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The optimization of elderly care in Szczecin – research report

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Abstract
The aim of the research was the examination of the available solutions in the field of meeting the needs of dependent elderly people in Szczecin and indicating priority actions in terms of elderly care optimization, possible to implement in Szczecin, on the basis of the diagnosis of the needs as well as resource and financial analysis. The method of desk research, including statistical and financial data concerning the social care sector, was used in the article. On the basis of the collected data it is possible to state that investing in sheltered accommodation is an alternative solution for building a nursing home. It is a less expensive replacement, which provides dependent seniors with a higher standard of care and support.

Introduction

The process of the ageing of Polish population and growing demand for long-term care services provided to dependent elderly people point at the necessity of creating

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a consistent support system for the elderly, with the use of alternative, efficient and economically effective solutions (Iwański, 2016). A new approach concerning social care in terms of seigniorial policy departs from the traditional one, based on giving benefits or places in nursing homes to the dependent people, towards the development of the preventive, activating services and support in the living environment. The need of the deinstitutionalization of elderly care for the development of services in the living environment is specified also by the gerontological research (Fal, 2016, p. 22–26). At the bottom of the conducted research there are findings of the national Supreme Chamber of Control's inspection conducted in 2015, entitled "Elderly care support provided by communities and counties which pay attention to the necessity of creating alternative solutions, cheaper than nursing homes, using all the statutory means including day-long support forms in the place of living (Common European Guidelines on the Transition from Institutional to Community Based Care, 2012). It was agreed, according to the of Supreme Chamber of Control recommendations as well as in compliance with the modern vision of social care, that the twenty-four-hour institutional care is the ultimate form of supporting the elderly, used when all other forms of assistance turn out to be insufficient (ibidem). The most efficient form of elderly care are community support services provided in the place of living. It was established that the rules of dealing with the elderly, accepted by UN in 1991, such as independence, participation, care, self-fulfillment and dignity (ONZ, 2017), are fundamental for the seigniorial policy development. Realization of the elderly people's independence, care and dignity rule in accordance with the subject of the research is expressed in the right to live in the environment which is adapted to personal preferences and changing possibilities, opportunity to stay in one's own apartment as long as possible, and access to services sustaining elderly people's autonomy and giving sense of security. At the same time, the principle of subsidiarity is also important. In this principle, when it comes to elderly care, conditions allowing the use of family, neighbours and friends care potential first are created, and next, with the growing demand for care, other informal groups, non-governmental organizations and local institutions are introduced. Such a way of thinking is based on a hierarchical compensation model, according to which formal assistance is the ultimate form of help, when it cannot be provided by the family and neighbours (Szweda-Lewandowska, 2014, p. 215–224).

The aim of the research was ther examination of the available solutions in the field of meeting the needs of dependent elderly people in Szczecin and indicating priority actions in terms of elderly care optimization, possible to implement in Szczecin, on the basis of the diagnosis of the needs as well as resource and financial analyses. It was agreed that the optimization of elderly care means increasing its quality by satisfying the needs of the elderly which are triggered by dependence, taking into account demographic forecasts and socio-cultural conditions as well as all statutory support

mechanisms, including support of the family in elderly care, with the use of economically rational solutions.

The need for elderly care in the context of demographic analysis

In 2016 Szczecin was inhabited by more than 405.000 people, of which 74.000 were 65 or more years old (BDL, 2016). Almost every fifth citizen of Szczecin was classified as a senior according to the demographic, economic, social, and civil rates. In classical scales of old age, population is described as old when the number of people over 65 exceeds 12% by Rosset, 15% by Klonowicz, and as very old, according to the latest UN scale, when the number of seniors reaches the level of 21% (Jurek, 2012). The demographic forecasts show that in the coming decade the population of Szczecin will exceed the updated UN old age scale.

