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## Staff shortages and inappropriate work conditions as a challenge geriatrics and contemporary healthcare service at large faces

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### Abstract

Deficit of human resources in health care is a widespread problem occurring not only in Polish system. Demanding work, emotional stresses and insufficient support are often associated with the doctor's shift mode of work and an excess of duties combined with a shortage of time allocated to their performance. It can be assumed that most of the doctors intend to continue their work so far, but its negative features may in the future affect their decisions about choosing a different career path, especially if the shortage of medical personnel increases. This may further overburden doctors (especially young doctors) with excess working hours, reduce the quality of their activities, increase the chances of committing an unintended medical error related to exhaustion, and lead to functional burnout. This situation may lead to a renewed intensification of economic emigration to other countries,

both in the EU and outside the EU, which create more favourable working conditions for working life. The scale of the problem is exacerbated by the increasing health needs of the aging population, causing an increasing burden on the health care sector, both in the near and distant future. This can create a vicious cycle where increasing burdens will drain physicians out of public health system, and increase the burden put on remaining physicians. The resulting restriction of access to medical services will lead to the deterioration of the health condition of the Polish population. In order to prevent such a situation, it would be necessary to increase the motivation to remain both in the medical profession and at work in Poland through actions aimed at improving working conditions and strengthening the sense of occupational safety of doctors. These activities should be especially aimed at group of medics starting their professional lives.

## **Introduction**

Due to the high dynamics of population ageing in Poland, an increased demand for healthcare services is to be expected in the near future. One of the main factors determining the available supply of medical services is how much staff there is in the healthcare sector. If the healthcare sector is understaffed, the amount of medical services available decreases and the health-related issues in a given population become more acute. One of the most important challenges contemporary social policy developers face is ensuring that there are enough healthcare professionals.

## **Challenges**

Poland is by no means the only country facing shortages of healthcare professionals. In the European Union's assessment, there was a shortage of 1 million of healthcare professionals (including 230,000 doctors) in 2020 [1]. Such human resources issues affecting healthcare system is, in addition to insufficient funding, a fundamental social problem of modernity. Unfortunately, even though discussions related to it are frequent, few steps – whether at national level or on lower levels – are taken to increase the number of employees in the healthcare sector or even to keep it at the same level.

Even before the pandemic, there were clear shortages of nurses and doctors [2,3]. This is confirmed by data from Eurostat according to which Poland has the lowest number of practicing doctors per 1000 citizens, i.e. 2.4, while the average number for EU-27 is 3.9 [4,5]. The COVID-19 pandemic made those shortages even more conspicuous [6,7,8].

Additionally, studies carried out by the Polish Supreme Medical Chamber (*Naczelna Izba Lekarska, NIL*) indicate that the medical professionals themselves are getting older as well. Male doctors aged 46+ already constitute 65% of the total number of practicing male doctors (the same percentage is over 61% for female doctors). The percentile share of particular age groups in the total number of practicing doctors in Poland in 2021 is presented in Table 1 below.

Table 1. Percentile share of particular age groups in the total number of practicing doctors in Poland in 2021.

Age	Men = 60 388	% of male group	Women = 85 270	% of female group	% of the total number of practicing doctors (total number of practicing doctors: 145 649)
Up to 25	54	0.09	119	0.14	0.12
26-35	12036	19.93	20148	23.63	22.10
36-45	8849	14.65	14953	17.54	16.34
46-55	12049	19.95	15011	17.60	18.58
56-65	14164	23.45	16994	19.93	21.39
66 and over	13236	21.92	18045	21.16	21.48

Prepared on the basis of data from the Supreme Medical Chamber of 1<sup>st</sup> March 2022.

