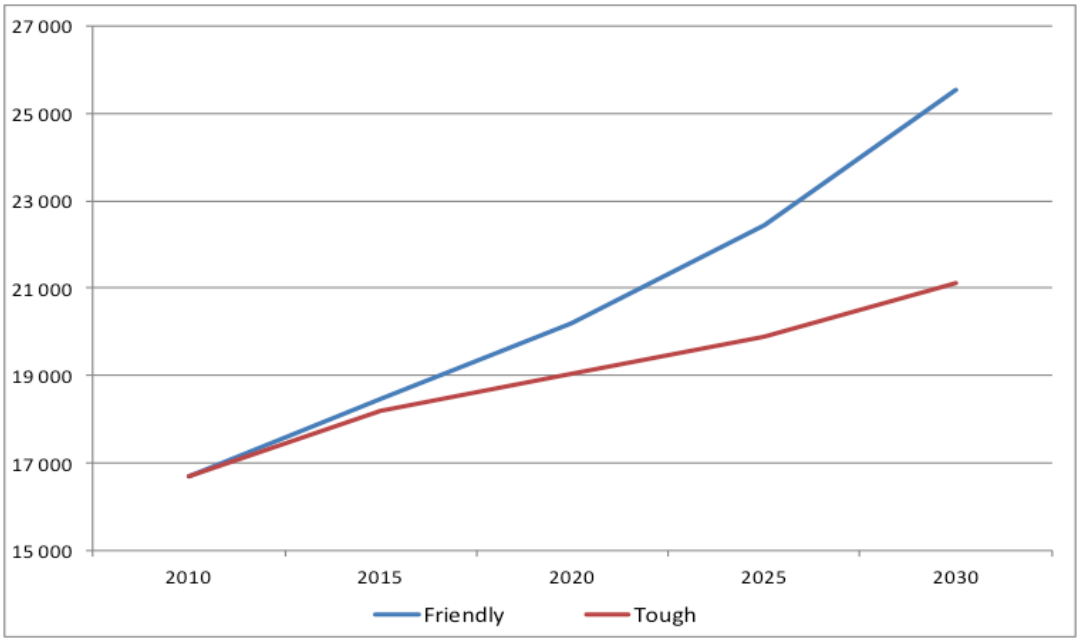
Occupation	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Physicians	1929	2132	2102	2335	2202	2595	2301	2953	2441
Nurses	8898	9836	9696	10771	10157	11972	10614	13622	11259
Psychologists	581	642	633	703	663	782	693	889	735
Educators	31	34	34	38	35	42	37	47	39
Physiotherapists	495	547	539	599	565	666	590	758	626
Medical workers	1699	1878	1851	2057	1939	2286	2027	2601	2150
Social workers	249	275	271	301	284	335	297	381	315
Nursing assistants	2809	3105	3061	3400	3206	3780	3351	4300	3554
Total	**16691**	**18451**	**18188**	**20204**	**19052**	**22458**	**19909**	**25553**	**21120**

Source: Own estimations.

Nurses are a key LTC professionals in the health sector. According to the forecast, their numbers will increase by more than 50% in the friendly scenario and by about 25% in the tough, both in residential and home care. The similarity in the employment growth rates in occupational groups is due to the specifics of the forecast.

Nurses in Poland need to meet increasing qualifications, i.e. they must have nursing studies completed. Only some older nurses have only completed the secondary level of education. A new profession in LTC services, medical worker with secondary level education, was introduced a few years ago. This group will probably develop more rapidly than highly qualified nurses but because of the forecast assumptions, which keep constant the relation to the number of patients, the high growth of total nursing personnel is not sufficiently reflected in forecast results.

Figure 13. Prognosis of employed LTC workers in residential care in the health sector - demand side



Source: Own estimations.

As the social sector deals with professional groups[9] that are different from the health sector, the forecast of employment by occupation for this sector has been prepared separately. The main group of employees in the social sector, the caregivers and therapists, will increase by 30% in the friendly scenario and by 16% in the tough scenario.

Table 21. Prognosis results of LTC personnel in residential care in the social sector - demand side

Employment groups	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Medical and physiotherapist workers	7119	7471	7410	7873	7617	8516	7948	9315	8307
Care and therapeutic workers	29574	31036	30783	32705	31642	35378	33019	38698	34511
Total	**36693**	**38507**	**38193**	**40578**	**39259**	**43894**	**40967**	**48013**	**42819**

Source: Own estimations.