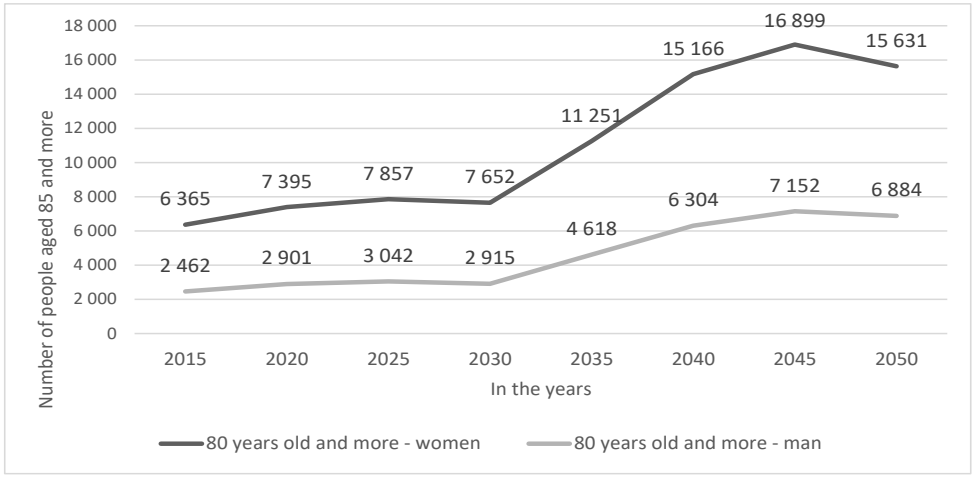
Table 1. Szczecin citizens aged 60 and more – status for 31 XII 2015

Sex	Years of living						
	60 and more	60–64	65–69	70–74	75–79	80–84	85 and more
Men	44.049	15.063	11.994	5.679	5.153	3.630	2.530
Women	63.304	18.277	15.163	7.908	8.434	6.979	6.543
Total	107.353	33.340	27.157	13.587	13.587	10.609	9.073

Source: Bank Danych Lokalnych, GUS 2016, www.bdl.stat.gov.pl [access 29.10.2016].

According to the GUS demographic forecast, till 2050 the number of people who are over 85, and are classified as very old, will almost triplicate. Along with age, the risk of dependency increases and the need of the elderly for assistance and support in everyday functioning grows. In 2030 more than 27.000 people aged 80 and more will live in Szczecin, and in 2050 the number will go up to 36.000 (GUS, 2014). Demographic forecasts point to the phenomenon of double ageing of the society. In a decade and a half, the number of young pensioners over the age of 60 and 65 will rise significantly, along with the increase of the number of people in advanced old age, entering "the fourth age". The double ageing of the population leads to an increased demand for public forms of dependent elderly support and care. In families, help might be need by two eldest generations ate the same time. Taking into consideration that old age includes postwar age groups and, at the same time, migration trends of the population boom from the 70s and 80s of the 20th century, it can be assumed that part of the seniors won't receive support from children and grandchildren in the following years.

Picture 1. Demographic forecast – age category 85 and more for the city of Szczecin for years 2015–2020



Source: forecast for communes and cities with district rights and subregions for years 2014-2050, GUS 2014.

The time of advanced old age is also connected with feminization of the ageing process in these age categories. The average life expectancy of women is much more longer than of men, and in the next decades this trend will be maintained. As estimated, every second 80-year-old requires support and help in everyday functioning. The number of one-man households led by elderly people will also be growing. In the following decades the demand for community, stationary and semi-stationary care services will be increasing. Until 2045 the number of people aged 85 and more will triplicate, which will influence the dependent elderly care system.

The dependency ratio will be increasing with every decade systematically. Currently, for every 100 people in the working age there are 57 in the pre- and post- working age. In the following decades the ratio will be growing, in 2030 it will reach the level of 63, and till 2050 it will equal 79. The number of people in the working age will decrease from 256.000 in 2014 to 189.000 in 2050. The retention of the fertility rate at a low level, which will not guarantee substitutability of generations, will lead to the decline of the number of people in the pre-working age. However, the number of people in the post-working age will be rising significantly every year, from 86.000 in 2015 to 104.000 in 2050. The considerable growth of the percentage of elderly people in the population of Szczecin leads to taking actions aiming at minimizing the economic, social and civil costs connected with the increase of the demographic dependency ratio.

In conclusion, according to the demographic forecasts the ageing process of the population will be proceeding. At present, there are no premises which would indicate the possibility of diverting the demographic trends in terms of the fertility rate to a level which will ensure the substitutability of generations or changes in migration trends.

Remembering about the subject of the analysis we should distinguish three demographic aspects which have crucial influence on the security of dependent elderly people:

– Till 2010 the number of inhabitants of Szczecin aged 85 and more will almost triplicate.

