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*Europe's Health Systems – Presentation of the  
health systems of Bulgaria, Poland and Germany*

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Yvonne Behrens / Mariusz Geremek / Karin Scharfenorth

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**Institut für Gesundheit & Soziales**  
der FOM Hochschule  
für Oekonomie & Management

**Yvonne Behrens / Mariusz Geremek / Karin Scharfenorth**

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# ***Europe's Health Systems***

## ***Presentation of the health systems of Bulgaria, Poland and Germany***

Yvonne Behrens / Mariusz Geremek / Karin Scharfenorth

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## **Preface**

FOM's internationalisation strategy is based on the conviction that the major social challenges of our time can only be solved together. FOM provides its scientific expertise to achieve scientific knowledge and to provide solutions for major social challenges.

By working together with international colleagues and establishing partnerships for future scientific projects, the scientists at FOM give an additional quality to research activities.

One of the major social challenges facing Europe is the spread of age-related diseases due to demographic change. More than 10 million people in Europe currently suffer from dementia. The majority of those affected are cared for at home by their relatives. The continuing responsibility as well as communication problems caused by dementia lead in the long run to a decline in the quality of life of carers and those in need of care.

Against this background, the DigiCare country project and the resulting European project proposal Dem.Com represent important milestones for international research at FOM. The FOM project team succeeded in attracting outstanding national and international research partners and, for the first time, coordinating a collaborative research proposal from our University of Applied Sciences in the EU's Research Framework Program Horizon 2020. The partial outcomes presented in this article result, in some instances, from reciprocal guest research visits that took place within the framework of the DigiCare country project. I am delighted about the European research partnership established here and hope that all readers will find it interesting to read.

Essen, October 2020

Prof. Dr. Thomas Heupel

Vice-President for Research

FOM Hochschule für Oekonomie & Management gGmbH

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## 1 Introduction

*By Yvonne Behrens*

The Federal Ministry of Education and Research funded the international project „Rural Regions in the Focus of Implementing Digital Health and Nursing Care (DigiCare country) in 2019/2020, led by the Institute for Health and Social Affairs of the FOM University of Applied Sciences for Economics & Management. The project team proposed to apply for funding of the EU framework program *Horizon 2020* for the project *Dem. Com*. The consortium consisted of German, Bulgarian and Polish partners with scientific, economical and humanitarian aid backgrounds. They jointly submitted a funding application for the development of a digital decision support system in home dementia care, with focus on communication between informal caregivers and their relatives suffering from dementia.

The research of the DigiCare country project and the requested Dem. Com project refers to the EU member states Germany, Bulgaria and Poland. Three countries that have similarities as well as differences in the health care of their populations.

The volume *Europe's health systems – Presentation of the health systems of Bulgaria, Poland and Germany* provides information about the Dem. Com project as well as the health systems of Germany, Bulgaria and Poland. For this purpose, an overview of the geography and the political systems of each country is given. Followed by information on demography, health status, health system and health care service rules in each mentioned country. This is followed by information about healthcare resources and long-term care as well as palliative care. Then, an overview of the occurrence of dementia in the countries is presented. Finally, there will be a comparison of the key data that was presented in the preceding country-specific chapters.

## **2 Representation of the project: DigiCare country**

*By Yvonne Behrens*

The *Rural areas in focus of implementation of digital healthcare and outpatient care* project was funded by the Federal Ministry of Education and Research from May 01, 2019 to June 30, 2020 and carried out at the FOM University of Applied Sciences for Economics & Management. The content of the project was to record framework conditions and requirements, which are necessary for developing a digital expert system to support health care and care in rural areas. A project application for the EU framework program Horizon 2020 was developed together with Bulgarian, German, Dutch and Polish partners.

At the beginning of the funding phase, it was clear to the international project team that they wanted to focus on the topic of dementia. Because dementia affects many areas of life. Memory, behavior and communication are all affected by the disease. In addition to the effects on the patients themselves, there are also major effects on their social environments. This is particularly true for caring relatives. Among other things, they suffer from mental, physical, social and economic impairments due to the illness and care of their relatives.

Together with the international project team, a funding application for the Dem.Com project was submitted in 2020 in the call "Better Health and Care, Economic Growth and Sustainable Health Systems" in the EU framework program Horizon 2020.

### **3 Representation of the project: Dem.Com**

*By Karin Scharfenorth*

The project Dem.Com strives for a socio-technical support for informal caregivers of dementia patients at home. As shown in the country comparison, dementia is a big challenge in Europe. Alike the demographic change towards ageing societies as well as the increasing spread of chronic diseases, dementia turns the world of healthcare upside down. In many cases no longer complete recovery of patients is possible, but long lasting care processes with numerous social implications take place. This affects the organizational shape of the healthcare provision, conditions of working life, lifestyle, living conditions and last but not least social relations in family, friendship and neighborhood.

The project idea focuses on the design of a digital decision support system for informal caregivers of elderly and invalid persons, in terms of a socio-technical innovation. The central point deals with the common creation of the digital application involving the different stakeholders (patients, volunteers, nursing staff, therapists, physicians, social workers etc.). In this way the gap between technological progress and utilization in the field of outpatient care might be reduced. Obstacles of dissemination, concerning technical support systems for the elderly, have been worked out, among others, within the European project MoPAct – Mobilizing the Potential of Active Ageing in Europe (2012 – 2016): acceptance, funding, technology, safety, interoperability as well as the political framework. Taking up this level of knowledge, besides technological design, particularly functional, organizational, economic and social challenges have to be accepted in the project.

The project focuses on the situation of informal caregivers in the domestic surrounding. They face many difficulties during the care processes. The main duty is to hold available a continuous assistance service, comprising advice for the patient, personal hygiene, domestic work, giving medicine, co-operating with doctors and nurses, everything unpredictable in detail. This should be brought in line with the familiar, occupational and recreational situation of the informal caregivers. Former research show considerable physical and mental strain<sup>1</sup>, as well as

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1 Gräßel, Elmar, Behrndt, Elisa-Marie (2016): Belastungen und Entlastungsangebote für pflegende Angehörige, in: Jacobs, Klaus, Kuhlmei, Adelheid, Greß, Stefan, KlauBer, Jürgen, Schwinger, Antje (Hrsg.): Pflege-Report 2016, „Die Pflegenden im Fokus“. s.l. p. 172 f.

the importance of resilience factors<sup>2</sup>. Also the specific difficulties of informal caregivers at work have been identified yet<sup>3</sup>. The huge challenge of such care situations cannot be handled in the project completely. Therefore, communication between informal caregivers and dementia patients will be in the centre of Dem.Com.

Especially the outpatient care, for those in need of care and invalid persons, is difficult. Health care professionals as well as volunteers are affected. Digital applications provide not utilized capabilities to rise quality of life of elderly and invalid persons while watching costs as well.

Understanding the expressions and needs of the patients and reacting adequately is an important part of a successful assistance. Informal caregivers shall be supported by a digital expert system, when they look for appropriate communication strategies in their everyday life with dementia patients. The project Dem.Com shall result in a socio-technical innovation. Up to now, we do not have clustered knowledge about communication strategies in such situations available. Scientific experts from care and medicine should contribute as well as self-help initiatives and healthcare professionals.

Scientific findings and experiences from practice will be collected by Big Data Analysis, interviews, literature review and by Delphi method. This data base needs assessment results in a systematic catalogue of requirements for the guidance of informal caregivers. The requirements will be taken up in the technical support system. They decide on the concrete architecture and rules of the software system. After testing and debugging, the support system will be prepared for implementation by conceptual definition of the implementation phase and by filling in content. The research on cultural and lingual specifics will be prepared in this phase, too. Last but not least, the important issue of data protection has to be arranged as an intersection between societal, legal and technical aspects. A first pilot testing shall ensure the usability of the support system during the following phase of implementation and evaluation. Implementation and evaluation in-

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2 Kunzler, Angela, Skoluda, Nadine, Nater, Urs (2018): Die Bedeutung von Resilienz-faktoren für pflegende Angehörige von Demenzpatienten – eine Übersicht zu ausgewählten Faktoren, in: Psychother Psychosom Med Psychol 68 (2018) Nr. 1. s.l. p. 12 ff.

3 Offermanns, Guido, Schw eiger, Andrea (2018): Status quo Pflege – Zur (Un)Vereinbarkeit von informeller Pflege und Beruf, in: Behrens Doris A., Kreimer Margareta, Mucke Maria, Franz Nele Elisa (Hrsg.): Familie – Beruf – Karrier. s.l. p. 189 ff.

corporate guidance of the test users, research on acceptance, system maintenance and software improvements and evaluation of the implementation process taking up the above-mentioned cultural and lingual specifics.

