Structure of Clients in Residential Social Services for the Elderly: A Regional Analysis

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Abstract: The Czech population is aging and, therefore, the demand for long-term care services for the elderly is increasing. This paper deals with the regional structure of clients of residential social services for the elderly concerning their degree of dependence. The study focuses on clients in retirement homes and special regime homes and analyses data obtained from the Ministry of Labour and Social Affairs. Specifically, it compares the regional structure of clients in 2013 and 2017 using descriptive statistics. The structure of clients has changed. In particular, the proportion of clients with the two highest levels (severe and complete) of dependence has increased. Moreover, the number of unsatisfied applicants for special regime homes has also grown. The current system of social care services seems to be unsustainable in the long term. The paper thus seeks to contribute to the discussion of the necessary capacities of care facilities and draws attention to differences in the regions.

Keywords: social services; retirement homes; special regime homes; seniors; dependence level

JEL Classification: H55; J14; R58

1. Introduction

Czech demographic curve shows a significant increase in the share of the population in the age group of 65 years and over (65+) as well as a decrease in the working population (Křesťanová 2018). The ratio of seniors 65+ to a hundred persons of working age 20–64 (so-called dependency ratio) is constantly increasing. This value was 23.5 in 2010, and the prediction for 2050 is 55.2. The indicators in Table 1, including the dependency ratio, very strongly demonstrate the aging of the Czech population and the topicality of the issue of health and social care support for people aged 65+.

| Indicator | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
|-------------------|------|------|------|------|------|------|------|------|------|
| Average age | 40.6 | 41.7 | 42.5 | 43.4 | 44.4 | 45.2 | 45.7 | 46.0 | 46.2 |
| Percentage of 65+ | 15.2 | 17.8 | 20.0 | 21.3 | 22.3 | 23.2 | 25.1 | 27.6 | 28.6 |
| Dependency ratio | 23.5 | 28.5 | 33.6 | 36.9 | 38.8 | 40.5 | 45.0 | 51.6 | 55.2 |

Table 1. Selected indicators of age composition of the Czech Republic.

Source: own calculation based on Czech Statistical Office (2011, 2016a) and Czech Statistical Office (2018a) projection, medium variant

As the population ages, the demand for long-term care will increase. Earlier and better diagnosis and medical care increase the odds of survival and extending life expectancy with chronic illness or disability (Colombo et al. 2011). This also results in an increasing need for long-term care. The aging population will thus reduce the availability of potential informal and formal caregivers (Wija 2012). Moreover, the Czech Republic is one of the countries of the European Union with a lower share of employed in the health and social services sector as a percentage of all employed persons (Schulz 2013).

The Czech Republic is already characterized by a lower level of availability and supply of formal care services provided at home and low involvement of the business sector in the provision of social services (Lux and Pfeiferová 2012, Marková and Komárková 2017). The choices of care for the elderly

in the Czech Republic are limited (Nešporová et al. 2008). Therefore, the family is placed in a dilemma between using care with very limited public services or institutional care (Svobodová 2006). Demand for formal care far exceeds supply (Bernášková and Ďurďa 2016; Langhamrová et al. 2018). Moreover, Kraftová (2013) concludes that the capacity distribution of social care services in the Czech Republic is not uniform among regions, even after considering the size of these regions. Therefore, it is necessary to focus on the interconnection and functionality of the long-term care system.

2. Czech Support System for Long-Term Elderly Care

The system of support for long-term home care in the Czech Republic consists of three basic pillars: 1/ family care, 2/ outpatient and field social services, and 3/ residential facilities. The residential social care services on long-term care for the elderly with reduced self-sufficiency include: respite care, weekly care centres, retirement homes, special regime homes, social services provided in health care institutions according to Social Services Act No. 108/2006 Coll. Care allowance is provided to clients who are dependent on the help of another person. This allowance is provided from the state budget regardless of the citizen's income and his/her property. Tomeš (2010) points out that the Czech Republic is the only European country that provides these care allowances only in monetary form.

There are four categories of addiction according to the degree of health damage and social constraints, namely *I. mild*, *II. moderate*, *III. severe and IV. complete dependence*. People with the level of dependence III or IV usually need full day care in residential social care facilities. The average monthly number of these care allowances in 2017 is shown in Table 2. There were about 353 thousand care allowance recipients in the Czech Republic. The largest number of the recipients is in the Moravskoslezský (MSK) Region, while the smallest one is in the Karlovarský (KVK) Region. Total expenditures on care allowances amounted to CZK 25.1 billion in 2017 (Czech Statistical Office 2018c).