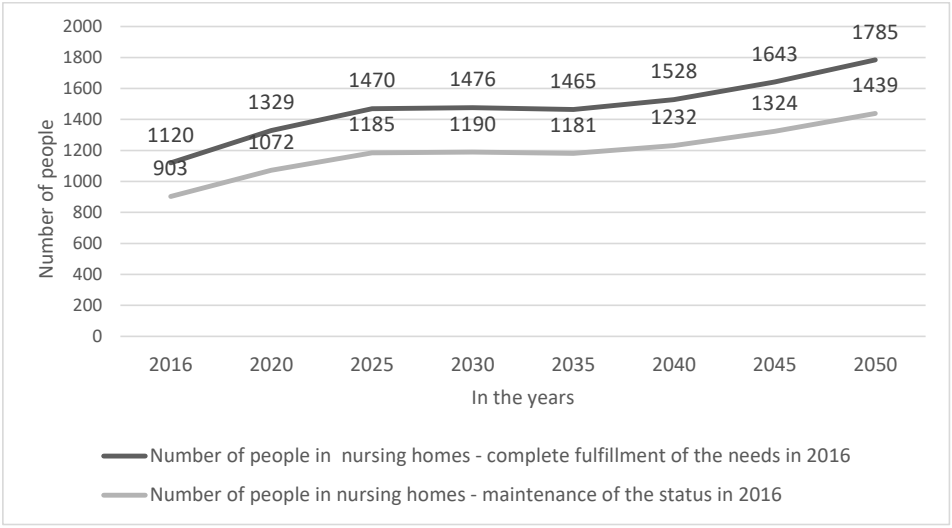
– Till 2030 the number of young pensioners over 60 and 65 will increase considerably, along with the growth of the number of people in the advanced old age, entering "the fourth age"

– With every decade the demographic dependency ratio will be growing systematically. The number of people in the working age will decrease.

The demand of elderly people for stationary care

Providing care to dependent elderly people from the commune of Szczecin city is carried out in the place of living and in nursing homes in form of day-long security of all the needs of seniors. In 2016, on a yearly basis, there were 903 chronically, somatically sick elderly people (MOPR Szczecin, 2016) in nursing homes, and 217 were waiting for a place for them (The strategy of solving social problems for the commune of Szczecin City for years 2015–2020, 2015). Securing care needs in the described year would require increasing the number of places by 24%, so opening, at current standards, at least 2 new institutions. In the following years, together with the increase of the demographic dependency ratio which will result in a lower care potential of the families, because of the migration trends of people in the working age, a multi-sectoral development of the elderly care system will be necessary.

Picture 2. The demand of elderly people for stationary care – deficient and optimal variant



Source: own elaboration.

In 2016 care in nursing homes was given to 1,22% of people over 65 living in Szczecin, including people who were given a place in institutions outside of Szczecin. Meeting the needs of all the people waiting for a place in care centers would rise the rate to the level of 1,52%. Private institutions providing 24-hour elderly care services were not included in the analysis. The offer of subjects in the market of stationary care services is directed into elderly people and families, who are able to cover all the costs of the given care, without the support of the commune. A monthly fare for a stay in such institutions varies from 2.200 to 7.000 PLN. Often enough it is necessary to pay extra for basic hygiene supplies and medicines. The private sector will be developing dynamically in the coming years, but without the system of co-funding the services from public means, the offer of this sector will not be aimed at people with low incomes from social transfers, which do not have any capital.

Therefore, taking two variants into consideration: loss-making – keeping the shortages at current level, and predicting full satisfying of the needs like in 2016, till the second decade of the XXI century in Szczecin, extra places should be created: in the first variant – 169, and in the second one – 257 places for seniors requiring help. The demand was estimated on the basis of the growth of the number of people over 65 in the population of Szczecin. Considering current standards (Art. 6 pt. 1, Dz.U. 2012 poz. 964) in the field of the organization of stationary elderly care, assuming that we do not introduce alternative solutions, creating at least two new nursing homes would be necessary. Assuming the option of full fulfillment of the needs – on the basis of the presented estimates – creating three institutions would be necessary.

Along with the age, the risk of dementia increases, as estimated 50% connected with Alzheimer's disease. In the population of people aged over 65, 5 to 10% is endangered with the disease. The risk grows with age, for people over 80 can reach even 50% (Knapik-Czajka, 2010, p. 140). According to Polish studies, the frequency of occurrence of dementia in urban populations takes from 5,7 (Bidzan, Turczyński, Szaber, 2007, p. 181–188) (for population over 65 years old) to 10%. Nationwide the number of people with dementia amounts from 300.000 to 500.000 (Gabrylewicz, 2014, p. 17). Having Alzheimer's disease is in 85% sporadically coincidental, only 15% is genetically conditioned (Wojszel, Bień, 2002, p. 2–6). Because of the feminization process in the old age categories, Alzheimer's disease concerns mainly women. The illness requires providing long-term support, and in the last stage a senior with Alzheimer's disease needs stationary 24-hour care. In 2015, 74.000 people in the age of 65 or more lived in Szczecin. Taking into consideration the optimistic variant, assuming that this type of medical condition touches 5% of people aged 65–69, 10% aged 70–74, 15% aged 75–79, 20% aged 80–84 and 25% aged over 85, 9485 elderly people suffered from dementia diseases.

