# fizioterapia. POLISH JOURNAL OF PHYSIOTHERAPY OFICJALNE PISMO POLSKIEGO TOWARZYSTWA FIZJOTERAPII NR 2/2015 (15) KWARTALNIK ISSN 1642-0136

THE OFFICIAL JOURNAL OF THE POLISH SOCIETY OF PHYSIOTHERAPY

Zaburzenia narządu ruchu u kobiet w zespole Turnera Musculoskeletal disturbances in women with Turner's syndrome

Analiza potencjalnych czynników ryzyka syndromu wypalenia zawodowego u fizjoterapeutów

The analysis of potential risks factors for professional burnout syndrome in physiotherapists

# ZAMÓW PRENUMERATE!

### **SUBSCRIBE!**

www.redakcja-fp.pl prenumerata@redakcja-fp.pl





## Analiza świadczeń udzielanych w zakresie rehabilitacji kardiologicznej w warunkach stacjonarnych

Analysis of intramural cardiac rehabilitation services

Karol Wojciechowski<sup>1(A,B,C,D,E,F)</sup>, Marek Kiljański<sup>2,3,4(D,E,F)</sup>, Krzysztof Mirecki<sup>5(E,F)</sup>, Jan Szczegielniak 6(A,C,D,E,F)

<sup>1</sup>Oddział Wojewódzki Narodowego Funduszu Zdrowia w Łodzi, Polska / Lodz Voivodeship Department of the National Health Fund (NFZ), Poland <sup>2</sup>Pabianickie Centrum Rehabilitacji SP ZOZ Pabianice, Polska / SP ZOZ Rehabilitation Center in Pabianice, Poland

<sup>3</sup>Uniwersytet im. Jana Kochanowskiego w Kielcach, Polska / Jan Kochanowski University, Kielce, Poland

<sup>4</sup>Wyższa Szkoła Informatyki i Umiejętności w Łodzi, Polska / University of Computer Sciences and Skills, Lodz, Poland

<sup>5</sup>ALDEMED Centrum Medyczne Zielona Góra, Polska / ALDEMED Medical Center Zielona Gora, Poland

<sup>6</sup>Szpital Specjalistyczny MSW w Głuchołazach, Polska / MIAA Specialistic Hospital in Glucholazy, Poland

#### Streszczenie:

Celem pracy jest próba charakterystyki profilu pacjenta kierowanego do leczenia w zakresie rehabilitacji kardiologicznej w warunkach stacjonarnych. Analizie poddano również ocenę skuteczności zastosowanej rehabilitacji u tych chorych.

Materiał badawczy stanowiły dane sprawozdane przez pieć oddziałów rehabilitacji kardiologicznej posiadających zawarte umowy z Łódzkim Oddziałem Wojewódzkim Narodowego Funduszu Zdrowia. Wszystkie świadczenia zostały wykonane w 2013 roku.

Badania wykazały, że najliczniejszą grupę pacjentów poddawanych rehabilitacji kardiologicznej w warunkach stacjonarnych na terenie województwa łódzkiego w roku 2013 stanowili chorzy w wieku 56-75 lat (68,02% ogółu badanych).

Analiza badań wykazała, że najczęściej sprawozdawane rozpoznanie dotyczyło " niewydolności serca nieokreślonej" (58,04% ogółu materiału badawczego).

Analiza trybu wypisów chorych z oddziałów rehabilitacji wykazała, iż tryb wypisu "zakończenie procesu terapeutycznego lub diagnostycznego" stanowił 76,75% ogółu badanych chorych.

Stwierdzono, że zdecydowaną większość chorych poddawanych rehabilitacji kardiologicznej stanowili mężczyźni (67,17% ogółu).

#### Słowa kluczowe:

rehabilitacja kardiologiczna, rozpoznania główne, tryb wypisu

#### **Abstract**

The aim of this paper was to make an attempt at characterizing a profile of patients referred for intramural systemic rehabilitation therapies. The analysis covered also an assessment of effectiveness of the rehabilitation applied to the

The research material were data reported by five departments of intramural cardiac rehabilitation which had signed contracts with the Lodz Voivodeship Department of the National Health Fund. All the services had been performed in 2013.