Based on the level of dependency and age of the applicant (two age categories: up to 18 years and over 18 years), the financial range of the contribution varies between CZK 880 and CZK 19,200 per month. The amount of these contributions was last modified on 1 July 2019. This contribution is a significant source of financial income for clients and is intended to cover the costs associated with the residential service. Moreover, Průša (2018ab) predicts that the number of care allowances can be expected between 469 and 489 thousand in 2030 and between 632 and 734 thousand in 2050.

| NUTS 3 region | Abbreviation | Total | Ι | II | III | IV |
|-----------------|--------------|-------|---------------|---------------|--------------|--------------|
| Praha | PHA | 30.1 | 9.8 (32.5%) | 10.7 (35.4%) | 6.5 (21.7%) | 3.1 (10.4%) |
| Středočeský | STC | 37.3 | 11.6 (31.1%) | 12.3 (33.1%) | 8.4 (22.7%) | 4.9 (13.1%) |
| Královéhradecký | HKK | 19.5 | 6.1 (31.2%) | 6.4 (32.7%) | 4.5 (22.9%) | 2.6 (13.2%) |
| Pardubický | PAK | 19.5 | 5.4 (27.8%) | 6.5 (33.2%) | 4.9 (25.2%) | 2.7 (13.9%) |
| Vysočina | VYS | 18.6 | 5.2 (28.1%) | 5.8 (31.4%) | 4.6 (24.8%) | 2.9 (15.7%) |
| Jihočeský | JHC | 21.8 | 6.4 (29.4%) | 6.9 (31.9%) | 5.3 (24.5%) | 3.1 (14.1%) |
| Plzeňský | PLK | 19.5 | 5.2 (26.8%) | 6.6 (33.7%) | 4.8 (24.7%) | 2.9 (14.9%) |
| Karlovarský | KVK | 9.2 | 2.8 (30.9%) | 2.9 (31.5%) | 2.2 (24.1%) | 1.2 (13.6%) |
| Ústecký | ULK | 30.4 | 9.4 (31.0%) | 10.6 (35.0%) | 6.8 (22.3%) | 3.6 (11.8%) |
| Liberecký | LBK | 15.3 | 4.7 (30.9%) | 5.0 (32.7%) | 3.7 (24.1%) | 1.9 (12.3%) |
| Jihomoravský | JHM | 42.7 | 12.1 (28.4%) | 13.9 (32.5%) | 10.5 (24.5%) | 6.2 (14.5%) |
| Olomoucký | OLK | 23.1 | 7.4 (32.1%) | 7.1 (30.9%) | 5.2 (22.7%) | 3.3 (14.3%) |
| Zlínský | ZLK | 22.8 | 6.4 (28.2%) | 7.0 (30.7%) | 5.5 (24.3%) | 3.9 (17.0%) |
| Moravskoslezský | MSK | 43.2 | 12.4 (28.7%) | 13.8 (31.9%) | 10.1 (23.5%) | 6.8 (15.7%) |
| Czech Republic | CZE | 352.9 | 105.1 (29.8%) | 115.5 (32.7%) | 83.2 (23.6%) | 49.1 (13.9%) |

Table 2. Average monthly number of care allowances in thousands in 2017, also relatively for the level of dependence in individual regions.

Source: own processing based on the Czech Statistical Office (2018c) data

Interesting data monitored by the Ministry of Labour and Social Affairs and presented by the Czech Statistical Office in its annual overviews are the percentages of clients in residential social service facilities with a severe mobility restriction, see Table 3.

| | Perm | anentl | y bedri | dden | Mobile with help | | | | | |
|----------------------|------|--------|---------|------|------------------|------|------|------|--|--|
| Social service | 2015 | 2016 | 2017 | 2018 | 2015 | 2016 | 2017 | 2018 | | |
| Retirement homes | 25.3 | 25.9 | 25.6 | 26.1 | 52.4 | 52.5 | 53.6 | 52.3 | | |
| Special regime homes | 24.0 | 24.5 | 24.9 | 24.0 | 42.6 | 42.5 | 42.2 | 42.8 | | |
| Weekly care centres | 2.7 | 2.3 | 1.9 | 2.5 | 20.3 | 15.8 | 17.8 | 29.3 | | |

Table 3. Percentages of clients in residential social service facilities with serious mobility restrictions during 2015 – 2018.

