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Organizational units providing mental health services for adults – an analysis based on Polish National Health Fund data for 2010–2016

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Summary

Aim. The aim of this publication is to analyze the organizational units of mental healthcare for adults based on the data on the services reported to the National Health Fund in 2010–2016.

Method. The following organizational forms of care were analyzed: mental health outpatient clinics, general psychiatric wards, general daycare psychiatric wards, community mental health teams, and psychiatric emergency rooms. These organizational units were analyzed in terms of their number, utilization and accessibility. In addition, a preliminary simulation of the expected Mental Health Centers was carried out.

Results. In Poland, in 2010–2016, the number of mental health service providers under contracts with the National Health Fund increased by 5%. The most robust growth was observed for community mental health teams, whose number increased by 282%. However, this organizational form was used by a marginal (1.9%) percentage of patients. The highest rate of admission to general psychiatric wards was observed in districts where a general psy-

chiatric ward and a mental health clinic were available with no daycare psychiatric wards or community mental health teams. A small number of entities providing comprehensive care was in operation in 2016. The preliminary simulation has shown that in 2016 a total of 156 Mental Health Centers should have been in operation, assuming that each of them would have provided care for 200,000 inhabitants.

Conclusions. It would be advisable to analyze the exact geographic distribution of units, human resources in individual organizational units, and to take financial outlays for mental healthcare in their various forms into consideration.

Key words: mental healthcare in Poland, organizational units, maps of health needs

Introduction

Thornicroft et al. [1] distinguish three periods in the history of mental healthcare in developed countries: the establishment of mental health hospitals, the decline of mental health hospitals, and the development of decentralized community psychiatry embedded in the local community. In the context of the ongoing debate about the positive and negative aspects of deinstitutionalization, re-institutionalization and trans-institutionalization [2] it is becoming more and more important that community psychiatry is not a specific institution or service. Rather, it is a way of thinking about the psychiatric patient, their needs and rights, while ensuring access to the healthcare system and to the broadly defined presence in the society. In a 'balanced care model', most services should be provided for those who need it at facilities close to their places of residence, with hospitalization being offered on the so-called acute psychiatric wards in general hospitals and the number of hospitalizations being reduced as much as possible [1].

According to the most recent Western European data, the number of psychiatric beds in 1990–2012 continued to fall, while the number of beds on forensic psychiatry wards went up [3]. The authors of the aforementioned paper emphasize that the relationship between these trends remains unclear. They point out the need to obtain exact information about the characteristics of the patients provided with services, to perform a long-term analysis of treatment paths, and to study the effectiveness of activities in order to develop evidence-based principles for providing mental healthcare.

Policy-makers are increasingly recognizing the need to 'think out of the box' in the areas of mental health and provision of mental health services given that the model followed so far has not been meeting society's expectations. Hannigan and Coffey [4, p. 223] indicate: "too little understanding of disease, lack of suitable and/or available treatments, poorly trained and/or too few workers, too few and/or the wrong types of teams or facilities, […] mental health laws which are either too liberal or too coercive […]". Ellis et al. [5] suggest the need for providing interdisciplinary, integrated services and for coordinated activities since the difficulties in obtaining help from the traditional system operating in many countries pose a risk of a significant deterioration of health and social circumstances to individuals with psychiatric disorders.

In Poland, there is a long history of activities aimed to shift from the traditional, asylum-based care model by, among other things, establishing an increasing number of outpatient mental healthcare facilities. The goal of the re-organizational changes is to implement comprehensive mental healthcare which will allow patients to function independently, with the support of their families, and to periodically use the services of community mental health services, such as daycare wards and comprehensive mental health teams. However, it was not until the adoption of the National Program for Mental Health Protection in the form of a ministerial regulation (Dz. U. (Journal of Laws) of 2016, items 546, 960 and 1245 [6–8]) pertaining to the Act of 19 August 1994 on Mental Health Protection that an opportunity to accelerate the reorganization processes was created. The National Program for Mental Health Protection now recommends for service providers to sign collaboration contracts and, thus, provide patients with comprehensive care in a given area.