The research showed that the largest group of patients subjected to intramural cardiac rehabilitation in the area of Lodz voivodeship in 2013 were the patients aged 56-75 (68,02% of all the researched).

The research analysis showed that the most commonly reported diagnosis was "unspecified heart failure" (58,04% of the whole of the research material).

The analysis of the modes of discharge from rehabilitation units showed that the mode of "completion of therapeutic or diagnostics process" accounted for 76,75% of all the researched patients.

It was noted that the vast majority of the patients subjected to cardiac rehabilitation were men (67,17% of the whole).

#### **Key words:**

cardiac rehabilitation, main diagnoses, discharge mode



Services of intramural cardiac rehabilitation are intended for patients who require direct continuation of improvement process following the termination of inpatient treatment in units/clinics specialized in: cardiology, cardiac surgery, internal diseases. Cardiac rehabilitation services are intended for cardiac patients whose continued treatment requires the application of complex rehabilitation services as well as 24hour doctor's supervision [1,2]. Cardiac rehabilitation is performed on the basis of specified groups of the services defined in the Catalogue of Diagnosis Related Groups (DRGs) in intramural therapeutic rehabilitation [1]. In order to qualify a patient into particular group, the seriousness of the patient's clinical condition must be proved as part of an individual medical documentation, based on the NFZ's criteria. For the moment, there are no publications available on complex analysis of the profile of patients subjected to physiotherapy at the cardiac rehabilitation units. The present paper is an attempt to characterize a profile of patients referred to intramural cardiac rehabilitation. The assessment of effectiveness of the implemented rehabilitation of the researched patients will also be analyzed.

The research material included data collected from five units of intramural cardiac rehabilitation which had signed contracts with the Lodz Voivodeship Department of the National Health Fund. All the services had been performed in 2013. The data was provided by the Lodz Voivodeship Department of the National Health Fund. Microsoft Office Excel 2007 Spreadsheet was used for the data analysis. The data reported by the care providers were classified into 7 age groups: 18 to 35 years old, 36-45 years old, 46-55 years old, 56-65 years old, 66-75 years old, 76-85 years old and over 85 years old patients. The research material analysis allowed for the patients' sex, age, course of discharge and the most common main diagnoses in each age group.

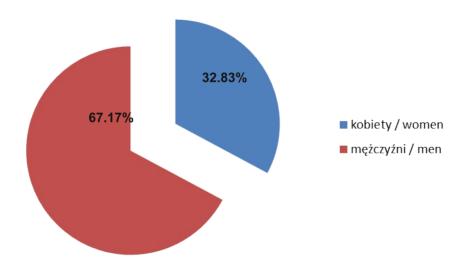


Fig.1. Classification of the patients based on their age



The analysis of research material showed that in 2013 1523 patients had been subjected to intramural cardiac rehabilitation in the area of Lodz voivodeship as part of the contracts with the Lodz Voivodeship Department of the National Health Fund. In the analyzed research material 32.83% of the patients were women, 67.17% were men (Fig. 1).

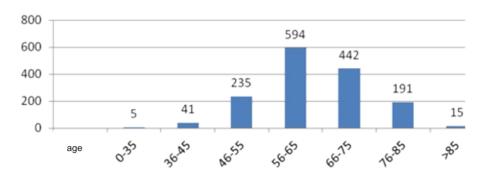


Fig. 2. Number of the researched patients

The data analysis showed that the most significant number of intramural cardiac rehabilitation patients were in the age between 56 and 65 (39.00% of all researched patients) and between 66 and 75 (29.02% of all researched patients). The lowest number of patients referred for intramural cardiac rehabilitation was observed in the age group of 18-35 years old (0.33% of all researched patients) and over 85 (0.99% of all researched patients). In the groups of 78-85 and 46-55 the percentages were respectively 12.54% and 15.43% of all hospitalized patients (Fig. 2).