Source: Czech Statistical Office (2016b, 2017, 2018c, 2019)

Percentages in Table 3 show a relatively significant share by clients who are permanently bedridden (immobile) in the case of retirement homes. The proportion of these clients increased slightly from 25.3% in 2015 to 26.1% in 2018. Moreover, there was over 50% of clients who were mobile only with the help of another person or with using some technical aids. We can see a similar situation for special regime homes in the case of immobile clients. The percentage ranged from 24.0% to 24.9% during 2015–2018. The proportion of clients requiring the help of others or aids in special regime homes was about 42% in the considered four years.

Given the above-mentioned expected trends, the issue of support for people in need of social care is very topical. Czech government considers the current system to be complicated and discusses a fundamental change to the Social Services Act. In the context of this current situation, we ask the following research questions:

RQ1: What is the regional structure of clients according to the level of dependence in residential services for the elderly?

RQ2: How has this structure of clients in residential services changed over time?

Using a deeper analysis of the structure of clients according to the degree of their dependence, it is then possible to discuss the capacities of care facilities, differences in regions, and possible solutions.

3. Methodology

Data on clients of social services being obtained directly from the Ministry of Labour and Social Affairs (hereinafter MoLSA data) were used. We focused on two typical residential social care services for the elderly, namely retirement homes and special regime homes. In particular, clients of special regime homes also include seniors with Alzheimer's disease, or dementia, respectively. Our analysis is based on data from two years, 2013 and 2017. The newer data set was used to answer the research question RQ1, the older one for comparing (RQ2).

Table 4 shows the numbers of residential services (facilities) for the elderly in the Czech Republic for both considered years. The number of facilities was determined based on the number of different service IDs in a given region. The region was determined by where the service provider was registered. Concerning this fact, the data for Prague are overestimated. Despite this, the largest share (about one eighth) of retirement homes was in the Moravskoslezský (MSK) and Středočeský (STC) region for both years. More than 10% of the total number of special regime home services is in five regions (PHA, STC, UST, JHM, and MSK) in 2017.

Concerning the research questions, the number of clients was recalculated with respect to their length of stay in the facility. In particular, recalculated numbers of clients were determined based on client-days, when the client was weighted by one if he/she spent 365 days in the facility. All calculations were performed in R software (R Core Team, 2019). As our analysis is explorative, we used descriptive statistical analysis.

| | Retire | ement | Special | regime |
|--------|------------|------------|------------|------------|
| Region | 2013 | 2017 | 2013 | 2017 |
| PHA | 52 (10.5%) | 62 (11.7%) | 20 (8.4%) | 46 (14.1%) |
| STC | 68 (13.7%) | 75 (14.2%) | 31 (13.0%) | 49 (15.0%) |
| HKK | 33 (6.6%) | 36 (6.8%) | 9 (3.8%) | 12 (3.7%) |
| PAK | 19 (3.8%) | 24 (4.5%) | 8 (3.3%) | 13 (4.0%) |
| VYS | 24 (4.8%) | 23 (4.3%) | 15 (6.3%) | 18 (5.5%) |
| JHC | 36 (7.2%) | 36 (6.8%) | 12 (5.0%) | 11 (3.4%) |
| PLK | 23 (4.6%) | 23 (4.3%) | 9 (3.8%) | 11 (3.4%) |
| KVK | 15 (3.0%) | 18 (3.4%) | 7 (2.9%) | 8 (2.5%) |
| ULK | 41 (8.2%) | 40 (7.6%) | 30 (12.6%) | 35 (10.7%) |
| LBK | 16 (3.2%) | 17 (3.2%) | 12 (5.0%) | 13 (4.0%) |
| JHM | 41 (8.2%) | 42 (7.9%) | 32 (13.4%) | 37 (11.3%) |
| OLK | 34 (6.8%) | 35 (6.6%) | 11 (4.6%) | 16 (4.9%) |
| ZLK | 31 (6.2%) | 31 (5.9%) | 15 (6.3%) | 19 (5.8%) |
| MSK | 64 (12.9%) | 67 (12.7%) | 28 (11.7%) | 38 (11.7%) |
| CZE | 497 (100%) | 529 (100%) | 239 (100%) | 326 (100%) |

Table 4. Numbers (proportions) of retirement homes and special regime homes by region.