According to the recommendations provided in the Regulation of the Council of Ministers of 8 February 2017 (Dz. U. (Journal of Laws) of 2017, item 458 [9]), primary mental healthcare is to be provided by Mental Health Centers (MHCs) whose target population would not exceed 200,000 inhabitants. It should also be borne in mind that an MHC may also be commissioned to provide healthcare services in the treatment of addictions. The structure of an MHC is to include an outpatient clinics, a community team (mobile), a daycare team, and an inpatient team. A reporting and coordinating point should ensure quick registration, coordination of services and, if necessary, crisis intervention, and it should be available seven days a week and, if possible, 24 hours a day. The legislator assumes that specialized teams (e.g., neurotic disorders teams, psychogeriatric teams, rehabilitation teams) will be made available where possible or in order to provide necessary specialized services (e.g., crisis help, hostels, periodic stays).

Currently, based on two regulations of the Minister of Health: one dated 27 April 2018 (Dz. U. (Journal of Laws), item 852) [10] and one dated 11 September 2018 (Dz. U. (Journal of Laws), item 1786) [11], a Mental Health Center pilot program is being carried out. The program will be completed in three years' time. Twenty-eight facilities will be testing the organizational model of community care proposed by the National Program for Mental Health Protection.

Aim

The aim of this publication is to analyze the organizational units of mental healthcare provided for adults based on the data on the services reported to the National Health Fund, a Polish public payer, in 2010–2016.

Material and methods

To conduct our study, we used the material from the first edition of the Maps of Health Needs (MHN) related to psychiatric disorders[1]. We expanded the scope of the data presented in the MHN to include additional years, thus we analyzed data for 2010–2016 (the MHN published in December 2016 provided data for 2014, while the next edition, which was published in December 2018, included data for 2016). The methodology used in the present study has been described in detail in a publication entitled: *An analysis of psychiatric services provided for adults in 2010–2014 based on the National Health Fund data* [12].

The analysis of organizational units of mental healthcare for adults is divided into three parts: (1) analysis of the number of organizational units, (2) utilization of units, (3) accessibility to organizational units. In the first part, which included the analysis of the number of organizational units, we presented the number of service providers as part of outpatient care, hospital wards, daycare wards, community care, and emergency rooms. A service provider was defined as an organizational unit providing services for adults within the psychiatric care and treatment of addictions in a given district and for a diagnosis from the F group according to ICD-10: 'Mental and behavioral disorders'. The analysis specified and focused on the organizational units of primary (non-specialized) mental healthcare in terms of their potential operation within the structure recommended by the legislator for Mental Health Centers. We analyzed the following organizational forms of primary care[2]: mental health clinics (ministerial code: 1700); general psychiatric wards (ministerial code: 4700); daycare general wards (ministerial code: 2700); community mental health teams (CMHTs) (ministerial code: 2730); psychiatric emergency rooms (ministerial codes: 4900, 4901). We included emergency rooms (ERs) as these play the role of facilities providing emergency mental health services 24 hours per day in the current system.

In the second part, which refers to the utilization of organizational units, we presented treatment pathways for adult patient treatment (aged 18 years or older), i.e., we showed the proportion of patients who used specific types of organizational units at least once during the period of interest. In addition, with respect to patients who received services in 2016, the treatment pathway was presented for years 2010–2016. In this case, we only presented information for the 2016 patients because the longest follow-up period is available for this cohort as regards data on the utilization of organizational units.

In the third part of the results on organizational units, we presented information about primary (non-specialized) mental healthcare in 2016. Given the provision regard-

[1] (http://www.mpz.mz.gov.pl)

[2] The ministerial codes refer to Part VIII of the ministerial code characterising the organisational unit of a hospital, as specified in the Regulation of the Minister of Health of 17 May 2012 concerning the system of ministerial identification codes and the detailed procedure for their assignment (Dz. U. (Journal of Laws) of 2012, item 594) [13].

ing territorial restrictions, which defines accessibility to mental healthcare in a relative proximity to the patient's place of residence, we analyzed the rates of admission to general psychiatric wards per 100,000 inhabitants of a district, depending on the availability of specific types of non-specialized care in the territory of a patient's district of residence. We then presented the expected number of Mental Health Centers (MHCs) in individual provinces, assuming an estimated population of 200,000 to be covered by a single Center, as recommended by the Regulation of the Council of Ministers of 8 February 2017 (Dz. U. (Journal of Laws) of 2017, item 458) [9] and adopted by the pilot program. Data on the number of inhabitants aged over 17 years were prepared by the Central Statistical Office of Poland.