[9] In the residential social sector, there are about 800 social assistance homes with about 50,000 employed persons. 30% of the staff in those homes are administrative and technical workers. Assuming the same share of administrative and technical staff in homes with only LTC services, the total number of people employed in the LTC residential social care sector is about 52 000 persons. The prognosis results for this group of workers are about 20 000 by 2030 (18 500 in 2025) in the friendly scenario and 18 000 by 2030 (17 500 in 2025) in the tough scenario.

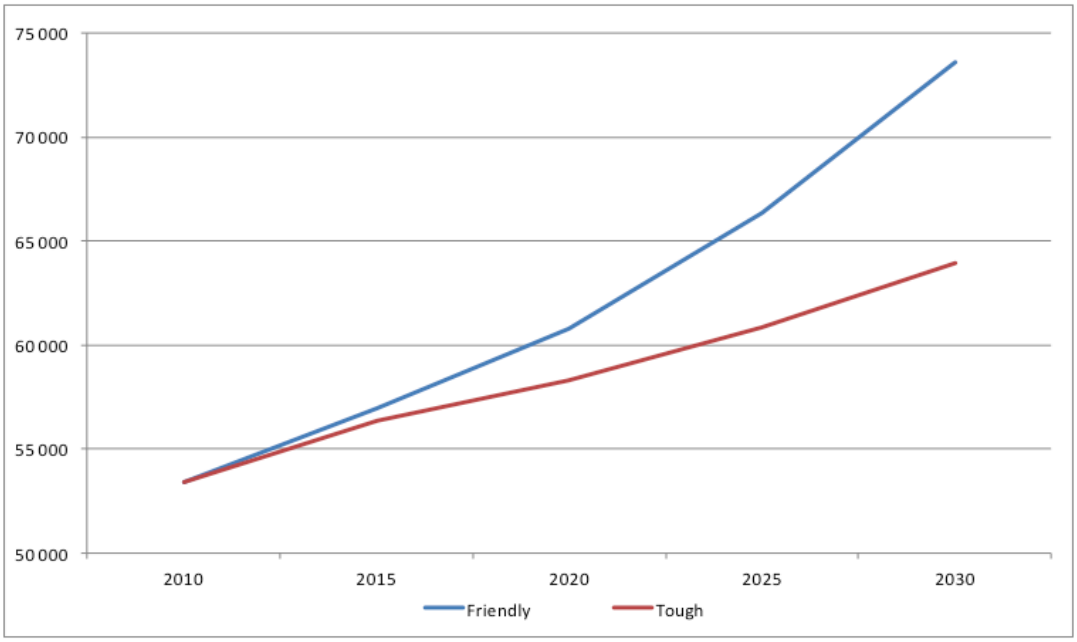
Summing up the results of employment forecasts of residential care in both sectors (health and social) from the perspective of demand, a moderate employment growth picture is emerging with a relatively small difference between the two scenarios of population growth – only a dozen percent or so.

Table 22. Prognosis results of LTC personnel in residential services in both sectors: health and social by friendly and tough demographic scenarios

Sector	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Health	16691	18451	18188	20204	19052	22458	19909	25553	21120
Social	36693	38507	38193	40578	39259	43894	40967	48013	42819
TOTAL	**53384**	**56957**	**56381**	**60781**	**58311**	**66352**	**60876**	**73565**	**63938**

Source: Own estimations.

Figure 14. Prognosis results of LTC personnel in residential services in both sectors together (health and social) by friendly and tough demographic scenarios



Source: Own estimations.

6.2.2 Home care

In terms of both utilization rates and employment, long-term home care in the health sector is, contrary to expectations, more than two times higher than in the social sector. Care services in the health sector are more medical in nature than in the social sector and are more dependent on sectoral decisions than on the decisions of the local government, which is responsible for the LTC social sector. Community-based LTC is therefore relatively weak because of insufficient intersectoral coordination, as confirmed by field studies (Golinowska, Sowa 2010).

Table 23. Employment in home care of health and social sectors per 1000 persons using care

Sector	Number of LTC personnel per 1000 beneficiaries
Health care sector – family community nurses	196.25
Social sector – home care services	81.59

Source: Own calculations.

