

Evaluating Medicare Trends for Traumatic and Elective Hand Procedures

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Objectives: The CDC estimates that approximately 25% of the U.S. population will be 65 years or older by 2060, reflecting projected increases in Medicare utilization and presenting new challenges for patients and providers. The objective of this study is to evaluate trends in Medicare reimbursement and utilization for trauma-related and elective hand surgeries. We hypothesize that historical trends in inflation-adjusted reimbursements will continue to decline; to compensate, procedural volume is expected to increase.

Design: Retrospective economic trend analysis of CMS Physician Fee Schedule reimbursement and Medicare Part B procedural utilization data from 2007 to 2025.

Patients: People enrolled in Medicare who underwent surgery were categorized using the following CPT codes: 25609, 26720, 26600, 25630, 64721, 25000, 26123, 25111, 64719, 26055.

Main Outcome Measures: CPT code utilization, nominal reimbursement, inflation-adjusted reimbursement, Physician Fee Scale, and Facility Payments over time.

Results: After adjusting for inflation, reimbursements for both traumatic and elective hand procedures declined, while RVUs increased. For traumatic procedures, distal radius fracture volumes rose, whereas metacarpal and phalangeal fracture volumes decreased. Most elective procedure volumes increased, except for ganglion cyst and Guyon's canal releases. Facility payments were slightly lower than physician fee schedule reimbursements across all procedures.

Conclusions: From 2007 to 2025, inflation-adjusted Medicare reimbursement declined across all examined hand procedures despite consistent increases in RVUs. Traumatic procedures saw inflation-adjusted physician fee reductions of approximately 20% to 33%, while elective procedures declined by roughly 28% to 35%, with facility payments decreasing by as much as 41% for select elective cases. During the same period, utilization

increased substantially for high-volume procedures, including distal radius fracture open reduction internal fixation and carpal tunnel release. These findings demonstrate a sustained divergence between rising procedural demand and declining real reimbursement, suggesting increasing financial pressure on surgeons caring for an expanding Medicare population.

Level of Evidence: Level IV; Retrospective Administrative Database Study

Keywords: Medicare reimbursement; Physician Fee Schedule; Relative Value Units (RVUs); inflation-adjusted reimbursement; hand surgery; orthopaedic hand procedures; distal radius fracture; carpal tunnel release; procedural utilization; healthcare economics; CMS; ambulatory surgical center; facility payments; Medicare Part B; reimbursement trends.

INTRODUCTION

In the United States, Medicare is the largest payer for healthcare.^{1,2} By 2030, Medicare expenditures are expected to account for approximately 5% of the United States' gross domestic product.³ Despite continued growth in Medicare spending, physician reimbursement fees have declined by approximately 33% from 2001 to 2025². The Centers for Medicare and Medicaid Services (CMS) reduced reimbursement for more than 30 specialties in 2021.⁴ These reimbursement changes have been observed across various specialties, including orthopedic surgery. There has been a reported average 24.7% reduction in reimbursement for orthopedic procedures after adjusting for inflation.⁵ Similar declines have been reported across orthopedic subspecialties, including foot and ankle by 30%, total

joint arthroplasty by more than 50%, and hand by approximately 20%.⁶⁻⁸

Due to an expanding and aging population, the prevalence of chronic diseases such as osteoarthritis and injuries has increased. Studies have reported that distal radius fractures account for 18% of all fractures in the elderly population; thus, there has been an increase in trauma-related hand and upper extremity procedures.⁹ Additionally, advances in technology and surgical techniques have led more patients to opt for surgical management with internal fixation rather than non-operative conservative management following distal radius fractures.¹⁰

Additionally, elective procedures have increased. Haglin et al. reported a 101.8% increase in all carpal tunnel release procedures and a 456.2% increase in endoscopic carpal tunnel release from 2000 to 2020.¹¹ Dupuytren's contracture release is also on the rise; this is thought to be due to an aging population and rising diabetes rates.¹² We hypothesize that the expanding aging population is leading to an increase in the prevalence of comorbidities, thereby contributing to the rise in elective procedures for chronic orthopedic pathologies, particularly those involving the hand.^{12,13}

Despite the increase in hand procedure volume, there has been limited updated data on Medicare reimbursement trends, particularly for comparisons between traumatic and elective procedures. While studies by Weiss (2024) and Smith (2022) reported declines in Medicare reimbursement for hand procedures, data are limited since the COVID-19 pandemic.^{8,14} Thus, our goal is to provide an updated, comprehensive analysis of Medicare reimbursement and procedural utilization trends for trauma-related and elective hand procedures from 2007 to 2025. The secondary aims of this study are to investigate the factors contributing to the decline in Medicare reimbursement rates. Additionally, we will analyze the

impact of the surgical setting on reimbursement trends, comparing hospitals to ambulatory surgical centers. We hypothesize that historical trends in inflation-adjusted reimbursements will continue to decline, while procedural volume is expected to increase. We also expect that RVUs will significantly influence reimbursement trends for both facility price (FP) and physician fee schedule (PFS) payments.

