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How do we feed our patients? Analysis of data on the quality of nutrition in Polish hospitals, with particular emphasis on cardiac patients

Czym żywimy naszych pacjentów? Analiza danych o jakości żywienia w polskich szpitalach ze szczególnym uwzględnieniem pacjenta kardiologicznego

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Abstract

Nutritional education leading to a change in current eating patterns begins in the hospital and is essential to improve patients' health and quality of life. Nutrition is a crucial part of the treatment process. Currently, the issue of the quality of hospital meals is underestimated and frequently ignored. In recent years, this topic has become particularly important as more attention is paid to the economic aspects of treatment. However, we do not acquire reliable data. The latest credible analysis can be found in the report of the Supreme Audit Office from 2018. It revealed that the Polish healthcare system did not provide proper nutrition. According to some law interpreters, incorrect nutrition is inconsistent with current medical knowledge and should be considered a violation of the Act on Patient Rights and the Act on the Patient Ombudsman. Currently, we lack legal regulations regarding the profession of dietitians and the rules of their employment in medical facilities. Even though dietitian is a regulated profession, legally is not a medical profession. Therefore, it is not included in the employment structure in healthcare facilities. Patients depend on nutritional care from doctors and nurses who often do not have time resources and are not suitably educated in the topic.

The article aims to present and summarize current knowledge about the quality and organization of nutrition in Polish hospitals. It also presents legal aspects of nutritional care planning, the legal situation of dietitians and guidelines regarding the principles of nutrition for patients, especially cardiac patients.

Keywords: hospital nutrition, patient care, legal aspects, guidelines

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Introduction

Appropriate dietary management plays an important role in supporting patients' treatment and recovery process [1]. Poor nutritional status during hospitalization negatively affects the effectiveness of therapy and increases the risk of complications [2]. Research have shown that adequate nutritional intervention can prevent unplanned readmissions [3]. Disease-related malnutrition is included in the International Statistical Classification of Diseases and Related Health Problems; therefore, it should be diagnosed and treated [4]. The thesis that obese patients (BMI > 30 kg/m^2) are well-nourished and can only receive intravenous crystalline fluids for several weeks after surgery or injury without negative health consequences is still common, even among the medical community [5]. That may result in malnutrition and, consequently, reduced effectiveness of pharmacological and surgical treatment. There is a relationship between the number of days spent in the hospital and the increased risk of malnutrition [6, 7]. Nutritional education leading to a change in current eating patterns begins in the hospital and is important in improving health and quality of life [8]. As the Council of Europe pointed out in its resolution, patient nutrition is an essential component of the therapeutic process [10]. It should be an integral part of the therapeutic process, co-determining the effectiveness of treatment and the rate of recovery [11]. It is crucial to highlight the significant impact of a patient's daily dietary habits and lifestyle on their overall cardiovascular risk. Specifically, the common diet of the average Polish person tends to resemble the Western dietary pattern more closely than the healthier Mediterranean diet [12].

Notably, only 24% of the Polish population have a healthy eating pattern. 29.1% of Poles express their reluctance to change their current diet. These statistics strongly underscore the urgent need for healthcare professionals to engage in patient education and implement effective interventions.

The aim of the article is to present and summarize the current knowledge on the quality and organization of nutrition in Polish hospitals. It also discusses the legal aspects of planning nutritional care, the legal status of dietitians, and the guidelines for patient nutrition principles.