In the next decades the number of people over 85 will increase and the risk of dependency will rise considerably. In 2020 more than 10.000 elderly people requiring help because of dementia diseases will live in Szczecin. Till 2050 the number of seniors with this type of medical condition will go over 16.000. Assuming that currently 80% of

dependent elderly care is realized by informal care givers – family, in case of dementia diseases in the following years it will be necessary to create a system which will provide support for 2101 people in 2020 and 3269 in 2050, who will not receive support and care from family members.

Assessment of the resources of Szczecin City Commune in terms of providing care to elderly people in the context of included costs

In Szczecin there are two nursing homes offering 24-hour stationary care. "Dom Kombatanta" nursing home at no. 17 Krucza Street, can accomodate 241 people. "Dom Kombatanta I Pioniera Ziemi Szczecińskiej" nursing home offers places for 251 seniors. Moreover, Szczecin Commune provides seniors' stay in supracommunal nursing homes outside of Szczecin (in 2016 – 302 people).

The basis to estimate the average monthly cost of stay in the nursing home is the cost of the functioning of the home in the previous year, excluding renovation and capital expenditure and taking into consideration the predicted consumer price index emerging from the budget act for the coming year multiplied by the actual population of the city. In 2014 the average cost of stay of one nursing home resident was 2822,38 PLN. In the analyzed period, the average cost of living of one person in the institution increased by 156 PLN and in 2016 was 2978,97 PLN. In the first place, the fee for the stay in a nursing home is covered by the senior, in the amount of 70% of the received pension. Next, the rest of the fee should be paid by the family. When the two main sources are not enough to cover the monthly cost of living in the nursing home, the rest is paid by the commune. In the researched period (2014–2016) the supplementary payment covered by the commune oon a yearly basis increased from 17 million in 2014 to 18 million in 2016.

The next means of supporting seniors and their families are day-support centres, in which seniors spend time during the day, receive two meals a day, are provided with care and their free time is arranged. It is a form of support for those elderly people who do not need 24-hour maintenance, are capable of taking part in activities and can count on their families in the evenings, at nights and on holidays. In Szczecin there are six day-support centres, including two specializing in providing care to people suffering from Alzheimer's disease and one functioning as part of the programme Senior+. Their support is used by 205 elderly people. The initial analysis of the costs stresses the possibility of lowering the costs by assigning their running to non-governmental organizations.

Apart from nursing homes – 24-hour and daytime, a system of sheltered and assisted housing for elderly people is built in Szczecin. It is aimed at elderly people who are at least 65 and require partial or complete support of others[5].

5 The system is run created by Szczecińskie Towarzystwo Budownictwa Społecznego Sp. z o.o., Towarzystwo Budownictwa Społecznego Prawobrzeże Sp. z o.o., Zarząd Bu-

In sheltered apartments seniors are guaranteed round-the-clock care and nursing, meals and arranged free time. This option has its positive aspect also in the context of using big size apartments , which are difficult to sell or rent. Sheltered apartments are usually accommodated by 5–6 seniors. The venues have a living room with its integrative function, three double bedrooms, a kitchen and two bathrooms. Owing to the opportunity of putting 5–6 dependent people in one apartment it is possible to provide them with 24-hour care like in a nursing home. The cost of creating one sheltered apartment for 6 people based on the housing stock in the commune of Szczecin and subsidiaries was estimated on the basis of current experiences connected with the activation of five apartments for 28 elderly people in previous years. Having regard to the cost of renovation and fitting of the rooms, the cost of the creation of such a flat is on average 102.040 PLN. It is worth mentioning that the expenses are diversified according to particular residential substance. The amount includes the cost connected with equipping the apartment and renovating it. The average cost of the renovation stays at the level of more than 68.000 PLN, and the cost of equipment – 33.080 PLN.