The employment forecast of home LTC in terms of demand gives the following growth results: about 60% in 2030 and about 40% in 2025 in the friendly demographic scenario. In the case of the tough scenario, projected employment growth is 27% in 2030 and 19% in 2025.

Table 24. Prognosis results of employment in home LTC in both sectors: health and social by different demographic scenarios

Sector	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Health care sector – family community nurses	11727	13116	12903	14418	13476	16159	14070	18620	14990
Social sector – home care services	7286	8149	8017	8958	8372	10040	8741	11569	9313
Total	**19013**	**21266**	**20920**	**23375**	**21848**	**26198**	**22811**	**30189**	**24304**

Source: Own estimations.

7. The gap between the prognosis based on demand and supply factors influencing personnel in LTC

Employment forecasts for both approaches, demand and supply, have been prepared on the assumption that in 2010 (the base year of the forecast) there was a balance in the development of professional human resources in LTC. Needs (demand) are covered by an adequate supply of LTC services and are provided by an adequate number of personnel. Demographic change, as the only factor influencing future demand and supply for LTC personnel, may disrupt this balance. The table below summarizes the results of the projections for both population growth scenarios (friendly and tough), for both types of services (residential and home) and for both service sectors (health and social).

Table 25. Prognosis results of gap in LTC personnel in both sectors and forms of services by friendly and tough scenarios of demographic development

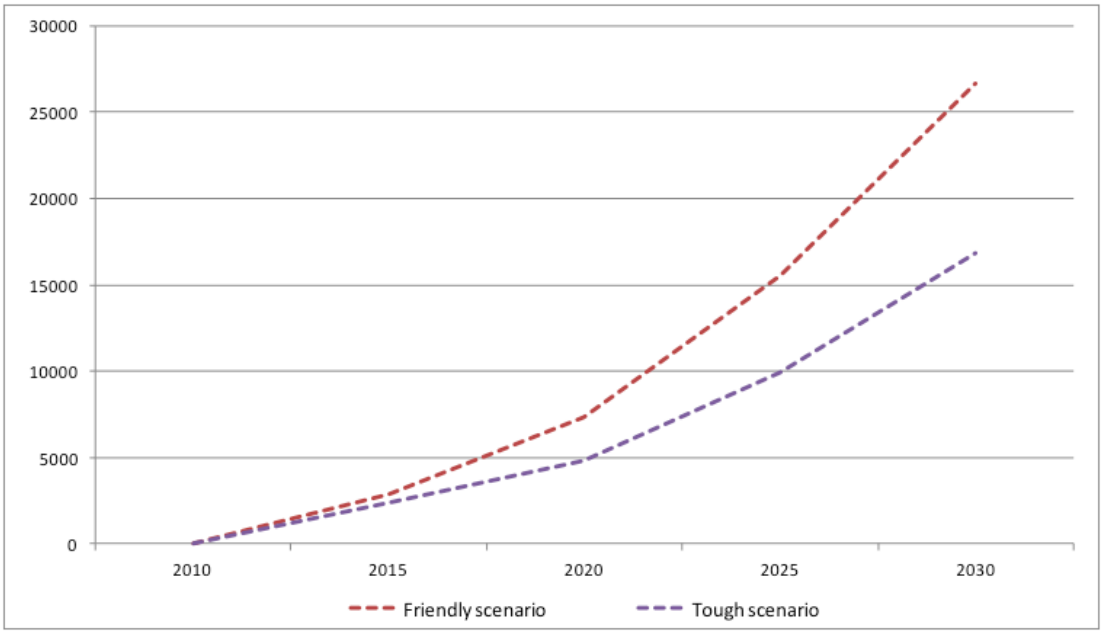
Sector and form of employment	2010	2015		2020		2025		2030	
		friendly	tough	friendly	tough	friendly	tough	friendly	tough
Residential care - health sector	0	1085	919	2480	1676	4640	2841	7691	4571
Residential care - social sector	0	331	228	1614	1059	4723	3445	8747	6439
Residential care - total	***0***	***1416***	***1146***	***4094***	***2735***	***9363***	***6286***	***16439***	***11010***
Home nursing care – health sector	0	910	767	1989	1295	3812	2256	6278	3571
Home care – social sector	0	566	476	1236	805	2368	1402	3900	2219
Home care total	***0***	***1476***	***1243***	***3225***	***2099***	***6180***	***3658***	***10178***	***5790***
Total: residential + home	**0**	**2892**	**2390**	**7319**	**4834**	**15543**	**9945**	**26617**	**16801**

Source: Own estimations.