Source: own calculation based on the MoLSA data

4. Results

In retirement homes, there were 36,477 "full-year" clients in 2013, and 35,165 "full-year" clients in 2017, see Table 5. The percentages of clients according to the level of their dependence was related to the regional (recalculated) numbers of clients.

In 2017, the largest group of clients (30.1%) in retirement homes had a dependency degree at level III. However, this was not entirely true for individual regions. For example, in the MSK region, there was level IV, and the ULK region, level II was slightly more prevalent. There were eight regions (HKK, PAK, VYS, JHC, KVK, LBK, JHM, ZLK) above the national percentage for level III in 2017. Moreover, three regions, namely HKK, ZLK, and MSK, had more than 30% of level IV clients in retirement homes.

Table 5. Recalculated numbers of clients in retirement homes by the region and their percentage by the degree of their dependence within the region for years 2013 and 2017.

| | Total r | number | Ι | |] | II | | III | | IV | | Non-specif. | |
|--------|----------|----------|------|------|------|------|------|------|------|------|------|-------------|--|
| Region | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | |
| PHA | 3,334.8 | 3,416.2 | 19.9 | 18.0 | 26.1 | 25.9 | 22.7 | 27.6 | 17.4 | 17.7 | 13.9 | 10.9 | |
| STC | 4,778.3 | 4,792.1 | 21.5 | 16.6 | 25.3 | 24.5 | 21.6 | 27.0 | 16.2 | 21.9 | 15.4 | 10.0 | |
| HKK | 2,146.4 | 2,039.8 | 14.8 | 8.7 | 23.7 | 20.0 | 29.5 | 35.0 | 27.5 | 32.9 | 4.5 | 3.5 | |
| PAK | 1,983.6 | 1,952.2 | 19.0 | 13.1 | 25.9 | 24.2 | 26.9 | 32.2 | 21.1 | 25.8 | 7.1 | 4.7 | |
| VYS | 2,052.9 | 1,958.9 | 18.3 | 12.5 | 22.5 | 22.4 | 26.1 | 31.4 | 24.9 | 28.6 | 8.3 | 5.1 | |
| JHC | 2,794.6 | 2,777.7 | 14.8 | 12.1 | 24.6 | 22.4 | 28.6 | 32.5 | 24.8 | 29.4 | 7.1 | 3.5 | |
| PLK | 1,756.2 | 1,639.3 | 14.0 | 12.1 | 24.8 | 23.1 | 26.8 | 30.1 | 19.2 | 27.5 | 15.3 | 7.2 | |
| KVK | 758.0 | 777.4 | 11.7 | 10.7 | 22.5 | 20.0 | 30.4 | 31.5 | 19.6 | 24.2 | 15.8 | 13.6 | |
| ULK | 3,549.5 | 3,203.8 | 19.8 | 20.4 | 24.1 | 23.8 | 19.6 | 23.5 | 13.4 | 15.5 | 23.2 | 16.8 | |
| LBK | 978.0 | 873.7 | 15.3 | 7.3 | 25.0 | 23.3 | 31.5 | 39.5 | 24.6 | 27.1 | 3.6 | 2.8 | |
| JHM | 2,784.1 | 2,521.7 | 18.5 | 12.2 | 27.1 | 27.1 | 26.0 | 35.4 | 16.8 | 19.9 | 11.7 | 5.4 | |
| OLK | 2,464.7 | 2,519.2 | 19.9 | 15.6 | 24.3 | 22.0 | 24.6 | 29.5 | 22.3 | 25.4 | 9.0 | 7.4 | |
| ZLK | 2,583.3 | 2,235.1 | 17.2 | 12.0 | 23.2 | 20.5 | 24.2 | 32.1 | 25.1 | 30.1 | 10.3 | 5.3 | |
| MSK | 4,513.0 | 4,458.0 | 13.6 | 11.8 | 20.5 | 20.0 | 25.4 | 29.4 | 30.4 | 32.6 | 10.1 | 6.2 | |
| CZE | 36,477.4 | 35,165.1 | 17.6 | 14.0 | 24.2 | 23.0 | 24.9 | 30.1 | 21.4 | 25.2 | 11.9 | 7.7 | |

Source: own calculation based on the MoLSA data

Comparing percentages for 2013 and 2017, we can see that the structure of clients had changed. The proportion of two higher levels (III, IV) of dependence increased from 46.3% to 55.3% for four years. The highest increase occurred in the ZLK and JHM regions, namely by 12.9 percentage points (pp), or 12.5 pp, respectively. On the other hand, the smallest increase of 5.2 pp occurred in the capital city of Prague.