Principles of proper nutrition for patients with cardiological problems

Most patients are recommended to follow a basic or easily digestible diet [11]. These should be composed according to the principles of rational nutrition and implement rules for the prevention of chronic non-communicable diseases [11]. Research showed that in many hospitals, diets included in the dietary system are prescribed regardless of the patient's health condition and without assessing the nutritional status [9, 13]. In Poland, cardiovascular diseases have been a serious health problem since the second half of the 20th century and remain the main cause of death [1, 14]. Proper nutrition is not only an element of their prevention, but also an important part of treatment. The necessity of including nutritional changes into treatment process was pointed out in the latest recommendations of the European Society of Cardiology from 2021 (ESC) [15]. Crucial rules are: promoting a diet based on the food of plant origin, limiting the consumption of saturated fatty acids to less than 10% of energy, daily supply 30–45 g of fiber, including fish in the diet 1–2 times a week, limiting salt intake to less than 5 g per day, eliminating alcohol, red meat and products containing monosaccharides. The Lyon Diet Heart Study revealed that the modified Mediterranean diet prevents the recurrence of coronary heart disease episodes in patients after myocardial infarction compared to the diet routinely recommended by doctors [16]. In comparison to the control group, the analyzed patients who followed the Mediterranean diet had a 70% reduction in the second non-fatal myocardial infarctions and a 56% decrease in overall mortality. These results show the potential high therapeutic value of a diet rich in vegetables, fruits, cereal products, fish and products containing alpha-linolenic acid (rapeseed oil, green leafy vegetables, walnuts) and with low amounts of saturated fatty acids and cholesterol. Therefore, one of the greatest challenges in the prevention of cardiovascular diseases is to develop more effective dietary strategies that motivate individuals to initiate changes in their diet and, to maintain them over time [16].

Current situation in Poland

a) Data from reports and research

The poor quality of nutrition in hospitals and their failure to meet dietary standards were presented in reports created by: the Supreme Audit Office (NIK, *Najwyższa Izba Kontroli*) (2018) [21], the State Sanitary Inspection (2016) [22], the Patient Ombudsman (2015) [23] and the Civil Rights Ombudsman (2016) [24]. The latest reliable data were revealed in the report of the NIK from 2018. It showed that the healthcare system did not provide proper nutrition. There were no legal regulations defining the standards or requirements for meals served to patients during their hospital stay. There were no consistent rules for controlling nutritional services in hospitals or employing dietitians in hospital wards. The methods of preparation and nomenclature of meals were not regulated by law. Such gaps in the system, lack of supervision and low financial outlays resulted in meals that were inadequate for patients' health conditions, prepared from low-quality raw materials, with underestimated or overestimated energy value and with incorrect nutritional value. Food provided by hospitals did

not fulfil its essential function — supporting the treatment and recovery process and sometimes could be a harmful factor. The daily meal allowances were unclear. The amounts shown in the NIK Report ranged from PLN 9.55 to PLN 17.99 per person-day [21].

A study on meals served in Polish hospitals to patients suffering from cardiovascular diseases was conducted in 2022 [21]. It assessed the compliance of the hospital menus with the 2021 guidelines of the European Society of Cardiology. The guidelines indicated dietary criteria for a patient with cardiological problems: (1) promotion a dietary pattern based on plant based products rather than animal based products, (2) saturated fatty acids should constitute < 10% of energy intake and be replaced by PUFAs, MUFAs and carbohydrates from whole grains, (3) total daily salt intake should be limited to < 5 g, (4) intake of fiber should be 30–45 g per day, optimally from whole grains, (5) intake of > 200 g of fruit and (6) > 200 g of vegetables per day, (7) reduction in consumption of red meat to 350–500 g per week, (8) consumption of fish at least 1–2 times a week, (9) consumption of 30 g of unsalted nuts per day, (10) limiting alcohol consumption to 100 g/week, (11) avoiding sweetened drinks, including fruit juices and sweet carbonated drinks. The analysis of 100 menus in a computer program standardized for the Polish population revealed that meals served in hospitals were inadequate to the needs of cardiological patients and poorly balanced. Out of 11 mentioned criteria, the maximum fulfilled were 6. Most hospitals did not provide special "cardiological" diet [15]. The diets promoted dietary patterns based on animal products rather than plant-based products. Hospitals served meals containing excessive amounts of salt, saturated fatty acids, monosaccharides, and insufficient amounts of fiber and beneficial fatty acids. In most of them, fish was included in only one meal a week. Additionally, in 3 out of 7 of them, there was no qualified dietitian present in the ward. That created a scenario where the patient had a very limited access to basic nutritional instructions and reduced his ability to understand the dietary requirements. Other research conducted among Polish patients showed that their satisfaction with meals served in hospitals is low [22, 23]. Only 24% of the 800 patients assessed that the meals served during their hospitalization were always tasty, fresh and served in compliance with hygiene rules, 31% of them believed that the meals were usually like that 29% admitted that sometimes, and 16% thought that they never met the above criteria [22]. Another study conducted in the Kuyavian-Pomeranian Voivodeship showed that the answers "poor" and "very poor" concerning: the variety of meals was chosen by 17% of the respondents, the size of the meals was chosen by 15% of the respondents and the temperature was chosen by 17% of the respondents [23].