Analysis of the data reported to the NFZ showed two dominating modes of discharging patients from cardiac rehabilitation units, representing 98.22% of all types of discharge. Discharge by "completion of therapeutic or diagnostics process" was found with 76.75% of all researched patients, whereas discharge by "referral for further treatment at an outpatients' clinic" was noted in 21.47% of researched cases (Chart 1.)

It should be assumed that the patient's discharge mode described as "completion of therapeutic or diagnostics process" confirms the effectiveness of the completion of rehabilitation process. The mode of "referral for further treatment at an outpatients' clinic" may indicate the lack of satisfactory results of rehabilitation and the necessity of its continuation at an outpatients' clinic. In all of the researched age groups these two modes of patients' discharge were dominant, while the remaining modes of discharge did not exceed 0.50% of all of the researched patients.

The discharge mode of "completion of therapeutic or diagnostics process" in particular age groups was noted respectively with 80.00%, 85.37%, 76.17%, 73.91%, 78.05%, 80.63% i 86.66% of all the researched cases (Fig. 3).



#### Table 1. Patients' discharge mode

referral for further treatment at another hospital	0.46%
referral for further treatment at an outpatient's clinic	21.47%
discharge on patient's own request	1.18%
completion of therapeutic or diagnostics process	76.75%
patient's death	0.07%
no data	0.07%

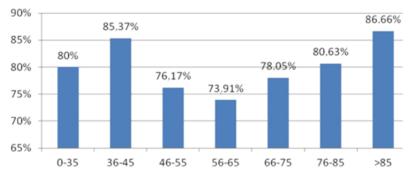


Fig. 3. Number of patients discharged in the mode of completion of therapeutic or diagnostics process with respect to particular age groups

The mode of "referral for further treatment at an outpatients' clinic" in particular age groups was respectively 20.00%, 14.63%, 22.13%, 25.08%, 19.92%, 15.71% i 6.67% of all the researched patients (Fig. 4).

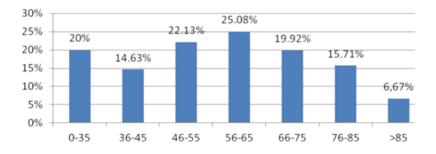


Fig. 4. Number of patients discharged in the mode of "referral for further treatment at an outpatients' clinic" with respect to particular age groups



The analysis covered main diagnoses of patients referred for intramural cardiac rehabilitation. It was showed that the patients subjected to intramural cardiac rehabilitation were most often diagnosed with "congestive heart failure", "left verticular heart failure", "unspecified heart failure", "presence of coronary artery bypass grafts", "presence of cardiac valve prostheses" and "presence of implants or transplants related to coronary angioplasty."

The largest group were the patients hospitalized because of "unspecified heart failure" (58.04% of all the researched patients.) The diagnoses of "presence of implants or transplants related to coronary angioplasty" and "presence of coronary artery bypass grafts" were reported respectively with 17.86% and 14.12% of all the patients, whereas "presence of cardiac valve prostheses" and "left verticular heart failure" respectively with 4.07% and 3.94% of the researched patients. The smallest group were the patients diagnosed with "congestive heart failure" (1.97% of all the researched patients) (Fig. 5). The distribution of main diagnoses in particular age groups was also analyzed.

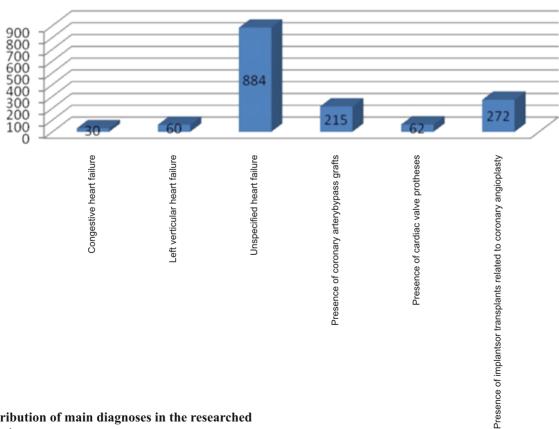


Fig. 5. Distribution of main diagnoses in the researched group of patients



The diagnosis of "left verticular heart failure" was the most common diagnosis reported in the age group of 85 and more (6.67%). In the researched groups of 36-45, 46-55, 56-65, 66-75 there was an increase of the number of this diagnoses with the age. In the age group of 76-85 the analyzed diagnosis was proved with 3.66% of the patients. The diagnosis was not noted in the youngest group of the researched patients (Fig. 6).

