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Directions of changes in spa treatment sector in Poland – legal and organizational aspects with fulfilling the mission of health culture in the background

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B Data Collection
C Statistical Analysis
D Manuscript Preparation
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Dictionary:

Spa treatment – according to the legal definition in Article 2 point 1 of the Act is an organised activity consisting in the provision of health care services in the field of spa treatment or spa rehabilitation, carried out in the health resort by health resort treatment facilities or outside the health resort in hospitals and sanatoriums located in arranged underground mine workings, using natural conditions such as: (a) the properties of the natural therapeutic raw materials, (b) the therapeutic properties of the climate, including thalassotherapy and subterraneotherapy, and the therapeutic properties of the microclimate – as well as accompanying physiotherapy treatments. Spa treatment facilities are used (Article 5(1) of the Act): 1) spa pump rooms, graduation towers, parks, exercise paths, landscaped sections of the seashore, therapeutic and rehabilitation spa pools, landscaped underground mine workings. Spa treatment may only be carried out in spa treatment facilities.

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Abstract:

Background and Study Aim: The authors of this publication identify with the hypothesis supreme criteria of the value of global civilization*: survival of humans and nature in a non-degenerate form and responsibility for coming generations*. Thus, in a responsible society, there can be no room for ignoring any opportunity to strengthen health in a balanced way – is, without neglecting any dimension (somatic, mental and social) either eliminating or favouring any social group. Spa treatment has the universal advantage that the qualities of climate, landscape, thermal, mineral water saturation, etc. do not favour anyone on the basis of social status, wealth, nationality, worldview and any other subjective or objective factor. The cognitive goal of the work is synthetic knowledge about the interrelationship of legal and organizational aspects of spa treatment with elements of health culture that escape quantification. Application goal, the prospect of possible implementations (more or less modified) in societies with similar or even extreme wealth, political system, culture, climate, etc.

Material and Methods: We used a complementary approach in terms of the intersubjective interpretation by the authors of this work of the available methodological findings about the use of this innovative method. The phenomena we are exploring have significant relationships with the supreme criteria of the value of global civilization. Legal acts, guidelines and regulations of the National Health Fund (NHF) were analysed. In addition, the documents of the Parliamentary Team for Health Treatment. Data on the number of patients covered by spa treatment and the value of financing by the NHF were obtained from the NHF Headquarters.

Results: In the period 2008-2023, the largest number of medical services in Polish spas were related to rheumatological diseases (n = 141.835). Least with blood and hematopoietic diseases (n = 657). The largest financial outlays were for rheumatological diseases (PLN 6,28 321). Between 2008 and 2012, the largest number of patients (n = 51.179) received spa treatment in Poland in 2009. Since 2013, there has been a gradual decline in spa patients, which continued until 2019.

Conclusions: The recommendations published by the National Consultant appear to be good premises and assumptions to start a substantive discussion on the direction of expected changes in spa treatment. Thus, the reform of spa treatment should be divided into individual stages

addressed to the relevant actors of the three basic areas: administrative, implementation, education.

Keywords: complementary approach, health education, INNOAGON, rheumatological diseases, supreme criteria of the value of global civilization

1. Introduction

Spa treatment is an integral part of the health care system in Poland, whose overarching objective is to ensure health security, based on meeting needs of an individual nature (e.g. resulting from illnesses or accidents) and needs of a collective nature (conditions of life, work, residence, nutrition, recreation that minimise or eliminate health risks) [1]. Among the many recommendations, one of the *most synthesised is the view that health is one of the most important social, economic and political problems of any country. This is why it is so important to have a health system and health care that is appropriately adapted to the needs of the population* [2]. In Poland a discussion on the place of spa treatment in the health care system has been going on for years, which gives more and more reasons to increase the correlation of the rehabilitation process, but also preventive health care, with the potential of spas, which can ultimately reduce the number and duration of hospital admissions and speed up the return of patients to the expected health well-being.

Spa treatment, has historically been considered one of the most important fields of medicine, and the widespread belief in the extraordinary importance of natural treatments for the health of patients is still valid today [3]. A characteristic feature of spa treatment (for which the colloquial term spa cure is also used) is its comprehensiveness, which includes the use of natural therapeutic raw materials such as mineral waters, gases and peloids for the therapies carried out and the use of a range of prophylactic (including health education) and recreational methods, which, when used together, produce a stronger therapeutic effect [4].

These most general premises are at the same time indicators of a phenomenon called not only in scientific debates and publications 'culture of health' (see glossary) but very difficult to quantify precisely from the perspective of mainly scientific analyses for the purpose of fulfilling the social mission of science. In this work, we do not analyse even the most general phenomenon of 'culture of health', but highlight it due to unsaid (enthymematic) detailed assumptions. That is, we are aware that the object of our exploration is part of a complex system of activities with multi-generational significance from the micro to the macro scale. By doing so, we bear witness to identifying with the supreme criteria of the value of global civilization: *survival of humans and nature in a non-degenerate form and responsibility for coming generations hypothesis* [5].

Thus, at the core of meaningful analyses and recommendations is knowledge of the legal environment of the health system. In Poland, the most important legal acts regulating the health sector include the laws on: publicly financed healthcare services [6], on medical activity [7], on the information system in healthcare [8], on the principles of functioning of the State Emergency Medical Service [9], on the profession of paramedic and the self-government of paramedics [10], on patient rights and Patient Ombudsman [11], on the medical and dental professions [12], on the

A Culture of Health – is broadly defined as one in which good health and well-being flourish across geographic, demographic, and social sectors: fostering healthy equitable communities guides public and private decision making; and everyone has the opportunity to make choices that lead to healthy lifestyles. This requires that society be free of systems and structures that perpetuate racial inequities. The exact definition of a Culture of Health can look very different to different people. A national Culture of Health must embrace a wide variety of beliefs, customs, and values. Ultimately it will be as diverse and multifaceted as the population it serves [source: The Robert Wood Johnson Foundation (RWJF)].

Health education – persuasive methods used to encourage people (either individually or collectively) to adopt life styles that the educators believe will improve health and to reject habits regarded as harmful to health or likely to shorten life expectancy. The term is also used in a broader sense to include instruction about bodily functions, etc., so that the public is better informed about health issues [43, p. 296].

Innovative agonology (acronym INNOAGON) – is an applied science dedicated to promotion, prevention, and therapy related to all dimensions of health and the optimization of activities that increase the ability to survive (from micro to macro scales) [30, 31].

AOTMiT (Polish: Agencja Oceny Technologii Medycznych i Taryfikacji) – Agency For Health Technology Assessment and Tariff System.

GUS (Polish: Główny Urząd Statystyczny) – Statistics Poland.

IHCP – Individual Health Care Plan) – Polish: indywidualny plan opieki medycznej).

IGUP (Polish: Izba Gospodarcza „Uzdrowiska Polskie") – Chamber of Polish Spas.

KRF (Polish: Krajowa Rada Fizjoterapeutów) – National Council of Physiotherapists.

MZ (Polish: Ministerstwo Zdrowia) – Ministry of Health of the Republic of Poland.

NFZ (Polish: Narodowy Fundusz Zdrowia) – National Health Fund.

NRL (Polish: Naczelna Rada Lekarska) – General Medical Council.

NRPIP (Polish: Naczelna Rada Pielęgniarek i Położnych) – Supreme Council of Nurses and Midwives.

PTBiMF (Polish: Polskie Towarzystwo Balneologii i Medycyny Fizykalnej) – Polish Association of Balneology and Physical Medicine.

SGURP (Polish: Stowarzyszenie Gmin Uzdrowiskowych RP) – The Association of Polish Spa Communities.

ULK (Polish: uzdrowiskowe leczenie kompleksowe) – comprehensive spa treatment.

ULP (Polish: uzdrowiskowe leczenie podstawowe – basic spa treatment.

UPG – Uniform Patient Groups – (Polish: JGP – jednorodna grupa pacjentów).

UUP (Polish: Unia Uzdrowisk Polskich) – Union of Polish Spas.

profession of physiotherapist [13], on nursing and midwifery professions [14], on pharmaceutical law [15], on mental health care [16].

Notwithstanding the above regulations, the right to health care is one of the citizens' social rights resulting directly from Article 68 of the Constitution of the Republic of Poland [17]. This regulation emphasises that everyone has the right to health care and that the public authorities shall ensure equal access to publicly financed health care services to citizens, irrespective of their material situation, under the conditions set out in a specific law (Article 68(1) and (2) of the Polish Constitution). The Constitution also implies an obligation for public authorities to provide special health care to children, pregnant women, persons with disabilities and the elderly (Article 68(3) of the Polish Constitution). The doctrine emphasises that: *'The individual's subjective right to health care is in the public mind one of the most important rights, a fundamental right – and indeed it is (see Article 35 of the Charter of Fundamental Rights of the European Union). Indeed, there are few spheres that so strongly define a person's existential situation as health. In addition, it affects the exercise of many other freedoms and rights. The protection of the human rights of the sick, including the patient, is an extension of the right to life (Article 38 of the Polish Constitution) and to dignity, including that perceived subjectively* [18]. The jurisprudence of the Constitutional Court plays an important role in interpreting the principle of health protection, including the obligations imposed on the state and public authorities. By way of example, the following views from case law can be pointed out:

1) The content of the right to health care is not naturally some abstractly defined

the (and essentially undefinable – more on this below) state of "health" of individuals, but the ability to benefit from a health care system functionally geared towards the control and prevention of disease, injury and disability' [19],

2) 'The following consequences follow from Article 68(2) of the Constitution:

Firstly, there needs to be mechanisms in place within the broader health system to collect and then spend public funds on health services. A detailed assessment of the legal nature of the funds paid by citizens is not relevant here, what is important is only whether they qualify as public funds.