In special regime homes, there were 17,160 clients in 2017, see Table 6. However, there was the largest group of clients with a dependence degree at level IV (41.8%). In the case of the Vysočina Region, it was even slightly above 50%. The proportion of higher levels (III, IV) of dependence increased from 63.1% in 2013 to 70.8% in 2017.

Table 6. Recalculated numbers of clients in special regime homes by the region and their percentage by the degree of their dependence within the region for years 2013 and 2017.

| | Total r | Total number | | | l | II | | III | | V | Non-specif. | |
|--------|----------|--------------|------|------|------|------|------|------|------|------|-------------|------|
| Region | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 |
| PHA | 861.1 | 1950.7 | 10.0 | 6.7 | 21.0 | 17.3 | 27.6 | 27.9 | 27.1 | 36.0 | 14.2 | 12.2 |
| STC | 1,196.7 | 2726.5 | 6.1 | 7.9 | 19.8 | 18.0 | 30.9 | 31.6 | 38.0 | 38.4 | 5.3 | 4.0 |
| HKK | 412.8 | 536.0 | 9.3 | 5.3 | 20.0 | 16.4 | 27.2 | 31.8 | 36.9 | 43.4 | 6.6 | 3.0 |
| PAK | 487.4 | 756.5 | 11.4 | 6.9 | 15.7 | 14.4 | 25.5 | 28.9 | 40.5 | 45.8 | 6.9 | 4.0 |
| VYS | 498.0 | 662.2 | 9.0 | 6.1 | 23.0 | 15.0 | 28.7 | 26.9 | 37.4 | 50.9 | 1.9 | 1.0 |
| JHC | 409.3 | 412.8 | 9.4 | 10.0 | 27.5 | 24.3 | 26.1 | 23.6 | 34.5 | 41.4 | 2.5 | 0.6 |
| PLK | 695.9 | 908.9 | 10.9 | 7.1 | 20.8 | 21.6 | 28.7 | 29.9 | 34.5 | 39.1 | 5.0 | 2.3 |
| KVK | 315.5 | 355.8 | 4.7 | 5.1 | 18.3 | 16.6 | 36.6 | 35.3 | 37.3 | 42.3 | 3.1 | 0.6 |
| ULK | 1,474.9 | 1,966.0 | 12.4 | 11.2 | 28.2 | 24.7 | 27.8 | 26.9 | 26.0 | 33.1 | 5.6 | 4.2 |
| LBK | 351.3 | 646.6 | 5.6 | 3.7 | 21.9 | 12.8 | 33.4 | 35.2 | 36.3 | 46.3 | 2.9 | 2.1 |
| JHM | 2,189.3 | 3,048.9 | 10.5 | 6.2 | 20.4 | 14.8 | 30.3 | 31.2 | 33.2 | 46.2 | 5.7 | 1.6 |
| OLK | 444.7 | 743.2 | 10.5 | 6.1 | 20.4 | 17.7 | 25.7 | 27.7 | 41.9 | 47.5 | 1.5 | 1.1 |
| ZLK | 585.5 | 867.6 | 18.4 | 11.4 | 16.9 | 18.0 | 22.0 | 23.2 | 36.2 | 45.4 | 6.5 | 2.0 |
| MSK | 1,243.5 | 1,578.4 | 8.3 | 7.0 | 18.8 | 16.5 | 23.7 | 24.6 | 44.2 | 46.0 | 5.0 | 6.0 |
| CZE | 11,166.1 | 17,160.3 | 10.0 | 7.5 | 21.2 | 17.7 | 28.1 | 29.0 | 35.0 | 41.8 | 5.7 | 4.0 |

Source: own calculation based on the MoLSA data

Table 7. Recalculated numbers of clients – seniors in the age of 65 and more (65+) in special regime homes by the region and their percentage by the degree of their dependence within the region for years 2013 and 2017.