Overall, the digital support system strives for the following objectives:

- Patients and their relatives should have better information and access to health literacy.
- Nurses and other health care professionals will get better informed coordinators, capable of acting.
- The social insurance system benefits from increasing quality and cost-effectiveness of dementia care.

Lastly, the support system should be ready for further commercial development and support informal caregivers optionally via different media, namely Personal Computer, Tablets, Notebooks and Smartphones. Besides, voice control should be available.

## 4 The healthcare system in the Republic of the Federal Republic of Germany

By Yvonne Behrens

### 4.1 Geography and political system

Germany has a total area of 357 578 km<sup>2</sup> <sup>4</sup>. The country borders on nine neighbouring countries: Austria (818 km), Czech Republic (818 km), Netherlands (576 km), Poland (469 km), France (455 km), Switzerland (333 km), Belgium (204 km), Luxembourg (136 km), and Denmark (68 km). In total 82 928 thousand inhabitants live in Germany (2018)<sup>5</sup>. This leads to a ratio of 233 inhabitants per km<sup>2</sup> <sup>6</sup>. 11.2 % of the population have a migration background (2017). The country's capital is Berlin, where 3 574 830 people live (as of 2017). The gross domestic product is about 3263.4 billion euros.

Germany has been a democratic, parliamentary state since 1949. The parliament consists of at least 598 members (plus overhanging and equalising mandates) and is elected every four years. The current head of state is Federal President Frank-Walter Steinmeier. The Federal President is elected every five years. The Federal Chancellor as head of government, currently Angela Merkel, is elected every four years.

The administrative structure comprises 16 federal states, each with its own constitution, parliament and government. The respective state governments send in total 69 members to the Federal Council, so that all federal states are represented<sup>7</sup>.

Germany has been a member of the European Union since January 1, 1958<sup>8</sup>.

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4 <https://www.bpb.de/nachschlagen/lexika/fischer-weltatmanach/65657/deutschland> (requested on 21.04.2020).

5 <https://de.statista.com/statistik/daten/studie/1985/umfrage/deutschland---grenzlaenge-zu-benachbarten-staaten/> (requested on 22.04.2020).

6 <https://de.statista.com/statistik/daten/studie/440766/umfrage/bevoelkerungsdichte-in-deutschland/> (requested on 06.10.2020).

7 <https://www.bpb.de/nachschlagen/lexika/fischer-weltatmanach/65657/deutschland> (requested on 21.04.2020).

8 [https://europa.eu/european-union/about-eu/countries/member-countries/germany\\_de](https://europa.eu/european-union/about-eu/countries/member-countries/germany_de) (requested on 21.04.2020).

## 4.2 Demography, health of the population

Life expectancy at birth is 83.4 years for women and 78.6 years for men (2017)<sup>9</sup>. The birth rate is 1.57 children per woman. Looking at the demographic change in Germany, it becomes clear that the population is aging rapidly. Every second person is currently over 45 years old, every fifth person over 66 years old<sup>10</sup>.

The greatest risk factors for the health of the German population are based on individual misconduct. In 2015, 28% of the burden of illness was due to illnesses caused by the consumption of alcohol and tobacco products and inadequate nutrition. The most common cause of death is cardiovascular disease. Cancer and diseases of the nervous system, which also include dementias, follow this. The following table shows the percentage distribution of deaths including gender.

**Table 1:** Percentage distribution of mortality in relation to the most common causes of death, broken down by gender (own table)

Pathology	Fatalities among the female population	Fatalities among the male population
<b>Cardiovascular diseases</b>	42 %	35 %
<b>Cancer</b>	23 %	29 %
<b>Nervous system disorders (including dementia)</b>	7 %	5 % <sup>11</sup>

Source: Own table (based on OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017).

## 4.3 The German health system

In 1883, Germany introduced the world's first nationwide system of statutory health insurance.

9 [https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/\\_inhalt.html](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/_inhalt.html) (requested on 06.10.2020).

10 [https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/\\_inhalt.html](https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/_inhalt.html) (requested on 21.04.2020).

11 OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels.  
<http://dx.doi.org/10.1787/9789264285200-de>, pp.1-4.

The administration of the system has a complex control structure. The federal government determines the legal framework. The joint federal committee, which is the highest decision-making self-governing body in the country, defines the regulatory details in form of guidelines. These include: the catalogue of benefits provided by statutory health insurers, reimbursement systems and quality assurance. The self-governing bodies at the state level are monitored by the individual federal states. The federal states are also responsible for hospital planning, investments and medical training.

#### **4.3.1 Health care service rules**

There is a general health insurance obligation in Germany. This means that there is almost universal health insurance coverage.

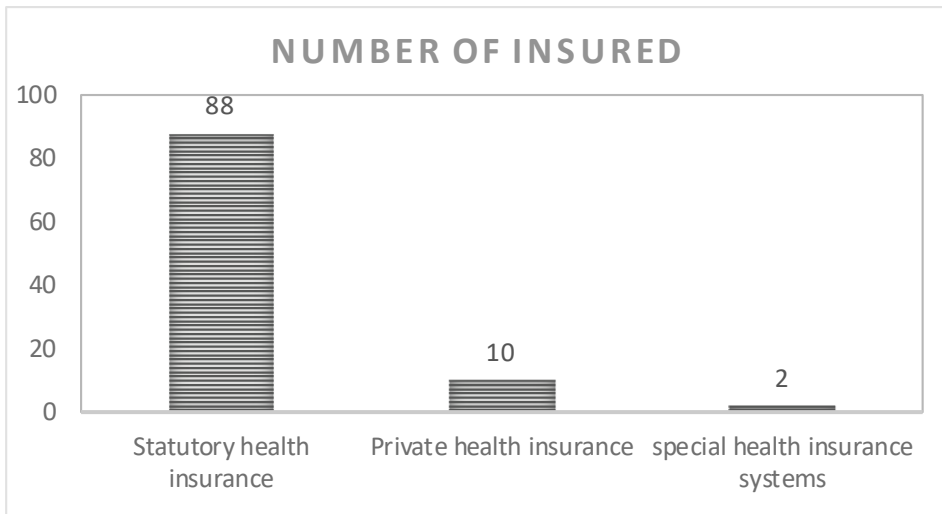
The financial regulation of financing health insurance is earnings-related with the statutory health insurance. The rates of the different insurance providers are approximately the same. The insurers' income is brought together through tax subsidies in the central health fund and then re-allocated to the health insurance companies in accordance with the risk equalization scheme<sup>12</sup>.

The following graphic shows the distribution of the insured among the individual insurance systems. The description "special health insurance systems" means insurance programs, which provide insurance, for example, soldiers or police officers.

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12 OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels.  
<http://dx.doi.org/10.1787/9789264285200-de>, pp. 6-7.



**Figure 1:** Distribution of the insured among the health insurance systems in percent

The graph shows that the vast majority of 88% is covered by statutory health insurance. 10% of the population are privately insured and 2% belong to the group of people who have special health insurance programs. According to estimates, 0.1% of the population, i.e. 79 thousand people, were not insured in 2015. Possible reasons are financial and administrative reasons. This can mean that self-employed are unable pay their contributions or that language barriers make hampers people to deal with the insurance system<sup>13</sup>

#### 4.3.2 Health care funding

11.2% of Germany's gross domestic product is used for the health care of its people. This corresponds to € 3,996 per capita (2015). Over 84.5% of health expenditure is paid by the public sector (2015), 12.5% is payed privately (2015). The purchase of medical goods make up 37% and long-term care 33% (2015)<sup>14</sup> of these costs.

13 OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, pp. 6-11.

14 OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>.

### 4.3.3 Healthcare resources

There are 4.2 doctors (2016)<sup>15</sup> and 8 hospital beds per 1 thousand inhabitants (2017)<sup>16</sup>. The high density of doctors, nurses and hospitals ensures that the availability of services is generally very good. However, there is still a deficiency of health workers and some specialists, especially in rural areas. The constantly stable number of medical students and the increasing number of nursing graduates' yields hope to reduce this deficiency. In order to reduce the shortage, doctors from abroad are also recruited and deployed. In 2015, 11% of all doctors came from abroad.<sup>17</sup> A total of 764 648 people work in inpatient and semi-inpatient care. Over 390,322 people work in outpatient care services.<sup>18</sup>

The German population shows a high level of activity, both outpatient and inpatient. On average, every citizen visits the doctor ten times a year. The hospitalization rate is 255 per 1 thousand inhabitants<sup>19</sup>.

### 4.3.4 Long term care and palliative care

The number of people in need of care in Germany is 3.4 million<sup>20</sup>, of which 2 594 862 people are cared for at home. Here, 1 764 904 people are cared for by their relatives<sup>21</sup>. There are 145 thousand nursing homes in Germany with a total

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<sup>15</sup> <https://www.tilasto.com/thema/bevoelkerung-und-gesundheit/gesundheitswesen/aerzte-pro-1000-einwohner> (requested on 06.10.2020).

