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REVIEWS

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Realization of home physical therapy services in Poland and the United States – a comparative study

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A – Study Design, **B** – Data Collection, **C** – Statistical Analysis, **D** – Data Interpretation, **E** – Manuscript Preparation, **F** – Literature Search, **G** – Funds Collection

Summary Home physical therapy is considered the most important health experience ensuring independence for disabled or older people. This aim is achieved by providing steady long-term care focused on the individual needs of patient and helping them improve their health literacy. The aim of this article is to discuss the possibility of using standardized questionnaires to measure changes in health status and the functional abilities of patient based on experiences in other countries. The article describes the home physical therapy system in Poland and the United States, based on current laws and scientific research. The following terms were included: outpatient physical therapy, home physical therapy, health literacy, tests to evaluate functionality of patient. The Barthel scale, used in Poland, does not take into account all elements of functional evaluation, and thus it does not allow authors to measure and evaluate changes in the functional abilities of the patient. One example of such a questionnaire is the Outcome and Assessment Information Set-C1 (OASIS-C1), used in the US. Realization of home physical therapy for patients requiring help may be an important factor in changing the range of their independence, thus having an influence on improving their quality of life. The use of a validated OASIS questionnaire and the Barthel scale to perform a functional evaluation of patients will lead to providing services more suitable to the health status of patients and a systematic evaluation of changes in the functional abilities of patients. Improving the health competence of patients will have an impact on the conscious use of health services financed through public and private funds.
Key words: health literacy, Barthel scale, home physical therapy, outpatient physical therapy, OASIS questionnaire.

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Background

One of the main objectives of global healthcare is maintaining a healthy and self-reliant society for as long as it is possible. This objective may be achieved by providing permanent long-term care focused on the individual needs of patients requiring medical attention and aiding patients in expanding their health education and self-control in the treatment process [1]. Healthcare for the society, access to medical services, realization of home physical therapy services and the assessment of their effectiveness depend on the country. Healthcare quality, costs and access to home physical therapy services are determined, among others, by legal regulations, funding sources and the health literacy level of the population [2].

Health literacy

The term "health literacy" does not have a direct equivalent in the Polish language and is translated as health competency, health awareness [3], functional health awareness or health knowledge [4, 5] or health assessment. According to the WHO definition, health literacy is defined as the mental capabilities and social abilities that influence an individual's motivation in gaining access, seeking and understanding information and using that information to maintain and improve good health [6–11]. The necessary condition in achieving health literacy, according to Kickbusch, and its key effect, according to Jahan, is having basic reading and writing skills [9, 10]. Three levels of health literacy competence were distinguished [9, 10]. The first level is "basic/functional literacy" – having the basic reading and writing skills necessary to effectively function in everyday situations. In the field of healthcare, basic literacy means having knowledge about health or illness, adhering to the advice of medical staff and working towards a change in behaviors.

The second level is "communicative/interactive literacy" – adjusting the type of information used according to changes in situations, conditions and circumstances. Its basic result is self-management of any occurring problems in cooperation with a health specialist. The highest level is "critical literacy" – the ability to critically analyze information and gain more control over various events in life (empowerment) [10]. A low level of health literacy has an impact on the overall health condition of the society, including an increased death rate, worse somatic and mental health condition, lack of adherence to medical advice, lack of knowledge about one's own condition, as well as an increased financial strain on the healthcare system [8]. In the United States, it is assumed that the level of health literacy is influenced not only by the socio-demographic factors (SES) of an individual, but also by the entire healthcare system of the country. Factors determining individuals and the entire healthcare system that need to be taken into consideration, measured and monitored are: access and usage of the healthcare system, patient-healthcare specialist relationship (e.g. a doctor, physical therapist) and the everyday behaviors of an individual aimed at maintaining health [11].