The total deficiency of LTC personnel will be equal to about 26 thousand employees in 2030 (about 15 thousand in 2025) in a friendly population development scenario. This represents 0.2% of total employment and 2.9% of those working in sector Q in 2010. In the tough scenario the deficiency is equal to almost 17 thousand workers in 2030 (about 10 thous. in 2025), representing 0.1% and 1.9%, respectively.

The graph below shows the development of the projected gap, which after 2020 is characterized by a higher dynamic than before.

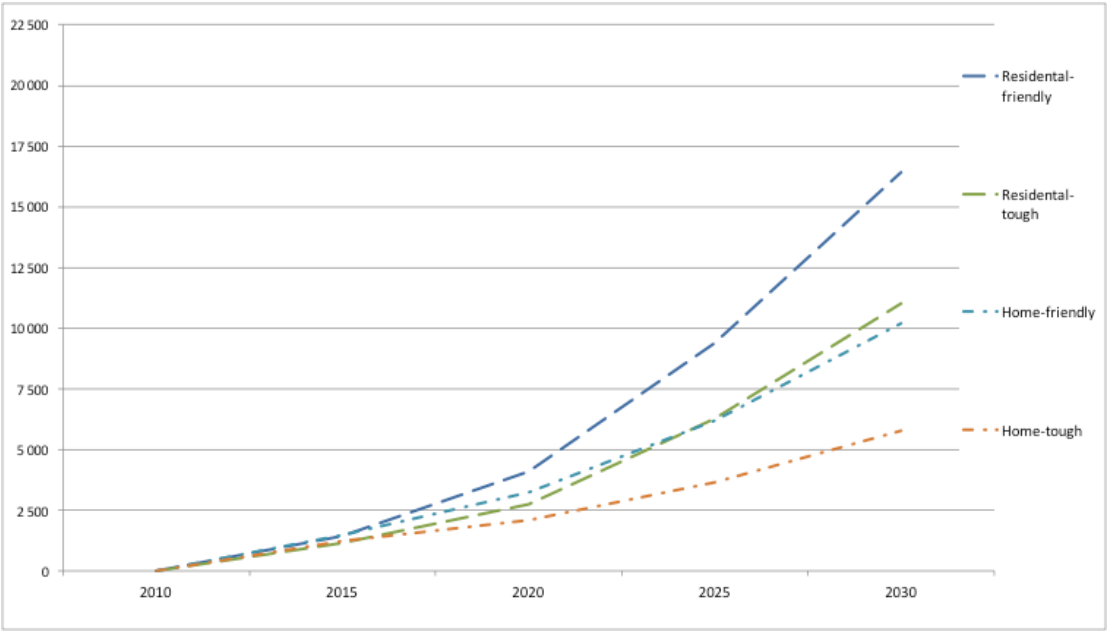
Figure 15. Development of the LTC personnel gap during the forecast period according to two scenarios of demographic development



Source: Own estimations.

The deficiency of personnel is particularly significant in residential care. The gap will be almost 12 times higher in 2030 than in 2015 in the friendly population development scenario, and in the tough scenario it will be 10 times higher. A higher dynamic of the gap in growth is projected for the social sector, in which the employment gap at the beginning of the forecast period is relatively low. The forecasted deficiency of personnel in home care is lower than in residential care: 7 - 5 times higher in 2030 compared to 2015, depending on the scenario.

Figure 16. Development of the LTC personnel gap during forecast periods by forms of services (residential and home) and by providing sectors (health and social)



Source: Own estimations.

The deficiency forecasts do not include administrative and technical personnel. Taking them into account, the deficiency of total employment in residential LTC would be significantly higher.

When summing up the results of analyses and forecasts of LTC personnel in Poland, it should be noted that the key point of labour deficiency will be residential care. Changes in the relationship between residential and home care requires significant changes in the social policy towards the ageing population in Poland, which are presented in the final part of the report.