In order to preliminarily, that is without including the value of the contract in the calculations, i.e., the number of points at the facility's disposal, estimate the accessibility of mental health clinics and community mental health teams, we additionally presented a corrected indicator of the number of units per 200,000 inhabitants that took the same number of days of the week on which the unit was open into account. If a given type of organizational unit was open for at least 5 days a week for most of the year, a weight of 1 was assigned to it, and if it was open for fewer than 5 days a week, then the weight assigned equaled the number of days of the week the facility was open divided by 5. Therefore, if a clinic or a community mental health team was open 1 day a week, the weight was 0.2, if it was open 2 days a week, then the weight was 0.4 etc.

Results

The number of organizational units for mental healthcare provided for adults

In Poland, there were 1,560 entities providing services as part of psychiatric care and treatment of addictions under contracts with the National Health Fund in 2016. The division into specific organizational forms of care in 2010–2016 is provided in Table 1.

Table 1. **Number of entities providing services as part of psychiatric care and treatment of addictions in 2010–2016.**

Year	No. of providers									
	Total	Outpatient care		Hospital wards		Daycare wards		Community care		Emergency rooms
		Total	Including mental health clinics	Total	Including general wards	Total	Including general wards	Total	Including community mental health teams	
2016	1,560	1,389	1,031	249	136	224	149	152	149	78

table continued on the next page

2015	1,563	1,395	1,033	250	137	219	148	143	140	82
2014	1,570	1,404	1,038	248	136	211	146	143	140	82
2013	1,573	1,407	1,051	260	138	211	145	135	132	80
2012	1,577	1,411	1,057	260	136	204	142	118	115	76
2011	1,521	1,377	1,048	258	135	162	119	61	59	72
2010	1,479	1,347	1,024	259	140	147	110	43	39	71
Change 2016 vs. 2010 (%)	5%	3%	1%	–4%	–3%	52%	35%	253%	282%	10%

In 2016, the number of all providers went up by 5% as compared to 2010. In the same year, the highest number of providers rendered services in clinics dedicated specifically to psychiatric disorders and treatment of addictions, 74% of which were mental health clinics. All hospital wards (both those in single-specialty hospitals and those operating within general hospitals), followed by daycare psychiatric wards were the second most numerous (in terms of the number of providers) organizational form of care. In 2016, the highest rise in the number of units was observed for community mental health teams (282% compared to 2010). In addition, there was an increase in the number of daycare general psychiatric wards (of 35%) and a small increase in the number of mental health clinics (of 1%). A decrease was seen in the number of psychiatric wards (of 4%), including general wards (of 3%).

Utilization of organizational units for mental healthcare provided for adults

The proportions of patients who were provided with specific organizational forms of treatment in 2010–2016 are provided in Table 2. The changes in consecutive years, compared to 2010, are presented in Figure 1.

Table 2. **Proportions of patients who were provided with specific organizational forms of care in 2010–2016**

Year	Outpatient care	Hospital wards	Daycare wards	Community care	Emergency rooms
2016	90.8%	13.0%	1.6%	1.9%	2.9%
2015	91.0%	13.2%	1.6%	1.7%	2.7%
2014	91.2%	13.4%	1.6%	1.5%	2.7%
2013	91.5%	13.5%	1.6%	1.4%	2.5%
2012	91.7%	13.7%	1.6%	1.1%	2.5%
2011	91.7%	14.6%	1.5%	0.7%	2.2%
2010	91.9%	14.8%	1.3%	0.5%	2.0%