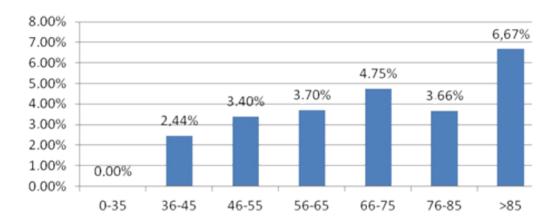


Fig. 6. The diagnosis of "left verticular heart failure" considering the researched age groups

It was showed that the most common main diagnosis reported by the researched cardiac rehabilitation units was "unspecified heart failure". The diagnosis was proved with 80% of the patients aged 18-35 and with 73% of the patients aged 85 and more. In the researched age groups of "unspecified heart failure" the diagnosis was proved with respectively 56.10%, 55.74%, 55.89%, 60.18% i 61.26% of the patients (Fig. 7).

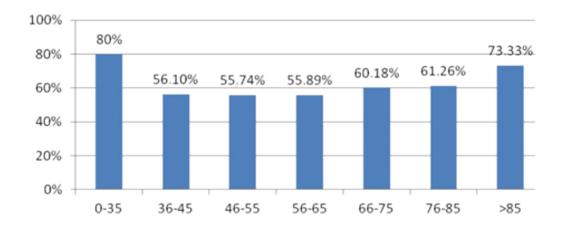


Fig. 7. The diagnosis of "unspecified heart failure" considering the researched age groups



The research analysis indicated the occurrence of the diagnosis of "congestive heart failure" in the age groups of 46-55, 36-45, 56-65, 66-75 respectively with 2.99%, 2.44%, 1.59% and 1.35% of the researched patients (Fig. 8).

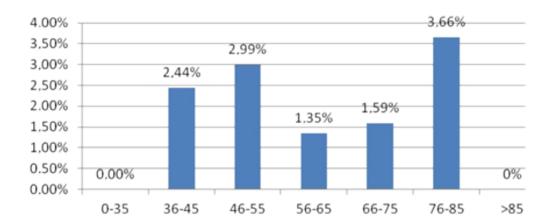


Fig. 8. The diagnosis of "congestive heart failure" considering the researched age groups

It was shown that the main diagnosis of "presence of coronary artery bypass grafts" was reported in the age groups of 66-75 (17.19% of the patients), 56-65 (15.82% of the patients), 85 and over (13.33% of the patients), 76-85 (11% of the patients) and 46-55 (9.36% of the patients). The analysis showed that the diagnosis did not occur in the two youngest age groups (Fig. 9).

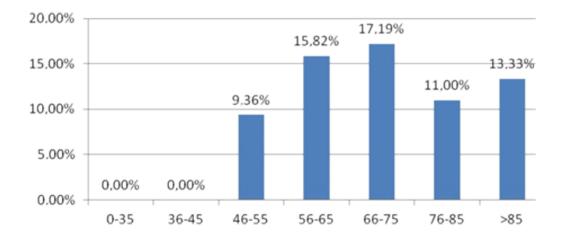


Fig. 9. The diagnosis of "presence of coronary artery bypass grafts" considering the researched age groups



The research analysis showed that the main diagnosis of "presence of cardiac valve prostheses" in the age groups of 36-45, 46-55, 56-65, 66-75, 76-85 respectively with 7,32%, 2,55%, 3,70%, 5,43%, 3,66% of the patients (Fig. 10).

