

UTILIZATION OF PHYSIOTHERAPY SERVICES IN THE WORD

ÁGNES SIMON-UGRON^{1*}

ABSTRACT. Introduction. Both at the national and international levels, direct access for patients to physical therapy services is currently under debate. Direct access for patients seeking physical therapy care might reduce waiting time and costs, and thus be of benefit for patients and health insurance companies. **Objectives.** The purpose of this study was to assess current evidence and evaluate the impact of physical therapy guideline adherence on subsequent healthcare costs and utilization for patients. **Materials and methods.** Data Sources is from Value in Health (2011-2016) and an electronic search was conducted in PubMed, at the 15th of January 2017. Key words were used independently and in combination including: physical therapy, physiotherapy and utilization. **Results.** The initial search of each database results were as follows: Value in Health (15) and Medline (PubMed) (41). Thus, a total of 56 results were identified. After applying the inclusion criteria and omitting duplicates, 22 articles remained and were included in this review. **Conclusion.** Utilization of physiotherapy in the word is different but where they oft use this therapy the health care costs became reduced.

Key words: *physical therapy, physiotherapy, utilization.*

REZUMAT. Utilizarea serviciului de kinetoterapie/fizioterapie în lume. Introducere. Atât la nivel național cât și internațional, un acces direct la serviciile de fizioterapie/kinetoterapie pentru pacienți este în dezbatere în prezent. Accesul direct pentru pacienții care doresc fizioterapie/kinetoterapie poate reduce costurile și timpul de așteptare, și, prin urmare, o să fie benefică pentru pacienți și pentru societățile de asigurări de sănătate. **Obiective:** Scopul acestui studiu a fost de a evidenția și evalua prin dovezi curente impactul fizioterapiei/ kinetoterapiei cu orientare privind costurile asistenței medicale și utilizarea către pacienți. **Material și metode.** Bazele de date utilizate: Value in Health (2011-2016) și pentru căutare electronică: PubMed, în data de 15 ianuarie 2017. Cuvintele de cheie au fost utilizate în mod independent și în combinație incluzând: fizioterapie, kinetoterapie și

¹ "Babes-Bolyai" University, Physical Education and Sports Faculty, Cluj-Napoca, Romania

* Correspondence author: ugron.agnes@ubbcluj.ro

utilizare. **Rezultate.** Căutarea inițială în baza de date a fiecărui rezultat au fost următoarele: Value in Health (15) și Medline (PubMed) (41). Astfel, un total de 56 rezultate au fost identificate. După aplicarea criteriilor de includere și omiterea duplicatelor, 23 de articolele au fost incluse și rămâneau în această recenzie. **Concluzii:** Utilizarea kinetoterapiei/fizioterapiei în lume este diferit, dar unde se aplică frecvent această terapie și costurile asistenței medicale devin mai reduse.

Cuvinte cheie: *fizioterapie, kinetoterapie, utilizare.*

Introduction

“Physical therapy provides services to individuals and populations to develop, maintain and restore maximum movement and functional ability throughout the lifespan. This includes providing services in circumstances where movement and function are threatened by ageing, injury, pain, diseases, disorders, conditions or environmental factors. Functional movement is central to what it means to be healthy. Physical therapy is concerned with identifying and maximizing quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, habilitation and rehabilitation. This encompasses physical, psychological, emotional, and social wellbeing. Physical therapy involves the interaction between the physical therapist, patients/clients, other health professionals, families, care givers and communities in a process where movement potential is assessed and goals are agreed upon, using knowledge and skills unique to physical therapists” (World Confederation for Physical Therapy, 2011).

Physiotherapy is a health care profession which provides treatment to individuals in order to develop, maintain and restore maximum movement and functional ability throughout a person’s lifespan (Maruf et al., 2012.)

Physiotherapy services are widely found in health institutions, private practice, schools, sports and work place settings. To provide effective treatment, the physiotherapist must understand the cultural, psychological and social factors that affect the patients. This begins with the assessment of the patient's condition through a medical history review and physical examination. This applies to all patients, irrespective of age and context. Physiotherapy has many specialties such as cardiopulmonary, geriatrics, neurology, orthopedics and pediatrics, to name a few (Maruf et al., 2012).