Secondly, the benefits financed by the above-mentioned funds are to be available to citizens (and thus no longer to 'everyone'), and it is not a matter of merely formal accessibility, declared by legal provisions of a 'programmatic' nature, but of real accessibility, constituting the realisation of the right to health protection specified in paragraph 1 of Article 68 of the Constitution (verba legis: ...public authorities… ensure...). The wording of the Constitution is categorical and of a guarantee nature.

Thirdly, access to publicly funded benefits must be equal for all citizens, regardless of their financial situation. The equality in access to health care services proclaimed in the provision under analysis is a development of the principle of equality expressed in Article 32 of the Constitution and the concept of social solidarity. This is because the rules on the use of healthcare services in this area are independent of the extent to which individual members of the civic community participate in the creation of the stock of public resources that constitute the source of their funding. Like access to benefits itself, this must also be equality in real terms and not just in formal terms. On the other hand, the Constitution does not presuppose universal accessibility to all health care services that are known and used in accordance with current medical knowledge. On the contrary – included in the sentence. The reference in the second paragraph of Article 68(2) of the Basic Law to the fact that not only the conditions, but also the scope of benefits financed from public funds are to be determined by law, opens up the

possibility for the legislator to compile a model of health care based on public funds with other methods known in modern systems of financing (or rather – financing) the costs of these benefits (deductibles, additional insurance). However, the law must not leave any doubt as to the scope of medical benefits to which the beneficiaries of the public health care system are entitled in view of the existence of an express constitutional obligation to define this matter and, consequently, it must not introduce – within this system – a model allowing for the differentiation of benefits in the event of the existence of similar health care needs.
Fourthly, the obligation to ensure the above-described standard of accessibility of publicly funded benefits is incumbent on public authorities. Thus, although the Constitution does not specify in detail how this requirement is to be redressed, leaving this to the ordinary legislature, the protection of health in this regard is a constitutionally assigned task of the public authorities [19].

Irrespective of the categorical nature and guaranteeiveness of the provisions of the Constitution of the Republic of Poland formulated in the aforementioned judgment concerning the accessibility of citizens to publicly financed healthcare services, the construction of Article 68(2) sentence is important. 2 of the Constitution, which explicitly states that the conditions and scope of the provision of benefits shall be determined by law.

The rules concerning spa treatment are included in the Act of 28 July 2005 on spa treatment, spas and areas of spa protection and the areas of spa protection and on spa communes, in the so-called 'Spa Act'[20]. The explanatory memorandum of the draft 'Spa Act' points to the urgent need for a new law to be drafted and enter into force to replace the anachronistic 1966 Act on Spas and Spa Treatment, which shows complete inconsistency with the modern legal system [21]. In addition, the need to adapt the legal environment of spa treatment and the operation of spas to the previously made legislative changes concerning the organisation and financing of health care and the tasks of the public administration in this area was indicated as the main reason for the introduction of the new legal regulation in 2005 [22].

The cognitive goal of the work is synthetic knowledge about the interrelationship of legal and organizational aspects of spa treatment with elements of health culture that escape quantification. Application goal, the prospect of possible implementations (more or less modified) in societies with similar or even extreme wealth, political system, culture, climate, etc.

2. Materials and Methods

Three We used a complementary approach in terms of the intersubjective interpretation by the authors of this work of the available methodological findings about the use of this innovative method. The complementary approach, precisely as the basic method (in the broad sense) of the new applied science, innovative agonology (see glossary), has a close methodological relationship with the hypothesis of supreme criteria of the value of global civilization. The phenomena we are exploring have significant relationships with the supreme criteria of the value of global civilization.

Legal acts, guidelines and regulations of the National Health Fund (NHF) were analysed. In addition, the documents of the Parliamentary Team for Health Treatment. Data on the number of patients covered by spa treatment and the value of financing by the NHF were obtained from the NHF Headquarters.

This work is edited according to the original article structure. However, the specificity of the issues analysed means that in the 'Results' section there are cross-references to source materials that contain data for the necessary statistical summaries. There are also definitions of key terms for the phenomena analysed and, in our view, necessary explanations.

3. Results

In the 2008-2023 period, the largest number of medical services in Polish spas were related to diseases: rheumatological, nervous system and orthopaedic-traumatic. It was least associated with the following diseases: blood and haematopoietic system and eye and eye appendages (Table 1).

The highest dynamics of patients visiting spas, occurred between 2008 and 2012. During these five years, an average of 46172 patients visited the sanatoriums per year (Figure 1).

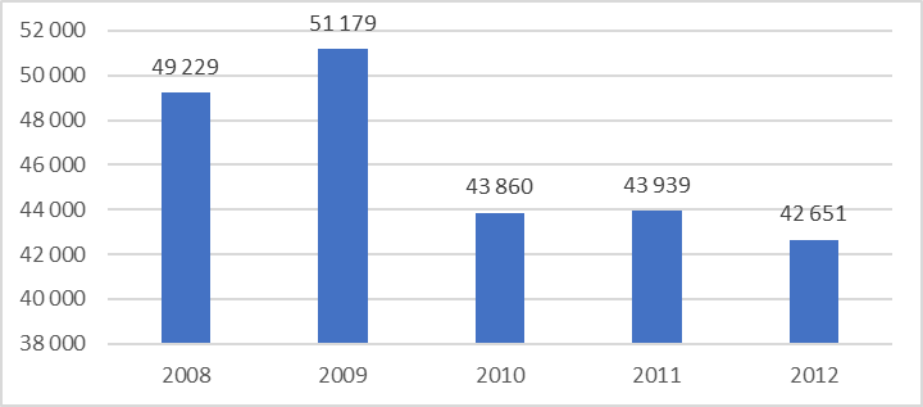

Figure 1. Number of patients receiving spa treatment in Poland in 2008-2012.

From 2013, there was a gradual decline in spa patients, which continued until 2019 (Figure 2). In contrast, the lowest percentage of visitors to sanatoriums was in 2020, due to the COVID-19 pandemic and the restrictions introduced by the Polish government and the Ministry of Health (15 716 patients). This trend continued for 2 years. In 2022, patients began rehabilitation placements again (23,314 patients per year).

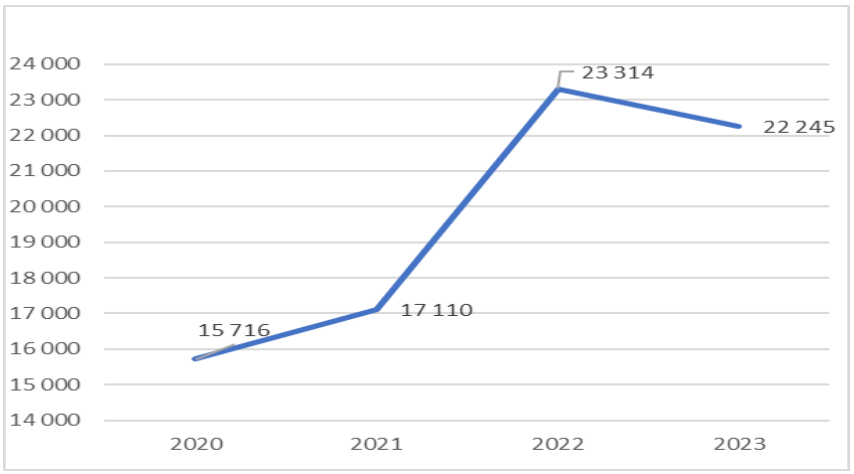

Figure 2. Number of spa patients between 2020 and 2023.

Table 1. Number of patients in spa treatment in Poland 2008-2023 according to classification of diseases and/or assignment to medical specialties – ordinal variable: from the most numerous sum of case