In home physical therapy, the impact of a low level of health literacy on access to and usage of the healthcare system may

be assessed on the basis of observations focused on the functioning of an individual (patient, caregiver) or an evaluation of the functionality of healthcare system. Lack of knowledge about symptoms of an illness and ways of preventing the occurrence of symptoms degrading the patient's condition may result in a delay in the patient's request for home physical therapy. Lack of trust, pessimism and low satisfaction in care is directly dependent on a low health literacy level and has an impact on the efficacy and final outcome of a home physical therapy program [11]. With the level of functionality of the healthcare system, the patient may have problems in using home physical therapy if they do not have sufficient knowledge regarding any guaranteed services they are entitled to, the scope of these services, as well as options for obtaining information about their availability. A low level of health literacy has an impact on the relationship between the patient and the physical therapist providing therapy services at the patient's home. The patient may not be aware that their knowledge about their condition is limited. Therefore, they do not ask questions and have a passive attitude towards the provided information and advice. In turn, the physical therapist may not be aware of the patient's low level of health literacy. When providing large amounts of information to the patient, the therapist rarely evaluates, in an objective way, the level of the patient's understanding of information received. Two methods of providing information to a patient that are known in healthcare – the so-called "teach-back" and "teach-to-goal" methods – help improve treatment results, even though there is not yet sufficient scientific proof of their effectiveness [11–13].

Home physical therapy in Poland and in the United States

The goal of providing home care is to help improve health and to help the patient regain independence and be self-reliant as much as it is possible [12]. The main goals of home care include recovery, maintaining the health level and monitoring changes which may have an influence on the patient's health status and self-reliance. The team of people responsible for these tasks is, according to WHO, a team consisting of specialists – doctors, nurses, physical therapists, occupational therapists, as well as speech language pathologists, social workers, pharmacologists, priests and members of the family involved in providing coordinated and complex care [13].

In Poland, physical therapy in the home environment (home physical therapy) is defined in Directive No. 24/2006 of the President of the National Health Fund (NFZ) as "medical services provided in the place of current residence of the insured patient in order to ensure proper care of the patient in a home environment" [14]. This goal is possible to achieve by providing high quality healthcare and social care from specialists (nurse, physical therapist) and informal caregivers (family), with the use of available technology and with the aim of ensuring treatment continuity [14].

In 2014, the Supreme Chamber of Control (NIK) performed an evaluation on the actual realization of home medical services in Poland. In the report, published in 2014 and regarding the availability and funding of home physical therapy, it was stated that despite the increase in financial resources for these services, access to physical therapy treatment in Poland is declining [13]. An NIK audit performed on medical service providers (regional NHF offices) that offer outpatient physical therapy, and which are compiled by the NHF to perform part of these services at a patient's home, has shown that none of the 18 audited offices have actually followed that directive. According to providers, these services were not performed due to lack of referrals from doctors. The majority of audited outpatient physical therapy facilities did not even inform their patients and doctors about the availability of home physical therapy and how they could request such services [13]. In Poland, facilities contracting outpatient physical therapy services from the NHF are required to spend at least 3% of the monthly contract value on home physical therapy. This is the only form of funding home physical therapy by the NHF [14]. Directive No. 24 from 2006 specifies who is allowed to provide home physical therapy services.

Such services are to be provided by specialists with a Master's degree in movement therapy or physical therapy, with a Bachelor's degree in physical therapy or by a physical therapy technician employed in an outpatient facility who does not require additional training in providing services at a patient's home [14]. In comparison to the standards in the United States or EU countries (e.g. Germany), the Polish standards of home physical therapy do not distinguish home therapy and outpatient therapy as two different services that require different therapy goals and different physical therapy procedures.

In the United States, there are over 12 thousand facilities (data from 2014) offering home medical services that provide care for nearly 5 million patients a year [15]. The U.S. Center for Medicare and Medicaid Services issues licenses for provision of medical services and monitors service quality. It is a government facility which ensures the highest quality of services to all patients. Each facility providing home physical therapy in the United States is required to develop guidelines for the introduction of a new employee and define their scope of responsibilities. The same competences are evaluated for all other employees on an annual basis. In order to ensure prompt access to home medical services, all 51 states allow patients to start their physical therapy without a doctor's referral [16]. However, the therapy needs to be approved by a doctor after an initial assessment of the patient's condition by a physical therapist.

In Germany, the decision of issuing a home physical therapy license is made by the insurer. After fulfilling all legal requirements defined by the insurer, especially those regarding the qualifications of the service provider, a home therapy services license is issued, which also entitles the provider to receive compensation for services rendered. In 2003 in Germany, there were over 12 thousand specialists with individual practices providing home medical services [17]. Home care in Germany is also provided by private facilities. Their number is steadily increasing, and currently in some regions, e.g. Hamburg, Berlin, Bremen, it higher than the number of patients entitled to their services by the insurer [17]. Their work is neither supervised nor evaluated.