<sup>16</sup> <https://de.statista.com/statistik/daten/studie/77168/umfrage/anzahl-von-krankenhausbetten-in-oecd-laendern/> (requested on 06.10.2020).

<sup>17</sup> OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, p. 8.

<sup>18</sup> Bundesministerium für Gesundheit (2020): Das deutsche Gesundheitssystem. Leistungsstark. Sicher. Bewährt. Berlin.

<sup>19</sup> OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, p. 8.

<sup>20</sup> [https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/\\_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742) (requested on 21.04.2020).

<sup>21</sup> <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/Tabellen/pflegebeduerftige-pflegestufe.html> (requested on 21.04.2020).

of 764 648 employees (2017). Over 14 100 outpatient nursing services are added to inpatient care. Over 390 322 people are employed in this sector (2017)<sup>22</sup>.

#### 4.4 Dementia in Germany

In 2018, over 1.7 million people with dementia lived in Germany. 300 thousand new cases are registered each year. Due to the increasing demographic change, there are more new cases than deaths. Therefore, the number of sufferers is steadily increasing. People under the age of 65 also show a high number with 25 thousand cases of illness<sup>23</sup>. Over 120 thousand people with a migration background currently suffer from dementia. Of these, around 12 500 people have a moderate to severe form of the disease<sup>24</sup>. The majority of those affected come from Eastern and Central Europe. The need for intercultural opening in dementia care is increasing significantly, not least due to the expected increase in dementia sufferers with a migration background. Foreign language information materials are already available from the German Alzheimer's Society. The illness of dementia is particularly serious for people with a migration background, as it can lead to alienation from their social environment. Memories and the basic trust in a life in Germany increasingly disappear in the course of dementia. In addition, there is the loss of German language skills<sup>25</sup>. Communication in the mother tongue is becoming increasingly important and promotes the health participation of the patient in the care situation<sup>26</sup>. The increasing number of people with dementia will inevitably become a key challenge in the German health and care system<sup>27</sup>.

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22 [https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/\\_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742) (requested on 21.04.2020).

23 Deutsche Alzheimer Gesellschaft e.V. : Selbsthilfe Demenz; Infoblatt 1 „Die Häufigkeit von Demenzerkrankungen“.s.a. s.l.

24 <https://www.wegweiser-demenz.de/informationen/gesellschaft-und-demenz.html> (requested on 21.09.2020).

25 <https://www.wegweiser-demenz.de/en/informationen/gesellschaft-und-demenz/demenz-und-migration.html> (requested on 21.09.2020).

26 Behrens, Y.; Langer, P. (2020): Steigerung des sozialen Kapitals durch kultur- und sprachensible Versorgungsansätze im Gesundheitswesen. Das Gesundheitswesen. s.l.

27 <https://www.aerzteblatt.de/nachrichten/109460/Deutliche-Zunahme-an-Demenzkranken-in-Deutschland-und-Europa-erwartet> (requested on 14.05.2020).

## 5 The healthcare system in the Republic of Poland

*By Mariusz Geremek*

### 5.1 Geography and political system

The Republic of Poland is located in Central and Eastern Europe (as the largest country of Central and Eastern Europe). In January 2019 the Republic of Poland's area was 312 705 km<sup>2</sup> (9<sup>th</sup> largest country of Europe, 6<sup>th</sup> of the European Union) with a population estimated at 38.4 million citizens (123 persons per km<sup>2</sup>)<sup>28</sup>. The length of the Polish border is 3511 kilometres. Poland borders with Germany (467 km), Czech Republic (796km), Slovakia (541 km), Ukraine (535 km), Belarus (418 km), Lithuania (104 km) and Russian Federation (210 km). Since 1999 Poland is divided into 16 voivodships. Warsaw, the capital of Poland has the largest population estimated at 1778 thousands inhabitants<sup>29</sup>. Poland is member of the European Union since 1 May 2004 and of the Organisation for Economic Cooperation and Development since 1996.

Polish Constitution of 1997 defines that the Republic of Poland shall be a democratic state ruled by law. The Prime minister serves as head of the government and the President is the head of the state. The parliament, which has legislative power, consists of two chambers- Sejm (lower chamber, 460 seats) and Senate (higher chamber, 100 seats). The Parliament is democratically elected by citizens for a four-year term of office. The president has representative functions and his power is limited in favour of the parliament. The President is elected by citizens for a five-year term of office<sup>30</sup>.

After democratic transformation of 1989 the local authorities were introduced. Since 1990 every of the 2477 gmina (community) has its own democratically elected council for a four-year term of office<sup>31</sup>. In 1999, second-level unit of the local government, poviats, were introduced (equivalent to a county or district) together with 16 new voivodships and voivodship sejmik (regional assembly)<sup>32 33</sup>.

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28 Area and population in the territorial profile in 2019. Statistics Poland, Warsaw 2019.

29 Concise Statistical Yearbook of Poland, Statistics Poland, Warsaw 2019.

30 The Constitution of the Republic of Poland of 2nd April, 1997. No. 78, item 483.

31 The Act of 8 March 1990 on the Municipal Government

32 The Act of 5 June 1998 On The Poviats Self-Government

33 The Act of 5 June 1998 On the Voivodeship Self-Government

## 5.2 Demographics, health of the population

In December of 2018, the Republic of Poland had a population of 38 411 thousands inhabitants, from which about 60.1% lived in urban areas and 39.9% in rural areas. There are 107 women for every 100 men. The Polish population is one of the most homogenous in the European Union with Poles estimated on the level of 97%<sup>34</sup>. 62.7 % of the population are people aged 20-64. In 2018, life expectancy indicator had a value of 81.7 years for women and 73.8 years for men. There is a significant increase in number of people aged  $\geq 65$  years in Poland (16.7% in 2017). Population projections suggest that this indicator will double by 2050 (32.7%)<sup>35</sup>. The total fertility rate was estimated on the level of 1.43 (one of the lowest values in both, European Union and world). The infant mortality rate was 3.8 infant deaths per 1 thousand live births.

Although there is a stable decrease in cardiovascular mortality since 1992, CVD is the main cause of death in the Polish population (about 41% deaths in 2017). The second cause of death are neoplasms (about 26.5%). Diseases of the respiratory system, injuries and poisonings by external cause account for about 6.5% and 4.77% respectively. Obesity and allergies are growing health problems<sup>36</sup>.

## 5.3 Health care services rules

Polish healthcare system is based on the insurance model. On the central level the system is governed by Ministry of Health, on the voivodship, poviats and community levels, it is governed by the local government units. The National Health Fund (Narodowy Fundusz Zdrowia, NFZ) is a centralized government institution, which acts as a purchaser and payer of the public health insurance system<sup>37</sup>. According to the article 65 of the Act of 27 August 2004 on healthcare services, financed from public funds, obligatory health insurance is based on the following principles: equal treatment, social solidarity, providing the insured with equal access to healthcare services and the choice of providers of healthcare services

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34 Concise Statistical Yearbook of Poland, Statistics Poland, Warsaw 2019.

35 Demographic situation of the elderly and the consequences of population aging in Poland in the light of the prognosis for the years 2014-2015. Główny Urząd Statystyczny, 2014. s.l.

36 Sytuacja zdrowotna ludności Polski i jej uwarunkowania. Wojtyński B., Goryński P., Narodowy Instytut Zdrowia Publicznego- Państwowy Zakład Higieny, Warszawa 2018.

37 Poland. Health system review. Health Systems in Transition Vol. 21 No. 1 2019. s.l.

(from those who have a contract with the NFZ (the provider of healthcare procedures within the public health system)<sup>38</sup>. All employees, farmers and self-employed are subject to health insurance. The constitution of the Republic of Poland states that all citizens have the right to have health protection and, regardless of their financial status, have the equal right to access to health services, financed from public funds. Public authorities are responsible for ensuring access to health care for children, pregnant women, handicapped people and elderly, epidemiological surveillance and public health issues<sup>39</sup>. According to the Act of 27 August 2004 on healthcare services, every employee is obliged to pay 9% of its salary on the health insurance. If the employee receives more than one salary in the same or different job he or she is obliged to pay health insurance from every of its salary. The same scheme applies if a self-employed person carries out more than one business activity. The farmers pay one zloty per hectare a month. Farm owners up to six hectares don't pay the health insurance (the health insurance for them is paid from the state budget). A separate scheme applies to family members of the insured persons.