Both at the national and international levels, direct access for patients to physical therapy services is currently under debate. Direct access for patients seeking physical therapy care might reduce waiting time and costs, and thus be of benefit for patients and health insurance companies (Kopkow et al., 2016).

Analysis of health care services and physiotherapy services from different aspects is indispensable for the planning, implementation and monitoring of more aimed, more effective and more economic services.

Objectives

The purpose of this study was to assess current evidence and evaluate the impact of physical therapy guideline adherence on subsequent health care costs and utilization for patients.

Methods

Data Sources is from Value in Health (2011-2016) and an electronic search was conducted in PubMed, at the 15th of January 2017. Key words were used independently and in combination including: physical therapy, physiotherapy and utilization.

Results

The initial search of each database results were as follows: Value in Health (15) and Medline (PubMed) (41). Thus, a total of 56 results were identified. After applying the inclusion criteria and omitting duplicates, 23 articles remained and were included in this review.

In *Nigeria*, the practice of physiotherapy on a first-contact basis is not common. Nigerian physiotherapists depend largely on referrals from medical doctors from different areas of medical practice. A lot of people in need of physiotherapy services, however, do not always get the required guidance to that effect and the few who are fortunate to access the services cannot fathom the 'strange' procedures with which they are treated.

Maruf et al. (2012) study examined the awareness, attitude, belief, and utilization of physiotherapy services in a Nigerian sample. This was a cross-sectional survey involving 885 adult residents of Nnewi in southeastern Nigeria. Awareness of physiotherapy existence was high (61.8%). Many of the respondents (29.7%) got their information about physiotherapy from hospitals and 20.8% thought that government should be responsible for creating awareness about physiotherapy. The majority of respondents (89.6%) felt they needed to know

more about physiotherapy while 56% felt their current knowledge about physiotherapy was enough to advise others on physiotherapy services. Almost all the participants (93%) thought that physiotherapy should be in all hospitals, while 41.3% and 35.6% respectively reported physiotherapy to be always and sometimes effective. Of those who had received physiotherapy, 22.7% and 20.2% felt satisfied and impressed respectively. The majority of respondents (70.5%) claimed they would recommend physiotherapy services, and 61.1% stated that they would prefer physiotherapy services to indigenous health services. Out of these, 43.2% claimed they would discourage the use of indigenous health services. In terms of cost effectiveness, 44.8% preferred physiotherapy to indigenous health services. Ignorance (38.7%) was the most frequently reported reason for preferring indigenous health services to physiotherapy. Indigenous health services was reported to have done more harm than good 55-99% of the time (31.8%). The majority of the participants thought that physiotherapy is necessary and that it contributes to the well-being of individuals who seek its services. The majority of participants believed that physiotherapists can make diagnosis and as well, treat individuals who seek their services (Maruf et al., 2012).

In the USA, Louw, Puentedura and Diener (2016) determined the referral patterns, utilization and indications for postoperative physical therapy (PT) for lumbar radiculopathy. In this study sixty-five patients who underwent LS for radiculopathy completed outcome measures on pain and disability prior to, and 1, 3, 6 and 12 months after LS. They also completed a questionnaire regarding postoperative PT at the 12-month follow-up. The majority of patients (59.32 %) attended PT after LS for an average of 14 visits and rated PT favorably. Forty-five percent of the patients who did not attend PT after LS were of the opinion that they would have benefitted from PT after LS, and 62.5 % of these patients reported the surgeon not discussing postoperative PT after LS. Patients with longer duration of symptoms prior to surgery, with greater leg pain scores 1 month after surgery, and who did not feel as well prepared for surgery at the 1 year follow-up were more likely to receive PT, but this did not result in significantly better outcomes on any measure at any follow-up period and did not predict attendance in PT after LS. There is a need to determine if a subgroup of patients following LS exists who will respond favorably to postoperative PT (Louw et al., 2016).