Classification of diseases and/or assignment to medical specialties	Value paid / year (in PLN thousand)																Total
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Rheumatological diseases (rheumatology)	51 562	215 334	300 968	312 755	326 924	358 036	374 796	392 236	405 637	414 671	431 528	464 254	250 096	397 368	792 013	1 140 203	**6 628 381**
Cardiovascular diseases and hypertension (cardiology)	63 909	89 200	80 053	79 390	83 218	83 169	80 496	76 612	72 605	66 981	63 253	64 577	32 916	46 660	88 057	111 436	**1 182 532**
Diseases of the nervous system (neurology)	18 148	29 129	30 973	38 798	41 450	44 703	47 582	48 578	48 556	48 934	49 185	53 674	28 944	45 970	94 038	135 201	**803 863**
Diseases of the lower respiratory tract (pulmonology)	32 604	40 897	33 625	32 548	32 228	31 935	29 511	28 234	26 244	25 014	24 284	24 114	11 541	15 833	31 303	38 747	**458 662**
Musculoskeletal system	204 745	170 693	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**375 441**
Diseases of the upper respiratory tract (ENT)	22 986	31 819	26 265	25 203	24 402	23 817	22 122	21 808	21 112	19 939	20 087	19 315	8 617	11 484	22 516	26 192	**347 684**
Orthopaedic and traumatic diseases (orthopaedics)	3 658	9 265	23 679	30 872	35 782	24 394	13 938	12 601	14 451	13 696	13 827	14 178	7 612	10 060	19 585	27 646	**275 244**
Diabetes (diabetology)	9 157	13 284	11 126	11 593	11 745	11 729	10 461	10 224	9 632	8 865	8 544	8 392	3 924	6 034	11 371	14 843	**160 924**
Obesity	4 504	6 119	4 735	4 005	4 303	4 675	5 317	6 166	6 099	6 657	6 321	6 337	3 421	5 149	8 461	10 074	**92 343**
Diseases of the digestive system (gastroenterology, hepatology)	8 459	10 936	8 419	8 110	7 001	5 346	4 104	3 362	2 869	2 624	2 238	2 029	903	1 156	1 965	2 120	**71 641**
Endocrine diseases	4 797	6 968	6 056	6 911	7 011	5 207	2 220	1 886	1 563	1 410	1 164	909	362	515	878	1 096	**48 953**
Female diseases (gynaecology)	2 923	3 707	2 975	2 767	3 006	2 396	2 264	2 097	1 967	1 768	1 570	1 524	745	784	1 159	1 506	**33 158**
Skin diseases (dermatology)	2 212	2 964	2 657	2 589	1 920	1 600	1 916	1 623	1 567	1 634	1 625	1 512	772	1 260	2 223	2 468	**30 542**
Kidney and urinary tract diseases (nephrology and urology)	2 315	2 966	2 216	2 235	2 092	1 949	1 862	1 588	1 467	1 441	1 282	1 247	516	760	1 332	1 284	**26 552**
Peripheral vascular disease	1 460	2 243	1 850	1 945	2 090	1 889	1 632	1 444	1 511	1 363	1 197	1 286	706	819	1 571	2 008	**25 014**
Osteoporosis	26	256	419	395	570	675	693	723	728	681	645	737	392	571	1 171	1 690	**10 372**
Diseases of the eye and its adnexa (ophthalmic diseases)	254	361	322	389	247	0	0	0	0	0	0	0	0	0	0	0	**1 573**
Diseases of the blood and blood-forming system (haematology)	85	110	90	85	101	73	75	57	61	61	49	68	26	36	86	125	**1 188**
RAZEM	**433 804**	**636 251**	**536 431**	**560 590**	**584 090**	**601 593**	**598 989**	**609 239**	**616 069**	**615 739**	**626 799**	**664 153**	**351 493**	**544 459**	**1 077 729**	**1 516 639**	

The cyclical decline in visitors is linked, among other things, to the rules for applying for another stay. Currently, the use of sanatorium or rehabilitation treatment is possible every 18 months. In contrast, in the last 15 years, the highest number of people receiving treatment is related to chronic diseases that impede daily functioning, including: rheumatological diseases (130,749); nervous system diseases (65,487); orthopaedic and traumatic diseases (52,629); cardiovascular diseases and hypertension (49,009).

Organisation of spa treatment in Poland

Until 2021 in Poland, the basic legal act outlining the directions of priority actions in the area of health care was the Regulation of the Minister of Health of 27 February 2018 on health priorities. Currently, the key document that details the role of spa treatment in the healthcare system is the National Health Programme 2021-2025 [23] – the strategic goal is to increase the number of healthy patient years and reduce social inequalities in access to health services. Tasks, in particular: prevention of overweight and obesity, prevention of addiction and initiatives for the prevention of occupational and work-related diseases and strengthening occupational health. The activation of seniors through the promotion of active lifestyles and the promotion of mental health is also extremely important. Chronic health problems particularly affect people over 60 years of age [24] and, according to the 2019 European Health Survey, 49% in the Polish population [24].

In Poland, the results of a population study of 2-14 year olds show that almost 12% of children are found to have sensory or motor difficulties. Children are most often chronically ill with various types of allergies (about 14%) and struggle with being overweight or obese (16% of 15-19 year-olds) [24].

Poland, as one of the leaders in balneology in Europe, has an abundance and with developed spa facilities, 254 treatment facilities operating in 47 spa towns [4]. In these spas, patients can benefit, among other things, from comprehensive post-hospital care as well as balneotherapy and rehabilitation carried out as a continuation of inpatient or outpatient treatment. The basis for the financing of spa treatment, including spa rehabilitation, is the completion of a certain number of physiotherapy procedures, including – and this is what distinguishes spa treatment from other forms of rehabilitation – a certain number of procedures using natural therapeutic raw materials [25]. The unit of account is the person-day of treatment (for outpatient services: treatment day). Adults receiving treatment in spa sanatoriums co-fund the costs of accommodation and meals, other types of services are financed entirely from public funds.

According to the GUS (Statistics Poland) report of 30 May 2023, Polish spa treatment facilities in 2022 had 45,600 beds and admitted 742,000 patients on an inpatient basis. In a multi-year perspective, however, it is noteworthy that there has been a decline in both the number of spa facilities and the number of patients treated in all types of facilities (despite an increase in the number of beds available in spa sanatoriums) [27].

Table 2. Value of spa treatment financing in 2008-2023 according to classification of diseases and/or assignment to medical specialties– ordinal variable: from the most numerous sum of case.

Classification of diseases and/or assignment to medical specialties	Value paid / year (in PLN thousand)																Total
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Rheumatological diseases (rheumatology)	5 642	10 124	11 851	11 447	11 086	10 670	10 094	9 713	9 617	9 103	8 613	8 370	5 078	5 491	7 584	7 352	**141 835**
Diseases of the nervous system (neurology)	4 474	5 052	5 167	5 518	5 533	5 285	5 092	4 806	4 673	4 564	4 277	4 209	2 389	2 643	3 694	3 644	**71 020**
Orthopaedic and traumatic diseases (orthopaedics)	1 287	2 418	4 779	5 570	5 761	5 314	4 127	3 778	4 019	3 827	3 635	3 560	2 015	2 195	3 023	3 082	**58 390**
Cardiovascular diseases and hypertension (cardiology)	4 947	5 025	4 574	4 299	4 204	3 939	3 637	3 455	3 269	2 974	2 788	2 701	1 532	1 583	2 197	2 089	**53 213**
Diseases of the upper respiratory tract (ENT)	4 625	4 799	4 293	4 134	3 836	3 506	3 240	3 125	3 006	2 794	2 658	2 374	1 305	1 419	1 889	1 670	**48 673**
Diseases of the lower respiratory tract (pulmonology)	5 315	5 024	4 353	4 143	3 947	3 461	3 277	3 074	2 811	2 556	2 299	2 150	1 180	1 328	1 771	1 516	**48 205**
Diseases of the digestive system (gastroenterology, hepatology)	3 262	3 487	2 815	2 747	2 461	1 975	1 661	1 397	1 262	1 122	1 009	892	430	436	570	476	**26 002**
Musculoskeletal system	13 420	8 464	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**21 886**
Diabetes (diabetology)	899	945	875	868	870	804	746	766	761	752	666	617	384	437	544	530	**11 464**
Endocrine diseases	1 241	1 331	1 179	1 285	1 243	971	671	572	521	492	424	339	146	183	227	212	**11 037**
Kidney and urinary tract diseases (nephrology and urology)	1 006	1 025	813	843	764	697	683	604	563	559	489	458	196	251	326	279	**9 556**
Female diseases (gynaecology)	1 019	1 037	915	878	873	675	597	512	494	403	329	331	169	180	206	184	**8 802**
Peripheral vascular disease	664	795	683	693	742	664	566	527	510	463	432	428	248	236	336	326	**8 313**
Skin diseases (dermatology)	707	754	666	657	529	464	483	461	433	412	416	370	220	246	335	281	**7 434**
Obesity	456	491	434	425	401	418	444	454	457	443	438	423	288	328	399	371	**6 670**
Osteoporosis	18	126	203	153	194	205	226	215	225	224	187	200	121	138	182	199	**2 816**
Diseases of the eye and its adnexa (ophthalmic diseases)	187	221	200	228	149	0	1	0	0	0	0	0	0	0	0	0	**986**
Diseases of the blood and blood-forming system (haematology)	60	61	58	51	58	45	47	33	40	39	30	39	15	16	31	34	**657**
Total	**49 229**	**51 179**	**43 860**	**43 939**	**42 651**	**39 093**	**35 592**	**33 492**	**32 661**	**30 727**	**28 690**	**27 461**	**15 716**	**17 110**	**23 314**	**22 245**	

At the same time, analyses of the document '*Health Needs Map for the period from 1 January 2022 to 31 December 2026'* highlight that the current rehabilitation system for chronically ill patients is not matched to the real needs of patients, and that waiting times for rehabilitation services are too long [28]. In addition, in the last decade, some of the spa rehabilitation wards and spa hospitals, as well as spa facilities for children, have been converted to sanatorium wards or closed down. The reason – the lack of referral of patients for such forms of treatment. The result – the unprofitability of these units, which in the future may result in a reduction in the availability of spa services dedicated to two social groups. Children and the oldest patients, especially in spa hospitals specialising in multi-disease and disability services. Over the past 15 years, the highest funding for inpatient stays was recorded in 2023 (PLN 1,516,639.00), which is a positive symptom of meeting the expectations and financial capacity of potential patients (Table 2).

Such a trend is conducive to forecasts that the necessary subsidies and the quality of the services provided will cover an increasing number of patients with the highest needs for spa interventions. Patients who expect to improve their daily functioning in the public and private spheres, but suffer especially from diseases: rheumatological (6,628,381); cardiological (1,182,532); nervous system (803,863). In the year 2022, with the lifting of the epidemiological condition in Poland, there was a resurgence of spa treatment – the value of funding in that year was as high as PLN 1,077,729. Restrictions on therapeutic stays in spas in 2020-2021 (COVID-19 pandemic) have resulted in financial reserves being reallocated to future years (Figure 3).

