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# FACTORS INFLUENCING TEAMWORK IN HEALTH CARE

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## ABSTRACT

The purpose of this paper is to analyse different views on interpersonal relations and team composition among managers and medical professionals with respect to the transition of professional roles in healthcare in Poland.

To achieve that goal, a description based on a quantitative and qualitative questionnaire was conducted. Since the questionnaire covered various areas of health care, only its small fraction was used for the analysis.

The main result is that most of the medical professionals and medical managers consider technology to be the single most important external factor influencing the team work efficiency and team composition in health care, and the managers consider skillset as the crucial factor determining whether a person would be a good team member. Based on the literature on professional roles in health care and their evolution in recent years, one can assume that constant development and lifelong learning would play a significant role in the healthcare systems reform. The findings are an important contribution to the discussion of the healthcare reform and its possible directions in future years as well a reference point for policy makers.

## KEY WORDS

**health care, professional roles, teamwork, managers and professionals, perspectives**

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## INTRODUCTION

The determinants of teamwork efficiency have been researched by many scientists. Depending on the perspective, sociology, psychology, management, political sciences or a mix of some of the above are involved. Hence, in most cases, no definitive attribution to a specific discipline can be made. In our paper,

we discuss the findings based on an interdisciplinary approach.

The main topic of this paper is how different members of the health care personnel (managers and medical professionals) see teamwork and what factors they consider to be crucial in shaping the professional cooperation. Since by definition determinants are factors that ascertain the nature of a process or

a phenomenon and we do not conduct a quantitative analysis allowing us to draw such sharp conclusions, the rest of the paper will describe only factors in general. The research project that is presented in this paper required a focus on external factors such as legal regulations, new technologies, remuneration system, etc. Because of the amount of literature on teamwork and limited size for the article, we had to draw the line and limit the literature overview to only the most basic sources. Some space is also dedicated to the description of the research project from which this paper originated, namely MUNROS.

## 1. LITERATURE REVIEW

Various aspects of medical health care (e.g. the sociological) are an important issue raised by many Polish experts (Golinowska, Kocot & Sowa, 2008; Rudawska, 2011; Boulhol, 2012). In Polish literature related to the field of medical health care, one of the most significant is the research conducted by Karkowska (2012), widely describing the changes observed in the Polish healthcare system (Kraśniak, 2014). The author emphasises that the generation gap caused the change in opinions on medical professionals. Meanwhile, the same issue is observed by the supranational organisations focusing on the problems related to health care professionals (European Commission, 2008; WHO, 2009). Some papers focus more on defining the crucial factors which determine the sector's ability and readiness for change (Flottorp et al., 2013) or on methods optimising health care management processes (Uziółko & Radosiński, 2009). Some research on human capital management in healthcare continue elaborating on this topic (Wyszkowska & Michalska, 2011; Bodzek, 2011; Hille-Jarząbek, 2011).

At the same time, professional roles in health care are a subject which became increasingly important in recent years (Dubois, 2009; Longpre, 2015). Due to the reform of the healthcare systems in many countries (Han, 2012; Sade, 2012; Shan et al., 2016; Tang, 2013) the professional roles emerge, vanish, merge and evolve in various forms (Bond et al., 2016). The process affects everyone involved in the treatment of a patient: nurses, doctors, managers, physicians, assistants and everyone else in the care pathway (Tsiachristas et al., 2015) which can cause a significant amount of stress (Ramuszewicz et al., 2005). Most of the treatment procedures require the cooperation of

two or more members of medical staff, thereby corresponding motivation to work (Zadros, 2011; Kwintowski & Grodzki, 2011). The determinants of the changes in the composition of such teams are important factors one must consider while creating policies for healthcare workforce development. From this perspective, it is crucial to determine which external variables influence a team composition in health care services.