METHODS

Ten common hand procedures in the elderly population were selected, and common procedural terminology (CPT) codes were identified based on reported frequency in the Part B Summary Data Files. The identified CPT codes were 25609 (ORIF of Distal Radius Fracture), 26720 (Metacarpal Fracture), 26600 (Phalangeal Fracture), 25630 (Scaphoid Fracture), 64721 (Carpal Tunnel Release), 25000 (De Quervain's release), 26123 (Dupuytren's Contracture Release), 25111 (Ganglion Cyst Excision), 64719 (Guyon's Canal Release), and 26055 (Trigger Finger Release). These CPT codes were then categorized as trauma-related or elective procedures, as shown in Table 1.

Table 1: Included Procedure Current Procedural Terminology Codes

Category	Procedure	CPT Code
Traumatic	Distal Radius ORIF	25609
	Metacarpal Fracture	26720
	Phalangeal Fracture	26600
	Scaphoid Fracture	25630
Elective	Carpal Tunnel Release	64721
	De Quervain's Release	25000
	Dupuytren's Contracture Release	26123
	Ganglion Cyst Excision	25111
	Guyon's Canal Release	64719
	Trigger Finger Release	26055

Table 2: Trends in Allowed Services and Total RVUs for Common Traumatic and Elective Hand Procedures, 2007–2025

Category	Procedure	CPT	Allowed Services			RVUs		
			2007	2022	% Δ	2007	2025	% Δ
Traumatic Hand Procedures	Distal Radius ORIF	25609	10,334	29,977	190.1%	26.27	32.28	22.9%
	Metacarpal Fracture closed treatment without manipulation	26720	11,444	7,816	−31.7%	4.25	6.05	42.4%
	Phalangeal Fracture closed treatment without manipulation	26600	16,432	10,958	−33.3%	6.26	9.15	46.2%
	Scaphoid Fracture closed treatment without manipulation	25630	1,984	2,095	5.6%	6.64	9.04	36.1%
Elective Hand Procedures	Carpal Tunnel Release	64721	148,026	148,255	0.2%	10.25	13.49	31.6%
	De Quervain's Release	25000	8,227	12,581	52.9%	9.05	10.79	19.2%
	Dupuytren's Contracture Release	26123	13,134	15,828	20.5%	20.37	25.81	26.7%
	Ganglion Cyst Excision	25111	8,415	7,680	−8.7%	8.08	10.16	25.7%
	Guyon's Canal Release	64719	4,512	3,065	−32.1%	9.85	12.57	27.6%
	Trigger Finger Release	26055	84,924	144,664	70.4%	7.27	9.1	25.2%

This study involved a retrospective analysis of publicly available data that did not include human subjects or patient-level information and was therefore exempt from Institutional Review Board (IRB) approval. This study adheres to the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines.

The CMS Physician Fee Service (PFS) Tool was queried for each CPT code to obtain the national payment amount (NPA) for facility price, facility limiting charge, and total RVUs from 2007 to 2025 (Tables 2–5).¹⁵ The Physician Fee Service was calculated by multiplying the total RVUs by the conversion factor (CF) and the geographic practice cost index (GPCI). Medicare Part B Summary Data Files

were queried to obtain annual procedural utilization data from 2007 to 2022 (Tables 2–5).¹⁶ All monetary values were adjusted to 2025 U.S. dollars using the Consumer Price Index (CPI) from the U.S. Department of Labor, Bureau of Labor Statistics.¹⁷ The selected time frame for both utilization and reimbursement trends reflects the availability of data in the CMS publicly available database.