[https://nil.org.pl/uploaded\\_files/1641220880\\_z-grudzien-2021-zestawienie-nr-01.pdf](https://nil.org.pl/uploaded_files/1641220880_z-grudzien-2021-zestawienie-nr-01.pdf)

An analysis of historic Polish Supreme Medical Chamber (NIL) data also indicates that the number of doctors continuing to practice medicine in spite of being eligible for retirement has also been increasing for years. In 2012, such doctors constituted 15% of the total number of professionally active male doctors and almost 23% of professionally active female doctors. Those numbers had grown to 22% and 31% respectively by 2021. As of now, medical professionals who could retire at any time is over 27% of the total number of practicing doctors.

Data pertaining to professionally active doctors who continue to work in spite of being eligible for retirement between 2012 and 2021 are presented in Table 2.

Table 2.

Doctors remaining professionally active in spite of being eligible for retirement.

Year	Men	% of all male doctors	Women	% of all female doctors	Number of practicing doctors	Number of doctors eligible for retirement	% of the total number of practicing doctors
2012	8169/54127	15.09	15555/70970	21.92	125097	23724	18.96
2013	8504/54797	15.52	16765/72409	23.15	127206	25269	19.86
2014	8753/55287	15.83	17992/73760	24.39	129047	26745	20.73
2015	10129/55889	18.12	21050/75186	28.00	131075	31179	23.79
2016	9766/56526	17.28	20625/76778	26.86	133304	30391	22.80
2017	10333/57264	18.04	22098/78222	28.25	135489	32431	23.94
2018	11037/57851	19.08	23511/79729	29.49	137580	34548	25.11
2019	11882/58653	20.26	24785/81484	30.42	140137	36667	26.17
2020	12561/59310	21.18	25722/82959	31.01	142269	38283	26.91
2021	13236/60388	21.92	26671/85270	31.28	145658	43143	27.40

Prepared on the basis of data from the Supreme Medical Chamber of 1<sup>st</sup> March 2022.

[https://nil.org.pl/uploaded\\_files/1641220880\\_z-grudzien-2021-zestawienie-nr-01.pdf](https://nil.org.pl/uploaded_files/1641220880_z-grudzien-2021-zestawienie-nr-01.pdf)

A study based on the statistical bulletins of the Ministry of health issued by the e-Health Centre, the number of doctors aged 65+ who are entitled to practice medicine had increased by 62% between 2007 and 2020 [9].

### **Work conditions: intensity, antecedents and consequences**

Ever since 1991 when Eurofound launched the European Working Conditions Survey (EWCS), its reports have been a source of information for assessing working conditions of employees, contractors, and self-employed people and presenting them quantitatively in a harmonised way, as well as examining the impact of different aspects of working conditions on one another, identifying apprehensions and vulnerable groups, and monitoring changes regarding the job market [10].

According to the report published in 2017, 36% of employees in the European Union (EU) claim that they work under the pressure of time / too tight deadlines and 33% of them claim that they work at a fast pace “for around three quarters of their working time.” An additional issue, reported by around 26% of all employees of the healthcare sector, are frequent, onerous, and disruptive interruptions to their work. The EWCS report emphasizes the importance of situations at work where employees are forced to hide their emotions, deal with infuriated clients, or work under emotionally harrowing conditions. Such requirements are more frequent in professions whose purpose is understood to consist in assisting others, associated with contact with people in need of help, care, and support. One in three EU employees claims that they hide their emotions “always” or “most of the time” (31%). People holding such positions - in the healthcare sector and in other lines of business where employees need to frequently interact with third parties - have needed to deal with irate clients, students, or parents more and more often since 2010.

People having a challenging job like that, especially if their capacity to take decisions as part of it is limited and the support available to them is insufficient, run a heightened risk of adverse health-related effects. The intensity of one’s work – measured using a work intensity index comprising the following indicators: working at a fast pace and to tight deadlines; insufficient time to perform one’s work; frequent and disruptive interruptions; factors impacting the pace at which work is to be carried out and other interrelated factors; emotional requirements - may also have a detrimental effect on one’s fitness, overall constitution, performance, and health. High intensity of work is quite common in Europe; older employees report that their work is less intense compared to young and middle-aged employees which may be due to the fact that more intense/demanding work is usually assigned to younger employees; in the case of young doctors, this usually means working shifts, including working nights, and having too many work-related tasks to complete in too short a period of time.