b) Legal conditions for nutrition in the hospital

The current legal regulations for the nutrition of patients are stated in the Act on Health Care Services Financed from Public Funds from 27th August 2004, the Act on Medical Activities from 15th April 201 and the Act on Patients' Rights and the Patient Ombudsman from 6th November 2008. According to the Act on Patient Rights and the Patient Ombudsman, patients have the right to health services consistent with current medical knowledge. Additionally, this act gives them the right to health benefits in kind and accompanying benefits, which, according to numerous interpretations, include nutrition. The issue has become particularly important in recent years since more attention is paid to the economic aspects of treatment. Determining the energy, nutrients and water requirement is an integral part of an assessment of the nutritional status to deliver a diet tailored to the patient's current needs. Therefore, nutrition can be considered a health service which aims to maintain, restore or improve health. According to some interpreters, incorrect nutrition is inconsistent with current medical knowledge and should be considered a violation of the Act on Patient Rights and the Act on the Patient Ombudsman [24]. It is difficult to demand from all medical professionals working in various departments, to have valid nutritional knowledge allowing them to apply an appropriate diet tailored to patient needs. Therefore, medical entities — hospitals and clinics are responsible for providing the proper diets [24]. To guarantee an appropriate nutrition dietitians must be full members of therapeutic teams composed of doctors, nurses and dietitians [5]. Hospitals recently prefer to use external catering services rather than to run their own hospital kitchen [25]. Hospital directors believe that this solution shifts the responsibility for managing this area to those firms. This approach is incorrect because the oversight of the proper nutrition of patients always rests with the hospital management. The hospital management is responsible for developing the requirements and criteria for nutrition implementation, signing appropriate contracts, and ensuring that external companies meet the conditions [25].

c) The situation of dietitians in hospital wards

Currently, there are no legal regulations concerning the profession of dietitian or the principles of their employment in medical facilities. The reduction of dietary care is one of the elements of apparent budget savings in hospitals [10]. The situation is worsened by the elimination of central, hospital kitchens and nutrition departments, and signing contracts with external catering companies. According to the previously cited NIK report, in the examined hospitals there was one dietitian per 76–740 patients [17]. Additionally, the dietitian's duties differed from their education.

They were often working as an archivist, storekeeper or kitchen helper. The "Principles of Proper Nutrition for Patients in Hospitals" ("*Zasady prawidłowego żywienia*") edited by M. Jarosz stated that a hospital should employ one dietitian with higher education and one with secondary education per 80 beds, and one dietitian with higher education and one with secondary education per 30–40 patients in cardiology, diabetology, nephrology, gastroenterology, obstetrics, oncology, and pediatrics departments [26]. Currently, hospitals are not obliged to employ a specified number of dietitians. Nutritional recommendations are commonly ignored, and the professional position of dietitians is undervalued. A controversial project of the act, which would define the principles of the dietitian profession, obtaining qualifications, education, and professional responsibility, is still in the Parliament. Dietitians were also not included in the Act on Certain Medical Professions of 17th August 2023, which entered into force in March 2024. Although the dietitian is a regulated profession, and several executive acts in the current legal framework partially define the conditions for practicing this profession, it is not considered a medical profession and therefore is not included in the employment structure of healthcare facilities [27]. Thus, the entire burden of providing nutritional care for patients falls on doctors and nurses who may not be adequately educated in the topic.