Hanney et al. (2016) in their systematic review suggest: the majority of studies show a small difference in the number of PT visits between those participating in an adherent and non-adherent treatment program. For three studies the difference ranged from 1 to 2 fewer visits for those participating in an adherent care program. However, the study by Childs et al. revealed a large difference of almost 9 visits. Little difference existed for prescription medication

use as did differences for additional physician office visits. Also, while the use of subsequent emergency department care was low (approximately 3% in the sample), there was little difference between those participating in an adherent versus non-adherent program. However, significant differences in advanced imaging was reported between those participating in an adherent and non-adherent treatment program. There seems to be conflicting evidence with regards to surgical procedures. While two studies demonstrated fewer surgical cases, another study demonstrated an increase in surgical cases for those participating in an adherent physical therapy program. Preliminary evidence suggests that adherence to established clinical practice guidelines may assist with decreasing healthcare utilization and costs. Additional research based on prospective randomized controlled trials are needed to provide high quality evidence regarding the impact of guideline adherence among patients with low back pain (Hanney et al., 2016).

Riley, Tafuto and Brismée (2016) studied what percentage of physical therapy (PT) referrals had a specific diagnosis and treatment orders. Additionally, specific and non-specific diagnoses and treatment orders were compared in regards to PT units billed, average visits per referral, and average cost per referral. The charts of 1,000 patients treated in outpatient PT underwent a retrospective chart review. Interferential statistics were used to determine if there was a statistically significant difference between specific and non-specific diagnoses and treatment orders in regard to PT units billed, average visits per referral, and average cost per referral. Twenty-nine percent of all referring diagnoses were non-specific in nature and 58% contained treatment orders that were non-specific. Charts with a specific diagnosis had a statistically significant higher utilization as compared to non-specific diagnoses ($p \leq 0.001$). Patients with a specific treatment order also displayed a statistically significant larger average in billed units, average visits per referral, and average reimbursement per referral than those without a specific treatment order ($p \leq 0.0001$). Our findings suggest that a physician diagnosis and referral may not be required to direct care for patients seeking PT services. Third-party payers that require a physician referral for PT services may be delaying access to healthcare and increasing costs (Riley et al., 2016).

Degenerative lumbar spondylolisthesis is a condition often identified in symptomatic low back pain. A variety of treatment algorithms including physical therapy and interventional techniques can be used to manage clinically significant degenerative spondylolisthesis.

Sclafani J. et al. (2016) in their retrospective, observational study utilized the 5% national sample of Medicare carrier claims from 2000 through 2011 in Colorado State. A cohort of beneficiaries with a new ICD-9 diagnosis code for degenerative lumbar spondylolisthesis was identified. Current procedural terminology codes were used to identify the number of procedures performed

each year by specialty on this cohort. A total of 95,647 individuals were included in the analysis. Average age at the time of initial diagnosis was 72.8 ± 9.8 years. Within this study cohort, spondylolisthesis was more prevalent in females (69%) than males and in Caucasians (88%) compared to other racial demographics. Over 40% of beneficiaries underwent at least one injection, approximately one third (37%) participated in physical therapy, one in five (22%) underwent spinal surgery, and one third (36%) did not utilize any of these interventions. Greater than half of all procedures (124,280/216,088) occurred within 2 years of diagnosis. The ratio of focal interventions (transforaminal and facet interventions) to less selective (interlaminar) procedures was greater for the specialty of Physical Medicine and Rehabilitation compared to the specialties of Anesthesiology, Interventional Radiology, Neurosurgery, and Orthopedic Surgery. The majority of physical therapy was dedicated to passive treatment modalities and range of motion exercises rather than active strengthening modalities within this cohort. Interventional techniques and physical therapy are frequently used treatment modalities for symptomatic degenerative spondylolisthesis. Understanding utilization of these techniques is important to determine relative clinical efficacies and to optimize future health care expenditures (Sclafani et al., 2016, a; Sclafani et al., 2016, b)

In the United States, outpatient physical therapy is underutilized in treating multiple sclerosis.

Lin Mu (2016) in his cross-sectional study observed that approximately 1,2 million visits (crude N.:2404, 1997-2012) occurred annually from United States adults with multiple sclerosis. Among these, physical therapy was offered in 69 thousand visits, corresponding to the weighted prevalence of 5.7%. Of these visits reflecting physical therapy utilization, 79,5% were visits from women, 76,2% from whites, 49,4% from individuals aged 40 to 55. [...] Of note 53,9% off all visits offering physical therapy were to patients with private insurance and 98,8% in metropolitan areas (Lin, 2016).