| | Total | Total number | | I | I | II | | III | | V | Non-specif. | |
|--------|---------|--------------|------|------|------|------|------|------|------|------|-------------|------|
| Region | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 |
| PHA | 814.3 | 1,808.5 | 9.5 | 6.1 | 9.5 | 16.8 | 28.2 | 28.3 | 27.2 | 36.7 | 14.5 | 12.1 |
| STC | 1,094.4 | 2,465.8 | 5.3 | 6.8 | 5.3 | 16.6 | 31.6 | 32.2 | 40.1 | 40.3 | 5.4 | 4.0 |
| HKK | 359.1 | 472.2 | 6.4 | 3.6 | 6.4 | 13.2 | 28.9 | 32.8 | 40.5 | 47.8 | 6.9 | 2.6 |
| PAK | 422.8 | 673.5 | 6.6 | 4.2 | 6.6 | 13.4 | 28.3 | 29.9 | 44.2 | 49.7 | 5.2 | 2.8 |
| VYS | 408.1 | 537.4 | 6.9 | 3.5 | 6.9 | 10.0 | 30.2 | 26.7 | 42.7 | 58.8 | 2.1 | 1.0 |
| JHC | 332.7 | 315.1 | 7.8 | 5.4 | 7.8 | 19.4 | 26.6 | 24.4 | 40.2 | 50.2 | 2.5 | 0.6 |
| PLK | 590.5 | 770.9 | 7.7 | 5.0 | 7.7 | 17.9 | 29.4 | 31.4 | 38.8 | 43.6 | 4.2 | 2.2 |
| KVK | 307.6 | 335.9 | 4.8 | 5.0 | 4.8 | 16.6 | 36.5 | 35.6 | 37.1 | 42.2 | 3.2 | 0.7 |
| ULK | 1,144.4 | 1,522.2 | 9.3 | 7.8 | 9.3 | 20.8 | 30.3 | 28.3 | 31.1 | 39.0 | 5.3 | 4.1 |
| LBK | 326.3 | 586.1 | 4.3 | 3.6 | 4.3 | 11.8 | 33.8 | 34.2 | 38.3 | 48.5 | 2.4 | 1.9 |
| JHM | 2,034.2 | 2,802.4 | 9.8 | 5.2 | 9.8 | 13.6 | 31.1 | 31.7 | 34.2 | 47.8 | 5.6 | 1.6 |
| OLK | 362.2 | 609.1 | 7.2 | 3.9 | 7.2 | 15.6 | 24.8 | 27.4 | 49.0 | 52.2 | 1.5 | 1.0 |
| ZLK | 471.3 | 705.7 | 15.1 | 6.5 | 15.1 | 14.5 | 24.0 | 25.5 | 42.7 | 51.5 | 3.8 | 1.9 |
| MSK | 1,057.5 | 1,315.8 | 6.4 | 4.7 | 6.4 | 14.5 | 24.1 | 24.7 | 49.4 | 51.0 | 4.3 | 5.1 |
| CZE | 9,725.5 | 14,920.6 | 8.1 | 5.6 | 8.1 | 15.6 | 29.2 | 29.7 | 38.2 | 45.2 | 5.4 | 3.9 |

Source: own calculation based on the MoLSA data

Homes with a special regime do not have only seniors among clients; therefore, the summary statistics were conducted separately for clients aged 65+ (Table 7). In 2017, 14,921 (86.9%) clients were at least 65 years old. 45.2% of 65+ clients had a dependence degree at level IV. Moreover, there were five NUTS 3 regions (VYS, JHC, OLK, ZLK, MSK) with more than 50% of such clients. According to these relative figures, the most challenging situation was in the Vysočina region, where almost 59% of clients with age 65+ have the highest level of dependency. The proportion of higher levels (III, IV) of dependence was 74.9% in 2017, in contrast to 67.4% in 2013.

