



Much Ado about nothing? The responsiveness of the healthcare system in Poland through patients' eyes



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ABSTRACT

This article analyzes the outcomes of the key healthcare reforms undertaken in Poland and assesses how successful they have been. Contrary to the governmental perspective on success, understood in terms of economic efficiency, we define it in terms of patient satisfaction. As such, health policy is treated as a political system's response to the problems emerging in the public agenda. The analysis therefore focuses on the responsiveness of the healthcare system through patients' eyes.

This analysis takes three main reforms undertaken in post-1989 Poland as reference points. These were: Regional Sickness Funds (*Kasy Chorych*, 1999); the National Health Fund (*Narodowy Fundusz Zdrowia*, 2003/2004); and the waiting lists package and the oncological package (*pakiet kolejkowy* and *pakiet onkologiczny*, 2015). Each introduced key institutional changes, but also sparked media interest, public attention, and mass discourse. The article presents the main goals and the most important consequences of the reforms for patients.

For the purposes of the analysis, the following patient-oriented indicators of reform success were chosen: (1) public satisfaction with healthcare, (2) waiting times, (3) number of health professionals. The assembled data from national and international databases leads to the conclusion that the reforms have not succeeded.

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1. Introduction

It may sound simple (if not banal), but providing better health is the number one aim of any healthcare system. In fact, the WHO stresses that “better health is of course the *raison d'être* of a health system, and unquestionably its primary or defining goal.” [1] Nonetheless, the radical, political transition in Poland from communism to democracy and capitalism in 1989 has comprised a fundamental challenge – stymieing the country's healthcare system in achieving that clear-cut objective.

The trauma of abrupt change created new quandaries in all aspects of social life, and a need to create new public policies in all sectors. Healthcare was one of the most important, literally affecting the wellbeing of citizens. It was also one of the most difficult to tackle because of the baggage of long-term negligence by the communist system, including high corruption, outdated infrastructure, as well as a dearth of funds for modernization, new treatments or

prophylaxis. Despite a number of attempts at healthcare reform in Poland undertaken since 1989, it is still perceived as poor by patients [2], as well as by health professionals, who have protested repeatedly.

This article will try to analyze the outcomes of some key healthcare reforms in Poland. We are not particularly interested in efficiency as understood by economists or as frequently portrayed in public health literature. This article will look at the effects of the reforms for patients – that is, whether they did, indeed, change the situation of patients with respect to satisfaction with healthcare, accessibility and quality of health services.

This way of treating healthcare reforms is rooted in a more general way of thinking about public policy as oriented towards its user – more specifically here, the patient. As a public policy, healthcare reform should therefore respond to the needs of patients, and not merely relate to systemic efficiency. The latter aim is enigmatic and elusive, difficult to define and translate into individual or broader public demands. This is why we want to check how reforms respond to their basic functional imperative of fulfilling the needs of patients. The concept of government responsiveness is linked to the notion of responsibility in democratic regimes [3].

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In terms of policy making, a democratic government should be both responsive and responsible. And there is a tension between these two characteristics; governments often claim that they have to act responsibly and, in their effort to provide responsible governance, they cannot always follow voters' wishes [4]. As Linde and Peterson claim, the responsiveness of government plays a role of reservoir of good will, which can support the trust in politics and political support for the government. Thus, satisfaction with government efforts and policy making is, according to the authors, an important factor in evaluating "responsiveness", while responsibility should be understood in the long term as a policy aiming at securing the possibility of providing solution to some problems, even if voters have not yet recognized them as important or urgent. This paper analyses the outcome of selected healthcare reforms through the lens of "responsiveness". With the tension between this aspect and the concept of responsibility, we try to investigate how subsequent Polish governments, in their efforts to be responsible in the field of healthcare, have ensured that their policies are also responsive.

2. Materials and methods

This paper is focused on healthcare system responsiveness, measured by factors influencing patient satisfaction. Looking at a healthcare system through the patient's eyes is not only an ethical duty. Evidence suggests a link between patient perception and quality of health services, with patient satisfaction being a multi-dimensional healthcare construct affected by many variables [5].

This analysis will take three major reforms undertaken in post-1989 Poland as reference points. Each introduced key institutional changes, but also sparked media interest, public attention, and mass discourse. These are: 1) the introduction of Regional Sickness Funds (1999); 2) their replacement by the National Health Fund (NFZ, first in 2003, and then, after being declared unconstitutional, in 2004); and 3) the introduction of the waiting list and oncological packages (2015).

This article will analyze the main points and goals of these reforms to see if they did, in fact, change anything for patients. For the purposes of the analysis, the following patient-oriented indicators of reform success were chosen:

1) Public satisfaction with healthcare. People's perception of healthcare was assessed, as well as whether reforms have had any impact upon these views. Aggregated data on public satisfaction and public perception of healthcare and health services since the 1990s (collected by the leading Polish public opinion research center CBOS) was used, alongside some complimentary statistics.