### **5.3.1 Health responsibility of the central, regional and local authorities**

On the national level, the Ministry of Health is responsible for health policy (i.e. medical standards and defining, which diagnostic and therapeutic procedures will be refunded within medical care), submitting proposals of legal acts to the parliament, cooperating with other ministries and central institutions to ensure the protection of citizens' health, including health issues in other policies, as well as healthcare system management and organization. The Minister of Health acts as a founder of medical universities and specialized hospitals across the country.<sup>40</sup>

On the regional and local level, the authorities are responsible for ensuring access to medical care for its citizens, and implementation of public health programmes (i.e. Poland's National Health Programme). The vast majority of hospitals are publicly owned and operate as independent, public healthcare units (Samodzielne Publiczne Zakłady Opieki Zdrowotnej, SPZOZ). Some of the ambulatory care units (both primary and specialist) operate as well as the SPZOZs. Local authorities are the founding bodies for SPZOZs across the country. Although local government units do not directly finance medical procedures of the SPZOZs as founding bodies, they are responsible for buying medical equipment

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38 The Act of 27 August 2004 on healthcare services financed from public funds obligatory health insurance.

39 The Constitution of the Republic of Poland of 2nd April, 1997. No. 78, item 483.

40 Poland. Health system review. Health Systems in Transition Vol. 21 No. 1 2019.

for their units. They are also allowed to transfer financial resources from its budgets on public health programmes, health promotion programmes for its citizens, renovations, buying additional equipment, implementation of projects financed from EU budget or European Free Trade Association (EFTA). Above mentioned financial transfers could be directed not only to the hospitals founded by local authorities but also other hospital units within its territorial division. For example, it allows communities to transfer funds for their poviats hospitals and poviats councils to support hospitals in the municipalities<sup>41</sup>.

### **5.3.2 Historical background of the Polish healthcare system**

As an effect of the Third Partition of Poland in 1795, Polish country was erased from the map of Europe. It regained independence in 1918. First modern healthcare solutions in the nowadays territory of Poland were introduced in the 1880s, when it was part of Germany (health insurance system introduced by Otto von Bismarck). Several years later, similar solutions were introduced in the territory of Poland, which was incorporated into Austria-Hungary.

The decree of 11 January 1919 on compulsory sickness insurance was introduced just two months after regaining independence after the First World War. This legal act was modelled on German solutions (obligation of insurance, introduction of Sickness Funds). One of the biggest challenges of the Second Republic of Poland (term used to describe the Republic of Poland during 1918-1939) was to unify territories, which were previously divided between Russia, Germany and Austria-Hungary. The Sickness Funds were functioning in the parts, which had been previously administered by Germany and Austria-Hungary and there was just a need of changing their names (from Krankenkasse into Kasa Chorych), transforming their organisation schemes and assigning new tasks. On the territory previously administered by Russia, the system of sickness funds didn't exist and had to be created. According to the decree of 11 January 1919 the sickness funds were self-governing institutions, completely independent of the central state institutions. This meant that they performed their tasks in the field of health and social care, but were not public administration bodies. The sickness funds were autonomic legal entities (which made their decisions on their own responsibility) and had their own budgets, which were not part of the state budget. In 1920,

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41 Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot twórczy oraz płatnik. Szetela P. *Zdrowie Publiczne i Zarządzanie* 2015; 13 (1): pp. 55-68. s.l.

The Act of 19 May on compulsory sickness insurance was introduced. It increased the importance of health issues, described in the decree of 11 January 1919. The act introduced free access to outpatient healthcare for insured, sickness benefits up to 60% of the salary (up to 75% in case of large financial resources of the sickness fund). Insured persons had access to public hospitals, which had a contract with their sickness fund. The payment for hospital treatment was in equally beared by the patient and the sickness fund. This act implemented the principle of universal, compulsory health insurance for all employees. Unemployed persons could have access to healthcare, if the disease occurred before the end of the thirteenth week of sickness fund membership (due to the lost job).

In 1933, the act of 28 March 1933 on a social insurance was introduced to eliminate differences in the quality of medical procedures across the country, maintaining financial liquidity during Great Depression and rapid decrease in inflow of financial resources due to the growing unemployment rate. The act of 28 March 1933 also changed the name of health insurance companies from sickness funds to social insurances and reduced their autonomy as legal entities. The act also limited access to obligatory health insurance scheme for some groups of employees (farm workers) and reduced the scope of refunded medical procedures and duration of sickness benefits<sup>42</sup>.

After the Second World War the centralized Soviet style Siemaszko Model of healthcare was introduced. This process was initiated by the introduction of the act of 28 October 1948 on social healthcare units and planned economy in healthcare. All public and non-public healthcare units have been nationalized and the state had a full monopoly on the establishing and operating of the healthcare units. The next significant changes took place in 1970s when the Healthcare Units (Zespół Opieki Zdrowotnej, ZOZ) were introduced. ZOZ was responsible for providing access to both, outpatient and inpatient healthcare in its statutory geographical area. Under ZOZ primary care teams consisting of internists, paediatricians, gynaecologists and dentists were introduced. Outside of ZOZ there were outpatient healthcare units organized at the factories, mines and universities. Just like in the Soviet Union, Ministry of National Defence of People's Republic of Poland and Ministry of Internal Affairs of People's Republic of Poland were establishing and operating its own ambulatory and hospital units available for their employees and members of their families. Since 1975 medical care was provided at

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42 Prawne aspekty transformacji systemu ochrony zdrowia w Polsce po 1989 roku. Interdyscyplinarne studium z zakresu nauk o zdrowiu i nauk prawnych. Jach-Męczekalska, 2016.



municipal level (ambulatory care units and hospitals operated by ZOZ), voivodship level (specialized ambulatory units and hospitals) and national level (hospitals operated by the medical universities, sanatoriums). The Siemaszko style healthcare system in Poland was focussed on specialist care and hospital treatment, thus the growing number of specialists, long average length time of hospital stay and creating financial plans based on expenses from the previous year, without financial forecasting resulted in rising healthcare costs<sup>43</sup>.

The economic crisis of the late 1980s and free market reforms introduced after the political and economic transformation of 1989 which also concerned the provision of health services and the production and distribution of medicines, made decision makers aware of the need for significant changes in the organization of healthcare in Poland. Act of 6 February 1997 on national health insurance reintroduced insurance model of healthcare<sup>44</sup>. The key aspects of new solutions were separating the function of payer and organizer of the healthcare procedures delivery (both functions have been previously performed by the public authorities). The internal market and competition between public and non-public healthcare providers were introduced. The payment was duty of the newly established 17 autonomous sickness funds. 16 of them were introduced in accordance with the territorial division of the country and the 17th sickness fund was introduced for employees of the uniformed services (i.e. army, police, fire brigade, prison guard). Although the health care financing was decentralized, the lack of contracting standards and different payment mechanisms resulted in differences in access and quality of healthcare across country. The Act of 23 January 2003 on the National Health Fund replaced the sickness funds as payers of medical procedures with the National Health Fund (NFZ)<sup>45</sup>. Due to the fact, that part of the Act of 23 January 2003 on the National Health Fund was considered by the Constitutional Tribunal as unconstitutional, it was replaced by the Act of 27 August 2004 on healthcare services financed from public funds<sup>46</sup>. The main bodies of the NFZ are the Council of the Fund and the President of the Fund, Council of the provincial branches of the Fund and their directors. The Council and the President of the fund are being appointed by the Prime Minister on the proposal of the Minister of

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43 Kobza J. 2005. Rola i miejsce kadry zarządzającej w reformowanym systemie opieki zdrowotnej w Polsce. Zakład Polityki Zdrowotnej i Zarządzania, Instytut. Zdrowia Publicznego, Wydział Ochrony Zdrowia, Collegium Medicum Uniwersytetu Jagiellońskiego.s.l.

44 Act of 6 February 1997 on national health insurance

45 The Act of 23 January 2003 on the National Health Fund

46 <http://trybunal.gov.pl/postepowanie-i-orzeczenia/komunikaty-prasowe/komunikaty-po/art/4157-kasy-chorych-skladki-na-ubezpieczenie-zdrowotne> (requested on 10.10.2019).