## 2. RESEARCH METHODS

The aim of this paper is to analyse different views on interpersonal relations and team composition among managers and medical professionals with respect to the transition of professional roles in health care in Poland and compare these perspectives to better understand the possible factors influencing the selection of team members in Polish health services. The research was conducted within the MUNROS project (Health Care Reform: the iMPact on practice, oUtcomes and costs of New roles for health pROfeSsionals), led by the University of Aberdeen. The Management Faculty of the University of Warsaw conducted a part of the research. The project started in September 2012 and is almost complete (as of the end of 2016), and the first partial results are being published and presented at various conferences. The scope of the project is to produce a comprehensive report serving as a basis for policy makers on the EU-level with regard to the new professional roles in health care. The main stages of the project were: an extensive literature review in all 9 countries, a large case-based comparative study (de Bont et al., 2016) and a survey (the questionnaires were developed by all members of the project, under the leadership of the University of Aberdeen) conducted in several hundred care pathways across Europe (324 single care pathways in total).

One of the stages of the project was conducting surveys among medical and medicine-related personnel — Health Care Professionals (HCP) and Health Care Management (HCM). All the questionnaires were distributed and collected between September and December 2015. Three care pathways were studied:

- heart failure/myocardial infarction — HD,
- breast cancer — BC,
- type 2 diabetes — T2D.

The questionnaires were created by the team led by the University of Aberdeen. Afterwards, the questionnaires were adapted by the authors of this paper to the Poland-specific local requirements (including a pilot research in two hospitals) and distributed among 12 Polish hospitals. In each of the hospital, the questionnaires were distributed to patients, HCPs and HCMs — 50 questionnaires per each care pathway, 30/15/5 to each group, respectively.

There were over 1.800 questionnaires distributed in total (sometimes, there were one or two more questionnaires in each pathway) with a return rate of slightly over 50% (907 questionnaires). Such a high return rate was achieved thanks to a direct distribution — a researcher was giving away questionnaires on-site and collecting them afterwards. This procedure not only raised the return rate significantly but also enabled faster data collection. The return rates in subgroups were as follow:

- patients — 58.4% (not covered in this paper),
- professionals — 51.1%,
- managers — 50.0%.

Some of the questionnaires had to be rejected due to:

- incompleteness,
- illegibility,
- lack of any answers.

The total number of observations on Medical Professionals in three pathways was reduced from 283 (returned questionnaires) to 183 in total (breast cancer — 40, heart diseases — 80, type 2 diabetes — 63).

Because of a rather qualitative nature of the research, the sample was put together taking the basic features of the hospitals into consideration: their localisation, size and ownership structure. Half of the hospitals were located in Warsaw and its vicinity and the rest — in various cities across Poland. Apart from these constraints, the main factor in deciding whether the hospital was eligible for the research was the number of care pathways it provided to have the results at least partially comparable to each other and the results that enable the comparison across pathways.

That by no means leads to any representativeness of the results. On the contrary — it was never an intent of the researchers to achieve this. The results can be analysed as a snapshot of selected issues in the present-day Polish healthcare system as perceived by professionals. Hence, no conclusions of a general nature can be drawn, but the observations give a solid starting ground for further research in this area.

### 3. RESEARCH RESULTS

The overall questionnaire results of each of the care pathways are shown in the tables below. In the first part the of this chapter, the results of the HCM questionnaires are shown, and then, the results of the survey conducted among HCP are presented as well.

The first table presents the choices of managers of all care pathways regarding factors important in

Tab. 1. Factors important in determining the staff to undertake each task

FACTORS	DOES NOT INFLUENCE MY CHOICE DEGREE OF IMPACT = 1				SOMEWHAT INFLUENCES MY CHOICE DEGREE OF IMPACT = 2				INFLUENCES MY CHOICE A LOT DEGREE OF IMPACT = 3				AVERAGE IMPACT			
	NUMBER OF ENTRIES				NUMBER OF ENTRIES				NUMBER OF ENTRIES							
	HD	BC	T2D	ALL	HD	BC	T2D	ALL	HD	BC	T2D	ALL	HD	BC	T2D	ALL
Budgetary/cost consideration	1	4	5	10	11	5	4	20	5	2	2	9	2.24	1.82	1.73	1.97
Cost effectiveness	1	2	3	6	8	7	8	23	7	3	8	18	2.38	2.08	2.26	2.26
Experience of staff	1	4	1	6	1	2	3	6	15	11	10	36	2.82	2.41	2.64	2.63
Patient preferences	7	4	4	15	7	5	6	18	2	2	2	6	1.69	1.82	1.83	1.77
Professional influence/opinions	0	0	2	2	14	8	7	29	2	4	3	9	2.13	2.33	2.08	2.18
Regulations	0	1	1	2	9	4	3	16	6	6	8	20	2.40	2.45	2.58	2.47
Skills and competences	0	0	1	1	2	3	1	6	15	9	10	34	2.88	2.75	2.75	2.80
Workforce availability	2	3	2	7	8	5	7	20	7	4	3	14	2.29	2.08	2.08	2.17

Source: authors' elaboration.

determining the staff members to undertake each task.