Physician fee reimbursement rates and annual procedural utilization data for each CPT code were recorded. All nominal data were converted to 2025 United States dollars using the Consumer Price Index (CPI) from the U.S. Bureau of Labor Statistics. Year-to-year and cumulative percent changes were calculated for

Table 3: Comparison of Mean Reimbursement Differences in facility prices and physician fee service (FP vs. PFS and Inflation Adjusted Models) Across Common Traumatic and Elective Hand Procedures

Category	Procedure	CPT Code	Mean FP– PFS	Mean Inflation adjusted FP– PFS
Traumatic	Distal Radius Fracture ORIF	25609	–\$10.74	–\$16.02
	Metacarpal Fracture closed treatment without manipulation	26720	–\$2.58	–\$3.89
	Phalangeal Fracture closed treatment without manipulation	26600	–\$5.62	–\$8.46
	Scaphoid Fracture closed treatment without manipulation	25630	–\$3.74	–\$5.63
Elective	Carpal Tunnel Release	64721	–\$1.74	–\$2.51
	De Quervain's Release	25000	\$5.53	\$8.39
	Dupuytren's Contracture Release	26123	–\$6.57	–\$9.74
	Ganglion Cyst Excision	25111	–\$0.09	–\$0.07
	Guyon's Canal Release	64719	–\$2.35	–\$3.55
	Trigger Finger Release	26055	–\$2.33	–\$3.49

reimbursement trends (2007–2025) and utilization trends (2007–2022).

RESULTS

After adjusting for inflation, reimbursement declined across all procedures, and the payment ratio remained constant at 0.80 for both the per-procedure maximum payment fraction and the global payment amount. RVUs increased for all procedures, ranging from 19.23% to 46.17%. However, there was no significant relationship between year-to-year changes in RVUs and procedural volume ($p = 0.389$). For all hand procedures, mean facility prices (FP) were slightly lower than physician fee service (PFS) reimbursements, with facility price at \$440.20 [263.78] and physician fee service at \$443.23 [265.92], resulting in an average mean difference of –\$3.02 (95% CI, –4.60 to –1.45, $p < 0.001$). After adjustment for inflation, facility price was \$571.29 [347.16] and physician fee service was \$575.79 [351.79], and the difference increased to –\$4.50 (95% CI, –6.86 to –2.13, $p < 0.001$).

For traumatic hand procedures, net unadjusted reimbursements from 2007 to 2025 showed that facility price changes ranged from +44.88% to +10.88%, and

physician fee service changes ranged from +4.88% to +24.76%. However, after adjusting for inflation, facility price reimbursement changes ranged from –6.93% to –28.78%, and physician fee service reimbursement changes ranged from –19.86% to –32.63%. From 2007 to 2022, the total number of allowed procedures increased by 190.08% for distal radial fractures ORIF and by 190.08% for scaphoid fractures. In contrast, metacarpal fractures declined by 31.70%, and phalangeal fractures declined by 33.31%. However, after adjusting for inflation, distal radius and metacarpal fracture procedures experienced only marginal increases in reimbursement, whereas phalangeal and scaphoid fracture procedures showed declines in reimbursement. For elective hand procedures from 2007 to 2025, changes in net unadjusted reimbursements showed that the change in facility price ranged from –8.49% to +11.76%, and the change in physician fee service ranged from +1.76% to +12.33%. Adjusted values showed that the change in facility price ranged from –28.00% to –41.22%, and the change in physician fee service ranged from –27.84% to –34.63%. Additionally, from 2007 to 2022, the total volume of allowed procedures for carpal

Table 4: Unadjusted Net Percentage Changes in Costs and RVUs for Hand Procedures

Category	Procedure	Facility Price	Physician Fee Service	Facility Limiting Charge	Total RVU
Traumatic	Distal Radius ORIF	10.9%	4.9%	10.87%	22.88%
	Metacarpal Fracture closed treatment without manipulation	32.8%	21.5%	32.8%	42.35%
	Phalangeal Fracture closed treatment without manipulation	44.9%	24.8%	44.9%	46.17%
	Scaphoid Fracture closed treatment without manipulation	26.2%	16.2%	26.2%	36.14%
Elective	Carpal Tunnel Release	12.1%	12.3%	12.1%	31.61%
	De Quervain's Release	-8.5%	1.8%	-8.5%	19.23%
	Dupuytren's Contracture Release	11.8%	8.2%	11.8%	26.71%
	Ganglion Cyst Excision	6.1%	7.3%	6.1%	25.74%
	Guyon's Canal Release	11.7%	8.9%	11.7%	27.61%
	Trigger Finger Release	10.2%	6.8%	10.2%	25.17%