Eurofound published a visualisation of data pertaining to working conditions in a group which included healthcare employees; it indirectly follows from those data that 18% of people in said group had to deal with angry clients during almost all of their work time. In the European Union, a corresponding indicator is at 17%. In Poland, 13% of members of said group found themselves in situations causing emotional distress almost all of their working time, while the same indicator in the EU is 10%. 64% of members of said group in Poland confirmed that they receive support from their colleagues (75% in the EU). As far as support from one’s superior (manager/principal/head doctor) is concerned, 58% of people in Poland claimed that they can count on it (62% in the EU) [11]. Such data do not refer specifically to the work of all doctors in Poland and should not be interpreted as such but they nevertheless provide an

approximate image of the disadvantageous situation of that particular professional group in Poland when compared to other countries.

Assessing the situation of doctors in Poland is, just like in other countries, not an easy task. One of the challenges researchers interested in that subject need to tackle is the difficulty of finding a representative sample of participants which would include all age groups of professionally active doctors. According to data presented in a study involving medical professionals, the greatest number of filled-out surveys was received from people aged 51 to 65, a considerable number of surveys was also delivered by medical professionals aged 35 to 50, relatively few surveys were delivered by people aged up to 35, and less than 5.5% of surveys were delivered by people over 62 [12] which means that the oldest medical professionals tend not to participate in online surveys.

It is also known that surveys carried out among doctors are usually filled out by few of them (as compared to surveys carried out among members of the general public) [13,14]. This information is confirmed by data from the Polish Supreme Medical Chamber (NIL), which indicate that the highest number of replies in surveys was 17%. Whether or not a doctor decides to fill out a survey (according to the report from the Centre for Studies, Analyses, and Information of the Polish Supreme Medical Chamber (NIL) referred to above) depends on physical considerations (the time needed to fill out that survey) and on other factors such as the perceived importance of that survey's object, a given person's interest and involvement in the survey, and the internal clock of the respondent governing their perception of time. This results in the optimum time filling out a survey should take (so that the process does not become tedious for respondents) having to be defined separately depending on the survey's object and the complexity/difficulty of questions in that survey. Polish Supreme Medical Chamber's (NIL) research indicates that a definite majority of doctors would like to participate in short (5-10 minutes) or very short (up to 5 minutes) surveys.

In spite of such difficulties, there are studies which can be used as a source of information pertaining to the situation of medical professionals. Those include research conducted by the Centre for Studies, Analyses, and Information of the Polish Supreme Medical Chamber (NIL) in collaboration with the Faculty of Philosophy and Sociology of the Polish Academy of Sciences which indicates 40% of the participants of the relevant surveys have encountered in the course of their career been pressure to work in violation of ethical principles or the law. This was usually administrative and economic pressure (64% and 62% respectively). Other types of pressure (24%) typically come from the National Health Fund (*Narodowy Fundusz Zdrowia*, NFZ) and include, without limitation: being pressured into prescribing cheap medicine, being threatened with inspections and penalties, the need to follow "insane" procedures, being pressured by patients to prescribe specific medicine, facing other claims, facing pressure from one's superiors, being forced to work "overtime" to serve all patients but without proper remuneration, being required to ensure top quality of work in spite of not having corresponding organisational and technical back office to rely on, facing limits regarding the amount of time one can dedicate to one patient (e.g. 10 minutes). Almost one in four respondents has encountered some form of mobbing at work. 73% of respondents have experienced aggression from patients or relatives of their patients. A definite majority of respondents declared that they saw symptoms of professional burnout in their colleagues and 38% of them believed professional burnout applies to a considerable portion of medical professionals; 42% of respondents noticed symptoms of professional burnout in themselves.