In 2010–2016, the proportion of patients using specific organizational forms of care fluctuated very slightly. In 2016, patients mainly used the services of outpatient

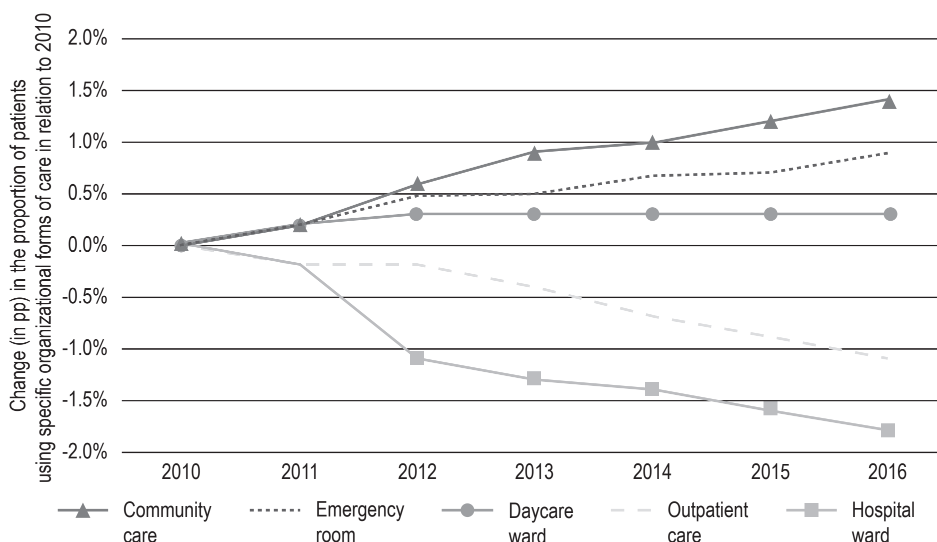

Figure 1. **Change in the proportion of patients using specific organizational forms of care in 2011–2016 compared to 2010 (in percentage points)**

care (nearly 91%), with only few receiving community care (1.9%) and daycare (1.6%) services. Figure 2 depicts the proportions of patients receiving services under specific pathways of treatment (a specific combination of pathways of treatment) in 2010–2016. Where a given combination accounted for less than 3% of the patients, the information was not expanded further.

In 2016, services were reported for more than 1.5 million patients with a diagnosis of a psychiatric disorder. In 2010–2016, 1.4 million of them (94%) received outpatient care at least once and nearly 319,000 (21%) were hospitalized at least once. Emergency room services were most commonly provided for patients who also received outpatient services and daycare ward services (59,100, 4% of all the patients). Daycare psychiatric wards were most commonly used by patients who were at the clinic but did not use the services of an emergency room or a hospital ward (nearly 41,000, 3% of all the patients in 2016). In 2010–2016, patients rarely used community care (26,100, nearly 2%), with the most numerous group being patients using outpatient services only (14,500, 1%). It is worth mentioning that 1 million patients (68%) who appeared in the publicly funded mental healthcare system in 2016 received, in 2010–2016, outpatient care only.

Accessibility to organizational units for mental healthcare provided for adults

Table 3 shows the number of hospitalizations in general psychiatric wards per 100,000 population according to accessibility – that is the presence of various organizational forms of primary mental healthcare in a district.