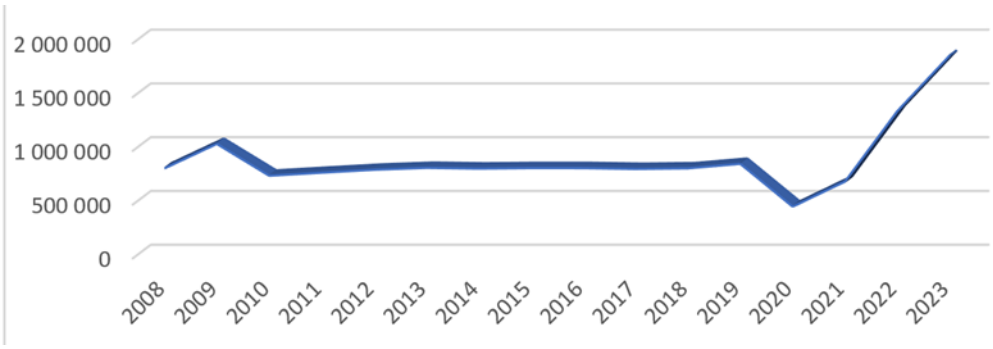

Figure 3. Level of financing of spa treatment in Poland in the years 2008-2023.

4. Discussion

The results of our research indicate that the demand for spa health services should gradually increase. It is therefore important to support spa treatment, including as an important element of so-called 'senior citizenship policy', based, among other things, on the promotion of healthy lifestyles. In addition, spas should be used systemically to improve the health not only of the elderly but also of children and adolescents, especially in the treatment of disorders of their physical and psychosocial development and to meet the needs of civilisation connected, for example, with the care of oncology patients.

It therefore seems reasonable to reform spa treatment and, above all, to raise its role and rank in the state's health-promoting policy. Developments in medical science and changes in the health needs of the population justify the need for changes concerning

both the facilities providing spa treatment, the organisation of treatment and patient care and the use of IT systems to support the provision of these services.

Any support of patients is an elementary fulfilment of the missions enshrined in codes or perpetuated in the good practice of many professions – especially the doctor, nurse, physiotherapist, psychologist, paramedic, personal trainer, etc. In fulfilling this mission, the participation of volunteers and the immediate family is not insignificant. A positive attitude on the part of the patient and the supportive social environment allows struggle [29] with the disease with the hope of overcoming it.

The use of the term 'struggle' in the last sentence refers directly to the cognitive potential of INNOAGON [30-34]. The methodology of this new applied science, whose main method is precisely the complementary approach [35, 36], should apply in circumstances where the use of the terms 'struggle' or synonyms is used to emphasise their degree of difficulty (often extreme). Perhaps the clearest justification for the veracity of this assumption is the findings of Artur Kruszewski and Bartłomiej Gąsienica-Walczak [37]. They stated, that from 1902 to March 2023, authors of 1,568 Web of Science-qualified publications in various discipline categories used the term 'self-defence' in the titles of these papers. 'Self-defence' is, after all, a key term in the narrowly conceived science about struggle – agonology [37].

Since we are talking about the fight against disease, but also taking into account the therapeutic and preventive potential of spa treatment, we emphasise an issue that generally escapes the perception of those involved in this area of social activity. Spa treatment has the universal advantage that the qualities of climate, landscape, thermal, mineral water saturation, etc. do not favour anyone on the basis of social status, wealth, nationality, worldview and any other subjective or objective factor [38].

In 2020, the Parliamentary Group on Spa Treatment, Uniformed Health Care, Rehabilitation and Spa Communities took action on supporting the development of spa treatment, including by proposing changes to the law. The members of the Working Team set as their main objective: improved quality in the delivery of spa services, simplified access and the empowerment of the patient receiving treatment services. The Team's recommendations for systemic change. They also point out the need for changes to the core curriculum of medical studies in terms of knowledge of spa treatment and balneology in particular. During the Team's work, it was further recommended that the procedure for referring patients for spa treatment be simplified in order to improve the utilization of the potential of this sector of health services.

When discussing proposals for changes in the operation of spa treatment, the results of an analysis of the current system in terms of its strengths and weaknesses cannot be ignored. Positive sides include: the theoretically even distribution of referrals for spa treatment by the National Health Service; free treatment for, among others, the spa hospital, as well as children and adolescents up to the age of 18 (and students up to the age of 26) and children with disabilities.

We also view favourably the uniform level of surcharges throughout the country (depending on the season and the standard of the room) and the existing system of contracting for services, which provides budgetary stability (however, there is still a problem with patients who do not arrive at the resort on time). In addition, entities do not bear the cost of qualifying for treatment and the cost of maintaining waiting lists.

The negative sides include, first of all, the lack of a precise definition of the role of spa treatment in the Polish health care system, including rehabilitation care. Also, the lack of consistency and clarity in the system of rehabilitation care in the sense of accessibility to the various services provided under the National Health Fund (medical rehabilitation and spa treatment), KRUS (Agricultural Social Insurance Fund), PFRON (The State Fund for Rehabilitation of Disabled People).

Another major problem is the failure to include spa treatment services as part of coordinated health care. The problem is exacerbated by the low prestige of the field, caused, among other things, by undermining the effectiveness and advisability of this type of treatment.

We further emphasize that the recipient and the provider are passive participants in the referral distribution system. Moreover, the substantive requirements for referral to spa treatment are not very clear for doctors and patients, with the consequence that there is a practical lack of referrals for specific forms of this category of medical services – the only clear criterion is referral to sanatoriums. The practice is dominated by the administrative process of qualifying a patient for a particular service. Many times a patient is given benefits that are inadequate to his or her condition and treatment needs. Paradoxically, either the potential and resources of spa treatment facilities are not fully utilized, or the patient is deprived of a certain category of medical services due to the lack of facilities adequate to meet his health needs. A centralized referral distribution system is counterproductive in several respects: it reduces the incentive for providers to improve the quality of their infrastructure and the services they offer; it limits the validity and scope of research and the implementation of innovations.

Thus, the result of the discussion that has been going on for many years on the directions of necessary changes in spa treatment is several documents of strategic importance. In 2005, an *Integrated Program for the Development of Spas* with particular reference to tourism services was developed and adopted by the Inter-Ministerial Team for Socio-Economic Activation of Spas [3]. The program was prepared with the cooperation of the government, The Association of Polish Spa Communities (SGURP), Union of Polish Spas (UUP) and Chamber of Polish Spas (IGUP). A consequence of its adoption was the decision to privatize a large part of Poland's spa companies, which in effect made it possible to recapitalize them [39].

Thanks to gradual ownership changes (privatization, communalization) and access to funds obtained, among other things, from the European Funds, over the last two decades significant development of the spa's treatment and hotel base has been observed, as well as improvements in the infrastructure of spa towns. Today's Polish spa entities, for the most part, are modern, modernized and efficiently managed enterprises or treatment facilities, offering a wide range of modern therapeutic methods in addition to traditional natural therapies. Many entities have teams of experienced staff able to use modern rehabilitation equipment adapted to the needs of people with disabilities. However, still spa treatment services are not being used optimally, according to demographic needs. More spa hospitals, children's spa treatment facilities and spa rehabilitation units are being closed down, and the role and function of spa treatment is being marginalized.

Another attempt to halt the negative trends was the development in 2017 by a Team appointed by a decision of the Minister of Health of the *Concept for changes in the spa treatment system* [1, 40]. The concept proposed numerous systemic solutions and

minor recommendations, with the main thrust being an attempt to adapt the current system to current health needs and demographic trends. Priority goal, to ensure continuity and comprehensiveness of treatment and optimize the way rehabilitation care potential is used in Poland. The above concept has not been implemented so far The exception was the introduction of a system (AP-KOLCE Central Queues application) that allows waiting (according to PESEL number) for the provision of inpatient rehabilitation services with only one provider, thus eliminating "artificial" queues in rehabilitation.

Due to the lack of results of the measures described above, an attempt to implement systemic changes was made in 2020 by the Parliamentary Team for Spa Treatment, Uniformed Health Service, Rehabilitation and Spa Communities, which worked with the Expert Group on the *"Concept for Changes in Spa Treatment"* proposed by the Management of the Department for Uniformed Services of the National Health Fund Headquarters [40]. The result of the work of the Team was the development, with the participation of the Ministry of Health, the Head Office of the National Health Fund, and the Expert Group, of proposals for changes in the regulations defining the rules for the realization of health resort services and the operation of health resort facilities and equipment, however, as a result of the lack of unanimity on the proposed solutions, no official recommendations were issued on the assumed system changes.

An initiative consistent with these activities are the official Recommendations of the National Consultant, in the field of balneology and physical medicine (see Appendix 1 to 9 and Figure 3) based in particular on the conclusions of the work of the Expert Group of the Parliamentary Group on Spa Treatment, Uniformed Health Care, Rehabilitation and Spa Communities. These recommendations, moreover, take into account the conclusions of the "Concept for changes in spa treatment" presented in 2021 by the National Health Fund and the conclusions of the "Final Report of the Team for the development of a concept for changes in the spa treatment system" from December 2017.

5. Conclusions

The quoted recommendations for changes in the health resort treatment system allow for the conclusion that the current system does not guarantee full utilisation of the possibilities offered by modern Polish health resort treatment in meeting the current health needs in the scope of rehabilitation and prophylaxis. There is an apparent lack of coordination with early and chronic rehabilitation services, limitations in accessibility to services for active persons. The referral and qualification system for the different types of services is not clear and is particularly an administrative process.

It is therefore legitimate to discuss, including scientifically, new principles for the operation of spa treatment in Poland, which will allow the use of spa resources in coordinated care, thereby improving access to early rehabilitation services and hospital treatment [41, 42, 38].

In addition, a wider use of spa services for preventive purposes and for improving the health status and quality of life of working people, seniors and patients treated for conditions that are a contemporary challenge for the health care system, such as oncological or psychosomatic diseases, would allow spa services to re-establish their

rightful role in the health care system - consistent with the state's health promotion policy.