2) Waiting times. These are commonly used to illustrate (in)accessibility of healthcare, and are comparable across both countries and time. Waiting for a specialist, specialized diagnostics, and/or specialized treatment is widely regarded as the fundamental problem of health systems; it is an important policy issue in many countries where statistics are routinely amassed, hence various measures to curb queues are undertaken [6]. Official statistics and data were drawn from the National Health Fund and the Supreme Audit Office (*Najwyższa Izba Kontroli*, NIK); and comparative data came from EHCI reports and independent agencies (Watch Health Care Barometer) regarding fluctuations in the length of waiting times for health services.

3) Health professionals. This is measured by the number of doctors and nurses per 1000 inhabitants, based on OECD data. Any shortage of health professionals is a concern, as it may influence accessibility and patient satisfaction with services. An increase in the number of health professionals should indicate that efforts to solve accessibility problems have been initiated.

Certain problems have hampered comparison, especially with respect to measuring waiting times. The comparative data over

time was insufficient, as the NFZ was not legally obliged to collect data on waiting times until 2004. Furthermore, centralized, online registries only appeared in 2014, whereas the first, regularly published independent reports date back to 2012. The result is a lack of earlier and reliable comparative data.

3. Institutional reforms

We shall open by presenting the primary objectives of the three aforementioned healthcare reforms in post-1989 Poland (as shown in Fig. 1).

3.1. Regional Sickness Funds (*Regionalne Kasy Chorych*, 1999)

In the 1990s, Poland began to initiate healthcare reforms aimed at decentralization, developing private medical practice, and upgrading public provider infrastructure. The first major systemic reform – replacing the central, Semashko-style, budgetary financing – came into force in 1999 with the Law on Universal Health Insurance (1997) [7]. This introduced unambiguous, monetary contributions based on universal health insurance. The new administration encompassed 16 Regional Sickness Funds (one for each province), alongside a separate fund for uniformed public servants (e.g., police, military, and state rail members).

The main reform goals were: to provide the contracting of services (with a "fee for service" rule); to bring in competition as the driving force behind increased quality and access to healthcare; to further delegate powers down to regional and local authorities; and to decentralize the system, allowing for free market competition among healthcare providers. All this was expected to produce better results for patients. In the first phase, an internal market for providers was created; each of the 17 Funds independently negotiated contracts for health services and offered patients a choice of providers. In the foreseen, but unrealized second phase, private health insurers were to be allowed entry into this market. A further stage – also never introduced due to the demise of the system – planned for competition between Sickness Funds.

The main reform outcomes included different payment mechanisms for contracted services by different Sickness Funds. This, in turn, led to considerable and growing regional disparities in access to and quality of healthcare – potentially infringing upon the Polish constitutional "equity" rule [8] p. 18; another consequence was under-financing, resulting in limits on available services and long waiting times. The public were highly dissatisfied with this widely criticized reform, mainly due to "decreased access to services during this period without notable improvements in service, quality and financial problems at the regional fund level" [9] p. 9.

3.2. National Health Fund (*Narodowy Fundusz Zdrowia*, NFZ, 2003)

In 2003, after waves of criticism and an electoral campaign centered around the failure of the first reform – as well as of healthcare overall – the National Health Fund was established. It, too, encompassed 16 regional branches, one in each province. However, "[t]o eliminate regional differences in access to health care, the Law [on Universal Health Insurance in the National Health Fund] introduced uniform contracting procedures and point limits for contracted services" [8] p. 18. Nonetheless, the law [10] was declared unconstitutional by the Constitutional Tribunal, among other things challenging discretionary decision making, lack of equal access to health services, the absence of transparent control mechanisms over NFZ finances, and overlaps in competencies with the Ministry of Health [11]. As a consequence, the 2003 statute was soon replaced by the Law on Health Care Services Financed from Public Sources in 2004 [12].