Health and after consulting its candidature with the Fund Council. This step was considered by the healthcare specialists as the recentralization of healthcare.<sup>47</sup>

### 5.3.3 Financing

In 2018, the total healthcare expenditures in Poland were at the level of 6.3% of GDP and were at the significant lower level than OECD average (8.8% of GDP). The increase of spending's was not observed during the last decade (6.6% of GDP in 2009, 6.25% of GDP in 2014). The out of pocket expenditures are considered at the level of 20.6% of the total healthcare expenditures. The total healthcare expenditures of Poland are lowest from all Visegrad Group members (Czech Republic, Slovak Republic, Hungary and Poland) and one of the lowest in whole EU-28<sup>48</sup>. Healthcare funds are collected mainly from the employees' health insurance payments (9% of the salary). The collected money is transferred to the NFZ central budget and then to its provincial branches. The NFZ spending's constitute about 85% of all healthcare expenditures in Poland.<sup>49</sup>

### 5.3.4 Healthcare resources

There is an increasing problem of lacking medical workforce in Poland. There is a significant lack of both, physicians and nurses, especially in rural voivodships without medical universities. In 2016, there were 144 982 physicians on the territory of Poland. In 2017, there were 2.4 physicians per 1 thousand inhabitants (OECD average: 3.5). The value of this indicator didn't change significantly during the last ten years (2.2 in 2008, 2.2 in 2013). In 2017 there were 11 medical graduates per population of 100 thousand (OECD average: 12.7). In 2017 there were 5.1 nurses per 1 thousand inhabitants (OECD average 8.8). The number of nurses was on the stable level during previous decade (5.2 in 2008, 5.3 in 2013). In 2017 there were 21.1 nursing graduates per population of 100 thousand.

In 2017 325 8 million of medical consultations were performed in the outpatient care. 52.9% by primary care physicians and 36.3% by specialists, 10.8% by dentists<sup>50</sup>.

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47 Poland. Health system review. Health Systems in Transition Vol. 21 No. 1 2019

48 Current expenditure on health, % of gross domestic product. OECD Health Statistics Frequently Requested Data.

49 Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot twórczący oraz płatnik. Szetela P. Zdrowie Publiczne i Zarządzanie 2015; 13 (1): pp. 55-68.

50 Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019. s.l.

Outpatient consultations by age of patients in 2017.

**Table 2:** Outpatient consultations by age of patients in 2017

Age	% of the population	% of the consultations		
		Primary care	Specialists	dental
0-17	18	21.5%	12.9%	28.7%
18-64	65.4	46.3%	59.0%	56.4%
65+	16.7	32.2%	28.1%	14.9%

Source: Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019

In 2017, there were 951 general hospitals and 191 short-stay surgery hospitals in Poland (2.5 stationary hospitals per 100 thousand inhabitants). In 2017 845 86 thousand of patients had medical procedures performed in stationary hospitals. About 24% were hospitalized in the surgical departments, 13.4% (1132.2 thousands of patients) in obstetrics and gynaecology clinics, 11.7% (985.5 thousands of patients) in internal medicine departments, 6.9% (581 thousands of patients) in cardiologic departments, 5.3% (446.7 thousands of patients) in paediatric departments, 4.1% (344 thousands of patients) in oncologic departments.<sup>51</sup>

### 5.3.5 Long-term care and palliative care

There is a constant need to increase the number of long-term care facilities due to the aging process in most of the developed countries. These units are nursing and patient rehabilitation oriented. In 2017, there were 576 inpatient long-term care facilities and 161 palliative care and hospice care facilities in Poland<sup>52</sup>.

At the end of 2018 there were 1831 stationary social welfare facilities in Poland with almost 119 thousand beds and 113 thousand residents. Both, the number of facilities and residents are steadily increasing (6.3% increase in number of facilities, 2.4% increase in number of beds, and 3.5% increase of residents comparing to 2017)<sup>53</sup>.

<sup>51</sup> Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019. s.l.

<sup>52</sup> Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019. s.l.

<sup>53</sup> Zakłady stacjonarne pomocy społecznej w 2018 roku. Główny Urząd Statystyczny, 2019. s.l.

## 5.4 Dementia in Poland

Due to the constant growth in number of people aged  $\geq 65$  the risk for neurodegenerative diseases, including dementia increases rapidly (2.8 cases of dementia of Alzheimer's type per 1 thousand person-years among age group of 65-69 up to 56,1 per person-years in group  $>91$ ). Dementia is caused by the brain damage that significantly reduces cognitive functions, what could affect speaking, spatial awareness and provoke apraxia. Age is one of the main risk factors of dementia. Up to age of 74 the prevalence of dementia is estimated on the level  $<5\%$ , but among people aged 85 the prevalence rate is 20-30%<sup>54</sup>. There are several types of dementia. The most common type of dementia is the Alzheimer type (50-70% of cases, F00 in ICD-10). The vascular dementia, which is caused by the lack of proper supply of blood to the brain (about 25%, F01 in ICD-10), dementia with Lewy bodies, which is neurodegeneration (about 15%, G31.8 in ICD-10) and frontotemporal dementia (G31.0 in ICD-10)<sup>55</sup>. In the PolSenior study dementia was diagnosed in 10.6 patients aged 65-69, 14.7% aged 70-74, 26.6% aged 75-79, 35.2% aged 80-84, 46.2% aged 85-89, 66% aged  $\geq 90$ <sup>56</sup>. In 2015, there were 360-470 thousand people with dementia of Alzheimer type in Poland. While in the period of 2005-2010 the annual increase of dementia of Alzheimer type was about 2%, in the period 2010-2015 it was estimated on the level of 3-4%. Just like in other countries, the statistical data concerning dementia could be underestimated<sup>57</sup>.

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54 The Erwin Böhmer's Psychobiographically Model as An Innovative Approach to Seniors with Dementia. Smrokowska-Reichmann A., *Labor et Educatio*. 5, 2017. s.l.

55 International Statistical Classification of Diseases and Related Health Problems 10th Revision, <https://icd.who.int/browse10/2010/en> (requested on 11.10.2019).

56 Aspekty medyczne, psychologiczne, socjologiczne i ekonomiczne starzenia się ludzi w Polsce. Mossakowska M., Więcek A., Błędowski P., Warszawa 2012.

57 Dementia in the aging population of Poland: challenges for medical and social care. Karczewska B., Bień B., *Health Prob Civil*. 2019, 13, p. 3. s.l.

## 6 The healthcare system in the Republic of Bulgaria

By Yvonne Behrens

### 6.1 Geography and political system

Bulgaria has a total area of 110 370 km<sup>2</sup><sup>58</sup> and 7 364 570 inhabitants (2011)<sup>59</sup>. The result is a ratio of 64.7 inhabitants per km<sup>2</sup><sup>60</sup>. The capital of Bulgaria is Sofia<sup>61</sup>, where 1 241 675 people live<sup>62</sup>. 1.37% of the Bulgarian population have a migration background (2019)<sup>63</sup>. The country borders on five other countries: Romania (605 km), Greece (472 km), Serbia (344 km), Turkey (223 km) and North Macedonia (162 km)<sup>64</sup>. The gross domestic product is 65.13 billion Euro<sup>65</sup>.

Bulgaria is a parliamentary republic under the 1991 constitution. The parliament is formed by the National Assembly (Narodno sabranje) with a total of 240 members, who are elected every four years. The head of state is elected every five years<sup>66</sup>. President Rumen Radev currently holds this function. The current head of government is Prime Minister Boyko Borisov<sup>67</sup>.

The administrative division is divided into 28 administrative districts<sup>68</sup>. Bulgaria has been a member of the European Union since January 1st, 2007<sup>69</sup>.

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58 <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65647/bulgarien> (requested on 22.04.2020).

59 [https://europa.eu/european-union/about-eu/figures/living\\_de#population](https://europa.eu/european-union/about-eu/figures/living_de#population) (requested on 22.04.2020).

60 <https://de.statista.com/statistik/daten/studie/278289/umfrage/bevoelkerungsdichte-in-bulgarien/> (requested on 22.04.2020).

61 [https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria\\_de](https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria_de) (requested on 22.04.2020).

62 <https://de.statista.com/statistik/daten/studie/943331/umfrage/groesste-staedte-in-bulgarien/> (requested on 22.04.2020).

63 <https://de.statista.com/statistik/daten/studie/760086/umfrage/auslaenderanteil-in-bulgarien-nach-geschlecht/> (requested on 22.04.2020).

64 <https://www.laenderdaten.de/geographie/grenzen.aspx> (requested on 22.04.2020).

65 <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=BG> (requested on 28.04.2020).

66 <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65647/bulgarien> (requested on 22.04.2020).

67 <https://www.auswaertiges-amt.de/de/aussenpolitik/laender/bulgarien-node/bulgarien/211824> (requested on 22.04.2020).

68 <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65647/bulgarien> (requested on 22.04.2020).

69 [https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria\\_de](https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria_de) (requested on 22.04.2020).

## 6.2 Demography, health of the population

Life expectancy at birth is 78.4 years for women and 71.4 years for men (2017). Different levels of education lead to further deviations. For example, a person with a low level of education at the age of 30 has a 6.9 year lower life expectancy than a 30-year-old person with a high level of education. The birth rate is 1.6 children per woman. One fifth (20.7%) of the population is over 65 years old.