Number of adult patients with "F" group diagnosis in 2016 [thousands]	Did the patient use outpatient psychiatric care in 2010-2016?			Was the patient hospitalized in the 24-hour ward in 2010-2016?			Did the patient use emergency rooms in 2010-2016?			Did the patient use daycare psychiatric wards in 2010-2016?			Did the patient use community care in 2010-2016?		
	yes/no	number of patients [thousands]	proportion of patients	yes/no	number of patients [thousands]	proportion of patients	yes/no	number of patients [thousands]	proportion of patients	yes/no	number of patients [thousands]	proportion of patients	yes/no	number of patients [thousands]	proportion of patients
1 502.4	YES	1 418.4	94%	YES	318.9	21%	YES	59.1	4%	YES	9.8	1%			
										NO	49.3	3%	YES	2	0%
													NO	47.3	3%
							NO	259.8	17%	YES	28.6	2%			
										NO	231.1	15%	YES	6.7	0%
													NO	224.5	15%
				NO	1099.5	73%	YES	23.6	2%						
							NO	1075.9	72%	YES	40.9	3%	YES	1.3	0%
													NO	39.6	3%
										NO	1035	69%	YES	14.5	1%
													NO	1020.5	68%
	NO	84.0	6%	YES	60.5	4%	YES	8.7	1%						
							NO	51.8	3%	YES	1.2	0%			
										NO	50.6	3%	YES	1.6	0%
													NO	49	3%
				NO	23.5	2%									

Figure 2. **Utilization of various organizational forms of mental healthcare in 2010–2016 by patients who were provided with services for psychiatric disorders in 2016**

Table 3. **The number of hospitalizations in general psychiatric wards per 100,000 inhabitants (according to the place of residence) based on the accessibility to various organizational forms of primary mental healthcare in a district**

Has the district of residence offered:								Number of hospitalizations per 100,000 population
a general psychiatric ward?		a mental health clinic?		a daycare general ward?		a community mental health team?		
Yes	No	Yes	No	Yes	No	Yes	No	
X		X			X		X	546.2227
X		X			X	X		498.5779
X		X		X			X	443.7435
X		X		X		X		424.6061
	X		X		X		X	380.5071
	X	X			X		X	360.0463
	X	X		X			X	354.9073
	X	X		X		X		343.1230
	X	X			X	X		331.3824

The highest rate of admission to a general psychiatric ward, defined according to the place of residence, was seen in districts where a general psychiatric ward and a mental health clinic were available with no daycare psychiatric wards or community mental health teams. Among the districts where a general psychiatric ward was available, the lowest rate of admission was observed in an area where all four organizational forms of care were available.

Table 4 presents a preliminary simulation of the number of Mental Health Centers in individual provinces. In addition, information is provided about organizational units in 2016 which offered one, two, three or four organizational forms of care (a general psychiatric ward, a mental health clinic, a daycare general ward, a community mental health team). The psychiatric emergency room was included in the simulation as the fifth organizational form of care given that it plays the role of the provider of 24-hour emergency mental health services in the present system.

Table 4. **Simulation of the number of Mental Health Centers in individual provinces and the number of providers according to the offered organizational forms of care based on the 2016 data**

Province	Adult population in 2016 (millions)	Number of Mental Health Centers	Number of providers according to the number of the offered organizational forms of care				
		One per 200,000	1	2	3	4	5
Lower Silesia	2.4	12	81	15	7	1	2
Kujawy-Pomerania	1.7	9	48	4	4	3	1

table continued on the next page

Lublin	1.7	9	39	8	6	1	2
Lubusz	0.8	5	28	6	2	1	0
Lodz	2.0	11	57	11	4	1	1
Lesser Poland	2.7	14	61	16	5	2	1
Mazovia	4.4	22	100	13	7	3	4
Opole	0.8	5	29	5	1	1	0
Podkarpackie	1.7	9	32	10	3	2	1
Podlasie	1.0	5	21	6	2	2	1
Pomerania	1.9	10	29	13	9	1	1
Silesia	3.8	19	118	15	10	5	1
Swietokrzyskie	1.0	6	28	4	1	1	1
Warmia-Masuria	1.1	6	24	5	0	2	1
Greater Poland	2.8	14	94	14	5	0	1
West Pomerania	1.4	7	39	5	3	1	2
Poland	31.2	156	828	150	69	27	20

In 2016, the most numerous group of providers ($n = 828$) offered one organizational form of care, followed by providers offering two organizational forms of care ($n = 150$). There were 20 providers in Poland which offered five organizational forms of care. The preliminary simulation revealed that in 2016, a total of 156 Mental Health Centers should have been in operation in Poland, and each of them would have provided care for 200,000 inhabitants.

