Disparities in Medicare Physician Reimbursement and Utilization of Landmark Guided Versus Ultrasound Guided Joint Interventions from 2000 to 2021

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INTRODUCTION: The purpose of this study was to evaluate the trends in annual case volume and Medicare reimbursement to physicians for both joint arthrocentesis and injections, with and without ultrasound guidance, over the past 20 years.

METHODS: Public data from the Medicare Part B National Summary Data Files was collected for CPT- 20610 (arthrocentesis, aspiration, and/or injection of major joint or bursa without ultrasound guidance) during the period of 2000 to 2021. CPT-20611, which represents the same procedures performed with ultrasound guidance, was introduced in 2015 and was included for analysis from 2015 to 2021. Reimbursement values were adjusted for inflation to December 2021 U.S. dollars using Consumer Price Index (CPI) conversion factors. Trends in procedural volume and inflation-adjusted reimbursement were assessed using percent change and linear regression analysis.

RESULTS:

Between 2000-2021, the number of Medicare-billed procedures involving inserting a needle into a major joint without ultrasound guidance (CPT-20610) increased by 80.9% (from 2,762,315 to 4,995,842). Over the same period, the inflation-adjusted mean reimbursement per procedure declined significantly by 39.7% (from $81.16 to $48.93, averaging $1.87 per year ($R^2 = 0.768$, $p < 0.001$)). For procedures with ultrasound guidance (CPT-20611), the volume increased by 21.5% (from 779,823 in 2015 to 947,262 in 2021). During that time, the inflation-adjusted mean reimbursement decreased modestly by 5.8% (from $84.70 to $79.78, averaging $0.65 per year ($R^2 = 0.381$, $p = 0.139$)).

DISCUSSION AND CONCLUSION: This study demonstrates the widening gap in Medicare reimbursement for joint injection, aspiration, and arthrocentesis dependent on the use of ultrasound guidance. Although the number of procedures being performed with or without ultrasound guidance is increasing yearly, only procedures coded as utilizing ultrasound have kept pace with inflation. In contrast, physician reimbursement without ultrasound has seen a significant decline over the past two decades. These findings emphasize the need for a Medicare reimbursement model that ensures non-ultrasound guided procedures remain financially viable for physicians, as their accessibility and lower resource demand are essential for preserving access to care, particularly for underserved populations and resource-limited practices.