According to manager declarations, the most important factor determining the choice of medical personnel to be assigned to a specific task was a particular human impact, i.e. skills and competencies as well as staff experience. Regarding breast cancer, the important factors were also regulations, since, for every cancer disease, the Polish lawmakers implemented the so-called 'fast oncologic path', easing the process of the medical care and the overall financing. The following table presents the answers of health care managers regarding the factors being a facilitator or a barrier to changes in the structure of a team of health care professionals, separately for each of the care pathways.

The most important facilitator regarding the changes in the team structure (according to answers of managers) are information technology and medical technology as well as specialist support; whereas the most important barrier is the remuneration system which is closely connected with regulations and legislation factors.

The last table presents the extent to which external factors are driving staff changes for each care pathway as well as for all pathways in total.

Again, according to manager declarations, in all three care pathways, the crucial factor that determined staff change in a team was a broadly defined new technology.

The perspective of the medical professionals was similar. According to the declarations, in all three care pathways, the most important factor that influenced the composition of the medical team was the broadly defined new technology. This was particularly visible in the heart diseases pathway where the spread between the index values was the biggest, as well as the number of observations. This can be attributed to the quick scientific and technological advances in this sphere in Poland in recent years. In the case of Breast Cancer and Type 2 Diabetes pathways, the dispersion of the results was smaller, but the technology was still perceived as the most important factor influencing team composition.

Again unanimously, the least important factor in all three pathways was the remuneration system. This was most visible in case of Breast Cancer pathway, but the differences across and within each pathway as well as the sample were too small to make any significant comments.

The results indicate that the views of the professionals and managers in the Polish healthcare on factors influencing teamwork are to some extent similar. The main external factor influencing the team composition is considered to be the available technology. As pointed out earlier, the simplest explanation of this fact is that the wider availability of new medical technologies shapes the teams. The fact that most managers declare the skills of the staff as an important factor in deciding whether a particular person would be

Tab. 2. Factors facilitating or impeding on changes in the structure of a team of health care professionals

FACTORS	FACILITATOR DEGREE OF IMPACT = 3				NEITHER DEGREE OF IMPACT = 2				BARRIER DEGREE OF IMPACT = 1				AVERAGE IMPACT			
	NUMBER OF ENTRIES				NUMBER OF ENTRIES				NUMBER OF ENTRIES							
	HD	BC	T2D	ALL	HD	BC	T2D	ALL	HD	BC	T2D	ALL	HD	BC	T2D	ALL
Information technology	13	9	11	33	2	2	3	7	2	2	1	5	2.65	2.54	2.67	2.62
Management support	12	8	8	28	2	4	5	11	2	1	2	5	2.63	2.54	2.40	2.52
Medical technology	11	8	8	27	5	4	5	14	1	1	2	4	2.59	2.54	2.40	2.51
Professional support	12	9	6	27	3	3	8	14	2	1	1	4	2.59	2.62	2.33	2.51
Experience requirements	8	9	6	23	5	3	7	15	4	1	2	7	2.24	2.62	2.27	2.36
Regulation and legislation	3	2	3	8	6	5	4	15	6	5	8	19	1.80	1.75	1.67	1.74
Staff satisfaction	9	8	9	26	3	1	2	6	5	4	4	13	2.24	2.31	2.33	2.29
Remuneration system	4	2	2	8	2	1	3	6	9	9	9	27	1.67	1.42	1.50	1.54

Source: authors' elaboration.