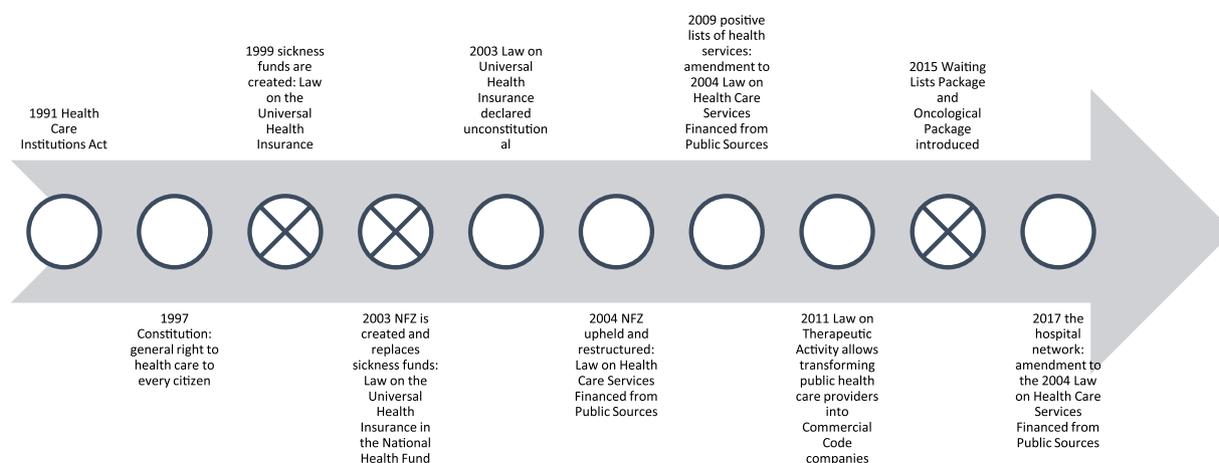


Fig. 1. timeline of major healthcare reforms in Poland after 1989.

These newer regulations – despite preliminary claims of a radical change from the Sickness Funds – upheld certain strategic ideas regarding services for the insured, health insurance premiums, and competition among providers. The NFZ “negotiates and signs contracts for service provision with healthcare providers (setting their value, volume and structure), monitors the fulfilment of contractual terms and is in charge of contract accounting. The quality and accessibility of health care services are to a certain extent influenced by the negotiated terms” [8] p. 20. This noted, critics (mostly the providers) pointed to the NFZ’s monopolistic powers as the only payer in the system, singlehandedly imposing prices and limits on medical procedures [8] p. 21.

3.3. The waiting lists package and the oncological package (pakiet kolejkowy and pakiet onkologiczny, 2015)

Over time, public pressure and growing discontent with the healthcare system were growing. In response to the crucial problems of long waiting times and high cancer mortality rates, two reforms – the waiting list package and the oncological package – were put forward in 2014 and introduced on 1 January 2015 [13–15].

The oncological package, imposed by the 2009 European Partnership for Action Against Cancer, which Poland, as one of the last EU countries, had not met [16], was directed at improving care for cancer patients. It abolished limits or health insurance quotas for cancer treatments and strengthened primary care in early diagnosis. “Oncology diagnosis and treatment cards” (*DiLO*) were introduced to facilitate fast-track diagnosis, preferential access to specialized treatment for patients with suspected or diagnosed cancer, and confirmed cancer staging. A waiting time limit from diagnosis to treatment was also introduced: initially 9 weeks, shortened to 8 in 2016, and then 7 weeks in 2017. Emphasis was placed on outpatient one-day treatment [17,18].

The “waiting lists package” was aimed at reducing long queues and ensuring better access to specialists. Hence, improvement in general accessibility to healthcare was predicted: “The expected direct outcome of the packages is the shortening of waiting times for specialist care, i.e. improved access to care. Indirectly, the packages are also expected to contribute to strengthening of primary care, e.g. through widening the competences of GPs, i.e. to improve the quality of care” [19] p. 259.

The NFZ was obliged to keep track of and publish centralized e-waiting lists with the nearest available dates for service, which was to lead to more transparent management and better information retrieval for patients. Overall, “[t]he packages introduce a

number of financial and other measures aimed at strengthening of primary care and shifting patients from specialist care to primary care” [19] p. 259. Additional measures included: “prescription visits” with primary care physicians for previously diagnosed patients only requiring a refill prescription; broader authority for nurses to prescribe certain medicaments and diagnostic procedures; financial incentives for specialists to execute quick diagnoses, treatment, and referral of patients back to primary care. However, neither additional funding nor structural and institutional changes were planned.

Although quite enthusiastically received at first, the policy soon became the subject of heavy criticism, especially from general practitioners and nurses (i.e., added workload and responsibilities without additional funding, shifting of queues from specialists to almost fully privatized and very well organized primary care practices), doctors’ organizations (i.e., possible threat to the system’s proper functioning due to lack of proper organizational and financial support), and patients (i.e., no trust in reform success) [19,20].

It seems that all the discussed reforms were more political endeavors than public policies aimed at improving the system for patients. They were either driven by political agendas and immanent political needs, or undertaken hastily without the true participation of stakeholders and the public. This displayed the “well-established model of health policy making in Poland, whereby stakeholders are merely consulted (this is a ‘token participation’ with no real influence on the policy making and is meant to appease potential opposition) and the decision-making up to the legislation stage is limited to the governing party” [19] p. 261.