Data Availability Statement: The data supporting this study's findings are available from the corresponding author upon reasonable request.

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Appendix 1. Assumptions – desired (expected) outcomes of systemic change.

	→ restoring spa services to their rightful role in the health care system, i.e. their role in the state's health promotion policy
	→ competing for patients with the quality and range of medical services → increasing efficiency and improving quality → empowerment of the patient / appropriate approach to the patient
	→ reactivation of specialised courses in spas
	→ reactivation of spa treatment for children
	→ reactivation of research and scientific centres in spas
	→ sustainable development of spas → development of balneology and physical medicine and Polish spa treatment

Appendix 2. Assumptions – the 'pillars' of systemic change in spa treatment.

	→ patient empowerment → ultimately enabling the patient to choose the spa (hospital, sanatorium) where he or she will receive treatment from among those specialising in treating his or her conditions
	→ optimisation of the organisation of spa treatment and further rationalisation of the requirements for spa treatment facilities
	→ completely digital process of referring and qualifying patients for spa treatment (use of electronic referrals for spa treatment)

Appendix 3. Recommended key system changes – "milestones" in verbal and visual terms.

	STAGE I
@	→ simplifying the referral process for spa treatment → e-referrals (system refinement)
	→ clarification of the role of spas in the health care system → clarity of the referral system for spa treatment (types of services, treatment objectives, indications, contraindications, diagnostic and therapeutic pathways) → inpatient chronic rehabilitation provided as part of spa services
	→ formal and legal preparation of system changes → alignment of legislation; education of providers and beneficiaries
	→ **direct referral of children for spa treatment** / pilotage → queue operated directly by the spa facilities → the parent / guardian of the child decides on his/her own or with the doctor about the place of treatment

	STAGE II
	→ optimising the organisation of spa treatment → one type* of stationary spa [sanatorium] → one type* of ward [spa ward] → one type* of inpatient services [spa treatment] accounted for within two (ultimately consecutive) UPGs *for adults and children respectively → further rationalisation of the requirements for spa treatment facilities
	→ adaptation of the treatment directions of spas to health needs → spa services as part of coordinated health care in diagnostic and therapeutic pathways and individual health care plans (IHCP) → two new spa treatment directions: ✓ treatment of psychosomatic disorders / pilotage ✓ spa cancer convalescence / pilotage → new type of sanatorium: family sanatorium → expansion of the catalogue of UPGs in spa treatment → spa services as part of coordinated health care in diagnostic and therapeutic pathways and individual health care plans (IHCP)
	→ increasing access to services → possibility of spa treatment every 12* months *National Consultant recommendation for the pilot period (to date: 18 months) → the possibility of obtaining a certificate of incapacity for work (sickness benefit) for the period of treatment at the sanatorium → the possibility for the parent/guardian of the child to receive a care allowance for the period of his/her stay at the sanatorium with the child from 3 to 8 years** (**for children with cerebral palsy and neurological conditions with a similar clinical picture - up to the age of 18).

	→ free** treatment in a sanatorium for seniors 75+ **National Consultant recommendation
	→ standardisation of treatment procedures and directions → standardisation of procedures (treatments) → standardisation of the provision of benefits in UPGs and/or treatment directions

	STAGE III
	→ **simplification of the process of selecting a spa treatment site** → queue ultimately operated directly by the spa facilities → the patient himself or with the doctor co-determines the choice of treatment site
	→ simplification of the qualification process for spa treatment → qualification for spa treatment carried out directly by the spa treatment facilities [e-referral]. → increasing the safety of the treatment by confirming the place of treatment appropriate to the patient's health needs
	→ **simplification of the timing of treatment** → the spa treatment facility will, immediately after the patient has qualified for treatment, make an estimate of the treatment date in accordance with the waiting list
	→ new rules on treatment subsidies → making board and lodging subsidy rates more flexible, depending on the capacity of the spa or the duration of the service provision
	→ evaluation of treatment results → obligatory: performed by the provider → optional: made by the beneficiary
	→ education of health professionals → knowledge of spa treatment in the core curriculum of medical studies → knowledge of spa treatment in medical specialisation programmes → continuous training
	→ digitisation of resources and data [rejestrymedyczne.ezdrowie.gov.pl] → e-record of natural medicinal raw materials → e-registry of spas and spa protection areas with treatment directions → e-registry of health care establishments and facilities

Appendix 4. Recommended key assumptions – implementing changes.

→ "Evolution, not revolution".
✓ changes should be implemented gradually – in stages, in an evolutionary and variant manner
✓ in order to assess the real (and not only the assumed) effects and consequences of the implemented changes and to develop final solutions, a pilot transition period is necessary, during which certain variants of the selected solutions will be allowed
→ Pilot period – minimum 24 months:
✓ testing and selection of optimal solutions

- ✓ during the pilot period → development and successive implementation of subsequent solutions (II and III stage of system changes): services in diagnostic and therapeutic pathways and IHCP, new treatment directions, expansion of the UPG catalogue, standardisation of procedures and treatment directions, evaluation of treatment results, education of medical staff, digitisation of resources and data
- ✓ stage I - piloting on: direct referral of children for spa treatment / pilotage
- ✓ stage II - piloting on: spa treatment of psychosomatic disorders, spa oncological convalescence
- ✓ stage III - piloting on: simplification of the process of selecting a treatment site, of qualifying for treatment and of scheduling treatment; objective: to protect less well-known and less attractive spas and smaller operators from possible adverse effects of the reform (such as reduction of treatment capacity and loss of jobs)
- ✓ during implementation of stage III → contracts with existing providers at least at the previous year's level (limit per site at least as per previous year's contract)
- ✓ in the first months of the year of implementation of stage III → „hybrid" system for facility occupancy → referrals from the NFZ (National Health Fund) queue distributed by the NFZ to all service providers according to the level of contract held in the previous year
- ✓ during the pilot stage III period → „hybrid" treatment site selection system → for those who do not wish to make the choice themselves or are unable to do so, e.g. due to digital exclusion, the referral is forwarded automatically by the electronic system (or via the National Health Fund) for qualification by the closest facility (according to the criteria specified on the referral) with the shortest queue and the lowest co-payment (when making the referral, the doctor indicates whether the patient chooses a sanatorium on his/her own or whether he/she wants to be "automatically" referred for qualification to a facility specialising in the treatment of his/her illness).

→ Evaluation every 6 months (for a minimum of 24 months):

- ✓ collecting and analysing information on the occupancy of individual facilities, the management process, the qualification process, etc., the effectiveness of the measures implemented
- ✓ The team, consisting of representatives of the Ministry of Health of the Republic of Poland, the National Health Fund (NFZ), AOTMiT (Agency For Health Technology Assessment and Tariff System), parliamentary teams, professional associations (UUP [Union of Polish Spas], IGUP [Chamber of Polish Spas], SGURP [The Association of Polish Spa Communities]), NLU [Chief Medical Officer of the Spa], PTBiMF [Polish Association of Balneology and Physical Medicine], NRL [General Medical Council], NRPiP [Supreme Council of Nurses and Midwives], KRF [National Council of Physiotherapists], social side, consultants, evaluates the information obtained and proposes possible corrective actions.

→ Implementation of final solutions – after 24 months:

- ✓ selection and final implementation of optimal solutions developed during the pilot period

→ Education, motivation and support

- ✓ without the support, education and motivation of all parties in the system, effective implementation of change will not be possible, so it is essential to:

  → proceed with the amendments through a wide public consultation

→ preparation and implementation by the Ministry of Health and the National Health Fund of a social campaign aimed at patients and doctors (in particular POZ [Primary Health Care Centres]) on changes in the rules of using spa treatment services
→ support, education and motivation of service providers (training, handbooks)
→ support, education and motivation of referring doctors, in particular PCPs, as well as doctors of specialist clinics and hospital wards (training, guidelines, handbooks)
→ patient support and education (social media campaign, educational material, information leaflets)
✓ the coordinators of the implementation of the reform at the regional level should be the provincial consultants in balneology and physical medicine, at the national level - the national consultant leading the team of consultants in this field
→ in particular, it is necessary for the provincial consultant in balneology and physical medicine in each province to cooperate with the consultant in family medicine (analogously at national level) in order to promote the use of spa treatment services by POZ in specific therapeutic pathways and ICHP and to carry out activities promoting the use of new tools (e-referral, direct referral to spas)

Appendix 5. Recommended key assumptions – benefit delivery principles.