Tab. 3. Extent of the external factors driving staff changes — all care pathways together (single pathways in parenthesis: HD, BC, T2D)

FACTORS	NOT AT ALL DEGREE OF IMPACT = 1	NOT REALLY DEGREE OF IMPACT = 2	UNDECIDED DEGREE OF IMPACT = 3	SOMEWHAT DEGREE OF IMPACT = 4	VERY MUCH DEGREE OF IMPACT = 5	AVERAGE IMPACT
	NUMBER OF ENTRIES	NUMBER OF ENTRIES	NUMBER OF ENTRIES	NUMBER OF ENTRIES	NUMBER OF ENTRIES	
Workforce policies	10 (3/2/5)	4 (2/0/2)	4 (2/2/0)	15 (6/5/4)	12 (4/4/4)	3.33 (3.35/3.69/3.00)
Remuneration system	10 (3/2/5)	5 (2/1/2)	4 (2/1/1)	19 (7/6/6)	7 (3/3/1)	3.18 (3.29/3.54/2.73)
Shifting influences	9 (2/1/6)	10 (5/4/1)	10 (4/3/3)	12 (4/3/5)	4 (2/2/0)	2.82 (2.94/3.08/3.60)
Redesign of health services	4 (1/1/2)	9 (3/3/3)	10 (4/2/4)	14 (4/4/6)	8 (5/3/0)	3.29 (3.53/3.38/2.93)
New technology	1 (0/0/1)	4 (2/1/1)	6 (2/2/2)	24 (7/7/10)	10 (6/3/1)	3.84 (4.00/3.92/3.60)
New legal rights	3 (1/0/2)	8 (4/3/1)	9 (4/2/3)	13 (5/3/5)	12 (3/5/4)	3.51 (3.29/3.77/3.53)
Need for audit trail	7 (1/3/3)	3 (2/0/1)	20 (7/6/7)	13 (6/3/4)	1 (0/1/0)	2.95 (3.13/2.92/2.80)

Source: authors' elaboration.

a team member supports this supposition. They probably refer to the skillset required for operating a specific equipment.

The conclusion is not representative because of the nature of the survey but carries some weight. It points out, that in the foreseeable future, professional education could be an important factor in the team composition process. This statement was supported most of the respondents.

## 4. DISCUSSION OF THE RESULTS

Considering other studies on the topic of factors influencing teamwork in health care, a starting point for our paper was a wide range of research on teamwork determinants in general. Some specific papers addressed health care in particular, but most of them were merely a literature review without any empirical contribution or simply focusing on the case-study method. The most notable findings suggest that leadership is a crucial factor in shaping the teamwork (Brown et al., 2015). This issue was studied in Poland (Kotas, 2015) but in a rather general manner describing the success factors in social services in general rather than in health care in particular. However, the findings support the ones by Brown, i.e., that leadership is a key factor in determining the success of a team. Other results were obtained while researching the competences of the health care managers. It was concluded that the key factor to the successful work

as a manager was the ability to introduce changes (Kraśniak, 2014).

A different approach to the research method is the main difference between conclusions made in the aforementioned papers and this article. MUNROS focuses more on institutional than psychological factors, hence leadership as such was not a subject of research. On the other hand, one can safely assume that after the inclusion of that topic into the questionnaires, leadership could become an important factor influencing teamwork in Polish health care as this is generally true.

In the present state, the paper is an important contribution to the research. Institutional factors play an important role in shaping teamwork in Polish health care and influence the everyday decision-making process to the extent that it cannot be ignored or omitted in the further research. Based on the results, one can assume that constant development and lifelong learning would play a significant role in the healthcare system reform. The findings are an important contribution to the discussion of the healthcare reform and its possible directions in future years as well a reference point for policy makers.

## CONCLUSIONS

From the practical perspective, the research shows factors that are important for the composition of a health care team, according to medical profes-

sionals and medical managers. The research covered only a selected range of issues; therefore, by no means the authors aspire to give a comprehensive answer as to what influences the team composition process in Poland the most. On the other hand, based on the answers one can safely assume, that professional education plays an important role while considering with whom we would like to work. This emphasises the importance of professional training and the necessity of lifelong learning among the health care professionals. Since most patient treatments are conducted in teams, the lack of professional expertise could potentially make effective work in the professional environment of health care worker impossible. This is additionally supported by answers attributing the team composition change to a broadly defined new technology. Its implementation usually requires a specific and extensive skillset from every person involved in the teamwork, which again stresses the importance of continuous professional training.

The theoretical perspective requires conducting further research on a larger and more representative sample to validate the results and potentially help shape the health care policy.

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