Project "Good Meal in the Hospital" ("*Dobry Posiłek w Szpitalu*")

On 25th September 2023 the pilot program "Good Meal in the Hospital" ("*Dobry posiłek w szpitalu*") designed by the Ministry of Health entered into force. The program aimed to facilitate access to dietary advice in hospitals and implement a nutritional model tailored to patients' needs during hospitalization [28]. Hospitals could join this program until 31st December 2023. Inclusion conditions included: employing a dietician part-time (4 hours/day), posting 7-day menus on the hospital's website with photos of at least two of the meals, ensuring regular meal times, and conducting organoleptic evaluations of meal parameters. Hospitals were required to provide information about the type of meal and its caloric and nutritional value (proteins, carbohydrates, fats (including saturated fats), fiber, salt), preparation method, and presence of allergens. The regulation's annex contained guidelines for standardizing the nomenclature of diets and meal preparation. The diets were categorized into: basic, easily digestible with fat restriction, easily digestible with reduced substances stimulating gastric juice secretion, high-fiber, low in easily digestible carbohydrates, controlled fatty acid content, low-energy, high-protein, low-protein, liquid and enhanced liquid. To implement those changes hospitals received an additional PLN 25.62 gross per patient day. The pilot program is currently under evaluation until 31st October 2024. This is the first attempt in many years to systemically improve hospital nutrition. Unfortunately, experts notice several problematic issues: the lack of a clear definition of organoleptic meal evaluation, the insufficient employment time of the dietitian, and patients' reluctance towards vegetarian meals.

Organization of Hospital Nutrition

In 2022, during the 44th Congress of the European Society for Clinical Nutrition and Metabolism (ESPEN), the "International Declaration on Human Rights to Nutritional Care" was adopted. Its preamble includes the human right to nutrition of the highest standard. Access to healthy food also applies to patients requiring hospitalization, for whom proper nutrition is essential and starvation is harmful. The declaration specifies demands: incorporating the right to nutritional care into national health policies, teaching clinical nutrition to medical, pharmacy, dietetics, and nursing students, raising awareness among medical staff, engaging and educating patients about their health and the benefits of nutrition. In 2021 ESPEN issued recommendations regarding hospital nutrition, including specific organizational facilitation. Particular emphasis is placed on the organization of the supply chain, meal planning, distribution, and avoiding waste, such as placing menus in places visible to patients, organizing a structured system of hospital kitchens, catering deliveries, or meal ordering systems. The need for proper work organization, especially focusing on the quality of ingredients, is also highlighted in the publication "Principles of Proper Nutrition for Patients in Hospitals," ("*Zasady prawidłowego żywienia chorych w szpitalach*") edited by M. Jarosz [10]. The costs of mass catering are one of the most critical factors determining the quality of patient nutrition. Adequate financial management, preventing food waste, and applying proper nutrition and therapeutic diets can improve patient health and reduce the usage of medications. Consequently, this allows for better utilization of available treatment funds. Meanwhile, as M. Jarosz points out, the nutrition block is often placed in the organizational structure as a low-importance service element, often significantly behind therapeutic activities [10]. The main and commonly occurring drawback of such management is the lack of a systemic view of this part of the hospital's activities. This stems partly from underestimating the importance of this issue and a poor understanding of the current food-related laws.

Conclusions

The nutrition in Polish hospitals is still an overlooked and underestimated topic. The transformation of current eating

habits starts with nutritional education which should be performed in hospital. In Poland, new legal regulations regarding rules for employing dietitians, meals evaluation, and financing are necessary to ensure proper patient care. Cooperation of an interdisciplinary team consisting of a doctor, nurse and dietitian is essential.

Additional information

Author contribution

AJB — 55%; conception, literature review, draft article, creation of the final form of the manuscript
AU — 25%; substantive supervision of the work, review of the literature, corrections to the initial draft of the article and creation of the final form of the manuscript
DŚ — 20%; substantive supervision of the work, literature review, corrections to the initial draft of the article and creation of the final form of the manuscript