Table 5 presents the number of providers offering various organizational forms of care per 200,000 inhabitants, and the corrected number of providers for mental health clinics and community mental health teams which takes the number of days in operation for these two organizational forms of care into account.

Table 5. **Number of providers per 200,000 inhabitants in 2016, and the corrected number of providers for mental health clinics and community mental health teams which takes the number of days in operation for these two organizational forms of care into account**

Province	Number of providers per 200,000 adult inhabitants				Corrected number of providers per 200,000 adult inhabitants	
	Mental health clinics	General psychiatric wards	Daycare general wards	Community mental health teams	Mental health clinics	Community mental health teams
Lower Silesia	8.51	0.83	1.17	1.17	6.29	0.82
Kujawy-Pomerania	6.80	0.95	1.07	0.60	4.91	0.55
Lublin	5.95	1.05	0.93	1.63	5.11	1.42

table continued on the next page

Lubusz	7.99	0.97	0.24	2.18	6.54	1.84
Lodz	7.15	0.88	0.69	0.78	5.70	0.69
Lesser Poland	5.08	0.88	1.10	1.69	4.09	1.49
Mazovia	5.53	0.64	0.69	0.64	4.56	0.58
Opole	7.82	0.98	1.22	0.73	5.86	0.73
Podkarpackie	5.54	0.94	1.06	0.94	5.19	0.50
Podlasie	6.47	1.25	0.63	1.46	5.89	1.25
Pomerania	5.17	1.08	1.40	1.61	4.76	1.14
Silesia	7.77	0.90	1.33	0.32	6.13	0.31
Swietokrzyskie	6.67	0.59	0.39	1.18	5.89	0.98
Warmia-Masuria	5.06	1.05	1.05	0.52	4.29	0.45
Greater Poland	7.72	0.64	0.93	0.64	6.29	0.59
West Pomerania	7.20	1.01	0.58	0.72	5.64	0.60
Poland	6.61	0.87	0.96	0.96	5.38	0.79

In Poland, in 2016, there were 7 mental health clinics, 1 general psychiatric ward, 1 daycare general ward, and 1 community mental health team per 200,000 inhabitants on average. As regards the most common number of days per week during which a provider was open, it may be concluded that an average of five clinics were open per 200,000 inhabitants. The largest differences between the raw and corrected indicator for mental health clinics were observed in the Lower Silesia, Opole and Kujawy-Pomerania Provinces, which stems from the relatively high number of providers open less than five days a week.

Discussion

In our opinion, the information about the organizational units for primary mental healthcare in operation in Poland from 2010 to 2016 and the analysis of treatment pathways may be useful in implementing a mental healthcare structure reform.

Over ten years ago, Knapp et al. [14] pointed out that mental health is the most neglected area of public health and remains a taboo in a large part of Europe. According to them, the existing systemic and organizational circumstances as well as social and legal barriers caused social exclusion of individuals with mental problems, tantamount to deterioration of their health and functioning. Those authors indicated the need to develop community care – alternative to the asylum model – and suggested that de-institutionalization, which is seemingly simple, does not mean that the issue of inefficient functioning of mental healthcare is solved.

According to epidemiological data [15], the prevalence of any psychiatric illness in European countries over one year is up to 38%. An epidemiological study, carried

out on a sample of 10,000 people in Poland aged 18–64 – EZOP Poland [16], shows that from the selected (*n* = 17) common mental disorders according to DSM-IV the following ones were the most common: alcohol abuse (10.90%), panic attacks (6.20%), specific phobias (3.40%), and major depression (3.00%). The number of patients who received services in the years 2014–2016 due to these diagnoses systematically increased [12]. In this context, the rise in the number of providers in Poland from 2010 to 2016 (of 5%) serves to increase the accessibility to mental health services. The high demand for these services is confirmed by the fact that in 2016, services were reported for more than 1.5 million patients diagnosed with a psychiatric disorder, 1.4 million (94%) of which received outpatient specialist care at least once. It is notable that the increase in the number of providers is observed for organizational units providing community care (with the highest increase being observed for community mental health teams – of 282% compared to 2010, followed by daycare general psychiatric wards – of 35%, and by outpatient care facilities – of 3%).