The main cause of death is cardiovascular disease. In 2016, 1 100 people per 100 thousand inhabitants died. Behavioural health risk factors account for over half (51%) of all deaths. These include nutritional risks, such as the low consumption of fruits and vegetables. At the same time, the population consumes a lot of salt and sugar. 33% of all deaths were referred to in 2017. Another misconduct has to do with high tobacco and alcohol consumption. At this point it should also be mentioned that there are differences in the extent of misconduct between the different levels of education. There is also a high rate of disease from infectious diseases. This includes for example tuberculosis.

The infant mortality rate is 5.8 deaths per 1 thousand live births (2018)<sup>70</sup>.

## 6.3 The Bulgarian health care system

The first health insurance was created in Bulgaria in 1918 under the title "Workers' Insurance Against the Risks Disease and Incident Act". In 1924, Parliament passed the law on the Public Insurance Act. This should protect all workers in government and private companies or organizations in the event of loss from risks induced by illness, maternity, disability and old age. The health insurance system exists since 1998 under the name „Health Insurance Act“<sup>71</sup>.

The Bulgarian health system is partly decentralized. At a central level, the Ministry of Health is responsible for the development of health policy, the development of legislation, sector-specific planning and prioritization, the organization of emergency care and public health measures. Some implementation and funding tasks are decentralized because they are delegated to local authorities. In addition, the National Health Insurance Fund (NHIF) is under control of the Ministry of Health. This public non-profit organization manages statutory health insurance. The NHIF headquarter is located in Sofia. It has additionally 28 nationwide offices and 105

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70 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 4-14.

71 <http://www.en.nhif.bg/> (requested on 14.05.2020).

regional offices. The aim of the NHIF is to provide the public with effective access to healthcare. In addition, 20 other private health insurance schemes are used by 3% of the population (2010).

On closer examination of the distribution of service providers in the Bulgarian health system, the following three can be named: outpatient providers of medical and health services, inpatient providers and providers in special care centres. The former are primary providers and specialists. Primary medical care and outpatient care are largely privatized. Individual or group practices carry out the services. Hospitals can be private as well as managed by a public representative, the state, or by the community. At this point, it should be mentioned that the state bears nearly all university clinics. The state is also sponsoring many national hospitals and inpatient psychiatric facilities<sup>72</sup>. If the hospital is privately owned, the costs are not covered by the health insurance<sup>73</sup>. Long-term care costs are neither covered by statutory health insurance<sup>74</sup>.

### 6.3.1 Health care service rules

Health insurance is compulsory in Bulgaria and depends on your place of residence and your nationality. Insurance provides the insured with free access to a service package. The customer can choose the service provider himself. Depending on the service, additional costs may arise.

The national health insurance company manages the health insurance, which is funded by contributions. All employees and the self-employed must contribute to the statutory health insurance. For employees, health insurance contributions are part of their social security charges, which are deducted by their employer from their salaries<sup>75</sup>. The insurance contribution accounts for 8% of the monthly salary and is equally paid by employer and employee<sup>76</sup>. Self-employed persons have to

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<sup>72</sup> Kösters, I.: *Arteria Danubia. Gesundheitsregionen im Donauraum*. Essen, 2019. pp. 15-16.

<sup>73</sup> Europäische Union: *Die Verwaltung der Gesundheitssysteme in den EU-Mitgliedstaaten- Die Rolle der lokalen und regionalen Gebietskörperschaften*. 2012, s.l. pp. 15-17.

<sup>74</sup> OECD/European Observatory on Health Systems and Policies (2019), *Bulgaria: Country Health Profile 2019, State of Health in the EU*, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. p. 11.

<sup>75</sup> <https://ec.europa.eu/eures/main.jsp?catId=8757&acro=living&lang=de&parentId=7803&countryId=BG&living=> (requested on 14.05.2020).

<sup>76</sup> Kösters, I.: *Arteria Danubia. Gesundheitsregionen im Donauraum*. Essen, 2019. p. 15.

pay the statutory health insurance independently<sup>77</sup>. Some groups of the population, such as pensioners and students under the age of 26, are exempt from paying this contribution<sup>78</sup>.

In 2018, 10.2% of the Bulgarian population was not covered by health insurance. In this case, the benefits must be borne by themselves. Long-term unemployed, the Roma population and people from disadvantaged regions are mainly affected.

### 6.3.2 Health care funding

The Bulgarian health system is a hybrid of a social security system and a tax-financed system<sup>79</sup>. 8.1% of the gross domestic product is spent on health care for the Bulgarian population. This corresponds to 1 311 euros per head. The out-of-pocket expenditure is 46.6% (2017). These costs are primarily associated with services from the dental sector and long-term care. There are additional costs for any services and prescription drugs<sup>80</sup>.

### 6.3.3 Health care resources

At regional level, there are 28 centrally funded regional health centres and 28 independently practicing emergency care centres<sup>81</sup>. In 2016, only 15.5% of all doctors were general practitioners, which is a result of the low attractiveness of general medicine compared to special medicine. The decreasing amount of practicing doctors is also favoured by their rapid aging<sup>82</sup>. There is also a large emigration of Bulgarian doctors. In 2015, around 2.600 doctors worked in other EU countries. Many medical graduates migrate to other EU countries immediately

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77 <https://ec.europa.eu/eures/main.jsp?catId=8757&acro=living&lang=de&parentId=7803&countryId=BG&living=> (requested on 14.05.2020).

78 Europäische Union: Die Verwaltung der Gesundheitssysteme in den EU-Mitgliedstaaten- Die Rolle der lokalen und regionalen Gebietskörperschaften. 2012, s.l. pp. 16-17.

79 Kösters, I.: Arteria Danubia. Gesundheitsregionen im Donauraum. Essen, 2019. p. 15.

80 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 10-16.

81 Europäische Union: Die Verwaltung der Gesundheitssysteme in den EU-Mitgliedstaaten- Die Rolle der lokalen und regionalen Gebietskörperschaften. 2012, s.l. p. 16.

82 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 11-22.



after completing their training. The same can be observed among nurses<sup>83</sup>. This will lead to a deterioration in access to general medicine.

In Bulgaria, there are 7.5 hospital beds available per 1 thousand residents. The perception of medical care is 6.1 consultations per person per year (2017). In 2017, 32.6% of the population reported difficulties in treatment and 54.8% in access to health services<sup>84</sup>. The unequal distribution of service providers in the health care sector makes access even more difficult.

#### **6.3.4 Long-term care**

In the home care situation, relatives care mostly for people with care needs. If this is not possible, those in need of care can live in care facilities with the support of local social support services<sup>85</sup>. There are currently 1 thousand long-term care facilities nationwide<sup>86</sup>. Due to the rapid aging process in Bulgaria, this will become a key challenge in the next years<sup>87</sup>.

### **6.4 Dementia in Bulgaria**

According to the Alzheimer's Association Bulgaria, there are currently about 100 thousand people with dementia in Bulgaria<sup>88</sup>. Half of these people suffer from Alzheimer's disease. The caring relatives' burden increases, due to insufficient dementia diagnosis and dementia care. This is caused by the small range of care facilities that people with dementia can accept. In 2015 there were only 14 nursing homes in Bulgaria that had space for 836 patients. Staff is often shorthanded and needs more training to deal adequately with people with dementia. Regular training does not provide that special knowledge (2015)<sup>89</sup>.

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83 Kösters, I.: *Arteria Danubia. Gesundheitsregionen im Donauraum*. Essen, 2019. p. 17.

84 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 11-22.

85 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 11-22.

86 <https://alzheimer-bg.org/> (requested on 13.05.2020).

87 OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. p. 11.

88 <https://alzheimer-bg.org/> (requested on 13.05.2020).

89 <http://www.alzheimer-europe.org/Policy/National-Dementia-Strategies/Bulgaria> (requested 06.05.2020).

## **7 Comparison of the key data**

*By Yvonne Behrens*

The following table summarizes the most important findings from the country-specific presentations.