Men noticed professional burnout in themselves decidedly more often. The same was true for middle-aged medical professionals (aged 36-50) with 11-30 years of professional experience. When asked if they intended to change jobs within that year, 4% of doctors declared that they

intended to start working abroad, 76% of respondents did not intend to change jobs, 11% said they had plans to change jobs, and 13% said they had not taken a final decision yet [15].

The acquired data might be used to draw a conclusion that most doctors intend to continue working as doctors. However, it is also quite disconcerting that many medical professionals believe that their work has at least several characteristic features which can be described using negative adjectives [16]. It can be assumed that adjectives doctors used to describe their work (anxious, dangerous, threatening) could influence their future decision to change jobs.

An interesting fact that should be noticed is that even though doctors often described their work as rushed, this has little impact on their decision to change jobs or continue doing their current job. It would seem that doctors have become accustomed to the fact that they are always in a rush at work because of the continuous shortage of medical personnel.

It could safely be assumed that if the work of medical professionals was to be better organised and, consequently, if their workload (especially as regards tasks not strictly related to medical matters) was to be reduced, their sense of danger would also be reduced, which could have a positive impact on their willingness to continue on their current career path. Another important factor having a considerable influence on the fact that doctors consider their job dangerous is the law as it provides for penalising medical malpractice with imprisonment. Medical malpractice may be and often is unintentional and results from circumstances beyond the control of a given doctor which often affect doctors, especially at the beginning of their career. Those include: faulty organisation of the national healthcare system, limited access to cutting-edge medical technologies, inadequate quality of medical infrastructure, or the number of patients awaiting urgent examination and treatment exceeding the capacity of doctors. A conclusion could be drawn that working under such circumstances results in younger doctors (up to 30 years of age) describing their work as anxiety-inducing much more often than their older colleagues, the latter working more often as part of outpatient healthcare where such stressful circumstances as the physical strain associated with shift-based work, the mental strain following from the complexity of one's work, and a sense of being in danger are less frequent [18]. The issue of how doctors are to be punished for malpractice was addressed, *inter alia*, during a meeting between the President of the Supreme Medical Council (*Naczelna Rada Lekarska*, NRL) and the President of the Council of Ministers, the Minister of Health, and the President of the Supreme Council of Nurses and Midwives (*Naczelna Rada Pielęgniarek i Położnych*, NRPiP) when Andrzej Matyja (President of the Supreme Medical Council) and Zofia Małas (President of the Supreme Council of Nurses and Midwives) proposed that steps be taken aimed at reducing the criminal liability of members of the medical profession for unintentional malpractice (a no-fault system) [19]; the fact that this issue was the first one to be discussed on the meeting's agenda confirms its importance.

### **Work conditions: types of work contracts, professional satisfaction, remuneration**

Another important source of discomfort that medical professionals feel while practicing medicine may be the fact that there is a tendency to hire medical personnel as contractors instead of offering them a contract of employment. Hiring medical personnel as contractors and not as regular employees may be popular due to the fact that it is less costly for the employer and gives the employer the potential to bypass laws regarding maximum working time. As per the law, a doctor who has worked a 24-hour shift is entitled to a break of 11 hours directly after the end of that shift. However, those regulations do not apply to services rendered by contractors. Consequently, in view of the shortage of medical personnel, managers of hospitals often make use of contracting procedures to ensure the continuity of medical care. The situation becomes quite paradoxical because the same doctor may work at