The main ingredient of the cost of maintaining a sheltered flat are expenses connected with providing care and support, which is realized round-the-clock seven days a week. The care index, so the number of care takers for one care giver is not bigger than 6 people. It is a level impossible to achieve in nursing homes in the westpomeranian voivodship, where for one care giver there are 15 seniors during the day and even 60 at night (Iwański, 2016). In sheltered housing residents pay for the cost of living from their pensions. On a yearly basis, the expenses for this aim barely surpass 20.000 PLN. The rest of the expenditures (184 464 000 PLN yearly) are covered within care and support services given to every person, owing to which 24-hour maintenance is possible. The economic phenomenon of sheltered housing lies in the fact that putting 6 dependent people in one flat and securing them with 6 hours of care services a day guarantees round-the-clock care (together 36 hours of care a day) assuring two care givers in peak hours so at times of the morning and evening hygiene and during meals. Providing the same comfort to 6 people in their place of living is impossible from the perspective of the budget of the city.

In years 2015–2016, 5 sheltered apartments were activated in Szczecin and 28 people live in them. In 2017 4 apartments will be activated, and in years 2018–2020 – one apartment a year.

Assisted living is the complementation of the offer for people requiring limited support and assistance in everyday functioning. First venues of this type in Szczecin were put into service in July 2015 as part of the project entitled "Rewitalizacja RAZEM – Dom dla seniora". There were 23 apartments, including 6 studio flats, 16 two-room flats and one three-room flat. In general, the so called "senioral quarter" is accom-

dynków i Lokali Komunalnych and Miejski Ośrodek Pomocy Rodzinie (Social Welfare Centre) in Szczecin as a coordinator of subject activities.

modated by 30 people. The programme is conducted by Szczecińskie Towarzystwo Budownictwa Społecznego (The Social Building Association of Szczecin) and the commune of the city of Szczecin. The social care over the residents is provided by Social Welfare Centre. The so called "quarter 23" is not only about assisted living, but also all the infrastructure allowing to have a self-reliant, independent and satisfying life even with some functional limitations. In the architectural and spatial aspect, those are apartments without barriers – easily accessible and designed to facilitate life to the disabled or endangered with disabilities, with huge common space encouraging to enhance neighbour bonds.

In years 2018–20202 STBS will prepare 45 apartments for the elderly. The apartments will have the access to the recreational, cultural and health offer owing to the surrounding venues offering activation of the elderly, there will be a geriatric health centre and a Local Avtivity Centre. The monthly cost of the maintenance of the sheltered flat, which includes the rent, management costs, utilities and renovation fund stands at the level of 650 PLN for an apartment of 40 m^2 and 750 for an apartment of 50m^2 (MOPR, 2016).

A crucial element in the systemic approach to elderly care is enabling them to function in the place of living. Because of this, specialist care services are provided in the place of living or current stay.

Table 2. Services in form of elderly care services in Szczecin

Care services	**2016**	
	Total	Including specialist care services
Number of people using support in form of care services	1 605	150
Number of services in hours	651 334	44 351
The cost of provided help	**8 544 836**	**893 959**
Average number of hours for one person - yearly	405,82 hours	295,67 hours
Average number of hours for one person - monthly	33,82 hours	24,61 hours
Average cost of one hour	**13,12 PLN***	**20,16 PLN**[1]

Źródło: MOPR Szczecin, 2016.

Every year the number of granted benefits to people over 61 increase together with the expenses in this field. In the analyzed period rise of the expenditures by 40% was noticed and in 2016 they reached the level of over 8,5 million PLN. The increase is

caused mainly by people from older age groups. 88% of beneficiaries of the services are women. The increase of the expenditures for care benefits realized in the environment is inevitable, but it is worth mentioning that it is the most common, accessible and economic form of helping seniors with limited self-reliance provided by social welfare institutions, allowing the elderly to stay in their environment. Care services are mainly provided to lonely elderly people. In 2016 84% of benefits were performed in one-person households.

Within environmental support for the elderly with limited self-reliance there are two pilotage programmes that have been implemented: "Przycisk życia" ("The button of life") – currently 50 people are involved, but till 2020 there will be 250 people using the programme; and "Gorący posiłek dla senior" ("Hot meal for the senior"). Additionally, "Srebrny Telefon dla Seniora ("A silver phone for the senior") is functioning.