Types of spa treatment facilities:
→ spa sanatorium
→ spa sanatorium for children
→ family spa sanatorium
→ sanatorium in an adopted underground mine workings
→ spa clinic
→ natural health spa
Types of services:
→ spa treatment of adults
→ spa treatment for children (for children from 3 to 8 years accompanied by adults*)
→ ambulatory spa treatment for adults and children
→ spa treatment of adults in an adapted underground mine workings
*for children with cerebral palsy and neurological conditions with a similar clinical picture - up to 18 years of age
Duration of treatment:
→ 21 days - spa treatment for adults*
→ 14-28 days - spa treatment for children*
→ 6 v 12 v 18 days - ambulatory spa treatment (children and adults)
→ 21 days - spa treatment of adults in an adapted underground mine workings
*the duration of inpatient spa treatment may be extended to a maximum of 42 days for UPG2 - ULK (comprehensive spa treatment)

Principles* of benefit delivery (stage III of system changes):
*recommendation for pilot period - target parameters to be established on the basis of evaluation

→ 30 days - for the patient to register a referral (choice of treatment site)
✓ a referral ceases to be valid if it is not registered in a spa within 30 days of its issue
→ 30 days - for the entity to qualify (from the date of registration of the referral)
✓ confirmation of the patient's eligibility for treatment or disqualification
✓ confirmation of the prognosis of the treatment date
✓ the need to supplement the documentation postpones this deadline by an additional 30 days
→ central queue: possibility to enrol in 1 queue for 1 type of service (outpatient or inpatient)
→ 12 months - to implement the referral (start of treatment) from the date of registration
→ 6*months - grace period after completion of treatment to obtain another referral *National Consultant recommendation for the pilot period (to date: 12 months)
→ 12*months - grace period after completion of treatment to implement (start) another treatment *National Consultant recommendation for the pilot period (to date: 18 months)
→ 6 months - grace period for obtaining another referral in the case of:
✓ unjustified cancellation of treatment (calculated from the date of cancellation)
✓ failure to register for the queue within 30 days of the issue date (calculated from the registration deadline)
→ a maximum of 2x - possibility to postpone treatment
✓ postponement of treatment only for justified and documented reasons
✓ 18 months to implement the referral (start of treatment) from the date of registration in case of postponement of treatment for legitimate reasons
Principles* of benefit delivery - cont. (stage III of system changes): *recommendation for pilot period - target parameters to be established on the basis of evaluation
→ the entity is free** to determine the dates of the "intakes" (in groups, i.e. every 21, 14, 7 days or individually) → optimising branch occupancy and minimising the risk of under-occupancy (vacancy)
→ the entity has the option to choose** the billing period: month or turn; this allows the entity to bill for services in two ways: at the end of the month for the man-days performed in that month (→ improving liquidity) or at the end of the turnaround, after the benefit has been completed;
→ in the case of multiannual contracts, when the accounting period is one month, the entity may carry out turnarounds at the turn of the calendar year (→ optimisation of ward occupancy and minimisation of vacancies) **during the pilot period
Contracts for the provision of services:
→ it is recommended to maintain the contractual system of contracting spa treatment services
→ advisable to conclude long-term contracts

Billing of inpatient services - Uniform Patient Groups [UPG].
→ 2* UPGs for inpatient services:
✓ UPG1: ULP – basic spa treatment
✓ UPG2: ULK – comprehensive spa treatment *adults and children respectively/possible expansion of UPGs catalogue eventually
→ tariffing of services: valuation of person-day in UPGs ULP and ULK (valuation of costs of therapy, accommodation and meals, including personnel costs); the unit of account is person-day

→ UPG2 - ULK [comprehensive spa treatment] provided (by the subject voluntarily - declaratively) upon fulfilment of additional conditions: 24-hour medical care, i.e.. physician on duty at the place of providing treatment; physician providing treatment who is a "spa physician" - equivalent of at least ½ FTE for the first initial 25 beds, then modularly / proportionally; physiotherapist - higher normative for the first initial 25 beds, then proportionally; hotel, catering and treatment facilities at the place of providing treatment; no architectural barriers for the disabled in the premises, catering and treatment facilities; 4 or 5 treatment procedures per day (two pricing options are proposed** varying the number of treatment procedures possible and applied); **during the pilot period (due to concerns raised by medical staff about the validity and, in some cases, the clinical feasibility of using more treatment procedures)
→ UPG2 - ULK [comprehensive spa treatment] – higher valuation of person-day of treatment - treatment provided free of charge for the patient
→ the entity declares the number of beds for which it meets the additional conditions required and on which it can implement UPG2 – ULK
→ spa sanatorium implementing UPG2 - ULK is referred to as a "complex" spa sanatorium
→ UPG1 - ULP [basic spa treatment] - basic valuation of a person-day of treatment - patient co-finances costs of accommodation and nutrition (specified upper limit of surcharge); treatment fully financed by NFZ for patient 75+ (averaged valuation of a person-day); 3 or 4 treatment procedures per day (two pricing options are proposed** varying the number of treatment procedures possible and applied); **during the pilot period (due to concerns raised by medical staff about the validity and, in some cases, the clinical feasibility of using more treatment procedures)
→ a patient fulfilling the criteria of UPG2 – ULK may be admitted out of turn if the sanatorium has free places enabling patients from UPG1 – ULP waiting in the queue to receive the service in accordance with the established prognosis
Eligibility criteria for the UPG2: ULK – comprehensive spa treatment
→ settlement of a benefit in the group UPG2 - ULK [comprehensive spa treatment] is possible only in the case of fulfilment of at least 1 qualification criterion for this group from the list of ULK - criteria, otherwise the settlement is made according to the group UPG1 - ULP
→ UPG2 list - ULK - criteria*:
✓ specific ICD-10 in the treatment direction plus a specific clinical criterion and possibly a specific time since the end of hospitalisation
✓ specific ICD-10 in the treatment direction plus multimorbidity (minimum of 3 additional conditions from the list of specified comorbidities)
✓ wheelchair patient
✓ dependent patient [activities of daily living according to Barthel ADL index: number of points ≤90]
✓ patient with a severe disability
✓ age ≥80 years *preliminary recommendation - a detailed list will be provided once the concept is approved
Group settlement (separate valuations) - required indication:
→ UPG1: ULP/3 - basic spa treatment (with 3** procedures)

✓ an average of at least 3 ICD-9-LU procedures per day (54 ICD-9 procedures over the reporting period of 21 person-days), including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list
✓ a minimum of 1 procedure during the reporting period (21 person-days) from additional list IDC9-LU-D*.
→ UPG1: ULP/4 - basic spa treatment (with 4 treatments)
✓ an average of at least 4 ICD-9-LU procedures per day (72 ICD-9 procedures over the reporting period of 21 person-days), including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list
✓ a minimum of 1 procedure during the reporting period (21 person-days) from additional list IDC9-LU-D*.
→ UPG2: ULK/4 - comprehensive spa treatment (with 4 procedures)
✓ an average of at least 4 ICD-9-LU procedures per day (72 ICD-9 procedures over the reporting period of 21 person-days), including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list
✓ a minimum of 2 procedures during the reporting period (21 person-days) from additional list IDC9-LU-D*.
→ UPG2: ULK/5 - comprehensive spa treatment (with 5** procedures)
✓ an average of at least 5 ICD-9-LU procedures per day (90 ICD-9 procedures over the reporting period of 21 person-days), including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list
✓ a minimum of 2 procedures during the reporting period (21 person-days) from additional list IDC9-LU-D*.
*examples IDC9-LU-D: 89.01-Prevention and health promotion; 89.011-Dietary consultation; 89.031-Dietetic consultancy; 93.0709-Other anthropometric measurements - assessment of nutritional status: BMI or NRS 2002 scale or SGA scale or body composition test
**during the pilot period (due to concerns raised by medical staff about the validity and, in some cases, the clinical feasibility of using more treatment procedures)

Billing of outpatient services - Uniform Patient Groups [UPG].
→ 1 UPG group for outpatient services:
✓ UPG3: ULA – ambulatory spa treatment for adults and children
→ tariffing of services: treatment day valuation in UPG3 - ULA (treatment cost valuation, including personnel costs); the unit of account is the treatment day
Group settlement - required indication:
→ UPG3: ULA/3 - ambulatory spa treatment for adults and children (with 3** treatments)
✓ an average of at least 3 treatment procedures from the ICD-9-LU list per day, including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list
→ UPG3: ULA/4 - ambulatory spa treatment for adults and children (with 4 treatments)

✓ an average of at least 4 treatment procedures from the ICD-9-LU list per day, including: an average of at least 1 ICD-9 procedure per day using natural therapeutic raw materials from the ICD9-LU-SN list **during the pilot period (due to concerns raised by medical staff about the validity and, in some cases, the clinical feasibility of using more treatment procedures)

Billing of services provided in an underground mine - Uniform Patient Groups [UPG].
→ 1 UPG for services provided in an established underground mine workings:
✓ UPG4: ULG - spa treatment for adults in an adapted underground mine workings
→ tariffing of services: pricing of person-day in UPG4 – ULG (pricing of therapy, accommodation and meals, including personnel costs); the unit of account is person-day
Group settlement - required indication:
→ UPG4: ULG/3 - spa treatment for adults in a furnished underground mine workings (with 3** treatments)
✓ an average of at least 3 treatment procedures from the ICD-9-LU list per day, including: at least 6 hours per day in 2 treatment cycles in the salt chamber and at least 3 nights (12 hours between 20:00 and 8:00) in the salt chamber
✓ a minimum of 1 procedure during the reporting period (21 person-days) from additional list IDC9-LU-D*.
→ UPG4: ULG/4 - spa treatment of adults in an adopted underground mine workings (with 4 treatments)
✓ an average of at least 4 treatment procedures from the ICD-9-LU list per day, including: at least 6 hours per day in 2 treatment cycles in the salt chamber and at least 3 nights (12 hours between 20:00 and 8:00) in the salt chamber
✓ a minimum of 1 procedure during the reporting period (21 person-days) from additional list IDC9-LU-D*. **during the pilot period (due to concerns raised by medical staff about the validity and, in some cases, the clinical feasibility of using more treatment procedures)

Queue maintenance (waiting list for the provision of services):
→ queue operated directly by the spa facilities
→ the entity managing a number of facilities with the same treatment profile in a given spa has the possibility to choose* how to run the queue: separately to individual facilities or centrally to the entity (within the same location, i.e. in one spa town)
→ the entity managing several facilities of the same treatment profile in a given health resort, running the queue separately to individual facilities, has the possibility, with the consent of the patient, of changing the place of provision of the service, provided that the service will be provided at a time not later than the originally established forecast and the surcharge for the costs of food and accommodation will not be higher than that offered when the place of treatment was selected
→ the principle of continuity of services throughout the calendar year applies
→ the principle of even occupancy applies: the pool of places available for e-booking may not fluctuate by more than plus/minus 50% throughout the calendar year