4. Results: reforms gone bad?

Before we move to the key question of the outcomes of the reforms from a patient’s perspective, we shall stress one key problem that seems to define Polish healthcare: underfinancing. “Limited financing seems to be the biggest barrier in achieving accessible and good quality health care services and in improving patient satisfaction with the system” [8] p. 177, according to the WHO report in 2011. In 2013 the diagnosis was similar: “Polish systemic solutions do not lag behind those in other countries. The problem is in inadequate coordination of public health tasks and low level of financing” [21]. Since then, there seems to have been little improvement, and subsequent governments have avoided the topic as much before as after.

Moreover, the system is characterized by a high level of private financing – mainly out-of-pocket payments for medications and a portion of health services (e.g., specialist visits, hospital treatment,

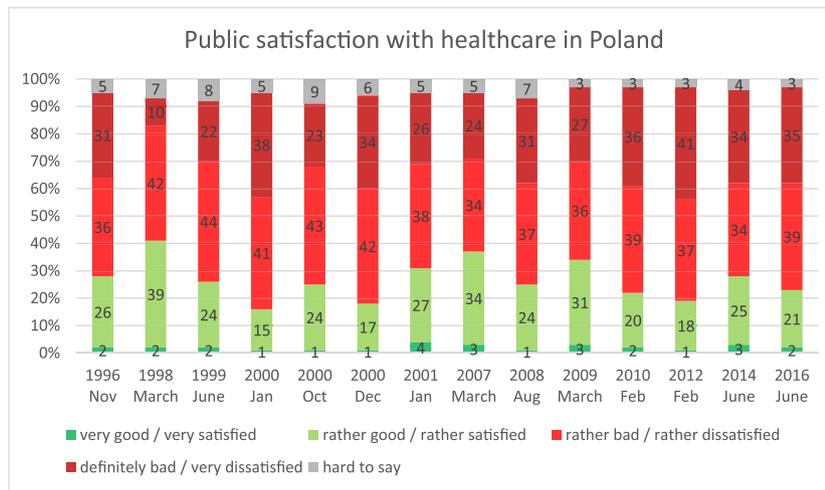


Fig. 2. Public satisfaction with healthcare in Poland.

Data based on [23–25].

rehabilitation, etc. – in the non-publicly funded medical “path” of services). Private spending comprises about 30% of all health expenditures – the equivalent of 511 USD per capita in 2015. This places Poland as one of the EU countries with the lowest share of public spending on healthcare (70% in 2015, dropping to 69% in 2016) [22]. At the same time, it is also one of the EU countries which spends the least on healthcare. Having said that, let us start with the “softest” of indicators of reform effectiveness: how does the public actually perceive the effects of the changes introduced?

4.1. Public perception

There is a strong, general discontent with healthcare in Poland. This popular opinion is corroborated by data, showing very low public satisfaction with healthcare, even plummeting after the introduction of the above-described reforms (Fig. 2).

What are Poles most concerned about? Firstly, health professionals are not particularly respected or trusted, especially when compared with other European states. General public surveys show declining esteem for doctors, ranked only 8th among various professions in Poland (71% of respondents thought of them as having high esteem), behind nurses (78%), miners (80%), skilled, physical laborers (81%), and the ever-most prestigious firefighters (87%), down 8% from 1995 [26]. A comparative study of trust in doctors conducted in 29 countries around the globe, ranked Poland the lowest. Only 43% of Poles strongly agreed or agreed that “doctors in your country can be trusted” [27]. In a recent survey, 67% of the respondents perceived doctors as competent and 60% as involved, while only half of the respondents (49%) think that patients are treated kindly and with care [25].

Other data also corroborates this rather low regard for physicians. In a recent survey, 67% of respondents perceived doctors as competent and 60% as engaged, while only half of the respondents (49%) thought that patients are treated kindly and with care [25].

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While health professionals, though with lukewarm enthusiasm, are perceived as somewhat competent and helpful, the organizational features of the system lag behind. General public opinion polls show accessibility as the key problem in Polish healthcare. Diagnostics is seen as easy and hassle-free only for 24% of the respondents; only 40% perceive health services – constitutionally guaranteed as public – as actually free of charge. Here specialist services seem to be the true access barrier, seen as very difficult to obtain for 88% of respondents [25]. Moreover, only 23% of Poles were completely or very satisfied with the treatment they received when they last visited a doctor [27].

Amongst the generally unhappy public, Poles who use private healthcare only or combine it with public services tend to be particularly dissatisfied with health services – 83% and 81% respectively [25]. This may suggest that they are fleeing the public insurance system to the highest possible extent, relying on out-of-pocket payments or the still marginal private insurance market.