one facility both as a contractor and as an employee. This results in doctors working shifts of more than 24 hours in violation of the law in force. Research carried out by Supreme Medical Chamber (NIL) indicates that factors contributing to a given person working at least 220 hours per month included: working at a hospital ward (excluding ED), age, and the person having accepted an opt-out clause. To put it in a somewhat simplified way: doctors who work over 220 hours per month are predominantly young doctors who have agreed to an opt-out clause and who work at another place in addition to the hospital ward that employs them. The sheer scale of the phenomenon of doctors being hired as contractors can be seen in data from the Ministry of Health which indicate that, for hospitals owned by local governments, the share in total costs of costs borne in connection with hiring contractor doctors has increased from 14% in 2006 to 29% in 2016 [20]. In 2019 in inpatient hospitals, there were 39 267 contracts of employment concluded with doctors while 52 909 (57.4%) of doctors worked under another type of civil law agreement [21]. Such a situation may lead, on the one hand, to doctors (particularly young doctors) being permanently overloaded with work and having too many hours of work to do and, on the other hand, to a deterioration of the quality of their work and an increased risk of them unintentionally committing malpractice due to exhaustion. It should be mentioned here that constant work in excess of the permitted maximum hours of work (which is the purpose of the opt-out clause) may lead to a functional burnout, i.e. burnout caused by the system itself [22,23,24]. This is further exacerbated by a shift-based work system typically associated with aid professions, as well as night shifts, not enough time for performing all work-related tasks assigned to one, and the impossibility to predict the efficiency of one's actions. There are data suggesting that doctors with surgical specialties feel significantly more often that their work is relaxing than doctors with non-surgical specialties [25]. A conclusion could be drawn that doctors dedicating a greater portion of their work time to actually helping patients (by means of surgical procedures, operations) derive more professional satisfaction from their work and, at the same time, suffer less from the stress associated with the bureaucratic requirements affecting doctors with non-surgical specialties.

The issue of remuneration is a separate matter which, even though it is often not included in surveys, also influences the career-related decisions of medical personnel and should be mentioned. Remuneration-related protests of people employed in the healthcare sector have over the course of the last three decades taken on all typical forms: demonstrations, occupational strikes, hunger strikes, and termination of one's contract of employment. Such protests have been particularly intense in the periods from 1994 to 1998, from 2004 to 2007, and, most recently, from 2015 to 2017. The Polish state authorities responded to such protests by means of passing laws for increasing wages in all healthcare-related professions or by means of regulating settlements with a particular group of employees. In spite of this, the average remuneration of a specialist doctor still equalled around 1.5 times the average remuneration in Poland; this value was the lowest among the 29 OECD countries for which the relevant data are available [26]. This is confirmed by an announcement by Supreme Medical Chamber (NIL) of 12<sup>th</sup> March 2021 related to regulating wages in the healthcare sector: "having reviewed a proposal of the Minister of Health regarding remuneration indicators for 2021 and for 2022-2024, we conclude that doctors, dentists, and other medical professionals working in Poland receive and will continue to receive the lowest remuneration among all other countries of the EU and that the proposals made by the Ministry of Health would only make the current situation worse [27].

## **External migration, switching to a non-medical career**

The above-indicated issues are by no means all problems affecting the healthcare sector, there is also the issue of missing domestic data regarding: the migration of doctors and other healthcare professionals, an assessment of current and future shortages of medical personnel at a regional and national level, predictions related to the number of doctors needed in particular disciplines of medicine in the future. There being no relevant data in Poland, information about “the intention to leave” based on the number of certificates issued by regional medical chambers confirming a given doctor’s right to practice medicine in another EU country is used. According to the Supreme Medical Chamber (NIL), the number of such certificates issued per year soon after Poland joined the EU exceeded two thousand and then, after the year 2008, it dropped to below one thousand per year. The total number of such certificates issued between 2004 and 2017 was 9535 (around 7% of the total number of 135 948 doctors authorised to practice medicine) [28]. From 2019 to 2020, certificates officially confirming medical qualifications were issued to 119 doctors, 68 of whom applied for such a certificate for the first time and 51 of them have already applied for it before.

certificates officially confirming medical qualifications were issued to 119 doctors, 68 of whom applied for such a certificate for the first time and 51 of them have already applied for it before. Such data indicate that the number of doctors considering moving to another EU country to practice medicine there has decreased; however, said data do not take into account the fact that some doctors may decide to change their job and quit working with patients at all. This is confirmed by the available data: only 24% resident doctors and 36% of specialist doctors have not considered changing jobs, changing their career path, migrating abroad, or limiting their professional activity [30].

