RESEARCH BRIEF

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The Latest Trends in Medical Equipment Cost Share

INTRODUCTION

Medical equipment—Durable Medical Equipment (DME); Prosthetics, Orthotics, Implants (POI); and Supplies—represent a growing portion of workers compensation medical costs, recently emerging as the fourth largest medical cost category across all NCCI jurisdictions.[1] This research brief reports on the estimated cost share of medical equipment and its three categories for the latest accident year (AY), 2024. The report also examines drivers of trends over the years.

KEY FINDINGS

- Medical equipment accounts for a substantial portion of overall workers compensation medical expenditure. For AY 2024:
  - The estimated overall medical equipment share of total medical costs is 8.3%
  - The estimated shares of total medical cost are 2.3% for DME, 2.7% for POI, and 3.3% for Supplies
  - The overall medical equipment share varies by jurisdiction, ranging from 4.1% to 12.8%

- Over the life of a workers compensation claim, the estimated medical equipment share of medical costs increases rapidly in the early stages, then stabilizes as the claim matures.

- There have been notable trends in medical equipment from Service Year (SY) 2012 to SY 2024:
  - The average cost of medical equipment increased by 87%, driven by a sharp increase in average DME cost
  - Miscellaneous DME (HCPCS code E1399) cost share rose persistently
  - Supply/Implants (revenue code 0278) cost share declined steadily
  - There are offsetting trends in top Supplies codes:
    - Anchor/screw for opposing bone-to-bone or soft tissue-to-bone (HCPCS code C1713) cost share increased gradually
    - General Medical/Surgical Supplies (revenue code 0270), Sterile Supplies (revenue code 0272), and Special Supplies Provided by a Physician or Other Qualified Health Care Professional (CPT® code 99070) cost shares continued to decline

[1] Based on payments reported in NCCI's Medical Data Call. The four largest medical cost categories are: Physicians, Hospital Outpatient, Hospital Inpatient, and Medical Equipment.

TERMINOLOGY

Terms used throughout this report include:

- **Accident Year (AY)**—The year in which an injury occurred.
- **Service Year (SY)**—The year in which a medical service is provided.
- **Relative Service Year (RSY)**—The year in which services are performed relative to the accident year. For example, a service performed in 2024 for an accident that occurred in 2022 would be in the third relative service year.
- **Study-states**—Aggregate results based on NCCI jurisdictions included in the report. Such results are labeled as "ALL".
- **Confidence Interval (CI)**—A range of values that is likely to contain the true value of an unknown population parameter. It provides a way to express how confident we are that the true value lies within that range.
- **Medical equipment consists of three distinct categories:**
  - **Durable Medical Equipment (DME)**—Medical equipment designed for repeated use (wheelchair, Intermittent Pneumatic Compression device, osteogenic stimulator, oxygen tank, etc.)
  - **Prosthetics, Orthotics, and Implants (POI)**
    - **Prosthetics** are designed to replace a body part (Limb Prosthetics [hands, arms, legs], Joint Prosthetics, etc.)
    - **Orthotics** support or correct the function of a body part (Knee Orthoses, Shoulder Orthoses, back braces, etc.)
    - **Implants** are placed within the body to support or replace a body part (spinal implants, stents, etc.)
  - **Supplies**—Consumable, disposable, or single-use items used in medical procedures (surgical screws, electrodes, surgical dressing, bandage and gauze, etc.)
- **Medical equipment claim**—A workers compensation claim that includes paid costs of medical equipment required for the treatment or management of a medical condition.
- **Healthcare Common Procedure Coding System (HCPCS) code**—A standardized set of medical billing codes used primarily in the United States to report medical procedures, services, and products.
- **Revenue code**—A standardized set of numeric codes used in the US medical billing system to report the type or location of service within a healthcare facility.
- **Current Procedural Terminology (CPT) code**—A standardized set of five-digit numeric codes used for reporting and documenting medical services across the US healthcare system.