Plantar fasciitis is responsible for 1 million ambulatory patient care visits annually in the United States.

Fraser, Glaviano and Hertel (2017) in their retrospective review of the PearlDiver patient record database was used to evaluate physical therapist utilization and use of manual therapy and supervised rehabilitation in patients with plantar fasciitis between 2007 and 2011. An International Classification of Diseases code (728.71) was used to identify plantar fasciitis, and Current Procedural Terminology codes were used to identify evaluations (97001), manual therapy (97140), and rehabilitation services (97110, 97530, 97112). A total of 819 963 unique patients diagnosed with plantar fasciitis accounted for 5 739 737 visits from 2007 to 2011, comprising 2.7% of all patients in the database. Only 7.1%

(95% confidence interval: 7.0%, 7.1%) of patients received a physical therapist evaluation. Of the 57 800 patients evaluated by a physical therapist (59.8% female), 50 382 (87.2% \pm 0.4%) received manual therapy, with significant increases in utilization per annum. A large proportion (89.5% \pm 0.4%) received rehabilitation following physical therapist evaluation. Despite plantar fasciitis being a frequently occurring musculoskeletal condition, a small proportion of patients with plantar fasciitis were seen by physical therapists. Most patients who were evaluated by a physical therapist received manual therapy and a course of supervised rehabilitation as part of their plan of care (Fraser et al., 2017).

Direct access to physical therapist services is available in all 50 states, with reported benefits including reduced health care costs, enhanced patient satisfaction, and no apparent compromised patient safety.

Boissonnault's & Lovely's (2016) study emphasize that forty-two percent of the survey respondents (20 of 47) reported that their facility offered direct access to physical therapist services, but fewer than 10% of patients were seen via direct access at 95% of the facilities offering such services. The most frequently reported obstacles to model implementation and utilization were lack of health care provider, administrator, and patient knowledge of direct access; its legality in Wisconsin; and physical therapists' differential diagnosis and medical screening abilities. Respondents representing direct access organizations reported more timely access to physical therapist services, enhanced patient satisfaction, decreased organizational health care costs, and improved efficiency of resource utilization as benefits of model implementation (Boissonnault & Lovely, 2016).

Whereas *in Germany*, the aim of Kopkow et al. (2016) study is to evaluate the health care situation for physical therapy services included in the catalogue of remedies from 2004 up to 2014. To obtain information regarding physical therapy services included in the catalogue of remedies, the freely available "Heilmittel-Informationen-System (GKV-HIS)" was used. Data from the regional Associations of Statutory Health Insurance Physicians as well as data from federal reports were extracted for the years from 2004 up to 2014. Prescription of physical therapy increased continuously from 2004 and 2014. In 2004, 155 677 860 and in 2014, 254 695 514 physical therapies were prescribed (increase of 61%). The highest number of physical therapies was prescribed in Saxony for all years, whereas in North Rhine-Westphalia and Hessen the lowest number per 1 000 GKV insured persons. Gross sales from physical therapy services differed between federal states and were the highest in Saxony (2004: 59.8; 2009: 54.6, 2014: 76.7) and Baden-Wuerttemberg (2004: 60.0; 2009: 57.6; 2014: 68.0). The results of this study show utilization of physical therapy services as defined in the catalogue of remedies in Germany to be heterogeneous (Kopkow et al., 2016).

Weber et al. (2016) observed in Germany the frequency of the use of physical therapy in the last 12 months in the 0 to 17-year-olds in the KiGGS-baseline survey was 6,4% with higher use during infancy and adolescence. The socio-economic status of parents was not associated with the use of physical therapy. A migration background decreased the probability of the use of physical therapy, for example, among children aged 0 to 2 years ($OR_{adjusted}$: 0,5 [95% CI: 0,2-1,0]). In those with scoliosis, the use of physical therapy was almost twice as frequent in infancy as in adolescence (58,4 vs. 34,4%). A maximum of 15% of all children and adolescents with back pain reported the use of physical therapy. When ADHD was diagnosed at preschool age, the probability of using physical therapy was increased ($OR_{adjusted}$: 5,1 [95% CI: 1,4-18,6]). The health problems, which were assessed in the KiGGS-baseline survey and considered for this analysis could explain 37% of the use of physical therapy in the 0 to 2-year-olds. In the other age groups, 59 to 62% could be explained. Comparison of the KiGGS-baseline survey with health insurance data shows similar frequencies and patterns of the use of physical therapy and can therefore be used for the analysis of healthcare questions on the use of physical therapy. The data point to potential deficits in treatment in population segments and for some conditions (Weber et al., 2016).