According to the available publications, the number of psychiatric beds is steadily decreasing [3, 17–19] although the reasons for this vary greatly. In Italy and the United Kingdom, for instance, this is caused by a considerable progress in replacing psychiatric hospitals by community care. In Albania and Turkey, on the other hand, the low number of beds reflects the lack of funds and the general deficit in providing mental health services [17]. In 1990–2012, in eleven European countries (Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Spain, Switzerland, the Netherlands, and the United Kingdom), a significant decrease in the number of hospital beds per 100,000 and an increase, in nearly all these countries, in the number of forensic psychiatric beds were observed [3]. In such countries as Belgium, France, Germany, and the Netherlands, an inpatient system of mental healthcare is closely associated with highly-developed systemic community care [20]. In Poland, the tendency observed in 2010–2016 – namely the decrease in the number of psychiatric wards (of 4%) with a simultaneous increase in the number of organizational units providing community care – shows a process of systematic de-institutionalization.

According to an analysis performed by Semrau et al. [17], nearly 85% of the countries reported the availability of daycare wards even though in some of these countries such wards were part of psychiatric hospitals, which defies the principles of community care. On the other hand, the number of daycare wards is very limited in other countries. It is noteworthy that in Poland, in 2016, there was an average of 1 daycare ward, 1 community mental health team and 5 mental health clinics per 200,000 inhabitants. In light of the goals of effective de-institutionalization, these data are satisfactory: closing hospitals should be avoided as it is not possible to continue care in the community both for discharged patients and 'new' patients entering the system [1].

Still, it is difficult to interpret the fact that – with the observed high increase in the number of community mental health teams and a fairly high increase in the number of daycare wards – the proportion of patients using these two organizational forms of

care was low (1.9% and 1.6%, respectively). It may well be that the transition from an institutional type of care to community care is a considerable change for patients and their families, who are not always interested in a place of care alternative to a hospital [21]. In extreme cases, we are dealing with ‘victims’ of de-institutionalization [18] – individuals with psychiatric disorders who have been pushed outside the system, who are homeless or in prison.

The analysis of treatment pathways in 2010–2016 revealed that emergency room services were most frequently provided for those patients who were also managed at a mental health clinic in the years of interest and were hospitalized in a 24-hour ward. It is likely that the accessibility to outpatient visits was not sufficient for these patients, hence the emergency room was a place where they were provided with emergency help the soonest. Psychiatric daycare wards were most often used by patients who were managed at a clinic but did not use the services of an emergency room or a hospital ward. It is reasonable to conclude that receiving treatment in a daycare ward provided effective help for those who needed it, the help that ‘protected’ them from subsequent visits to an emergency room and the need for 24-hour hospitalization. This assumption is confirmed by the fact that the highest rate of admission to general psychiatric wards was seen in districts where a general psychiatric ward and a mental health clinic were available with no daycare psychiatric wards or community mental health teams. Among the districts in which a general psychiatric ward was available, the lowest rate of admission was observed in an area where all four organizational forms of care were available.

According to the literature, comprehensive mental health services continue to be fragmentary despite many attempts to promote them [5], and patients get lost in the system, posing serious health and social risks to themselves and their close ones [22]. In Poland, in 2016, the most numerous group of providers ($n = 828$) offered one organizational form of care, with 27 and 20 providers offering four and five organizational forms of care respectively. This means that there were few entities providing comprehensive care in 2016. According to the study by Kolwitz [23], the insufficient functioning of the Polish healthcare system is affected by: too small expenditures for health protection, monopoly of the National Health Fund and lack of competition among insurers, unequal status of public and non-public providers, public service indebtedness, as well as poor access to healthcare. In these conditions, individuals try to ensure comprehensive care within one institution by financing benefits by the payer based on a fee for service or advice (not for a fixed rate per patient per capita). Another way to ensure continued care is the partnership of entities under the PO WER project of the Ministry of Development. Among others, the following entities benefited from the project: Józef Babiński Specialist Hospital SP ZOZ Krakow, and Wroclaw Health Center SP ZOZ. The obtained additional financial resources enabled the development and implementation of the projects: “Closer to You – a model of integrated treatment and environmental support for people with mental disorders” (in Krakow) and a “” program (in Wroclaw).

