Medicare's Tunnel Vision: The Influence of Private Equity on the Utilization of Carpal Tunnel Release and Reimbursement

Mohammed A. Khan[1], Gurtej Kahlon[1], Rania Babar[2], Rafi Chowdhury[1], Ahmed Manzoor[1], Mohammed A. Khan[3], Omar Mohiuddin[4]
[1]Drexel University College of Medicine, Philadelphia, PA, [2]George Mason Center for Applied Proteomics and Molecular Medicine, Manassas, VA, [3]Boston University Department of Psychological and Brain Science, Boston, MA, [4]University of Maryland Department of Chemistry and Biochemistry, College Park, MD

Mak546@drexel.edu

INTRODUCTION: Private equity (PE) is becoming increasingly more integrated into multiple sectors of healthcare, including orthopedics. For years, PE has pursued orthopedic practices as lucrative targets due to high procedure volume and associated ancillary revenue potential. Previous studies into PE in healthcare show poorer outcomes after PE acquisition, raising concerns over its effectiveness and potential impact on costs and quality of care.[1] This study evaluates this relationship within the field of orthopedic surgery, particularly in elective hand procedures such as carpal tunnel release (CTR), an area less explored in the context of PE, assessing whether PE ownership is associated with changes in surgical volume and Medicare reimbursement for CTR.

METHODS: We identified orthopedic practices acquired by PE in 2017 from Boddapati et al. and supplemented it with an independent search.[2] We then used National Provider Identifiers to extract Medicare Provider & Service data for 30 physicians from these practices between 2015 and 2019. We filtered for physicians who performed CTR, including open carpal tunnel release (OCTR, CPT code 64721) and endoscopic carpal tunnel release (ECTR, CPT 29848). Reimbursement values were adjusted using annual Medicare conversion factors to control for policy-level changes. Outcomes included average reimbursement per case, procedure volume, and total billed to Medicare. We used R and Excel to compile data and analyze average reimbursement and procedure volume across three periods: Pre-acquisition (2015), Acquisition (2017), and Post-acquisition (2019). Statistical analyses included t-tests for pairwise comparisons and ANOVA across periods, with significance set at $p < 0.05$.

RESULTS SECTION: Preliminary results indicate that the average Medicare reimbursement for OCTR and ECTR remained stable across our cohort for the study period ($p > 0.05$). Total amount billed to Medicare and p.cedure volumes also rose across our study period, with a higher relative increase of ECTR (~20% increase, $p < 0.05$). These findings indicate that revenue growth following PE acquisition was primarily volume-driven rather than due to changes in per-case reimbursement.

DISCUSSION: Our results indicate that PE acquisition of orthopedic practices is associated with significant increases in surgical throughput without commensurate increases in per-procedure Medicare reimbursement. These findings suggest that PE strategies in orthopedics emphasize scaling operations to drive revenue within typical investment horizons, supporting research conducted in other medical fields. The relative increase in ECTR utilization may reflect both patient preferences for quicker recovery and cost as well as practice-level incentives for efficiency.[3] This underscores the importance of monitoring how ownership structure shapes operational priorities and long-term value in orthopedics.

SIGNIFICANCE/CLINICAL RELEVANCE: (1-2 sentences): The rising volume of carpal tunnel release procedures may reflect the broader changes to increase productivity in the business of healthcare, particularly within the field of orthopedics. Understanding how private equity ownership influences surgical volume and reimbursement is essential to ensure that financial strategies align with (and do not risk compromising) high-quality patient care.

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