8. Discussion

It should be remembered that the presented analysis and projections consider LTC funded from public sources and provided in public facilities, although with significant private co-payments. In Poland, however, the private LTC services and facilities market has been growing in the last couple of years. Facilities led by non-governmental organizations, especially religious ones, are the most recognized. Data on private investments show that the number of for-profit facilities: senior homes, care and nursing facilities with palliative care targeted at fulfilling social needs has also been dynamically growing in the recent years[10]. There is an opinion, created mainly by the media, that the use of private residential care involves some risks. It is true that there are no standards and insufficient monitoring of the quality of care in both the public and private sectors (Jurek 2011; Golinowska, Styczyńska 2012). *Nota bene* the process of completion of the quality standardization of comprehensive LTC at the national level in line with EU standards has been postponed until 2016. At the same time there are many local initiatives aimed at standardizing the quality of LTC services at the local level, known as good practices (Mejsner 2010).

Projections of employment in public LTC, taking into account the health and social sectors and different forms of services (residential and home care) require a further explanation of the data used and of the assumptions that the projections are based on.

Collected data on LTC employment and utilization of care are taken from the public administrative sources: CSIOZ (Center for Information Systems in Healthcare), NFZ (National Health Fund) and MPiPS (Ministry of Labour and Social Policy) - Social Assistance Department. As the data by age were needed to prepare the presented report, they were provided based on individual requests to the governmental institutions thanks to courtesy of officials. These data are not generally available. Statistical information on the age structure of utilization of care is different in both types of residential care institutions: health and social, which required further adjustments and estimations for modelling purposes and for the creation of common statistics in the data set. Structural data are estimates to some extent.

[10] Private and for profit LTC facilities for older people operate on the basis of the Commercial Companies Code. Statistics of economic entities (register of companies) indicate that there were 89 such LTC companies in 2005, 125 in 2007 and now there are about 700. They are mostly slower than public ones (villas, pensions), and quality standards and payments (from 2000 to 7000) are differentiated (Krzemiński 2012). Private LTC companies are more likely to be newly created than privatized public establishments, as suggested in the article by Jolanta Perek –Białek (2011), where she writes about services for older people that have been moved from the public sphere to market'.

LTC personnel employed in both sectors, health and social, differ in terms of the training and requested skills. At the same time aggregate categories that do not fit together were created, as especially in the social sector, the occupational structure in unclear. It seems that the latest regulation of the Minister of Labour and Social Policy (2013) on teams of care personnel in social assistance homes will be helpful in the future. Also, identifying administrative and technical personnel in residential LTC is a problem. Due to the fact that the number of residential care homes in the social sector is higher than the number of residential care facilities in the health sector (800 compared to 500), employment of administrative and technical personnel in the social sector is also higher. Administrative and technical employment in social sector residential care amounts to 30% of the total LTC personnel in the residential care social sector. Based on rough assumptions, it could be estimated that the total number of LTC personnel in both sectors, including administrative and technical personnel, amounts to approximately 93.1 thousand[11] LTC personnel.

Shifts of nursing personnel from the social to the health sector took place in the last years of the previous decade as a result of poorer financing of social assistance at the municipality level and the deterioration of working conditions in social assistance homes (Golinowska 2010). This resulted in an increase in the number of nurses in LTC services in the health sector. The total supply of LTC nurses was hardly affected. On the other hand, the amount of work in the LTC has resulted in an increase in outsourcing, especially in social assistance residential homes. The latter holds for contracts with physicians and nurses in primary care.

Assumptions that might seem controversial were made in the projections, especially the assumption of the stable share of the care workforce to the total number of people employed. Maybe an alternative scenario should be considered with an increasing share in time. Some say that within a couple of years, about 200 thousand new workplaces in LTC will come to existence (Augustyn 2013). This is twice as much as in the projections of employment in the supply approach. It should be remembered, however, that the presented numbers are underestimated (e.g. they do not take into account administrative and technical personnel in residential care in both sectors). It also seems that the opinions on the significant increase in labour demand in LTC services take into account the effects of changes in funding of care, and most of all of the creation of financial support mechanisms for dependent older people from public sources.

[11] Estimations are based on the following calculations: home and residential care without administration (72.4 thousand) + administration and technical personnel in social sector residential care (15.7 thousand) + estimated administration and technical personnel in the health sector (5.0). Administration and technical personnel in home care are not taken into account.

9. Conclusions and recommendations

As indicated in this paper, LTC in Poland is in the family domain. LTC services, financed from and led by the public sector are only a part (a smaller one) of care for elderly people needing care. The next part of non-family LTC are the services of carers hired, mostly in the shadow economy. It is more and more common that such care is carried out by private residential institutions, both non-profit as well as for-profit.