The only area perceived as accessible is primary care: according to public opinion polls, 65% of the public regard primary care access as unproblematic. Nevertheless, this reflects a significant and steady decline from 2014 (74%) and 2010 (85%) [25]. Further data is provided by National Health Fund research (and therefore, social researchers might treat it with some skepticism), collecting over 35,000 patient questionnaires. This study showed that almost 40% of patients were very satisfied and a further 24.69% were satisfied with their primary care services; 53.09% of the patients had received service on the day they registered and 20.16% on the next day [28]. Paradoxically, primary care – predominantly covered by public funds – is also almost entirely privately owned [29].

4.2. Waiting times

According to comparative reports over the last decade, Poland has held the dubious distinction of being one of the European leaders in terms of length of waiting times [2] p. 30, with over 5.9 million people currently queuing for a medical service [30]. This persistent trend seems to suggest that not much has been done to stop it, and thus waiting times were chosen as another indicator of reform success. There is a general, public discontent with the waiting time for a “guaranteed” medical service. Such delays constitute a major accessibility obstacle; they also create new social and economic costs due to deterioration of (physical and psychological) health,

inability to work, being (or feeling) a burden to family, as well as frequent financial and psychological engagement of the entire family in order to secure health services for an ill family member.

According to reports, “limits in the volume of health services set in contracts concluded between services providers and the National Health Fund branches (formerly Sickness Funds), which are a typical feature of the present insurance system, are mostly responsible for restricted access to health services” [9] p. 50. Such restrictions “result in refusals or postponement of admissions and visits (especially towards the end of each year – a basic accounting period), and lengthen waiting lists” [9] p. 50. However, it turns out that the total number of those waiting for particular medical services is not changing over time, which means that as many new persons sign in as are provided with a service. “The queue neither increases, nor decreases”, which “gives the NFZ a chance for reducing queues if [it] once pays for treatment of those in waiting lines” [30].

Checking and comparing waiting times among providers has proven to be a challenge. Measuring of queues was not undertaken until 2004, when the NFZ compelled healthcare providers on contract to run registries of patients awaiting specific medical services [31]. Central monitoring of such lists ensued in 2014, and currently, waiting times for particular providers may be checked online. The first regularly published independent reports (Healthcare Barometer) date back only to 2012, hence information is scarce; no earlier and reliable comparative data exists, so rendering any pre-2004 comparison is practically impossible.

We will point to some key examples of waiting time dynamics, concentrating on those procedures and areas where queues have been the longest and most inconvenient. Since acute cases have been generally (though not always, as in oncology) expedited, the majority of backlogs have concerned elective procedures. Table 1 shows changes in waiting times for a single medical service.

As noted, cancer diagnosis and treatment were especially targeted during the 2015 reforms. Two studies conducted in 2014 [32] and late 2015/early 2016 [33] reveal no significant improvement in access to oncological treatment. Prior to the reform, the interval between the first primary care visit and the beginning of treatment was 77 days (41 days for diagnosis and 36 until the first treatment); one year later, it had fallen to just 74 days. Moreover, this insignificant decrease did not apply to a minority of patients who did not qualify for “fast-track” treatment; for them the average waiting time from first symptoms to treatment actually increased to 85 days. As a result, only 41% of the patients were treated within the 9-week reform target – similar to the 40% in late 2014. A comprehensive study by the Supreme Audit Office (NIK) corroborates these results, showing that although the package shortened waiting times slightly, it “did not significantly contribute to better access to oncological treatment” [34] p. 44: as many as 38% of patients were not issued their oncological DiLO cards, many hospitals and outpatient clinics did not provide services within the package framework, or only did so in a limited way, and the general foundation of primarily ambulatory diagnostics of cancer patients was only met in 25% of cases [34]. One may also add limited access to innovative therapies, including medicines, as most innovative or new oncological drugs are either not available or have limited availability [35]. Adding no significant increase in funding (funding of oncological services increased by 3.26% in 2015, while the general dynamics of increases in medical service costs amounted to 6.97%), a shortage of oncologists, and lengthy, still uncoordinated, and irregular treatment and diagnostics, the NIK report is ultimately critical of the reform [34].

As Table 1 and other data [36] show, the 2015 reforms have not yielded a significant decrease in waiting times. A report published almost a year after their introduction states that “the condition of healthcare in Poland has steadily declined [since the systematic monitoring of queues began] and this trend has until now not in

Table 1 Waiting times for medical services, in months.