All values adjusted for inflation with CPI. Monetary values in 2025 US dollars.

tunnel release, De Quervain's release, Dupuytren's contracture release, and trigger finger release increased by 0.15% to 70.35%. In contrast, the frequency of ganglion cyst excision declined by 8.73%, and the frequency of Guyon's canal release declined by 32.07%. Significant differences between facility price and physician fee service were observed for Dupuytren's contracture release (unadjusted -\$6.57, $p = 0.049$, and adjusted -\$9.74, $p = 0.05$) and trigger finger release (unadjusted -\$2.33, $p = 0.047$, and adjusted -\$3.49, $p = 0.043$). However, after adjusting for inflation, all elective procedures experienced declines in reimbursement.

DISCUSSION

Overall, the results of this study are comparable to those in the prior literature, which reported declines in facility prices and physician fee service reimbursements from 2007 to 2025 for both traumatic and elective procedures. This study is the first to incorporate data through 2025, thereby reflecting the impacts of the COVID-19 pandemic. Additionally, we assessed factors that may contribute to declining reimbursements. Despite an increase in Relative Value Units (RVUs), the study revealed ongoing reimbursement declines,

suggesting that other factors, such as conversion factors, are inversely influencing these trends.

Traumatic and elective procedures showed declines in reimbursements for facility price and physician fee service. Although facility price and physician fee service are independent reimbursement factors, these trends indicate that hospital and physician fee reimbursements are comparable and that inflation-adjusted reimbursements are declining at similar rates. These data are consistent with previous studies showing decreases in adjusted reimbursement for foot and ankle surgery and for total hip/knee procedures.⁵⁻⁷ Furthermore, studies assessing trends in various hand procedures from 2000 to 2019 demonstrated declines in inflation-adjusted reimbursements greater than 20%.^{8,18}

As the aging population continues to expand, there has been a reported increase in comorbidities and a higher risk of injury from falls in the elderly population.⁹ Distal radius fractures have been reported to account for 18% of fractures in the elderly population.⁹ Due to increases in comorbidities such as diabetes, there has been a rise in elective procedures, including carpal tunnel release and Dupuytren's contracture release.^{11,12} Pineda (2024) observed that the

Table 5: Inflation-Adjusted Net Percentage Changes in Costs and RVUs for Hand Procedures

Category	Procedure	Facility Price	Physician Fee Service	Facility Limiting Charge	Total RVU
Traumatic	Distal Radius ORIF	-28.8%	-32.6%	-28.8%	22.9%
	Metacarpal Fracture closed treatment without manipulation	-14.7%	-21.9%	-14.7%	42.4%
	Phalangeal Fracture closed treatment without manipulation	-6.9%	-19.9%	-6.9%	46.2%
	Scaphoid Fracture closed treatment without manipulation	-18.9%	-25.4%	-18.9%	36.1%
Elective	Carpal Tunnel Release	-28.0%	-27.8%	-28.0%	31.6%
	De Quervain's Release	-41.2%	-34.6%	-41.2%	19.2%
	Dupuytren's Contracture Release	-28.2%	-30.5%	-28.2%	26.7%
	Ganglion Cyst Excision	-31.9%	-31.1%	-31.9%	25.7%
	Guyon's Canal Release	-28.3%	-30.0%	-28.3%	27.6%
	Trigger Finger Release	-29.2%	-31.4%	-29.2%	25.2%

All values adjusted for inflation with CPI. Monetary values in 2025 US dollars.

procedural volume for Dupuytren's contracture release doubled from 2016 to 2022, with most patients diagnosed aged 65 to 90 years.¹² Similarly, Haglin et al. reported a 101.8% increase in all carpal tunnel release procedures from 2000 to 2020.¹¹ Our study observed that utilization for traumatic hand procedures increased for distal radius fracture ORIF and scaphoid fractures, while metacarpal and phalangeal fractures declined. All elective procedures showed increases in utilization, except for Guyon's canal release. The most common traumatic and elective procedures were distal radius fracture ORIF and carpal tunnel release, respectively. These results are comparable to previously reported utilization trends, indicating that despite an increase in procedural volume, reimbursement rates continue to decline.