Long-term shortages of medical professionals and their ageing combined with new threats that emerged in connection with the COVID-19 pandemic has alerted both specialised research centres and the media to the problems the medical world faces[31]. In 2021 in the USA, 42% of doctors, mostly women, suffered from professional burnout related to, first and foremost, bureaucratic duties, too many hours of work, and the progressing digitization of their work. Over two-thirds of medical professionals have experienced symptoms commonly associated with depression and 13% of them have had suicidal thoughts. Medical professionals suffering the most from burnout were: members of emergency response teams, rheumatologists, contagious diseases specialists, urologists, lung diseases specialists, neurologists, and family doctors [32,33,34]. The COVID-19 pandemic has resulted in an increase of demands towards healthcare systems even further and they were underfunded and struggling even before it. This resulted in an increase of the dissonance between medical professionals’ desire to carry out their work diligently and their actual capacity [35] and it has led to health-related damage due to protracted stress [36]. The phenomena described above have also led to an increasing awareness of the fact that steps aimed at supporting medical professionals need to be taken [37,38,39,40,41]. Polish doctors also feel various inconveniences and burdens associated with the negative features of their work. One could assume that a considerable portion of medical professionals “having completed the harsh trials of studying medicine and professional traineeship” is highly resilient in both physical and mental terms and it could be said that they accept the realities of their profession, embracing its positive and negative aspects. Due to their realistic assessment of the characteristic features of their profession, those respondents are the least likely to take a decision to change their job. At the same time, the pragmatism with which they assess their profession may, in the future, increase the chances of them choosing to migrate to another country if their job in Poland continues to deteriorate in terms of remuneration or working conditions (excessive workload, even stricter criminal law regulations threatening their



professional security).

The remainder of doctors probably ignore, more or less consciously, most of the negative aspects of their work and even though they plan to continue working as doctors, they are likely to decide against continuing work as a doctor or decide to change jobs if they witness for themselves incidents illustrating the negative aspects of their profession such as: a colleague dying while at work, assaults by patients or members of their families (either a personal assault or an assault on a colleague), lawsuits filed against themselves or their colleagues, a worsening of the financial situation of themselves and their families.

### **Conclusions.**

Polish doctors are still in a difficult situation due to shortages of medical professionals and unsatisfactory conditions of work and employment. Even though fewer Polish doctors decide to migrate to another EU country now than in the past, the negative aspects of work in the healthcare sector might result in them migrating to the private healthcare sector or deciding to change their career. This could result in another intensification of doctor migration to other countries (within the EU and outside of it) where their professional career would bring them more benefit. The problem is exacerbated by the unfavourable age structure of doctors and the increasing needs of the ageing Polish society, which is likely to increase the strain put on the healthcare system both in the near future and later on.

This could result in a vicious cycle where increased pressure on doctors results in fewer doctors willing to work in the public healthcare sector and fewer doctors willing to work in the public healthcare sector resulting in even more pressure on those doctors who decide to remain. The ensuing limited access to medical services and increased waiting time before a patient is able to take advantage of health benefits will result in a deterioration of the overall health of the Polish society. To prevent this from happening, a number of steps would have to be taken aimed at support them - improving working conditions, improving the appeal of particular medical specialties, boosting the sense of professional security among doctors, and encouraging doctors to continue practising medicine and remaining in Poland. Such steps would have to be targeted especially at young doctors who have begun their professional career relatively recently. Activity of this type would require genuine interest of and cooperation between all interested parties. In Poland, those include, apart from the Polish Government and the Sejm, the Ministry of Health, medical universities, chambers of doctors, healthcare managers, trade unions and professional associations, as well as local government units, which own a considerable portion of hospitals and inpatient centres.

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