Conflict of interest

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Edukacja żywieniowa chorych prowadząca do zmiany dotychczasowych nawyków żywieniowych zaczyna się w szpitalu i ma kluczowe znaczenie w poprawie stanu zdrowia oraz jakości życia. Żywienie pacjentów jest niezbędnym składnikiem procesu leczniczego. Aktualnie problem jakości posiłków szpitalnych jest pomijany oraz niedoceniany. W ostatnich latach temat ten nabiera szczególnego znaczenia w związku ze zwracaniem coraz większej uwagi na aspekty ekonomiczne leczenia. Nie dysponujemy jednak świeżymi danymi. Najnowsza rzetelna analiza znajduje się w raporcie Najwyższej Izby Kontroli z 2018 r. Wynikało z niej, że system ochrony zdrowia nie zapewniał pacjentom przebywającym w szpitalach prawidłowego żywienia. Według niektórych interpretatorów nieprawidłowe żywienie to niezgodność z aktualną wiedzą medyczną i należy uznać je za naruszenie Ustawy o prawach pacjenta oraz Ustawy o Rzeczniku Praw Pacjenta. Aktualnie brakuje również prawnych dotyczących zawodu dietetyka oraz zasad ich zatrudnienia w placówkach medycznych. Jak dotąd dietetyk, mimo, że jest zawodem regulowanym, nie jest zawodem medycznym, a więc nie figuruje w strukturze zatrudnienia w placówkach ochrony zdrowia. Cały ciężar sprawowania opieki żywieniowej na chorym spoczywa zatem na barkach lekarzy i pielęgniarek niekoniecznie do tego przygotowanych.

Celem artykułu jest przedstawienie i podsumowanie aktualnej wiedzy o jakości oraz organizacji żywienia w polskich szpitalach. Przedstawia on również prawne aspekty planowania opieki żywieniowej, sytuację prawną dietetyków oraz wytyczne dotyczące zasad żywienia chorych.

Słowa kluczowe: żywienie szpitalne, opieka nad pacjentem, aspekty prawne, wytyczne

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References

1. Vaduganathan M, Mensah GA, Turco JV, et al. The Global Burden of Cardiovascular Diseases and Risk: a compass for future health. J Am Coll Cardiol. 2022; 80(25): 2361–2371, doi: 10.1016/j.jacc.2022.11.005, indexed in Pubmed: 36368511.
2. Czapla M, Juárez-Vela R, Łokieć K, et al. The association between nutritional status and length of hospital stay among patients with hypertension. Int J Environ Res Public Health. 2022; 19(10): 5827, doi: 10.3390/ijerph19105827, indexed in Pubmed: 35627363.
3. Sharma Y, Miller M, Kaambwa B, et al. Factors influencing early and late readmissions in Australian hospitalised patients and investigating role of admission nutrition status as a predictor of hospital readmissions: a cohort study. BMJ Open. 2018; 8(6): e022246, doi: 10.1136/bmjopen-2018-022246, indexed in Pubmed: 29950478.
4. International Statistical Classification of Diseases and Related Health Problems – 10th Revision (ICD 10). Warsaw, 2012.
5. Szczygieł B, Kłęk S, Kapała A, et al. Lack of nutritional education is the main cause of hospital malnutrition and increased treatment costs. What every doctor should know. (Brak edukacji żywieniowej główną przyczyną niedożywienia szpitalnego i wzrostu kosztów leczenia. Co powinien wiedzieć każdy lekarz). Postępy żywienia klinicznego. 2024; 19: 32–38, doi: 10.5603/pżk.99061.
6. Waitzberg DL, Caiaffa WT, Correia MI. Hospital malnutrition: the Brazilian national survey (IBRANUTRI): a study of 4000 patients. Nutrition. 2001; 17(7-8): 573–580, doi: 10.1016/s0899-9007(01)00573-1, indexed in Pubmed: 11448575.
7. Westergren A, Wann-Hansson C, Börgdal EB, et al. Malnutrition prevalence and precision in nutritional care differed in relation to hospital volume a cross-sectional survey. Nutr J. 2009; 8: 20, doi: 10.1186/1475-2891-8-20, indexed in Pubmed: 19422727.
8. Paterick TE, Patel N, Tajik AJ, et al. Improving health outcomes through patient education and partnerships with patients. Proc (Bayl Univ Med Cent). 2017; 30(1): 112–113, doi: 10.1080/08998280.2017.11929552, indexed in Pubmed: 28152110.