Palliative care is an approach that improves the quality of life of patients with incurable and progressive illnesses; therefore, in these situations physiotherapy can play an important role.

Woitha K. et al (2017) in their study examined the integration and utilization of physiotherapy in palliative and hospice care services in Germany. A cross-sectional survey including all palliative care units, specialized outpatient palliative care teams and hospices in Germany ($n = 680$) in 2013 was carried out. The response rate was 43.5% ($n = 296$). Physiotherapy is predominantly applied in palliative care units (79%) but rarely in hospices (38%) and outpatient palliative care teams (30%). A structured physiotherapeutic assessment is rarely carried out even on palliative care units (26%). Despite its significant potential to relieve symptoms, physiotherapy is not systematically integrated into palliative care practice in Germany (Woitha et al., 2017)).

Physiotherapy services are reimbursed on a fee for service method in the ambulatory care in *Hungary*. The aim of Molics et al. (2011) study is to analyze the utilization of physiotherapy services in Hungary. Data were derived from the financial database of the National Health Insurance Fund Administration, the only health care financing agency in Hungary. We analyzed the year 2008. Medical procedures which can be performed by physiotherapists were included into the study. Medical procedures are listed according to the Hungarian version of the International Classification of Procedures in Medicine of WHO. Altogether 151 medical procedures were used by physiotherapists. The following top-11

medical procedure were responsible for more than half (52.5 %) of total activities: ultrasound therapy (8.2 %), iontophoresis (6.5 %), muscle strengthening exercise (4.8 %), individual training (4.4 %), training for circulation improvement (4.1 %), hand massage (4.0 %), passive movement of multiple limb (4.0 %), middle frequency treatment (3.8 %), mobilization of joints (3.3 %), exercises against resistance (3.2 %), education of using medical devices (3.1 %), extension of contracture (3.1 %). Total annual health insurance reimbursement of physiotherapy services was 7.34 billion HUF (42.7 million USD; 29.2 million EUR). Physiotherapy care proved to be a highly concentrated health service where 11 medical procedures out of 151 are responsible of more than half of activity and health insurance reimbursement (Molics et al., 2011).

Molics et al. (2012) evaluate the most frequent outpatient care physiotherapy services provided for trauma patients, based on age and regional distribution. The 151 different types of treatment codes are listed in the chapter of the Guidelines of HHIA for 'Physiotherapists, massage-therapists, conductors and other physiotherapy practices'. Of the physiotherapeutic services provided for trauma patients, the knee and lower leg injuries (ICD code S80-89) occurred with the highest incidence. Data collected from the year 2008 were further analyzed based on the distribution among the 7 different Hungarian regions and based on age distribution, set to 5 years intervals. The total number of the provided 151 different types WHO-classified physiotherapy services was 29045736 in the year of 2008; 3188650 of them with the ICD code group S00-S99 with the highest incidence: 713898 of services for knee and lower leg injuries (S80 -S89). The highest number of physiotherapy treatment in total of 86048 cases was provided for patients in the age group 30 to 34, followed by age group of 35 to 39 with 77903 cases. The average number of cases was 71.17/1000 persons. Injuries related treatments occurred with the highest incidence in the Central-Hungarian region (81.07 cases/1000 population) and with the lowest incidence in the Western-Transdanubian region (62.52 cases/1000 population). In case of the traumatic injuries, the highest demand of the outpatient care physiotherapy services occurred for knee and lower leg injured patients (Molics et al., 2012,a).