**Table 3:** Comparison of the key data

Country	Bulgaria	Germany	Poland
<b>General information</b>			
<b>Area</b>	110 370 km <sup>2</sup> <sup>90</sup>	357 578 km <sup>2</sup> <sup>91</sup>	312 705 km <sup>2</sup> <sup>92</sup>
<b>Population</b>	7 364 570 inhabitants <sup>93</sup>	8 928 000 inhabitants <sup>94</sup>	38 400 000 inhabitants <sup>95</sup>
<b>Political system</b>	Parliamentary republic <sup>96</sup>	Democratic, parliamentary republic <sup>97</sup>	democratic republic <sup>98</sup>
<b>Health information</b>			
<b>Life expectancy</b>	78,4 years ♀ 71,4 years ♂ <sup>99</sup>	83,4 years ♀ 78,6 years ♂ <sup>100</sup>	81,7 years ♀ 73,8 years ♂ <sup>101</sup>
<b>Birth rate</b>	1,6 children/ w omen <sup>102</sup>	1,57 children/ w omen <sup>103</sup>	1,43 children/ w omen <sup>104</sup>
<b>Existing health insurance system since ...</b>	Health insurance since 1918 <sup>105</sup>	statutory health insurance since 1883 <sup>106</sup>	sickness insurance since 1919 <sup>107</sup>
<b>Insurance system</b>	health insurance obligation <sup>108</sup>	health insurance obligation <sup>109</sup>	health insurance obligation <sup>110</sup>
<b>Financing</b>	8,1% of GDP (1311 €/capita) <sup>111</sup>	11,2% of GDP (3,996 €/capita) <sup>112</sup>	6,3% of GDP <sup>113</sup>
<b>Care system</b>	7,5 hospital beds/ 1000 habitants <sup>114</sup>	4,2 doctors/ 1000 habitants <sup>115</sup> 8 hospital beds/ 1000 habitants <sup>116</sup>	2,4 doctors/ 1000 habitants <sup>117</sup>
<b>In need of care</b>	./.	3,4 million people <sup>118</sup>	./.
<b>People with dementia</b>	100 000 <sup>119</sup>	1 700 000 (state 2018) <sup>120</sup>	./.

<sup>90</sup> <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65647/bulgarien> (requested on 22.04.2020).

<sup>91</sup> <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65657/deutschland> (requested on 21.04.2020).

<sup>92</sup> Area and population in the territorial profile in 2019. Statistics Poland, Warsaw 2019.

<sup>93</sup> <https://www.bpb.de/nachschlagen/lexika/fischer-w-eltalmanach/65647/bulgarien> (requested on 22.04.2020).

- <sup>94</sup> <https://de.statista.com/statistik/daten/studie/1985/umfrage/deutschland---grenzlaenge-zu-benachbarten-staaten/> (requested on 22.04.2020).
- <sup>95</sup> Area and population in the territorial profile in 2019. Statistics Poland, Warsaw 2019.
- <sup>96</sup> <https://www.bpb.de/nachschlagen/lexika/fischer-weltatmanach/65647/bulgarien> (requested on 22.04.2020).
- <sup>97</sup> <https://www.bpb.de/nachschlagen/lexika/fischer-weltatmanach/65657/deutschland> (requested on 21.04.2020).
- <sup>98</sup> The Constitution of the Republic of Poland of 2nd April, 1997. No. 78, item 483.
- <sup>99</sup> OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 4-14.
- <sup>100</sup> [https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/\\_inhalt.html](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/_inhalt.html) (requested on 06.10.2020).
- <sup>101</sup> Demographic situation of the elderly and the consequences of population aging in Poland in the light of the prognosis for the years 2014-2015. Główny Urząd Statystyczny, 2014. s.l.
- <sup>102</sup> OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 4-14.
- <sup>103</sup> [https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/\\_inhalt.html](https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/_inhalt.html) (requested on 21.04.2020).
- <sup>104</sup> Demographic situation of the elderly and the consequences of population aging in Poland in the light of the prognosis for the years 2014-2015. Główny Urząd Statystyczny, 2014. s.l.
- <sup>105</sup> <http://www.en.nhif.bg/> (requested on 14.05.2020).
- <sup>106</sup> OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, pp. 6-7.
- <sup>107</sup> Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot twórczy oraz płatnik. Szetela P. Zdrowie Publiczne i Zarządzanie 2015; 13 (1): pp. 55-68. s.l.
- <sup>108</sup> Kösters, I.: Arteria Danubia. Gesundheitsregionen im Donauraum. Essen, 2019. p. 15 f.
- <sup>109</sup> OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, pp. 6-7.
- <sup>110</sup> Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot twórczy oraz płatnik. Szetela P. Zdrowie Publiczne i Zarządzanie 2015; 13 (1): pp. 55-68. s.l.
- <sup>111</sup> OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 10-16.
- <sup>112</sup> OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>, pp. 1-12.
- <sup>113</sup> Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019. s.l.

Looking at the general information, it is noticeable that Germany has the most residents in the largest area. Followed by Poland and Bulgaria, which has got the lowest number of inhabitants in the smallest area.

The German population has the highest life expectancy. Bulgaria has the lowest. It should be emphasized that the difference in life expectancy between men and women varies widely. In all three countries, men have a significantly lower life expectancy than women. The average of the difference is 6.6 years. The birth rate per woman is highest in Bulgaria. The birth rate per woman in Poland is well below the average in Germany and Bulgaria.

The health insurance system in Germany is the oldest of the three. The implementation of a health insurance system in Poland and Bulgaria took place almost at the same time, but much later than in Germany. Health insurance is mandatory in all three countries.

In relation to Poland and Bulgaria, the German state spends the highest proportion of its gross domestic product on health care for its population. It is followed by Bulgaria. In relation, the Polish state spends the smallest share of its gross domestic product on health care for its population. Assessing the supply of the population, it is difficult to make a comparison of the three countries, since the relevant information is not available for every country. Information on hospital beds per 1 thousand inhabitants was only found for Germany and Bulgaria. Table 3 shows that Germany has more available hospital beds than Bulgaria. Due to the lack of information on hospital beds in Poland, only human resources can be compared. In Germany there are significantly more doctors available per 1 thousand residents than in Poland.

Only for Germany, information on the total number of people in need of care in the country was found. A comparison with Poland and Bulgaria is therefore not

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<sup>114</sup> OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 11-22.

<sup>115</sup> <https://www.tilastotieto.com/thema/bevoelkerung-und-gesundheit/gesundheitswesen/aerzte-pro-1000-einwohner> (requested on 06.10.2020).

<sup>116</sup> <https://de.statista.com/statistik/daten/studie/77168/umfrage/anzahl-von-krankenhausbetten-in-oecd-laendern/> (requested on 06.10.2020)

<sup>117</sup> Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019.

<sup>118</sup> [https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/\\_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742) (requested on 21.04.2020).

<sup>119</sup> <https://alzheimer-bg.org/> (requested on 13.05.2020).

<sup>120</sup> Deutsche Alzheimer Gesellschaft e.V.: Selbsthilfe Demenz; Infoblatt 1 „Die Häufigkeit von Demenzerkrankungen“.s.a.

possible. If one looks at the number of people with dementia, there is a very clear difference in Bulgaria and Germany. The number of people with dementia in Germany is significantly higher. This is due to the large difference in the population. No total number is available for Poland. In all three countries, however, a large number of unreported cases can be expected. This can be presumed because diagnoses are often not available.

## 8 Conclusion

*By Yvonne Behrens*

The present anthology was created as part of the *DigiCare country* project, in which the project idea for Dem.Com was developed. The Dem.Com project aims to support communication in home dementia care. The support is to be achieved by means of a digital support tool. The content should be based on real needs. For this purpose, those who are affected and dementia experts should be interviewed. A funding application for the project was submitted in 2020 in the call "Better Health and care, economic growth and sustainable health systems" in the EU framework program Horizon 2020.

The anthology presented the health systems of Bulgaria, Germany and Poland. The aim was to create an informative overview. The health systems as well as the population show similarities and differences. In comparison, people in Bulgaria have got the lowest and people in Germany have got the highest life expectancy.

Bulgaria has the highest birth rate of these three, whereas Poland has one of the lowest birth rates in Europe.

If one takes a closer look at the health system, it can be noticed that Germany's health insurance system is the oldest in the world. Health insurance is compulsory in all three countries.

The disease of dementia is in each presented country a great and increasing challenge. In Germany, the importance of culture and language-specific approaches for people with dementia with a migration background is a growing challenge. This plays a less important role in Poland, due to the high degree of ethnic homogeneity. In Bulgaria, the lack of available care offers is one of the major challenges in dealing with dementia.

The article showed that there are similarities as well as differences in the health systems of Bulgaria, Germany and Poland. For the future, it is to be hoped that the transnational challenges will be dealt with together and thus health care for the European population can be improved.

