Physical Therapy Timing: An Investigation of Physical Therapy Initiation and Case Duration, Restricted Workdays, and Imaging Utilization

Austin Snider[1], Amelia Roebuck[2], Amanda Coupe[2], T. David Wu[3], Michael Knipp[3]
1. Indiana University School of Medicine; 2. Parkview Mirro Center for Research and Innovation; 3. Parkview Occupational Health

Background: Occupational health injuries are common, and many individuals will suffer a workplace injury throughout their career. When employees cannot work for extended periods of time, companies face financial and staffing difficulties. Prior studies have suggested that early referral to physical therapy (PT) is associated with improved patient outcomes and reduced healthcare utilization. However, there has been limited investigation of this in occupational health settings and among diverse types of injuries. Our goal was to investigate how the timing of PT impacted the case duration, restricted workdays, and imaging utilization among injured workers.
Methods: We conducted an IRB-approved retrospective chart review of N=1191 patients who received care between 9/2017-6/2023 at Parkview Occupational Health. Timing of PT initiation was categorized as early (0-13 days), delayed (14-20 days), or late (>30 days) from date of first visit. Kruskal-Wallis tests were performed to assess differences in case duration and restricted workdays by PT timing. Chi-square tests evaluated utilization of different imaging modalities by PT timing. Bonferroni-corrected Dunn tests were performed to compare groups. Analyses were performed using Excel and Stata V.18 (alpha=0.05 for significance).
Results: Across PT timing groups, median case duration ranged from 44-78 days, median restricted workdays ranged from 12-28 days, and total imaging utilization ranged from 32%-48%. Early PT initiation was associated with a significant reduction in case duration ($p<0.001$), total imaging ($p<0.01$), and X-ray utilization ($p<0.001$) compared to delayed or late PT initiation. Early PT was associated with fewer restricted workdays compared to delayed PT ($p<0.001$) but not late PT ($p=0.054$).
Conclusion: These results support the benefits associated with utilizing early PT after a workplace injury with earlier utilization showing the greatest benefits.