With the aging of society, the need for providing care to people gradually losing their self-reliance is increasing. Such care is provided by family, friends and state facilities. In 2016, 16% of the Polish society were people older than 65. It is estimated that by 2050 in Poland, this amount will increase to 32.7% of the society [18]. In Poland, less than 20% of people older than 65 consider themselves as individuals in good health. As a comparison, in the United States, as high as 80% of society members consider themselves to be in good health. In the 34 OECD countries, this group accounts for 45% of all respondents. 58% of society members older than 65 admit to having serious limitations in performing everyday tasks, and 34% of this population admit to having partial difficulties in functioning and walking [19]. Serious difficulties in performing everyday tasks result in the necessity to provide long-term healthcare.

The annual increase in public expenditures on home healthcare in Poland in the years 2005–2013 was 0.5% GDP, and in other OECD countries – 4.3% GDP [18–22]. Poland ranks 22nd among the 34 OECD countries in terms of fulfilling the healthcare needs of its citizens (data from 2013) [19].

The cost of home physical therapy depends on the source of funding [13]. Such services may be entirely or partially funded by the state (Medicare and Medicaid in the United States), insurance companies (insurance policy covering long-term care in Germany, NHF in Poland), group insurance offered by an employer (employer and employees sharing insurance costs in the form of monthly employee fees), privately by the patients them-

selves by means of an individual contract with the therapist or by additional private individual insurance (Germany, Poland) [12, 14, 17, 22–24].

The relationship between available and efficient home physical therapy and the decrease in cases that require hospitalization, patients gaining the ability to function at home after being released from hospital and the reduction in overall healthcare expenditures is indisputable and has been broadly described in various publications [19–21].

Evaluation of the results of patient improvement in domestic conditions in the United States and in Poland

In order to systematically evaluate the results of home therapy in patients in the United States, the OASIS-C1 (Outcome and Assessment Information Set-C1) document was developed [23]. This questionnaire measures changes in the functional abilities of the patient, as well as changes in their health status at various stages of their physical therapy at home. The evaluation is performed by a nurse or a therapist on specifically appointed dates: during the first visit of therapist or nurse to the patient's home, every 60 days from the first visit of therapist or nurse to the patient's home, after the patient is released from hospital if therapy was put on hold due to hospitalization and on the last day of home care. The OASIS-C1 is not the only home care evaluation that is performed, as this needs to be supplemented with the physical therapist's evaluation of the patient's functional abilities. A comparison of OASIS-C1 results at various stages of therapy provides an objective evaluation of the patient's progress or lack thereof [22].

In Poland, the Barthel scale is used to evaluate a patient's functionality and define their needs in terms of nursing care in a home environment. Physical therapists providing home therapy are not required to document the evaluation of a patient's initial functional condition, nor define therapy goals and plan therapy sessions on this basis. Lack of such documentation results in the lack of an objective evaluation of the effectiveness of home physical therapy [24, 25].

Summary

Since the late 1990s, the number of countries which perform an evaluation of how patients perceive their health state and functional abilities prior to and after receiving treatment (PROMs – Patient Reported Outcome Measures) has been increasing [19, 23]. The results of these studies are used to improve the quality of healthcare and allow one to perform a comparative evaluation of private and state-owned medical service providers, as well as an evaluation of differences in ways these services are provided nationwide. In Poland, PROMs are recorded for outpatient care, and their results are among the lowest in all OECD countries [19]. So far in Poland, there have been no advanced studies on the realization of home physical therapy services financed with public funds. In Polish popular science literature, there is a noticeable lack of information about the availability, quality and costs of home physical therapy provided by specialists with a Master's degree in physical therapy. It is necessary to attempt to evaluate the realization of home physical therapy as a medical service guaranteed by an insurer in Poland for patients who meet NHF criteria, as well as an evaluation of the effectiveness of home physical therapy from the point of view of the patient receiving treatment at home and the physical therapist providing the service. It is also necessary to develop a standardized forms that can be appropriate in the functional assessment of the home care patient.

Studies aimed at defining the needs and expectations of patients receiving home physical therapy and their caregivers ought to be conducted. Providing such information to service providers focused on home physical therapy may help in the issuing of more referrals for this type of service, which are based on an objective assessment of the patient's needs.

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