We observed increases in RVUs for both traumatic and elective procedures, with traumatic procedures showing a greater increase. Studies have reported similar increases in RVUs across various orthopedic subspecialties; however, conversion factors continue to decline, making it nearly impossible to keep pace with inflation.^{19,20} Studies have hypothesized that physicians are increasing their procedural volume to

offset reimbursement reductions, which may lead to physician burnout and limited access to care for patients with Medicare.²¹

In 2021, CMS reduced reimbursement across numerous specialties and procedures, coinciding with inflation increases of 4.7% and 8.0% in 2021 and 2022, respectively.¹⁷ Meanwhile, Medicare enrollment has increased from 39.7 million in 2000 to 62.89 million in 2020, representing a 58.41% rise.²² We hypothesize that continued policy-driven reimbursement declines may prompt physicians to increase procedural volume to offset financial losses, ultimately straining resources, limiting patient access to quality care, and threatening hospitals' economic sustainability.

Future research should assess reimbursement trends among private insurers and survey physicians to evaluate how inflation and reimbursement rates affect their practices and surgical volumes. Policymakers should consider this and similar studies when determining future reimbursement rates. At the same time, hand surgeons should be aware of these trends, as reduced compensation may necessitate increased surgical volume, which, in turn, can lead to burnout.

This study has limitations, as it is a retrospective review of publicly available data. However, for patients 65 and older, the CMS database is the largest publicly available national dataset for both inpatient and outpatient procedures. There are multiple CPT codes for each procedure; however, the codes were initially chosen based on previously reported literature. For procedures with multiple CPT codes, the 2022 Medicare Part B Summary Files were used to select the most commonly used procedure for that year.²³ In addition, this study uses only a single insurance payer, Medicare. While Medicare remains the largest payer in American healthcare, other insurers also offer their own reimbursement rates, which are not publicly disclosed.^{1,2} The authors also acknowledge that utilization trends have not fully recovered since COVID-19 due to limited public data availability; however, values are recovering and trending toward expected changes.

CONCLUSION

From 2007 to 2025, inflation-adjusted Medicare reimbursement declined for all 10 commonly performed orthopaedic hand procedures, despite consistent increases in total RVUs (19.23% to 46.17%). For traumatic procedures, inflation-adjusted physician fee schedule payments declined by 19.86% to 32.63%, and facility price payments declined by 6.93% to 28.78%. Elective procedures showed even greater reductions, with inflation-adjusted physician fee schedule payments decreasing by 27.84% to 34.63% and facility price payments declining by 28.00% to 41.22%. During the same period, procedural utilization increased substantially for several high-volume procedures, including a 190.08% increase in distal radius fracture open reduction and internal fixation, and increases of up to 70.35% for elective procedures such as carpal tunnel and trigger finger release, whereas select procedures declined. Although RVUs increased across all procedures, these increases were not associated with

changes in procedural volume, and declining conversion factors offset RVU growth. Overall, these findings demonstrate a widening disconnect between rising procedural demand and declining real reimbursement, highlighting sustained financial pressures on hand surgeons and healthcare systems caring for an expanding Medicare population.

REFERENCES

1. Kalainov DM, Barnard C, Walradt J, et al. Medicare in the 21st Century: Understanding the Program to Promote Improvements. *J Am Acad Orthop Surg.* 2024;32(10):427–438. doi:10.5435/JAAOS-D-23-00464
2. Henry JK, Teehan E, Deland J, et al. Lessons From Revision Total Ankle Replacement: Tibias Fail Earlier, and Taluses Fail Later (and Fail Again). *Foot Ankle Int.* 2024;45(9):993–999. doi:10.1177/10711007241255112
3. Medicare Payment Advisory Commission. *July 2024 Data Book: Health Care Spending and the Medicare Program.* 2024. <https://www.medpac.gov/document/july-2024-data-book-health-care-spending-and-the-medicare-program/>
4. Centers for Medicare & Medicaid Services. *Medicare Program; CY 2021 Payment Policies Under the Physician Fee Schedule and Other Changes.* Accessed September 2, 2025. <https://www.cms.gov/medicare/medicare-fee-service-payment/physicianfeesched/pfs-federal-regulation-notices/cms-1734-f>
5. Sibia US, Millen JC, Klune JR, et al. Analysis of 10-year trends in Medicare Physician Fee Schedule payments in surgery. *Surgery.* 2024;175(4):920–926. doi:10.1016/j.surg.2023.12.012
6. Pollock JR, Moore ML, Haglin JM, et al. Between 2000 and 2020, Reimbursement for Orthopaedic Foot and Ankle Surgery Decreased by 30%. *Arthrosc Sports Med Rehabil.* 2022;4(2):e553–e558. doi:10.1016/j.asmr.2021.11.016
7. Palmer RC, Elmenawi KA, Hannon CP, et al. Medicare Reimbursement for Primary Hip and Knee Arthroplasty Is Disproportionately