The analysis of the costs of the investment – creating 100 places in sheltered housing versus 100 places in nursing homes

The cost of creating one sheltered apartment for 6 people using the housing stock belonging to Szczecin commune and subsidiaries was counted on the basis of previous experiences connected with setting 5 apartments for 28 elderly people in former years. Taking into account renovation and fitting expenses, the cost of creating one apartment is 102 040 PLN. Securing 100 places for dependent elderly people requires creating 17 sheltered apartments, whose estimated cost equals 1 734 687 PLN. The estimated total cost of constructing a nursing home for 100 elderly people has been specified as 22 720 560 PLN. The main elements of the investment expenses are construction and development of the site with its equipment. Because of the dynamic situation on the marketplace the estimated cost of the investment can increase significantly[6].

In conclusion, the cost of securing the needs of 100 dependent elderly people in a nursing home is 22 720 560 PLN. The cost of meeting the needs of 100 dependent seniors in sheltered housing is 1 734 687 PLN. There are a few arguments for sheltered accommodation apart from the lower cost of creating the places. The investment process in this case is shorter and brings smaller deviations in terms of the planned and actually borne investment costs. Building a nursing home requires a multi-stage investment and a number of investment procedures. Moreover, sheltered housing can be created in stages (e.g. 5 every year) which helps to stagger the costs in time. The

6 At the current stage there is no possibility of using the simplified calculation method, consisting of estimating the budget of the works as a sum of products of basic works and their individual prices. Therefore, for the valuation of the construction works the method of individual price net for 1 m^2 of total space was used. For the valuation of the fitting and some of the elements of the estimated budget, the method of market valuation was used, on the basis of the common knowledge accessible on the websites of BIP units of local government. The total area to valuate is: 3500 m^2, and the price net is 3000 PLN. The cost of the internal fitting was also estimated. It was assumed that the area for the investment belongs to the commune of Szczecin City.

time needed to activate a sheltered flat is much shorter than building a nursing home. Sheltered flats can be located in different parts of the city, which plays an important role in letting seniors stay in their environment and preventing the creation of the so called "social enclaves".

Conclusions and recommendations

Demographic forecasts and the conducted research indicate the necessity of preparing solutions aiming at restricting the negative results of the process of the ageing of the population of Szczecin. The need for care services for the dependent elderly people will be growing systematically in the coming years. The extension of all the elements of the system of support, environmental, semi stationary and stationary forms is needed. We recommend especially:

I The development of forms of 24-hour care alternative for nursing homes, less costly and more acceptable by elderly people, particularly:

1. Intensification of the development of sheltered housing by increasing the number of sheltered apartments to 5 in every consecutive year, in years 2018–2030.
2. Development of the sheltered housing system.,
3. Creation of family nursing homes for elderly people.

II Creation of environmental support system:

1. Optimization of the functioning of daytime support centres through:
   a) rationalization of costs
   b) profiling the work of daytime support centres, especially taking into account supporting people with dementia, Alzheimer's disease and disabilities (the blind, deaf and others);
   c) assigning the conduction of the support centres to non-governmental organizations
   d) extending the range of services of the centres in favour of people in the living environment;
   e) development of voluntary care service, including people in the "third age" in favour of people in the "fourth age".
2. Development of environmental services in cooperation with social organizations (e.g. transport services, adaptation of spaces, food delivery, shopping, small repairs) and schools (e.g. hot meal) enabling elderly people to function independently in their environment.
3. Extending environmental support for dependent seniors and members of their families, including respite care.
4. Development of the chain of senior clubs.

III Support for people with dementias

1. Creation of the urban plan of support for people with dementias, in cooperation with specialists and non-governmental organizations.

2. Adaptation of current resources of nursing homes to the needs of people leading a recumbent lifestyle, who are characterised by exiguous or zero independence.

IV Working out family support mechanisms in the process of elderly people care.

1. Preparing family care givers to provide care to dependent seniors in a safe way adequate to their needs. In many cases the health crisis of the senior is sudden (e.g. stroke, hip injury), the necessity of providing care the dependent elderly person is abrupt. Moreover, it is important to take care of psychological support for the family care givers, who, because of the difficulties it brings and its length (often counted in months) are endangered with a number of psychological crises (e.g. depression, caregiving burnout).

2. Consideration of legal, organizational and financial possibilities concerning introduction of "caring voucher", thanks to which a supplementary payment to care services provided by private subjects in an environmental and stationary form would be possible.

V Creating a Senior's Centre, in which could function such departments as: department of intervention, information, special counselling, judicature, family support, senior initiatives, equipment rental, etc.

The described recommendations refer to the indication of solutions which are vital for the improvement of elderly care within social welfare actions, in the light of the legal possibilities which are in force. An equally important role in building a coherent elderly care system belongs to the health sector, however, changes in this field are not included in the competences of commune/district self-government and require independent analysis.

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