## References

### Bibliography

- Area and population in the territorial profile in 2019. Statistics Poland, Warsaw 2019.
- Aspekty medyczne, psychologiczne, socjologiczne i ekonomiczne starzenia się ludzi w Polsce. Mossakowska M., Więcek A., Błędowski P., Warszawa 2012.
- Behrens Doris A., Kreimer Margareta, Mucke Maria, Franz Nele Elisa (Hrsg.): Familie – Beruf – Karriere, Wiesbaden: Springer Gabler, 2018. s.l.
- Behrens, Y.; Langer, P. (2020): Steigerung des sozialen Kapitals durch kultur- und sprachensible Versorgungsansätze im Gesundheitswesen. Das Gesundheitswesen. s.l.
- Bundesministerium für Gesundheit (2020): Das deutsche Gesundheitssystem. Leistungsstark. Sicher. Bewährt. Berlin.
- Concise Statistical Yearbook of Poland, Statistics Poland, Warsaw 2019.
- Dementia in the aging population of Poland: challenges for medical and social care. Karczewska B., Bień B., Health Prob Civil. 2019, 13, 3. s.l.
- Demographic situation of the elderly and the consequences of population aging in Poland in the light of the prognosis for the years 2014-2015. Główny Urząd Statystyczny, 2014.s.l.
- Deutsche Alzheimer Gesellschaft e.V. : Selbsthilfe Demenz; Infoblatt 1 „Die Häufigkeit von Demenzerkrankungen“.s.a.s.l.
- Europäische Union: Die Verwaltung der Gesundheitssysteme in den EU-Mitgliedstaaten- Die Rolle der lokalen und regionalen Gebietskörperschaften. 2012, s.l.
- Gräßel, Elmar, Behrnt, Elisa-Marie (2016): Belastungen und Entlastungsangebote für pflegende Angehörige, in: Jacobs, Klaus, Kuhlmeier, Adelheid, Greß, Stefan, Klauber, Jürgen, Schwinger, Antje (Hrsg.): Pflege-Report 2016, „Die Pflegenden im Fokus“. s.l.
- Jacobs, Klaus, Kuhlmeier, Adelheid, Greß, Stefan, Klauber, Jürgen, Schwinger, Antje (Hrsg.) (2016): Pflege-Report 2016, „Die Pflegenden im Fokus“. Stuttgart: Schattauer, 2016. s.l.



- Kobza J. 2005. Rola i miejsce kadry zarządzającej w reformowanym systemie opieki zdrowotnej w Polsce. Zakład Polityki Zdrowotnej i Zarządzania, Instytut Zdrowia Publicznego, Wydział Ochrony Zdrowia, Collegium Medicum Uniwersytetu Jagiellońskiego.s.l.
- Kösters, I.: Arteria Danubia. Gesundheitsregionen im Donauraum. Essen, 2019.
- Kunzler, Angela, Skoluda, Nadine, Nater, Urs (2018): Die Bedeutung von Resilienzfaktoren für pflegende Angehörige von Demenzpatienten – eine Übersicht zu ausgewählten Faktoren, in: Psychother Psychosom Med Psychol 68 (2018) Nr. 1. s.l.
- OECD/European Observatory on Health Systems and Policies (2017), Deutschland: Länderprofil Gesundheit 2017, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. <http://dx.doi.org/10.1787/9789264285200-de>.
- OECD/European Observatory on Health Systems and Policies (2019), Bulgaria: Country Health Profile 2019, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. pp. 4-14.
- Offermanns, Guido, Schweiger, Andrea (2018): Status quo Pflege – Zur (Un)Vereinbarkeit von informeller Pflege und Beruf, in: Behrens Doris A., Kreimer Margareta, Mucke Maria, Franz Nele Elisa (Hrsg.): Familie – Beruf – Karrier. s.l.
- Poland. Health system review. Health Systems in Transition Vol. 21 No. 1 2019. s.l.
- Prawne aspekty transformacji systemu ochrony zdrowia w Polsce po 1989 roku. Interdyscyplinarne studium z zakresu nauk o zdrowiu i nauk prawnych. Jach-Męczekalska, 2016. s.l.
- Rola samorządu terytorialnego w polskim systemie ochrony zdrowia: organizator, podmiot tworzący oraz płatnik. Szetela P. Zdrowie Publiczne i Zarządzanie 2015; 13 (1): pp. 55-68. s.l.
- Sytuacja zdrowotna ludności Polski i jej uwarunkowania. Wojtyniak B., Goryński P., Narodowy Instytut Zdrowia Publicznego- Państwowy Zakład Higieny, Warszawa 2018.
- The Constitution of the Republic of Poland of 2nd April, 1997. No. 78, item 483. s.l.

The Erwin Böhm's Psychobiographically Model as An Innovative Approach to Seniors with Dementia. Smrokowska-Reichmann A., Labor et Educatio. 5, 2017. s.l.

Zakłady stacjonarne pomocy społecznej w 2018 roku. Główny Urząd Statystyczny, 2019. s.l.

Zdrowie i ochrona zdrowia w 2017 roku. Główny Urząd Statystyczny, 2019. s.l.

### **Web sources**

<http://trybunal.gov.pl/postepowanie-i-orzeczenia/komunikaty-prasowe/komunikaty-po/art/4157-kasy-chorych-skladki-na-ubezpieczenie-zdrowotne> (requested on 10.10.2019).

<http://www.alzheimer-europe.org/Policy/National-Dementia-Strategies/Bulgaria> (requested 06.05.2020).

<http://www.en.nhif.bg/> (requested on 14.05.2020).

<https://alzheimer-bg.org/> (requested on 13.05.2020).

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=BG> (requested on 28.04.2020).

<https://de.statista.com/statistik/daten/studie/1985/umfrage/deutschland--grenzlaenge-zu-benachbarten-staaten/> (requested on 22.04.2020).

<https://de.statista.com/statistik/daten/studie/278289/umfrage/bevoelkerungsdichte-in-bulgarien/> (requested on 22.04.2020).

<https://de.statista.com/statistik/daten/studie/440766/umfrage/bevoelkerungsdichte-in-deutschland/> (requested on 06.10.2020).

<https://de.statista.com/statistik/daten/studie/760086/umfrage/auslaenderanteil-in-bulgarien-nach-geschlecht/> (requested on 22.04.2020).

<https://de.statista.com/statistik/daten/studie/943331/umfrage/groesste-staedte-in-bulgarien/> (requested on 22.04.2020).

<https://ec.europa.eu/eures/main.jsp?catId=8757&acro=living&lang=de&parentId=7803&countryId=BG&living=> (requested on 14.05.2020).

[https://europa.eu/european-union/about-eu/countries/member-countries/germany\\_de](https://europa.eu/european-union/about-eu/countries/member-countries/germany_de) (requested on 21.04.2020).

[https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria\\_de](https://europa.eu/european-union/about-eu/countries/member-countries/bulgaria_de) (requested on 22.04.2020).

[https://europa.eu/european-union/about-eu/figures/living\\_de#population](https://europa.eu/european-union/about-eu/figures/living_de#population) (requested on 22.04.2020).

<https://www.aerzteblatt.de/nachrichten/109460/Deutsche-Zunahme-an-Demenzkranken-in-Deutschland-und-Europa-erwartet> (requested on 14.05.2020).

<https://www.auswaertiges-amt.de/de/aussenpolitik/laender/bulgarien-node/bulgarien/211824> (requested on 22.04.2020).

<https://www.bpb.de/nachschlagen/lexika/fischer-weltalmanach/65647/bulgarien> (requested on 22.04.2020).

<https://www.bpb.de/nachschlagen/lexika/fischer-weltalmanach/65657/deutschland> (requested on 21.04.2020).

[https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/\\_inhalt.html](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/_inhalt.html) (requested on 06.10.2020).

[https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/\\_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742), (requested on 21.04.2020).

<https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/Tabellen/pflegebeduerftige-pflegestufe.html>, (requested on 21.04.2020).

[https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/\\_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742](https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/_inhalt.html;jsessionid=CB120373E7A318E0A574DF10780BAA20.internet8742), (requested on 21.04.2020).

[https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/\\_inhalt.html](https://www.destatis.de/DE/Themen/Querschnitt/Demografischer-Wandel/_inhalt.html) (requested on 21.04.2020).

<https://www.laenderdaten.de/geographie/grenzen.aspx> (requested on 22.04.2020).

<https://www.wegweiser-demenz.de/en/informationen/gesellschaft-und-demenz/demenz-und-migration.html> (requested on 21.09.2020).

<https://www.wegweiser-demenz.de/informationen/gesellschaft-und-demenz.html>  
(requested on 21.09.2020).

International Statistical Classification of Diseases and Related Health Problems  
10<sup>th</sup> Revision.

<https://icd.who.int/browse10/2010/en> (requested on 11.10.2019).

<https://www.tilasto.com/thema/bevoelkerung-und-gesundheit/gesundheitswesen/aerzte-pro-1000-einwohner> (requested on 06.10.2020).

<https://de.statista.com/statistik/daten/studie/77168/umfrage/anzahl-von-krankenhausbetten-in-oecd-laendern/> (requested on 06.10.2020).

## **List of Sources of Law**

### Polish Acts

The Act of 6 February 1997 on national health insurance

The Act of 23 January 2003 on the National Health Fund

The Act of 27 August 2004 on healthcare services financed from public funds  
obligatory health insurance

The Act of 5 June 1998 on The Poviats Self-Government

The Act of 5 June 1998 on the Voivodeship Self-Government

The Act of 8 March 1990 on the Municipal Government

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