*during the pilot period

Figure 6. Analysis of opportunities and risks.

 reform - opportunities	 reform - risks
→ from a system perspective	→ from a system perspective
✓ restoring health spa services to their rightful **role in the health care system**, i.e. their role in the state's health promotion policy, **clarifying the role of spas** in the health care system	→ the risk of a market for services based on competition for patients by location and 'hotel' conditions rather than the quality of medical services – **the risk of marginalising the role of medical provision** in spa treatment
✓ **clarity of the referral system** for spa treatment (defined objectives, diagnostic-therapeutic pathways, contraindications) => greater clarity of the rehabilitation care system => ultimately "unblocking" of rehabilitation ward beds for early rehabilitation	→ **the risk** of a reduction in the availability of experience (**reduction in the resources** of the spa treatment potential) in the event of liquidation of facilities / entities that will not be able to function in the new formal-legal reality
✓ **optimising the organisation** of spa treatment	
✓ competing for patients with the **quality and range of medical services**	→ risk of elimination of jobs in the spa treatment departments of the Regional Branch of NFZ in case of queues and qualification by spa treatment entities
✓ increasing **efficiency** and improving **quality**	
✓ appropriate approach to the patient	
✓ **adaptation of the therapeutic directions** of spas to health needs, targeting two new therapeutic directions of spas: treatment of psychosomatic disorders and spa convalescence of oncology	→ from the perspective of the referring physician
✓ **reactivation of speciality faculties in spas** (specialisation of spas within selected treatment faculties, opportunity to develop less popular treatment faculties)	→ the need to fill in a specific e-referral form (different from other types of benefits), the need to submit test results or attachments with the referral – these formalities may discourage doctors, particularly those less IT proficient, from making referrals
✓ reactivation of spa treatment for **children**	→ possible absorption of staff by IT 'excluded' patients in order to obtain assistance in choosing a place of treatment – the above expectations may discourage doctors from making referrals
✓ reactivation of **research and scientific centres** in spas	
✓ ultimately: introduction of service **standardisation**	
✓ ultimately: **evaluation of** treatment **results**	→ from the patient's perspective
✓ ultimately: **regulating access to** and use of **natural resources**	→ the risk of difficulties in choosing a place of treatment for people who are less IT proficient or digitally excluded
✓ ultimately: improving the quality of medical **staff education**	
	→ from an entity's perspective

✓ ultimately: **digitisation of resources** and data (e-records)	→ implementation of system changes in **a period of unstable economic, political and geopolitical conditions** (inflation, war in Ukraine, election period, commitment to repay advances taken during the COVID-19 epidemic)
✓ **as a result: the development of spas**, the development of Polish spa care, raising the **prestige** of the discipline	
→ from the perspective of the referring physician	→ **transferring all the** financial and economic **risk** of a possible failure of the reform to providers
→ **less paperwork**: simplified referral process (e-referral filled in 'by default' and intuitively), less administrative formalities	→ **risk of choosing "attractive" locations ("destinations" for tourists) and well-known, "flagship" facilities, regardless of the quality of the medical services offered** – problems with the operation of small, less well-known and less "attractive" resorts, entities and facilities, and consequently a risk of the loss of jobs for those directly employed in spa treatment facilities as well as in the area of the spa community and of the disproportion in the development of spas
→ **savings**: e-referrals do not have to be printed out or sent in traditional way (by post)	
→ **no need to refer patients only under specific** (regulated by the Regulation of the Ministry of Health) ICD-10 **diagnoses** (only contraindications will remain specified, not specific indications)	→ **risk of seasonality** – problems with occupancy outside the "attractive" season ("sea in summer, mountains in winter")
→ **possibility of directing patients directly to selected spa** treatment facilities - possibility of cooperation (locally, regionally, supra-regionally) between primary care physicians and specialists and physicians of hospital wards and clinics with sanatoriums ensuring continuity of specific therapeutic paths **(assured continuity and comprehensiveness of treatment)**	→ **increased costs in terms of:** handling queues, handling eligibility for treatment, correspondence with patients, increased number of treatment procedures (4 v 5), mandatory health education activities – c**oncerns about not being compensated for these costs when valuing the service**
→ from the patient's perspective	→ **difficulties in ensuring queuing and eligibility for treatment** (limited staff resources with the competence to perform these tasks)
→ reduced paperwork for referrals: simplified referral process (**e-referral**)	
→ **savings**: e-referrals do not have to be sent in traditional way (by post)	→ **reduction of revenues in terms of:** making the surcharge rates more flexible – patients may expect the lowest possible surcharges and, as a consequence, force the entity to lower the surcharge rates as much as possible (make the use of treatment conditional on offering the lowest or zero surcharge)
→ the patient (or in the case of treatment of children: the parent or guardian) is **notified** of the next steps in the processing of the e-referral **in the way they choose**: electronically, by telephone or traditionally	
→ **the patient can be informed online** of the next steps in the processing of the e-referral, including registration, appointment of the treatment prognosis and confirmation of the appointment	

→ **the patient has the possibility of choosing the sanatorium** where he or she will receive treatment, from among those centres which specialise in treating his or her conditions	→ **reduction in revenue in terms of:** lack of demand and decline in occupancy – particularly in less well-known and less 'attractive' resorts and facilities
→ **lack of regional differentiation in the waiting period** for spa treatment – equalisation of opportunities in this respect for patients from all over the country	→ **decrease in revenue in terms of: decrease in commercial sales of stays and treatments** with an assumed increased availability of services financed by the NFZ
→ **change in the rules for determining the date of treatment** – the prognosis of the date of treatment will be determined directly after the qualification, the patient will have the possibility to choose the centre which will guarantee **the fastest** provision of the service	→ **risk of a lack of occupancy in facilities providing treatment for conditions other than musculoskeletal disorders** (the most common treatment direction)
→ **increasing the safety of the treatment** by confirming the place of treatment appropriate to the patient's health needs directly with the spa treatment facility	→ possible difficulties with the addition of UPGs in spa treatment and with the qualification, establishment of the place of treatment ("complex" sanatoriums) and billing of services under the UPG
→ **intensification of** medical **services** (increase in the number of treatments, professional health education)	→ in the event of abandoning the competition model of contracting services and "freeing the market" (contracts with the NFZ for all entities meeting the requirements regardless of the estimated demand for the provision of services): the risk of an excessive supply of places for the provision of services and, as a result, the lack of a guarantee for the implementation of the contract with the NFZ by entities that are less attractive "in terms of location" but guarantee high quality of medical services, providing specialist staff and experience
→ **improving accessibility:** possibility to receive treatment every 12 months	
→ **improved accessibility for professionally active people**: sickness benefit during treatment	
→ **improving accessibility for children:** care allowance for the child's parent / guardian	
→ **improving accessibility for seniors:** free treatment in a sanatorium for 75+ seniors	
→ **making** board and lodging **subsidy rates more flexible**, depending on the capacity of the spa or the duration of the service – the patient can decide to choose the cheaper facility	
→ **maintenance of free spa treatment** for: children, adolescents, students up to the age of 26, children with severe disabilities without age limitation, employees involved in the production of asbestos-containing products	
→ **maintaining free of charge spa treatment** for patients meeting certain medical criteria, i.e. requiring complex treatment (the oldest, those with multiple diseases, at an early stage of	

treatment, etc.) – **standardisation of eligibility criteria for free treatment** → from an entity's perspective → **organisational optimisation** (one* type of establishment, one* type of department, one* type of inpatient services billed under two UPGs; *for adults and children respectively) → **rationalisation of the requirements** for spa treatment facilities → **cost reduction in terms of**: optimal and flexible use of capacity (beds, staff) – one type of ward / services → **increased demand:** eligibility for treatment every 12 months, sickness benefit during sanatorium treatment, care allowance for parent / child carer, free sanatorium treatment for seniors 75+ → **increased revenues in terms of:** optimised facility occupancy, reduced under-occupancy, no vacancies → **the possibility of actively recruiting patients** by establishing partnerships with outpatient clinics or hospital departments in order to ensure continuity of treatment in specific therapeutic directions → **possibility of active and flexible** filling of places: no obligatory turnout, possibility of reacting to under-occupation, optimisation of facility occupancy, → the possibility of actively building the entity's brand on the basis of selected **specialisations**	

Appendix 7. Analysis of opportunities and risks.