A broad discussion of the methods of financing services in healthcare exceeds the framework of this work. However, it is worth mentioning the pay for performance system (P4P) [24]. The results of testing the effectiveness of this system are not straightforward. Pelonero and Johnson [25] found that in psychiatry this way of financing contributed to a significant improvement in the quality of services provided in six areas of the seven assessed such as care coordination, addiction detection, treatment implementation in addiction, treatment of major depression, communication with families in child and adolescent psychiatry. There was no improvement in terms of patient satisfaction assessed as a willingness to recommend a given family member or friend to the service provider. Bremer et al. [26], after analyzing 24 performance programs (P4P), concluded that further comprehensive research is needed to determine whether this solution should be widely used in psychiatric healthcare.

According to the preliminary simulation of the number of Mental Health Centers, assuming that each of them would have provided care for a population of 200,000 inhabitants, services for the adult population of Poland should have been provided by a total of 156 such centers. Taking the needs on a district level into consideration, one should keep in mind that their sizes and populations vary greatly: in 2016, 18% of the districts were inhabited by more than 100,000 adults, 47% by 50 to 100,000 adults, and 36% by less than 50,000 adults. According to the Regulation on Mental Health Centers, a population covered by a single Center should not exceed 200,000 adult inhabitants, while "the Mental Health Center infrastructure outside the hospital should principally be located in whole in an area of territorial responsibility". We therefore believe that it will be possible to meet the goals related to the accessibility to Mental Health Centers with the existing infrastructure. Efforts should, however, be made to increase the accessibility to daycare wards and community mental health teams so that the goals of the organizational reform can be fully met. The situation requires analysis that would take human and economic resources into account because – in terms of solutions – service providers now being able to sign collaboration contracts and, thus, provide patients with comprehensive care in a given area may be insufficient. The results of the current pilot program for the Centers are expected to provide guidance that will enable putting the finishing touches to the expected transformation of the mental healthcare system.

When evaluating the pilot program, attention should be paid to two aspects: the change of way of financing the services, i.e., the Mental Health Centers receive the lump sum per population – the global budget, which is the product of the per capita fee and the number of inhabitants of a given area as well as specialists resources and availability of the different forms of care in a given area.

The main limitation of this analysis is the fact that it only takes organizational forms of care financed by the public payer of healthcare services – the National Health Fund – into consideration. It also fails to include units providing specialized care, such as social welfare facilities, hostels, or protected accommodation. In order to gain a full picture of the organizational structure, it would be advisable to analyze

human resources in individual organizational units and – following the example of similar analyses carried out in other countries – to consider financial outlays for mental healthcare in its various forms [18].

Conclusions

1. In Poland, from 2010 to 2016, the number of providers of mental health services commissioned by the National Health Fund increased by 5%.
2. During the period of interest, the most robust growth was seen for community mental health teams, whose number increased by 282%. However, this organizational form of care was utilized by a marginal percentage of patients (1.9%).
3. The highest rate of admission to general psychiatric wards was seen in districts where a general psychiatric ward and a mental health clinic were available with no daycare psychiatric wards or community mental health teams.
4. In 2016, a small number of entities providing comprehensive care were in operation.
5. In 2016, there were 5 mental health clinics, 1 general psychiatric ward, 1 daycare general ward, and 1 community mental health team per 200,000 inhabitants on average.
6. The preliminary simulation revealed that in 2016, a total of 156 Mental Health Centers should have been in operation in Poland, and each of them would have provided care for 200,000 inhabitants.
7. In order to gain a full picture of the organizational structure, it would be advisable to analyze the exact geographic distribution of units, human resources in individual organizational units, and – following the example of similar analyses carried out in other countries – to take into consideration the financial outlays for mental healthcare in its various forms.

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