Average waiting times for medical service in:	Feb/Mar 2012	June/July 2012	Oct/Nov 2012	Feb/Mar 2013	June/July 2013	Oct/Nov 2013	Feb/Mar 2014	June/July 2014	Oct/Nov 2014	Feb/Mar 2015	June/July 2015	Oct/Nov 2015	Feb/Mar 2016	June/July 2016	Oct/Nov 2016	Feb/Mar 2017	June/July 2017	Apr/May 2018	Dec 2018/Jan 2019
Orthopedics, incl.	12.5	7.6	13.1	12.0	11.5	13.2	9.6	11.1	15.0	16.0	17.1	14.7	17.3	16.7	13.3	11.2	9.5	7.6	10.9
Hip replacement	13.7	10.5	26.5	31.8	28.9	45.8	29.6	21.7	22.5	51.6	51.4	44	54.9	63.1	35.1	28.4	27.6	18.9	32.7
Knee replacement	29.5	20.4	44.7	29.6	25.4	34	26.1	38	44.9	53	67.5	45.5	60.1	50.7	47	42.9	22.6	15.7	15.7
(stable)																			
Ophthalmology, incl.	4.4	5.0	4.9	7.9	7.8	5.0	5.5	4.8	5.7	5.6	5.3	3.4	3.9	3.8	4.9	4.9	5.6	3.4	3.8
Cataract surgery	24.7	19.2	30	29.3	32.2	22.3	26.2	25.6	27.5	28.1	24.9	18.5	24.9	24.9	23.5	22.4	27	12.5	11.2
Endocrinology, incl.	3.6	3.3	3.1	4.9	4.3	2.1	3.3	3.5	3.3	3.5	3.7	4.6	5.4	3.8	4.9	5.0	5.3	11.0	11.5
specialist visit:	7.2	7	0.3	7.1	8.3	3.6	6.5	6.5	4.5	5.9	5.9	5.7	9.5	6.7	9.2	9.4	10.3	23	24.2
Cardiology	3.2	4.0	1.9	3.8	5.3	3.7	3.5	3.0	3.2	3.4	3.5	4.1	3.9	4.8	4.4	4.2	5.0	5.0	1.5
Oncology	0.9	1.2	0.7	2.0	1.7	1.2	0.9	0.6	1.0	1.3	0.6	1.0	0.4	1.0	0.8	1.0	0.8	1.8	2.0
Pulmonology	0.6	1.7	1.5	0.8	0.9	0.9	0.8	1.2	1.7	0.7	1.0	1.5	1.0	1.1	0.9	1.0	1.7	1.8	0.5
Otolaryngology	3.8	3.0	4.5	4.2	6.3	4.4	3.7	5.2	6.2	5.5	3.7	4.3	3.7	3.3	3.8	3.1	2.4	7.5	3.1
Medical rehabilitation	4.1	2.5	3.4	3.5	2.9	3.1	1.8	2.5	2.8	4.6	3.3	5.0	5.3	5.3	5.2	5.9	3.5	4.3	4.8

Data based on WatchHealthCare 2012–2019.

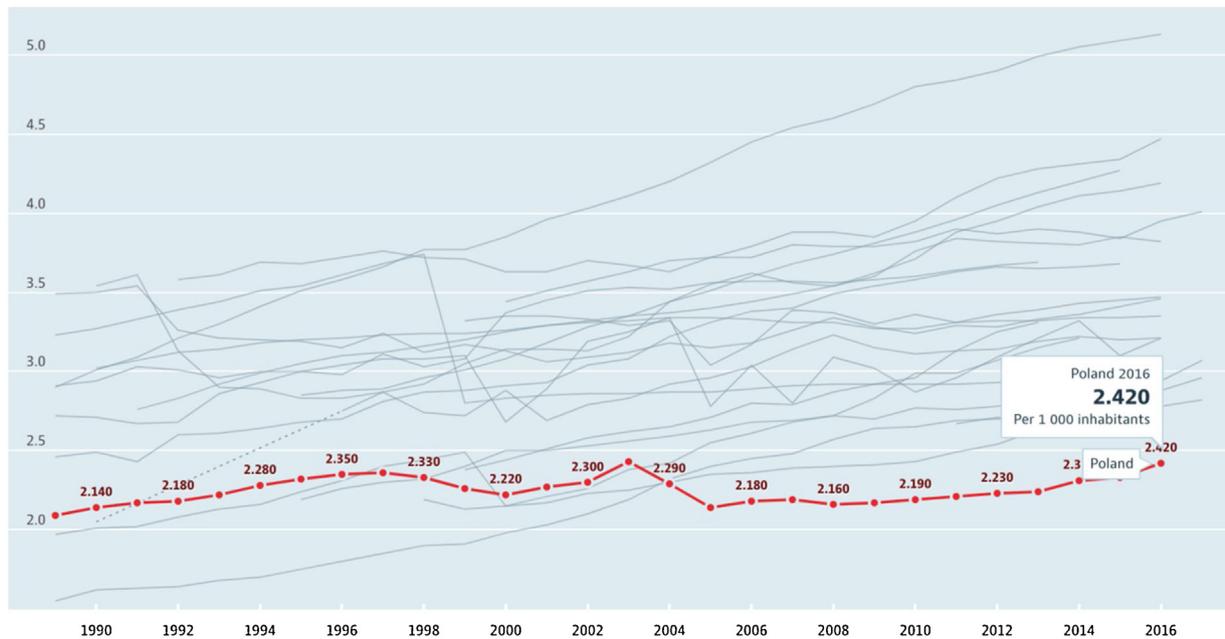


Fig. 3. Number of doctors per 1000 inhabitants, Poland compared to EU states.1989–2016.