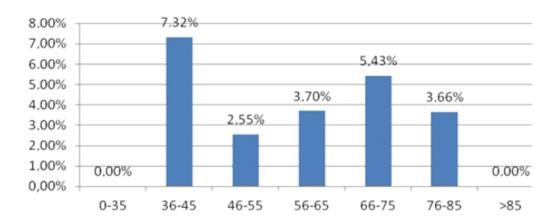


Fig. 10. The diagnosis of "presence of cardiac valve prostheses" considering the researched age groups

The diagnosis of "presence of implants or transplants related to coronary angioplasty" was most commonly reported in the age groups of 36-45 (31.70%) and 46-55 (25.96%). In the age groups of 18-35, 56-65 and 76-85 this diagnosis was reported respectively with 20.00%, 19.54% and 16.76% of the patients. The analysis showed the occurrence of the diagnosis in the age group of 66-75 with 10.86% and with 6.67% of the patients aged 85 and over (Fig. 11).

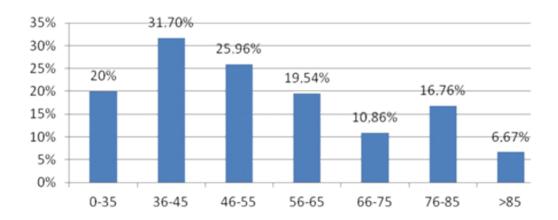


Fig. 11. The diagnosis of "presence of implants or transplants related to coronary angioplasty" considering the researched age groups



The research analysis showed that the most commonly rehabilitated patients in the intramural cardiac rehabilitation units were those between 56 and 75 years old (68.02% of all the researched patients). It was shown that 67.17% of the whole of the researched patients were men.

The analysis of the modes of discharge from cardiac rehabilitation units showed the occurrence of "completion of therapeutic or diagnostics process" with 76.75% of the researched patients which indicates high effectiveness of the applied rehabilitation. It was shown that with 58.04% of the researched patients were diagnosed with "unspecified heart failure.

#### **Conclusions**

- 1. The research showed that the largest group of patients subjected to intramural cardiac rehabilitation in the area of Lodz voivodship in 2013 were the ones aged between 56 and 75 years old (68.02% of all the researched).
- 2. The research analysis showed that the most commonly reported diagnosis was "unspecified heart failure" (58.04% of the whole of the research material).
- 3. The analysis of the modes of discharge from rehabilitation units showed that the mode of "completion of therapeutic or diagnostics process" accounted for 76.75% of all the researched patients.

#### Corresponding author



#### Karol Wojciechowski

email: fizjocoma@gmail.com

#### References

- 1. Zarządzenie Nr 80/2013/DSOZ Prezesa Narodowego Funduszu Zdrowiaz dnia 16 grudnia 2013 r. w sprawie określenia warunków zawierania i realizacji umów w rodzaju rehabilitacja lecznicza (The Ordinance No. 80/2013/DSOZ of the President of the National Health Fund, dated 16 December 2013, on defining the conditions of conclusion and management of the therapeutic rehabilitation contracts).
- 2. Rozporządzenie Ministra Zdrowia z dnia 6 listopada 2013 r. w sprawie świadczeń gwarantowanych w rehabilitacji (The Regulation of the Minister of Health, dated 6 November 2013, on guaranteed rehabilitation services).

#### Certyfikat jakości PTF

Zarząd Główny Polskiego Towarzystwa Fizjoterapii umożliwia uzyskanie akredytacji placówkom fizjoterapii, spełniającym wysokie standardy kadrowe, metodyczne, naukowe, bazy lokalowo-sprzętowej.

Akredytacja, czyli przyznanie "certyfikatu jakości" placówce, potwierdza wysoką jakość jej usług, co przekłada się na bezpieczeństwo pacjentów. Placówka staje się gabinetem, godnym zaufania, w którym pracują wykształceni, doświadczeni fizjoterapeuci.

W celu uzyskania akredytacji konieczne jest pisemne zgłoszenie, stanowiące odpowiedni załącznik regulaminu i przesłanie go na adres sekretariatu komisji ds. akredytacji.

Dodatkowych informacji udziela:

Sekretarz komisji ds. akredytacji placówek dr Marcin Krajczy Centrum Rehabilitacji ul. Bohaterów Warszawy 21, 48-300 Nysa marcin.krajczy@wp.pl tel. 605 23 01 84