9. Council of the Europe Committe of Ministers Resolution RESAP3 on Food and Nutritiunal Care in Hospitals (Adopted by the Comittee of Ministers on 12 November 2003 at 860th Meeting of the Ministers' Deputies, 12.11.2003.
10. Jarosz M. Principles of proper nutrition of patients in hospitals [Polish]. Institute of Food and Nutrition, Warsaw 2011.
11. Wojtyniak B., Goryński P. Health Status of Polish Population and It's Determinants 2022. https://www.pzh.gov.pl/raport-sytuacja-zdrowotna-ludnosci-polski-i-jej-uwarunkowania (01.07.2023).
12. Thibault R, Chikhi M, Clerc A, et al. Assessment of food intake in hospitalised patients: a 10-year comparative study of a prospective hospital survey. Clin Nutr. 2011; 30(3): 289–296, doi: 10.1016/j.clnu.2010.10.002, indexed in Pubmed: 21067850.
13. Thibault R, Abbasoglu O, Ioannou E, et al. ESPEN guideline on hospital nutrition. Clin Nutr. 2021; 40(12): 5684–5709, doi: 10.1016/j.clnu.2021.09.039, indexed in Pubmed: 34742138.
14. WHO Cardiovascular Diseases (CVDs). https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds) (01.07.2023).
15. McDonagh TA, Metra M, Adamo M, et al. ESC Scientific Document Group, ESC Scientific Document Group. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. Eur Heart J. 2021; 42(36): 3599–3726, doi: 10.1093/eurheartj/ehab368, indexed in Pubmed: 34447992.
16. de Lorgeril M, Salen P, Martin JL, et al. Mediterranean diet, traditional risk factors, and the rate of cardiovascular complications after myocardial infarction: final report of the Lyon Diet Heart Study. Circulation. 1999; 99(6): 779–785, doi: 10.1161/01.cir.99.6.779, indexed in Pubmed: 9989963.
17. Żywienie pacjentów w szpitalach [Nutrition of Patients in Hospitals]. https://www.nik.gov.pl/plik/id,16458,vp,18988.pdf (21.11.2023).
18. Letter from the Chief Sanitary Inspector to the Patient Ombudsman, GIS-BŻ-WS-073-29/BO/15/2. 2016.
19. Pismo Rzecznika Praw Pacjenta do Głównego Inspektora Sanitarnego, RzPP-ZPR.422.10.2015.AMAL/RzPP-ZPR.420.95.2015.AS. 2015.
20. Address of the Ombudsman to the Minister of Health, V7010.68.2016.AA 2016.
21. Śliż D, Jodczyk AM, Łakoma K, et al. Examining the nutrition of cardiological patients in hospitals: evaluating the discrepancy between received diets and reference diet based on ESC 2021 guidelines-hospital diet medical investigation) (HDMI) study. Nutrients. 2023; 15(21): 4606, doi: 10.3390/nu15214606, indexed in Pubmed: 37960260.
22. Borowska M, Religioni U, Augustynowicz A. Patients' opinions on the quality of services in hospital wards in poland. Int J Environ Res Public Health. 2022; 20(1), doi: 10.3390/ijerph20010412, indexed in Pubmed: 36612739.
23. Leźnicka M, Warunek A, Hartwich E, et al. Assessment of patient satisfaction with services provided at health care facilities in Kuyavian-Pomeranian voivodeship. Hygeia Public Health. Hygeia Public Health. 2014; 49(4): 787–792.
24. Rożdżeński W. Nadequate nutrition as a basis for the liability of a healthcare entity. Medical Law Review. 2019; 2.
25. Jarosz M. Principles of proper nutrition of patients in hospitals. Institute of Food and Nutrition, Warsaw 2011: 93.
26. Jarosz M. Principles of proper nutrition of patients in hospitals. Institute of Food and Nutrition, Warsaw 2011: 193.
27. Regulation of the Prime Minister of April 25, 2016 on the list of regulated professions subject to mutual warning by Member States., Dz.U.2016 poz. 594.
28. Regulation of the Minister of Health of September 25, 2023 on a pilot program in the field of nutritional education and improving the quality of nutrition in hospitals - "A good meal in the hospital", Journal of Laws 2023 item 2021. https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20230002021 (01.06.2024).