Based on OECD data [22].

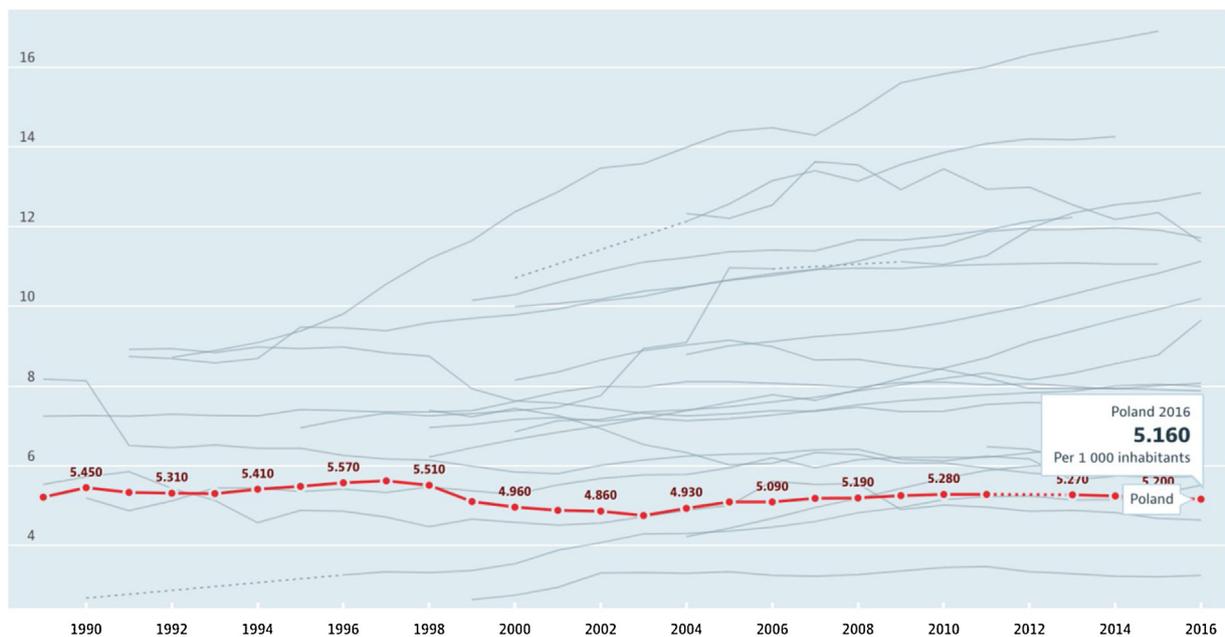


Fig. 4. Number of nurses per 1000 inhabitants, Poland compared to EU states.1978–2016.

Based on OECD data [22].

any way been stopped” [37] p. 10. Another report maintains that “actions undertaken by the waiting lists package did not contribute to any shortening of queues” [38] p. 16.

Interestingly, the total number of those waiting for particular medical services does not significantly change in time, which means that “as many new persons sign in as are provided with a service”. “The queue neither increases, nor decreases”, which “gives the NFZ a chance for reducing queues if [it] once pays for treatment of those in waiting lines” [30]. This is corroborated by significant drops in waiting times, which occurred only due to individual actions or “financing boosts” from the NFZ or the Ministry of Health. The most recent cases were hip replacement (63.1 in mid-2016 to 18.9 months in mid-2018, elective procedures), knee replacement (60.1 in early-2016 to 15.7 in mid-2018), and cataract

surgeries (24.9 in mid-2016 to 12.5 months in mid-2018 [39–44]. Despite shortening of waiting times, the queue for the latter still amounts to over 313,000 people waiting for their surgery in 2019, which was shortened from about 0.5 million patients before the boosts [30]. However, as such boosts were confined to specific areas or procedures, they may not be attributed or related to any particular well-planned, thought-through and publicly discussed policy.

4.3. Shortage in health professionals: doctors and nurses

Another key problem that Poland should tackle in order to increase accessibility of health services is shortage of health professionals, in particular doctors. Currently, there are around 88,000

practicing physicians in Poland [45]. As Fig. 3 illustrates, Poland has the lowest number of doctors in the EU (2.42 per 1000 inhabitants); the number is almost twice as high in states such as Germany (4.19), Sweden (4.27 in 2015) and Lithuania (4.47), and more than double in the world-leader, Austria (5.13) [22].