- Decreasing Relative to Other High-Volume Inpatient Procedures: Leader of the Pack. *J Arthroplasty*. Published online May 2025:S0883540325004814. doi:10.1016/j.arth.2025.04.088
8. Weiss SN, Gilbert GV, Gentile P, et al. Medicare Reimbursement in Hand and Upper Extremity Procedures: A 20-Year Analysis. *Hand (N Y)*. 2024;19(1):175–179. doi:10.1177/15589447221096708
 9. Nellans KW, Kowalski E, Chung KC, et al. The epidemiology of distal radius fractures. *Hand Clin*. 2012;28(2):113–125. doi:10.1016/j.hcl.2012.02.001
 10. Azad A, Kang HP, Alluri RK, et al. Epidemiological and Treatment Trends of Distal Radius Fractures across Multiple Age Groups. *J Wrist Surg*. 2019;8(4):305–311. doi:10.1055/s-0039-1685205
 11. Haglin JM, Hinckley NB, Moore ML, et al. Long-term Trends in Open vs Endoscopic Carpal Tunnel Release Among the Medicare Population in the United States. *Hand (N Y)*. 2024;19(7):1069–1074. doi:10.1177/15589447231168977
 12. Pineda N, Ghayyad K, Beaudoin TF, et al. Epidemiology and Treatment Trends in the Management of Dupuytren's Disease From 2016 to 2022. *Cureus*. Published online October 28, 2024. doi:10.7759/cureus.72528
 13. JHS N, AHAF L, GVG R, et al. Epidemiology of Trigger Finger: Metabolic Syndrome as a New Perspective of Associated Disease. *Hand (N Y)*. 2021;16(4):542–545. doi:10.1177/1558944719867135
 14. Smith JF, Moore ML, Pollock JR, et al. National and geographic trends in Medicare reimbursement rates for orthopedic shoulder and upper extremity surgery from 2000 to 2020. *J Shoulder Elbow Surg*. 2022;31(4):860–867. doi:10.1016/j.jse.2021.09.001
 15. Centers for Medicare & Medicaid Services. *Search the Physician Fee Schedule*. CMS website. Accessed May 26, 2025. <https://www.cms.gov/medicare/physician-fee-schedule/search>
 16. Centers for Medicare & Medicaid Services. *Part B National Summary Data File*. CMS website. September 10, 2024. Accessed May 26, 2025. <https://www.cms.gov/data-research/statistics-trends-and-reports/part-b-carrier-summary-data-file>
 17. U.S. Bureau of Labor Statistics. *Consumer Price Index*. Bureau of Labor Statistics. Accessed May 26, 2025. <https://www.bls.gov/cpi/>
 18. Thornburg DA, Gupta N, Chow N, et al. An Analysis of Procedural Medicare Reimbursement Rates in Hand Surgery: 2000 to 2019. *Hand (N Y)*. 2022;17(6):1207–1213. doi:10.1177/1558944721990807
 19. Christensen EW, Nicola GN, Rula EY, et al. Medicare Volume Growth and Shift in Payments From Physicians to Non-Physician Practitioners Under Statutory Budget Neutrality. *Inq J Health Care Organ Provis Financ*. 2024;61:00469580241249076. doi:10.1177/00469580241249076
 20. Singh R, Shahbandi A, Singh A, et al. U.S. Surgical Practice: 23-Year Trends in Medicare Procedures and Reimbursement. *Ann Surg*. Published online August 13, 2025. doi:10.1097/SLA.0000000000006912
 21. Choubey AS, Hussain J, Zabawa L, et al. Compensation Crisis: The Impact of Inflation and Declining Medicare Payments on Hip Arthroplasty Surgeons. *J Arthroplasty*. 2025;40(9):S110–S116. doi:10.1016/j.arth.2025.05.021
 22. Vankar P. *Projected Change in Medicare Enrollment 2000–2095*. June 4, 2024. <https://www.statista.com/statistics/245621/projected-change-in-medicare-enrollment-in-the-us>
 23. Coyle RM, Tawfik AM, Green A, et al. Coding Practices in Hand Surgery and Their Relationship to Surgeon Compensation Structure. *J Hand Surg Glob Online*. 2021;3(4):161–166. doi:10.1016/j.jhsg.2021.04.004