Trauma injuries account for 3.471.657 cases in the annual number of the physiotherapy-related activities (32.318.413 cases) showing an approximately 10.5% prevalence. The annual number of extremity injuries is the greatest, while that of the torso, neck and head injuries is the smallest. Most cases treated in the region of the knee and leg with 794.326 cases (22.88%), followed by the region of the upper extremity. The 20 most commonly used activities out of 151 with 86.35% incidence shows a varied content. Increase with age, the 10.000 per capita physiotherapy procedures is on the rise. There is no significant difference between the mean values in both genders (females=3272.54, males=3349.70). Until 49 years of age for men, and over 50 years of age for women the number of injury-related cases are greater (Molics et al., 2012, b).

Physiotherapy activities of the annual number of 32.318.413 cases, such as 19.095.614 musculoskeletal cases show 59.09% incidence with an annual cost of approximately 4.5 billion Hungarian Forint (HUF). The 20 most frequently used interventions show 79,19% incidence. The average number of cases in physiotherapy activities of the most common diseases accounts for 12.015 dorsopathies, 6.305 arthropathies and 3.461 soft tissue disorders per 10.000 inhabitants. By males and females, the average number of cases accounts for 8.061 and 15.589 dorsopathies, 4.110 and 8.295 arthropathies, 2.592 and 4.245 soft tissue disorders. The 20 most common interventions in musculoskeletal and soft tissue disorders represent high number of cases, but show varied composition with regard to active and passive procedures. Concerning the number of cases in interventions, females show lower incidence for dorsopathies, arthropathies and soft tissue disorders as well. Changes in the number of cases justify the high incidence of musculoskeletal disorders in the older patients (Molics et al., 2013, a).

In 2009 the average number of cases undergoing physiotherapy activities following lower extremity injuries per 10,000 persons were the following: „hip and thigh injuries” 249.75 male cases and 443.7 female cases; „knee and leg injuries” 927.64 male cases and 668.25 female cases, and „ankle and foot injuries” 307.58 male cases and 245.75 female cases. According to Molics et al. study, the number of physiotherapy activities for patients with injuries of the lower extremity showed significant differences between genders (Molics et al., 2013, b).

Trauma injuries account for 3471657 cases within the annual number of the physiotherapy-related activities (32318413 cases) are showing an approximately 10.5% prevalence. Increasing with age, the number physiotherapy procedures per 10000 population is on the rise with a national mean value of 3386. There is no significant difference between the mean values in both genders (females=3272, males=3349). The highest number of physiotherapy treatment is provided for the men patients in the age group 55 to 59 (4525) followed by age groups of 35 to 45 with 4225 and 4272 cases. The oldest women age group show the highest value in this gender (7664), followed by age groups of 75 to 85 with 6057 and 6041 cases per 10000. The number of injury-related cases are higher in men until 49 years of age, but over 50 years of age is higher for women. In case of the traumatic injuries, the highest demand of the outpatient care physiotherapy services occurred older injured patients. The claim indicators were significantly higher for men and women over 50 years of age (Molics et al., 2013, c).

The total number of the provided 151 different types WHO-classified physiotherapy services was 32.318.413 in the year of 2009; 19.095.614 (59,09%) of them with the musculoskeletal and connective tissue diseases. The prevalence of the dorsopathia diseases were 51,17% in the group of the musculoskeletal

and connective tissue diseases. The average number of cases of physiotherapy activities per 10,000 persons accounted for 12.015 cases in 2009. The average number of cases per 10,000 persons for males and females were 15.589 cases for males and 8.061 cases for females. The number of cases increases from the 20. age groups in the men and women patients. The highest number of physiotherapy treatment is provided for both genders in the age group 50 to 59 followed by age groups of 60 to 74. The physiotherapy services occurred with the highest incidence in cases of the 'diseases of the musculoskeletal system and connective tissue' ICD group. The dorsopathia diseases at the ICD groups show the highest prevalence, indicating the importance of prevention (Molics et al., 2013, d).

In 2009 altogether 190986 patients with neurological disorders received physiotherapy treatment in outpatient care, representing 1331675 cases and got 388.215 million Hungarian Forint health insurance reimbursements. The number of patients with nerve, nerve root and plexus disorders was 39 patients/10 000 population for males and 66 patients/10000 population for females. The number of patients with cerebral palsy and other paralytic syndromes was 49 patients/10000 populations for males and 35 patients/10000 population for females. The number of patients with episodic and paroxysmal disorders was 33 patients/10000 population for males and 52 patients/10000 populations for females. In the outpatient physiotherapy care the utilization indicators for female patients were higher in nerve, nerve root and plexus disorders and episodic and paroxysmal disorders, while in cerebral palsy and other paralytic syndromes the utilization by male patients was higher. There are important age and gender inequalities in the utilization of physiotherapy care of patients with neurological disorders (Molics et al., 2015).

