

State Of Ohio Occupational Therapy, Physical Therapy and Athletic Trainers Board

State Funded Physical Therapy Outcome Study

Executive Summary

The purposes of the State Funded Physical Therapy Outcome Study were to describe responses to various physical therapy procedures and to understand the physical relationships of that care. This study was undertaken as a pilot study since the time given for the completion of the study was limited. Its immediate purpose was to establish a volunteer database for physical therapy clinics that included information on utilization of services including the number of visits, charges, and the number of days in an episode of care for different diagnoses. In addition, it was to include, in the database, information concerning the functional outcomes from patients who were treated by physical therapists utilizing standardized assessment tools. A database of 22 clinics has now been established with data collected from approximately one year of operations. This can be added to in the future by other volunteer clinics. Many obstacles were encountered in procuring this information including difficulty with downloading data from hospital outpatient sources due to confidentiality concerns, and difficulty in changing already existing systems for outcome analysis that may have existed in some outpatient clinics. These difficulties are not trivial, but with time should be able to be overcome. Perhaps the most important outcome of this study is that some tools were identified with good psychometric properties and were utilized easily by clinicians to demonstrate whether patient perceived function improved with physical therapy care. In fact, it does appear the tools were successful in demonstrating change in function among the patients sampled and these can be incorporated into the outcome measures that physical therapists collect.

The SFPTOS was initiated on July 1, 2000. The first 6 months of the project were spent on development of an infrastructure to allow for data to be collected at multiple clinical sites. Overall, 27 independent facilities and 1 network of clinics were recruited to participate in data collection that began on January 1, 2001. Besides recruitment of facilities, the infrastructure of the project was developed during this time by selecting data collection tools, standardizing data collection guidelines, and developing methods of data transfer from both billing software and a web site. From the many facilities that agreed to participate, upon review, data from only 22 facilities met criteria for analysis. Most of these facilities were

dispersed in central and northern Ohio with equitable distribution between urban and rural locations. Five facilities were hospital-based and 17 were private outpatient orthopedic clinics.

Utilization data were obtained from 12,675 patients. Twenty percent of these patients had only one physical therapy visit; therefore, utilization data were analyzed from 9,987 patients that were discharged from physical therapy from January 1, 2001 to September 30, 2001. A patient was considered discharged if he/she had completed the discharge surveys of functional outcome or if 30 days had passed since the date of the last visit. Therefore, it was possible that some patients did not complete their full plan of care prior to being discharged if they did not return for treatment due to unknown reasons.

Because the data collection for this study was by registry of volunteer clinical facilities, the sample cannot be considered representative of the entire population of patients that received outpatient physical therapy in the state of Ohio in 2001. It certainly cannot be generalized to all different types of settings where physical therapy is provided. For patient utilization and physical therapy interventions, the sample size was fairly large ($n=9,987$); however, only a limited number of clinics participated (22 clinics) which may or may not be representative of the entire state. In addition, no attempt was made to further classify the groups according to diagnoses, severity of the condition, or duration of the condition. Therefore, caution should be taken in interpretation of the results. Still, from the 9,987 cases presented here, interesting trends were noted and can form the nucleus of future studies.

In this sample of patients, the average charge for an episode of physical therapy was $\$820 \pm 713$ and lasted 8.4 ± 6.7 visits. It should be noted that charges do not reflect cost of service, and clearly do not reflect the reimbursement to the provider or the cost to the insurer or consumer. These are, however, used as an indicator of utilization in this study since direct cost or reimbursement could not be obtained. These averages were slightly increased if the patient had a condition of the knee or shoulder and if the patient had more dysfunction (demonstrated by the PF-10, a functional tool) at the initial visit. These averages decreased if the patients were very young (1-15 years) or very old (76-100). Most of the variability within the data could not be explained using the variables that were collected in this study and will require further study.

The average of the interventions used in the physical therapy episode of care for all patients consisted of 61% exercise, 12% thermal interventions, 7% electrical interventions, and 5% manual therapy.

The use of the different types of interventions was affected by the diagnosis of the patient and initial level of dysfunction. Patients with neck disorders had more thermal and manual intervention and less exercise during the episode of physical therapy than other patients. The percent use of exercise increased during the episode of care if the patient had a disorder of the knee and had more dysfunction at initial presentation for care.

Functional outcomes were collected on 1,025 patients. For functional outcomes and the relationship between functional outcomes and utilization, the sample was relatively small. Since the return rate for the functional questionnaires was 12% of this current population, and there was a small but significant difference in initial function between those who did and did not return the surveys, no strong conclusions can be drawn about the functional outcomes from physical therapy interventions for outpatient orthopedic clinics. In spite of the fact, then, that the results cannot be generalized to all patients seen by physical therapists, the data do speak to the specific population of patients who did return the surveys in this study and will be presented as such.

Of the patients analyzed, significant functional change was gained during the episode of physical therapy. On average, the PF-10 score changed $16.8 \pm$ points. Besides the amount of change noted on the PF-10, change was also noted for patients on the region-specific scores, which were more specific to the diagnosis. The effect sizes for each group of patients ranged from .88-1.13 standard deviations, indicating that persons who had physical therapy during this period generally improved their functional condition. The amount of functional change for patients in Ohio compared to functional change associated with previous research on patients with spine and knee conditions. For most conditions, age affected the initial and discharge levels of function, but not the amount of change that occurred. Older patients have the same amount of change with treatment, regardless of initial levels of dysfunction, than younger persons do. In only one instance, patients with shoulder disorders, did the amount of physical therapy affect the amount of functional change.

Patient reported satisfaction was relatively high (4.4 out of 5; $\pm .6\%$) and stable across patients of all ages, diagnoses, and geographic locations. This was fairly consistent across all studies of physical therapy outcomes and this study was not an exception.

Summary: Utilization and functional outcomes were collected from multiple (22) outpatient orthopedic clinical sites to describe the current practice of physical therapy in Ohio. Since this was a pilot study, many questions remain about the reasons for the results obtained in this study; therefore, the utilization and intervention data should be used with caution by other outpatient orthopedic facilities in Ohio for comparison of physical therapy practice to their individual clinics. The rate of return for collection of functional outcomes was low. However, the functional outcomes for patients in this study with back, neck, and knee disorders compares to outcomes reported in previous literature, which lends credibility to the results.