5. Discussion

The structure of clients is changing; the proportion of clients with degree III and IV has increased over the last four years. This result is in accordance with the results presented by Průša (2018ab) who focused on the development and structure of recipients of care allowances in the Czech Republic but without regional distinction. The observed change in structure is related to the aging of the population in the Czech Republic when the share of 65+ inhabitants increased by 1.8 pp from 2013 to 2017 (Table 8). However, there are regions with different old population, and this should be taken into account when planning the capacities of the necessary social and health care. For example, in both considered years 2013 and 2017, the Královéhradecký Region belonged to the oldest regions. The share of the population aged 65+ exceeded 20% in 2017. On the other hand, the Středočeský Region was one of the youngest regions in the Czech Republic.

| | Czecł | h popula | ation character | istics | Percentage of clients with levels III and IV | | | | | | |
|--------|-------|----------|-----------------|-----------|--|---------|---------------|----------|--|--|--|
| | Avera | ige age | Percentage of | f age 65+ | Retiremen | t homes | Special regin | ne homes | | | |
| Region | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | 2013 | 2017 | | | |
| PHA | 42.0 | 41.9 | 18.1 | 18.8 | 40.1 | 45.3 | 55.4 | 65.0 | | | |
| STC | 40.6 | 41.1 | 16.3 | 17.9 | 37.8 | 48.9 | 71.7 | 72.5 | | | |
| HKK | 42.0 | 42.9 | 18.4 | 20.7 | 57.0 | 67.9 | 69.4 | 80.6 | | | |
| PAK | 41.5 | 42.3 | 17.5 | 19.5 | 48.0 | 58.0 | 72.5 | 79.6 | | | |
| VYS | 41.6 | 42.6 | 17.7 | 19.7 | 51.0 | 60.0 | 72.9 | 85.5 | | | |
| JHC | 41.6 | 42.5 | 17.5 | 19.6 | 53.4 | 61.9 | 66.8 | 74.6 | | | |
| PLK | 41.9 | 42.6 | 17.9 | 19.6 | 46.0 | 57.6 | 68.2 | 75.0 | | | |
| KVK | 41.5 | 42.7 | 16.8 | 19.4 | 50.0 | 55.7 | 73.6 | 77.8 | | | |
| ULK | 40.9 | 41.8 | 16.4 | 18.8 | 33.0 | 39.0 | 61.4 | 67.3 | | | |
| LBK | 41.1 | 41.9 | 17.0 | 19.5 | 56.1 | 66.6 | 72.1 | 82.7 | | | |
| JHM | 41.7 | 42.3 | 17.8 | 19.4 | 42.8 | 55.3 | 65.3 | 79.5 | | | |
| OLK | 41.7 | 42.6 | 17.7 | 19.8 | 46.9 | 54.9 | 73.8 | 79.6 | | | |
| ZLK | 42.0 | 42.9 | 17.8 | 19.9 | 49.3 | 62.2 | 66.7 | 77.0 | | | |
| MSK | 41.5 | 42.5 | 17.0 | 19.2 | 55.8 | 62.0 | 73.5 | 75.7 | | | |
| CZE | 41.5 | 42.2 | 17.4 | 19.2 | 46.3 | 55.3 | 67.4 | 74.9 | | | |

Table 8. Average age and percentage of inhabitants with the age of 65+ by region to the end of 2013 and 2017; the percentage of clients (seniors) with the dependence levels III and IV.

Source: own processing based on the Czech Statistical Office (2014, 2018b) data and the results in Table 5 and 7

Moreover, there is already now an excess of demand over supply of residential social care services in the Czech Republic as various studies (e.g., Bernášková and Ďurďa 2016; Langhamrová et al. 2018) point out. Therefore, Table 9 shows the development of the number of unsatisfied applicants for retirement or special regime home services over the last four years available. Although there is a satisfactory trend for retirement homes in total, the unmet demand for special regime home services has grown. Increasing demand for special regime homes may be related to dementia – another big problem connected with the aging population. The quality of care for this type of residential clients is discussed by Hradcová et al. (2014). According to Bernášková and Ďurďa (2016), the highest ratio of unsatisfied requests in the total capacity of the facility is for the Prague and the Plzeňský region for both types of facilities, and further for the Jihomoravský Region in the case of retirement homes and the Zlínský Region in the case of special regime homes. Only subsidies from the state or the founder (municipality, region) amounted to CZK 5.1 billion in 2015 and CZK 8.8 billion in 2018 for the retirement and special regime homes (Czech Statistical Office 2016b, 2019).