The number of specialized home care visits in Hungary accounted for values between 1106396 and 1310093 in the period of 2010 - 2014. The rate of completed visits amounted to 55-60% regarding specialized care and 40-45% to physiotherapy services. Within physiotherapy services, physiotherapy showed to highest incidence with the number of visits between 390092 and 483654. This represents approximately 85% frequency each year opposite to electrotherapy and speech therapy min. 22918 (83,62%) patients in 2010 and 31217 (88,55%) patients in 2014 (Molics et al., 2016; Járomi et al., 2016).

Conclusion

Utilization of physiotherapy in the word is different but where they oft use this therapy the health care costs became reduced.

To ensure the quality of physical therapy services, inter professional and patient relevant research is needed (Kopkow et al., 2016).

The number of physiotherapy rounds gives reason to reconsider financing and requires more support for the elaboration of physiotherapy services (Molics et al., 2016).

REFERENCES

- Childs, J.D., et al. (2015). Implications of early and guideline adherent physical therapy for low back pain on utilization and costs. *BMC health services research*. 15(1):150. doi: 10.1186/s12913-015-0830-3 pmid:25880898.
- Boissonnault, W.G., & Lovely, K. (2016). Hospital-Based Outpatient Direct Access to Physical Therapist Services: Current Status in Wisconsin. *Phys Ther*. 96(11):1695-1704. doi: 10.2522/ptj.20150540
- Fraser, J.J., Glaviano, N.R., & Hertel, J. (2017). Utilization of Physical Therapy Intervention Among Patients With Plantar Fasciitis in the United States. *J Orthop Sports Phys Ther*. 47(2):49-55. doi: 10.2519/jospt.2017.6999.
- Hanney, W.J., Masaracchio, M., Liu, X., & Kolber, M.J. (2016). The Influence of Physical Therapy Guideline Adherence on Healthcare Utilization and Costs among Patients with Low Back Pain: A Systematic Review of the Literature. *PLoS One*. 11(6):e0156799. doi: 10.1371/journal.pone.0156799.
- Járomi, M. et al. (2016). Number of patients in physiotherapy services within specialized home care in Hungary between 2010 and 2014. *Value in Health*, 19(7): A484-A485. doi: 10.1016/j.jval.2016.09.799
- Kopkow, C., Lange, T., Schmitt, J., & Petzold, T. (2016). Utilization of Physical Therapy Services in Germany from 2004 until 2014: Analysis of Statutory Health Insurance Data. [Article in German: Physiotherapeutische Versorgungssituation in Deutschland von 2004 bis 2014. Analyse des Ordnungsverhaltens bei Versicherten der Gesetzlichen Krankenversicherung]. *Gesundheitswesen*. doi: 10.1055/s-0042-116229
- Lin, M. (2016). Physical Therapy Utilization in the Management of Multiple Sclerosis in the United States. *PM&R*. 8(9S): S274. doi: 10.1016/j.pmrj.2016.07.516.
- Louw, A., Puentedura, E.J., & Diener, I. A descriptive study of the utilization of physical therapy for postoperative rehabilitation in patients undergoing surgery for lumbar radiculopathy. *Eur Spine J*, 25(11):3550-3559. doi: 10.1007/s00586-016-4457-9.
- Maruf, F.A., Ekediegwu, E.C., Akinpelu, A.O. & Nwankwo, M.J. (2012). Awareness, Belief, Attitude and Utilization of Physiotherapy Services in a Nigerian Population. *Journal Of The Nigeria Society Of Physiotherapy*. 20.
- Molics B, et al. (2011). Utilization of physiotherapy services in Hungary. *Value in Health*, 14(7): A353.