ACCIDENT YEAR 2024 ANALYSIS

Figure 1 shows the projected medical equipment share of total medical costs for AY 2024 for each jurisdiction in this study. The chart also displays the 90% confidence interval around each projection. For example, the AY 2024 medical equipment share for study-states, denoted by "ALL" and colored in red, has a projection of 8.3%. The 90% confidence interval provides a range from 8.0% to 8.6%.

The projected medical equipment cost share varies across jurisdictions from 4.1% to 12.8%. Principal contributors to the state variations include:

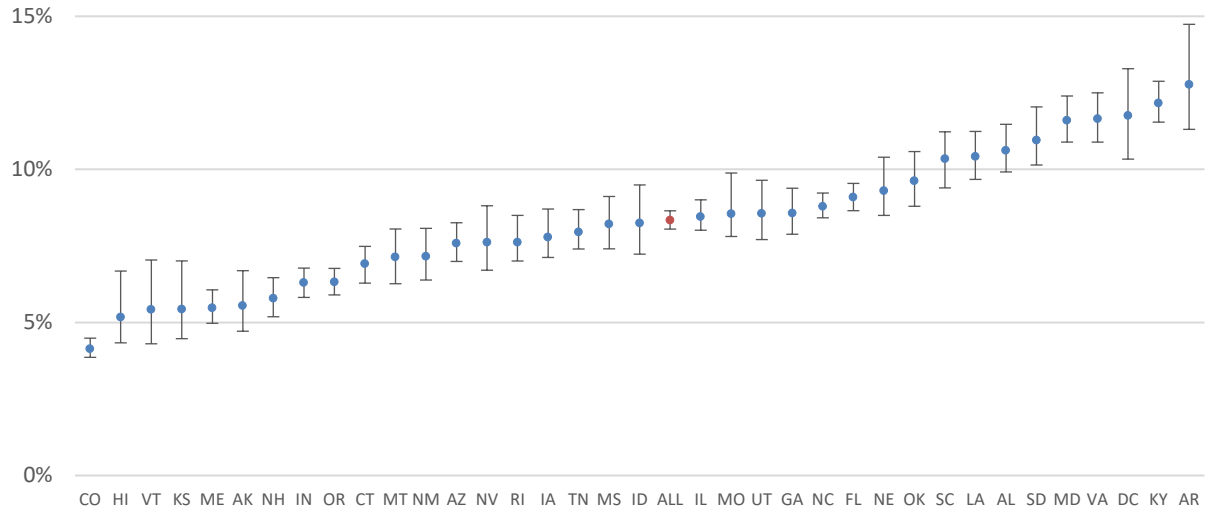
- Medical equipment fee schedules[2] or other regulations regarding prices and utilization
- Claim and injury mix
- The type of commodity used

See Appendix A for the projected medical equipment cost share and the 90% confidence interval for each jurisdiction.

See Appendix B for data used in this study.

See Appendix C for details about the methodology used to derive the estimates.

Figure 1: Projected Medical Equipment Cost Share of Total Medical Costs With 90% Confidence Interval
By Jurisdiction



[2] Jon Sinclair and Katherine Norris, "Medicare Fee Schedules and Workers Compensation in 2025", p. 7, www.ncci.com/Articles/Documents/Medicare-Fee-Schedule-2025.pdf

Figure 2 shows the projected cost share of Supplies, the largest of the three categories of medical equipment. The estimated study-states' Supplies share of total medical costs is 3.3%, roughly accounting for 39% of total medical equipment costs. The 90% confidence interval around the projection ranges from 3.1% to 3.4%. Point-estimates across jurisdictions range from 1.1% to 6.2%.