reform - risks	minimising risks
✓ the risk of a market for services based on competition for patients by location and 'hotel' conditions rather than the quality of medical	→ **education** of physicians and patients → development and promotion of **specialised faculties**

services – the risk of marginalising the role of medical provision in spa treatment	→ **promoting quality and range of** medical **services** in the contracting process
✓ risk of reduced availability of services (reduction of resources of the spa treatment potential) in case of liquidation of facilities / entities that will not be able to function in the new formal-legal reality	→ introducing **service delivery rules** that increase demand and improve accessibility while allowing for even occupancy of facilities
✓ risk of elimination of jobs in the spa treatment departments of the Regional Branch of NFZ in case of queues and qualification by spa treatment entities	→ **management of the staff** of the Regional Branch of NFZ for tasks related to benefit billing, evaluation, education, operation of treatment selection desks in the Customer Service Room or hotline operation,
→ the need to complete a specific e-referral form, the need to submit test results or attachments with the referral – these formalities may discourage doctors, particularly those less IT proficient, from making referrals	→ the possibility of authorising a **medical assistant** to issue a referral for spa treatment with the objectives and indications for treatment specified by the doctor
→ possible absorption of staff by IT 'excluded' patients in order to obtain assistance in choosing a place of treatment – the above expectations may discourage doctors from making referrals	→ if necessary, assistance in registering the e-referral (choice of sanatorium) should be provided by a **medical assistant**
→ the risk of difficulties in choosing a place of treatment for people who are less IT proficient or digitally excluded	→ **various possibilities of selecting the place of treatment:** by the patient - individually (Internet, telephone, e-mail, dedicated helpline, Customer Service Rooms of the Regional Branch of NFZ), by the doctor, or by the system – automatically,
→ implementation of system changes in a period of unstable economic, political and geopolitical conditions (inflation, war in Ukraine, election period, commitment to repay advances taken during the COVID-19 epidemic)	→ **gradual**, evolutionary and variant implementation of change → a **pilot** transition period during which certain variants of the chosen solutions will be allowed → **evaluation** and development of final solutions on its basis
→ transferring all the financial and economic risk of a possible failure of the reform to providers	→ **considering the introduction of financial safeguards** to enable adaptation to change **during the pilot period**, e.g. a system of "advances" for operators who will have temporary or seasonal difficulties with the occupancy of facilities
→ risk of choosing "attractive" locations ("destinations" for tourists) and well-known, "flagship" facilities, regardless of the quality of the medical services offered – problems with the operation of small, less well-known and less "attractive" resorts, entities and facilities, and	→ introduction of **service delivery rules** that guarantee a fairly even occupancy of available bed resources throughout the country (limited validity of referrals, limited duration of provision) → increasing demand and improving accessibility (shortening the grace period for referral and

consequently a risk of the loss of jobs for those directly employed in spa treatment facilities as well as in the area of the spa community and of the disproportion in the development of spas	treatment, sick leave for sanatorium stays, reimbursement for 75+ stays,...). → development and promotion of **specialised faculties** → possibility of **active patient acquisition**
→ risk of seasonality – problems with occupancy outside the "attractive" season ("sea in summer, mountains in winter")	→ as above
→ reduction in revenue in terms of: lack of demand and decline in occupancy – particularly in less well-known and less 'attractive' resorts and facilities	→ as above
→ risk of a lack of occupancy in facilities providing treatment for conditions other than musculoskeletal disorders (the most common treatment direction)	→ **development and promotion of specialised faculties** by including spa services in diagnostic and therapeutic pathways and IHCP
→ reduction in revenue in terms of: making surcharge rates more flexible – patients may expect the lowest possible surcharges and consequently force the provider to undercut surcharge rates as much as possible (make the use of treatment conditional on offering the lowest or zero surcharges)	→ setting a **range (percentage) within which the level of co-payment can be set** (minimum level to cover fixed costs), thus preventing operators from "coercing" patients into unpaid treatment
→ decrease in revenue in terms of: decrease in commercial sales of stays and treatments with an assumed increased availability of services financed by the NFZ	→ **realistic and reliable pricing of** spa **services** will compensate for the reduction in other revenues
→ increased costs in terms of: handling queues and eligibility for treatment, correspondence with patients, increased number of treatment procedures (4-5), mandatory health education activities – concerns about not being compensated for these costs in the valuation of the service	→ **realistic and reliable valuation of** spa treatment **services** taking into account all new costs
→ difficulties in ensuring queuing and eligibility for treatment (limited staff resources with the competence to perform these tasks)	→ **minimising paperwork, simple and intuitive tools** (apps, digital enhancements) for handling queues and qualifications → **reliable valuation of services**, taking into account new personnel costs (such as hiring medical registrars and doctors to qualify referrals)
→ possible difficulties with the addition of UPGs in spa treatment and with the qualification, establishment of the place of treatment ("complex" sanatoriums) and billing of services under the UPG	→ expansion of the UPG catalogue in an **evolutionary manner**, initially divided into two groups (basic and comprehensive)

	→ using the knowledge of specialists (consultants) from other fields in the construction of the UPG catalogue → an appropriately **refined** referral **template**
→ in the event of abandoning the competition model of contracting services and "freeing the market" (contracts with the NFZ for all entities meeting the requirements regardless of the estimated demand for the provision of services): the risk of an excessive supply of places for the provision of services and, as a result, the lack of a guarantee for the implementation of the contract with the NFZ by entities that are less attractive "in terms of location" but guarantee high quality of medical services, providing specialist staff and experience	→ **demand-driven** contracting of services → **defining of precise requirements for spa facilities** (infrastructural and personnel) that will exclude the possibility of entities (facilities) for which curative activity is not the primary activity from applying for the provision of services

Appendix 8. Recommended system changes - scheme.

	STAGE I
1.	→ simplifying the referral process for spa treatment
2.	→ clarification of the role of spas in the health care system
3.	→ formal and legal preparation of system changes
4.	→ direct referral of children for spa treatment

STAGE I: preparatory phase for systemic change

Recommended:

→ fine-tuning the operation or creating new IT tools: e-referral, e-registration applications;

→ assessing health needs in terms of access to spa treatment services;

→ establishment of a group of medical experts in the field of balneology and physical medicine and medical rehabilitation, supported by scientific societies and experts from other medical disciplines, whose task will be to develop a detailed system of eligibility for particular forms of treatment, a detailed catalogue of contraindications to treatment, a system of Uniform Patient Groups (UPG), requirements for service providers and treatment standards;

→ the establishment of an expert group on legislative change, which will develop all the necessary legal changes required to implement the new system;

→ introducing (as a pilot) a change in the way children are referred to and qualified for spa treatment facilities.

	STAGE II	
5.		→ optimising the organisation of spa treatment
6.		→ adaptation of the treatment directions of spas to health needs
7.		→ increasing access to services
8.		→ standardisation of treatment procedures and directions

STAGE II: implementation and evaluation phase of system changes

→ making legislative changes (stage II tasks);

→ training of staff in the operation of the new system;

→ information campaign on system changes and education of referring doctors and patients;

→ evaluation: collecting and analysing information on the effects of the changes implemented, taking corrective action.

	STAGE III	
9.		→ simplification of the process of selecting a spa treatment site
10.		→ simplification of the qualification process for spa treatment
11.		→ simplifying the timing of treatment
12.		→ new rules on treatment subsidies
13.		→ evaluation of treatment results
14.		→ education of health professionals
15.		→ digitisation of resources and data

STAGE III: final implementation phase of system changes

→ implementation of stage III tasks, introduction of treatment outcome assessment, digitisation of resources and data;

→ continuing information and education activities;

→ selection and implementation of final solutions.

Appendix 9. Expected effects of changes to the spa treatment system (hereafter 'ST') from a health system perspective - summary:

	Actions – changes	Purpose of the changes	Effect of the changes
	→ greater use of spa rehabilitation → ST benefits as post-hospital convalescence → spas in diagnostic and therapeutic pathways and Individual Health Care Plans	✓ clarification of the role of spas in the health care system	✓ restoring spa services to their rightful role in the health care system, i.e. their role in the state's health promotion policy
	→ change to the referral and eligibility rules for inpatient rehabilitation services: only those meeting the criteria for "urgent" groups and those with the Significant Degree of Disability would be eligible for a stay in an inpatient unit	✓ increased accessibility to urgent and inpatient rehabilitation services for people with the Significant Degree of Disability	✓ in-patient "chronic rehabilitation" provided exclusively as part of spa services ✓ improving accessibility to inpatient rehabilitation for people with the Significant Degree of Disability
	→ ST's new direction [amending the Act]. → development of service delivery principles (possibly piloting)	✓ spa convalescence for oncology	✓ improvement in prognosis and quality of life ✓ reduced hospital and pharmacotherapy costs
	→ ST's new direction [amending the Act]. → development of service delivery principles (possibly piloting)	✓ spa treatment of psychosomatic disorders	✓ improvement in quality of life ✓ reduced hospital and pharmacotherapy costs ✓ lowered absenteeism at work
	→ piloting – directing children and adolescents to spas (assumptions already prepared)	✓ improving the health of children and young people	✓ reduced hospital and pharmacotherapy costs ✓ less school absenteeism ✓ an investment in the health of future generations
	→ piloting centres → development of rules for the provision of benefits	✓ use of ST for children with disabilities	✓ improvement in quality of life ✓ improving accessibility to services

	→ one type* of in-patient spa [sanatorium] → one type* of ward [spa ward] → one type* of inpatient services [spa treatment] accounted for within two (eventually more) UPGs → new type of sanatorium: family sanatorium *for adults, children and families respectively	✓ optimising the organisation of spa treatment	✓ adaptation of services to current health needs ✓ improving accessibility to services
	→ possibility of spa treatment <u>every 12 months</u>* (to date: sanatorium every 18 months) → the possibility of obtaining a certificate of incapacity for work for the period of treatment in the sanatorium → <u>free treatment</u> in a sanatorium <u>for seniors 75+</u> → the possibility for the parent / guardian of the child to receive a care allowance for the period of the stay at the sanatorium with the child from 3 to 8 or up to 10 years**. **for children with cerebral palsy and neurological conditions with a similar clinical picture – up to 18 years of age	✓ increasing the availability of spa treatment services	✓ ST as part of a healthy lifestyle ✓ improving the health and quality of life of senior citizens and working people ✓ role in senior citizenship and rehabilitation policy ✓ role in the prevention of civilisation diseases ✓ reduced hospital and pharmacotherapy costs
	→ entitlement to a certificate of incapacity for work (sickness benefit) during treatment in a sanatorium by working people	✓ improving the health of workers	✓ lowered absenteeism at work ✓ longer working capacity and better quality of work