- Molics B, et al. (2012).(a); The annual health insurance activity of physiotherapy procedures related to definition in outpatient care. [Hungarian: A fizioterápiás jellegű tevékenységek éves egészségbiztosítási finanszírozásának meghatározása a járóbeteg-szakellátásban.] *Nővér*. 25(6): 21-27.
- Molics B, et al. (2012).(b); Regional and age distribution evaluation of the outpatient care physiotherapy services for high incidence traumatic injuries. *Value in Health*. 15:(7): A519.
- Molics B, et al. (2013). (a); Utilization indicators of physiotherapy care in musculoskeletal and connective tissue disorders for outpatient care. [Hungarian: Fizioterápiás járóbetegellátás igénybevételi mutatói a mozgásszervi kórképek kezelésében.] *Magyar Traumatológia Ortopédia Kézsebészet Plasztikai Sebészet*. 56(4): 305-315.
- Molics B, Kráncz J, Schmidt B, Sebestyén A, Nyárády J, Boncz I. (2013). (b); Utilization of physiotherapy services in case of trauma disorders of the lower extremity in the outpatient care. [Hungarian: A fizioterápiás jellegű tevékenységek igénybevételi mutatói a járóbeteg-szakellátásban az alsó végtag traumatológiai kórképei esetében.] *Orv Hetil*. 154(25): 985-992.
- Molics B, et al. (2013).(c); Frequency of outpatient physiotherapy services in trauma disease in Hungary. *Value in Health*, 16(3): A230.
- Molics B, et al. (2013). (d); Age and Gender Distribution of Outpatient Care Physiotherapy Services fo Dorsopathia Diseases in Hungary. *Value in Health*, 16(7): A574.
- Molics B, et al. (2015). Health insurance aspects of physiotherapeutic care of neurology disorders in outpatient care. [Hungarian: A neurológiai kórképek fizioterápiás ellátásának egészségbiztosítási vonatkozásai a járóbeteg szakellátásban.] *Ideggyogy Sz*, 68(11-12): 399-408.
- Molics, B., et al. (2016). Utilization of physiotherapy visits completed in specialized home care in Hungary between 2010 and 2014. *Value in Health*, 19(7): A481-A482.
- Riley, S.P., Tafuto, V., & Brismée, J.M. (2016). Retrospective analysis of physical therapy utilization by the specificity of the diagnosis and order written on the referral. *Physiother Theory Pract*. 32(6):461-467. doi: 10.3109/09593985.2016.1145310
- Sclafani, J.A., Constantin, A., Ho, P.S., Akuthota, V., & Chan, L. (2016). (b); Descriptive Analysis of Spinal Neuroaxial Injections, Surgical Interventions and Physical Therapy Utilization for Degenerative Lumbar Spondylolisthesis within Medicare Beneficiaries from 2000-2011. *Spine (Phila Pa 1976)*.
Doi: 10.1097/BRS.0000000000001724
- Sclafani, J.A., Ho, P.S., Mayfield, C., Ukegbu, U., Akuthota, V., & Chan, L. (2016).(a); Interventional Treatment and Physical Therapy Utilization for Degenerative Lumbar Spondylolisthesis Within Medicare Beneficiaries From 2000-2011: Descriptive Analysis and Impacts on Surgery Frequency. *PM R*8(9S):S160. doi: 10.1016/j.pmrj.2016.07.043.
- Weber, A., et al. Utilization of Physiotherapy Services by Children and Adolescents - Results of the KiGGS- Baseline Survey. [Article in German. Inanspruchnahme von Physiotherapie im Kindes- und Jugendalter – Ergebnisse aus der KiGGS-Basiserhebung] *Gesundheitswesen*. Apr 7. doi: 10.1055/s-0042-100728.

- Woitha, K., Schneider, N., Wunsch, A., Wiese, B., Fimm, S., & Müller-Mundt, G.(2017). Die Einbindung und Anwendung der Physiotherapie in der Hospiz- und Palliativversorgung. [Article in German. Integration and utilization of physiotherapy in hospice and palliative care: A survey on clinical practice in Germany]. *Schmerz.(1)*:62-68. doi:10.1007/s00482-016-0151-4.
- World Confederation for Physical Therapy (WCPT). (2011). *Policy statement: Description of physical therapy*. Retrieved from: <http://www.wcpt.org/policy/ps-descriptionPT>.