The number of doctors grew in the early 2000s, before plummeting after Poland's 2004 EU accession, in line with other post-communist EU members (e.g. Hungary). The shortage of doctors became apparent in part due to migration, attributable to better wages and working conditions in Western European states (United Kingdom, Germany, Scandinavian countries), and in part due to barriers in education, including the formal and informal limits of specializations.

"Although there are no reliable estimates on the adequacy of staffing levels in the health care sector, available evidence suggests a shortage of health care professionals" [8], which became especially visible with residents' protests of 2017 and 2018, and doctors' growing unwillingness for overburdening work, with lengthy work hours, commonly in many workplaces, and numerous additional night shifts for hospital-employed doctors.

The situation is similarly alarming with respect to qualified nurses (Fig. 4). Poland has one of the lowest numbers of nurses in the EU (5.16 per 1000 inhabitants), similar to Spain (5.51) and Slovakia (5.74) [22]. Yet the disproportion between the number of nurses in Poland and that in some of the best-staffed European states is even greater than in the case of physicians: 16.7 nurses per 1000 inhabitants in Denmark (doubled since 1992), 12.85 in Germany; the figures are also very high in non-EU Iceland (14.22), Norway (17.49), and Switzerland (17.02). All these countries have made remarkable progress in increasing the number of nurses in recent years [22].

The decreasing number of nurses has still unresolved – and often not even tackled – causes. Low wages are combined with hard working conditions, often in 12-h shifts in hospitals. The profession is highly feminized (98% of all nurses and almost all midwives are women), physically and psychologically demanding, and unrewarding in terms of wages, tasks performed, and social status. This career no longer attracts much interest from younger potential candidates; as a result, the population of nurses in Poland is growing drastically older. The average age of a nurse was 50.79 years in 2016, compared to 44.19 in 2008 – a situation bearing the traits of a "lack of generational replacement" [46] pp. 29–30. If nothing changes, a further decline in the number of nurses is unavoidable.

Despite waves of strikes and protests over the years – both local and national, by physicians as well as nurses – none of the reforms has tackled the shortage of health professionals. Actually, only the latest (still difficult to assess) "hospital network" reform of 2017 suggested at least a measure of concern regarding the future of healthcare as seen through the lens of an ever more urgent need for physicians.

Also, considering the global tendency towards an aging population, the need for healthcare professionals has become an increasingly serious and recognized concern [47–51]. It is therefore not difficult to predict further problems associated with human resource shortages, which will affect both patients (e.g., deterioration of care, accessibility problems, increased waiting times), and health providers (e.g., lack of human resources, especially physicians and nurses, for both inpatient and outpatient services).

5. Conclusion: current developments and the urgent need for reform

It should be emphasized that the aim of our analysis was not the overall evaluation of all institutional, structural, economic and

social changes in Polish healthcare system. Such an evaluation would require a detailed, multidimensional socio-economic and cultural analysis, which it is not possible to present in the limited space of this journal paper. Instead of that, we aimed to present and understand the reasons for patients' dissatisfaction – expressed in social surveys – despite costly reforms. The results diagnose some weaknesses of the political system in terms of its low responsiveness in the field of healthcare.

The dilemmas and analyses discussed here are especially important in the midst of the healthcare tempest at hand: the newly established "hospital network", possible (yet ever less realistic) replacement of the National Health Fund with a centrally funded healthcare model, new, often grassroots and non-political reformatory initiatives (such as the extensive "Together for Health" debate) and protests among doctors and other health professionals, such as physiotherapists. A strike of residents broke out with full force in mid-2017. Initially focusing on better wages, the system's main demands shifted towards better quality health services, improved financing of healthcare (up to 6.8% of GDP), resolution of waiting lines and bureaucracy, and better working conditions in healthcare [52]. Largely ignored by the government, recent strikes spread quickly among residents and specialists. As the protesters widely opted out of labor contract clauses agreeing to a 48+ hour workweek, the campaign began to paralyze many Polish hospitals, which base their daily functioning on the practically unlimited (yet ever better paid) workload of doctors [52–54].

National and international data, and current developments, such as protests, proves that the reforms initiated heretofore have not succeeded. More urgently, a comprehensive and broadly discussed restructuring is necessary, if health services are to be at least sustained at even the current (albeit unsatisfactory) level. Any new reform must consider not only the key players in healthcare, but also the growing needs of an aging society. As other evaluations have noted, "Initial reforms were haphazard and there was little continuity in the reform process (e.g., the introduction of Sickness Funds and their replacement by the centralized NFZ), which could be explained by varying political agendas of the parties in power and by lack of expertise and the capacity to prepare for reforms via in-depth analysis" [8] p. 177. Finally, any future changes should also ensure continuity – something which, as far as present-day political agendas and policies are concerned, is not guaranteed at all.

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