Although expenditures on residential social services grow, Horecký and Průša (2019) point out that the current system of financing does not allow for continuous and flexible responses to clients' demand for social services. To meet the demand for placement in retirement homes, Langhamrová et al. (2018) estimated, using input-output analysis based on data from 2013, that this would require an investment of CZK 202.3 billion. However, the resulting impacts of investments vary by region. The greatest impact on the regional economy can be expected in absolute figures in the Jihomoravský region, while in relative terms in the Zlínský Region.

| |] | Retireme | nt home | s | Special regime homes | | | | | |
|--------|--------|----------|---------|--------|----------------------|--------|--------|--------|--|--|
| Region | 2015 | 2016 | 2017 | 2018 | 2015 | 2016 | 2017 | 2018 | | |
| PHA | 6,397 | 7,267 | 7,955 | 7,183 | 1,419 | 1,484 | 1,882 | 2,345 | | |
| STC | 8,685 | 8,620 | 8,748 | 9,533 | 1,734 | 2,243 | 2,162 | 2,320 | | |
| HKK | 2,583 | 2,957 | 2,821 | 3,052 | 505 | 768 | 566 | 710 | | |
| PAK | 1,695 | 1,677 | 1,657 | 1,728 | 297 | 398 | 557 | 689 | | |
| VYS | 3,353 | 3,800 | 3,197 | 3,515 | 917 | 1,337 | 1,274 | 1,565 | | |
| JHC | 4,191 | 4,294 | 4,192 | 4,673 | 600 | 632 | 743 | 1,083 | | |
| PLK | 3,481 | 3,868 | 4,647 | 2,208 | 1,396 | 1,624 | 1,928 | 1,455 | | |
| KVK | 204 | 251 | 455 | 618 | 149 | 186 | 373 | 616 | | |
| ULK | 4,163 | 4,081 | 4,537 | 4,906 | 2,070 | 2,065 | 2,527 | 2,393 | | |
| LBK | 1,165 | 1,002 | 900 | 1,237 | 400 | 624 | 625 | 775 | | |
| JHM | 11,965 | 12,556 | 7,228 | 5,100 | 4,670 | 5,219 | 4,171 | 4,026 | | |
| OLK | 3,740 | 3,558 | 4,349 | 4,254 | 960 | 1,025 | 1,268 | 1,226 | | |
| ZLK | 5,996 | 5,356 | 4,613 | 4,364 | 1,551 | 1,544 | 2,168 | 2,205 | | |
| MSK | 6,440 | 6,469 | 5,714 | 5,626 | 2,114 | 2,185 | 2,104 | 2,790 | | |
| CZE | 64,058 | 65,764 | 61,013 | 57,997 | 18,782 | 21,334 | 22,348 | 24,198 | | |

Table 9. Number of unsatisfied applications for residential social services during 2015 – 2018.

Source: Czech Statistical Office (2016b, 2017, 2018c, 2019)

6. Conclusions

Based on the data from the Ministry of Labour and Social Affairs and the Czech Statistical Office, this paper demonstrates the change in the structure of clients in residential social services with regard to their degree of dependence. The share of clients with severe and complete dependence is increasing. This phenomenon increases demands on formal caregivers in these facilities. At the same time, there is an excess demand for residential social services, which is increasing for special regime homes.

The current situation is probably not sustainable in the long term. Expenditures on residential social services grow, and public budgets are limited. Regional governments are thus faced with the challenge of effectively and mainly efficiently extending the capacity of not only residential social services, but also outpatient and field services to support home care. Informal caregivers are an important part of care for the elderly, and their importance will grow because of the limited capacity of formal caregivers. Some studies (e.g., Tóthová et al. 2011) also discuss the advantages and disadvantages of community-based care. Furthermore, it would be desirable to adapt the current system of financing social services. Better conditions for private social services providers than the current ones would also allow for the necessary capacity increase.

A conceptual reform in the area of financing and implementation of social services is currently under discussion. The amendment to the Social Services Act is in the comment procedure. It proposes to change the types of social services, both preventive and care services. In particular, retirement homes and special regime homes should be merged. This proposed change in the categorization of individual types of services aims to make their financing and provision more transparent and simpler.

The limitation of this study is that it focuses only on clients of residential social care services. In the future, therefore, we plan to analyse regional numbers of workers in these services, especially those in direct service care. The aim of the next study should be to discuss the optimal number of clients per one formal caregiver. Furthermore, we plan to focus on particular outpatient and field services.

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