The services of the public care for dependent elderly are carried out within the health and social sectors. In both cases, access to LTC services is limited. In the health sector, this is a result of using the nursing needs test because of dependency in somatic functioning, and in the social sector, as a result of social assistance criteria used. Apart from this limitation, the analyses carried out in the report and the projections prepared on using public services indicate that the services will have a growing trend. This is due to the fact that the process of population ageing will be so dynamic, that only for that reason the demand for care services and nursing services will grow. The increase will be especially significant if the projections take into account the so-called friendly scenario of demographic development: a higher increase of the average life expectancy factor, a decrease in the mortality rate, and an improvement in the fertility rate. The LTC personnel gap in that variant is estimated for 31 thousand employees in 2030 and 20 thousand in 2025. It is probably underestimated, taking into account underestimated supply in the period of diagnosis (staff outsourcing, informal services out-of-family, not completely collected information on some LTC occupations,…), as well as the growing institutionalisation of care services as a result of family and culture changes.

As a result of the restricted regulation on access to public services, care is used in the most difficult situations and the needs concern mainly stationery care. Home care supported from public resources because of various reasons, partly recognized in the research, is not developing sufficiently[12] in spite of its declared supremacy over stationary care and the promotion of its development.

[12] According to the research, there are many factors influencing the low development of formal home care, especially the following: limiting access criteria, bureaucratic procedures, insufficiently flexible care staff, numerous problems with carers traveling, and difficulties adapting the flats of elderly people to their functional dependency. Hence, some experts promote stationary day-care as a solution, in which the persons needing care are transported to the day-care homes located in accessible places, such as local administration centers. This solution is called sometimes “kindergartens for seniors”.

The personnel gap for public LTC was stated on the basis of the analysis of recent years[13]. Highly qualified staff with medical skills is needed but the possibilities of adequate remuneration are limited due to low financing in both sectors. Medium-qualified staff, who have only started to be trained in recent years, are also needed. Long-term specialists are more likely to find jobs in the private sector. However, in that sector as well there is a barrier for decent remuneration due to the limitation of payments for care services by elderly people from their pensions. This is why various ways of care funding have been proposed by different experts in political reports, including additional money (a kind of nursing insurance or earmarked taxes) with the purpose of financing care for the elderly. Submitted proposals by top experts group can indicate probable development paths for the LTC, which will include:

- Development of residential care in private settings, with supervised quality and supported by cash benefits (vouchers for the elderly with defined and "measured" needs for care).
- Development of daily LTC services in local environments (so called "kindergartens" for seniors) if the sectorial disintegration will be overcome (between the social and health sectors).
- Gradual development of home care with parallel family and local self-governments support.
- Separation of LTC tasks from other local government tasks.

In the Polish situation – taking into account the dynamically growing demand for LTC services, the **development of the supply** of these services needs special attention. The desired effect cannot be achieved only by non-investment regulations, however, they are necessary as well. It is not enough to create new sources of services financing, although it is necessary to maintain them on a sufficient level in order to remunerate the staff in a decent way. **Investment in LTC facilities infrastructure and the education of LTC personnel is necessary**. Numerous LTC options and policies concentrating mainly on financing of LTC services are discussed, but given the growing needs there is a necessity for the significant infrastructure investments in residential and home LTC services and especially: renovation and adaptions of flats, where older people live, creation of day-care homes and building of territorially adequate nets of stationary care houses.

[13] The forecast model assumes that in the basic forecast year, the demand and supply of LTC staff are balanced.

Parallel 'white human capital' development for health care, LTC and social sectors is necessary. It means more attentions and funds for education in medical and care specific occupations. LTC type of services is strongly dependant on numbers and the professionalism of the people involved.

In order to resolve the appropriate supply of LTC services problem in a complex way, institutional changes are required as well. In that field it is important to separate the long-term services sector and to coordinate the services offered by the health and social sectors at the local level. This coordination should theoretically be a local government based solution. However, there are concerns related to sufficient competences of local self-government and practices used there, especially when it comes to employing sufficient staff, e.g. medical, taking into account the employment rights of the staff[14] employed and the relevant service quality.

[14] Medical staff often fear that they would not be treated according to the law related to medical occupations in sectors other than the health sector.

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