Figure 2: Projected Supplies Cost Share of Total Medical Costs With 90% Confidence Interval

By Jurisdiction

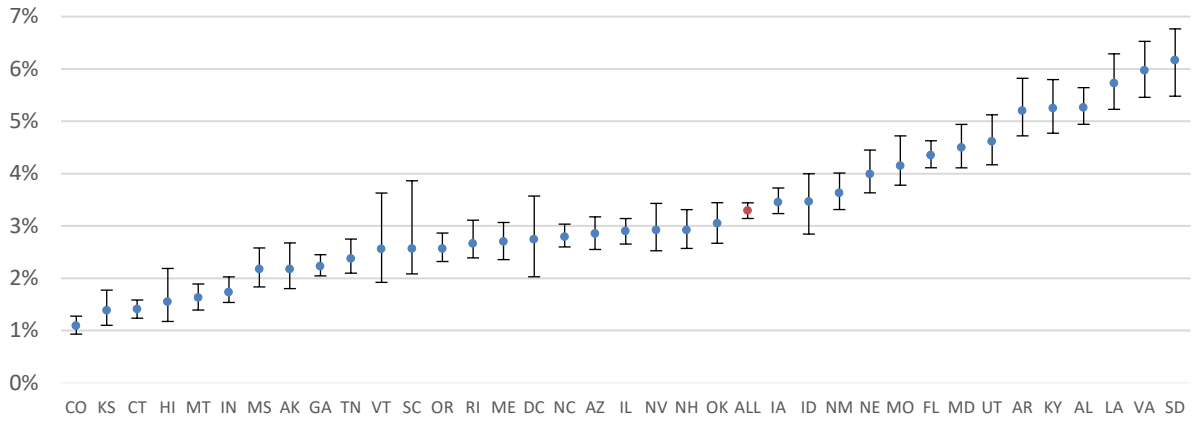
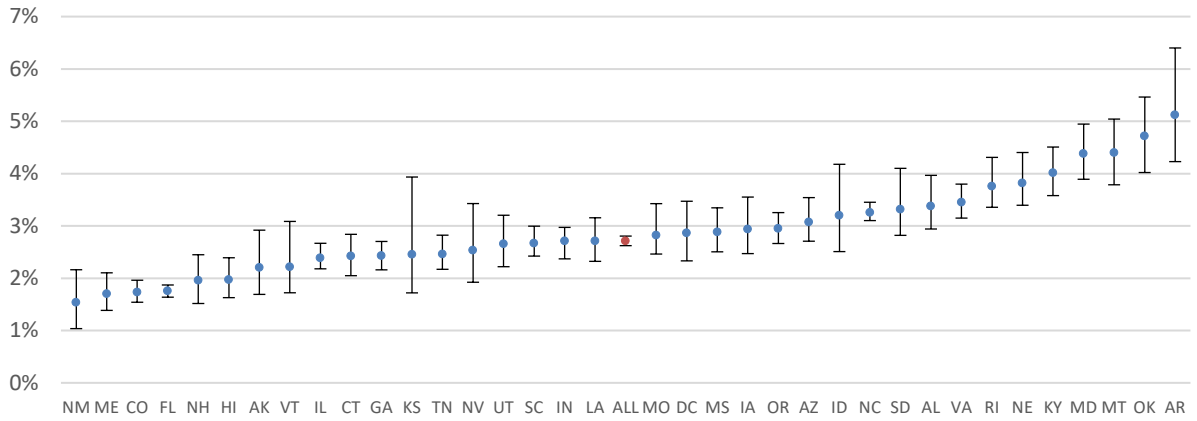


Figure 3 shows the share of POI in total medical costs. POI represents the second largest category of medical equipment with an AY 2024 projected share of 2.7%. This accounts for roughly 33% of total medical equipment costs. The 90% confidence interval around the projection ranges from 2.6% to 2.8%, a very narrow range. The variation among jurisdictions is similar to what we observed for Supplies, with average estimates ranging from 1.5% to 5.1%.

Figure 3: Projected POI Cost Share of Total Medical Costs With 90% Confidence Interval

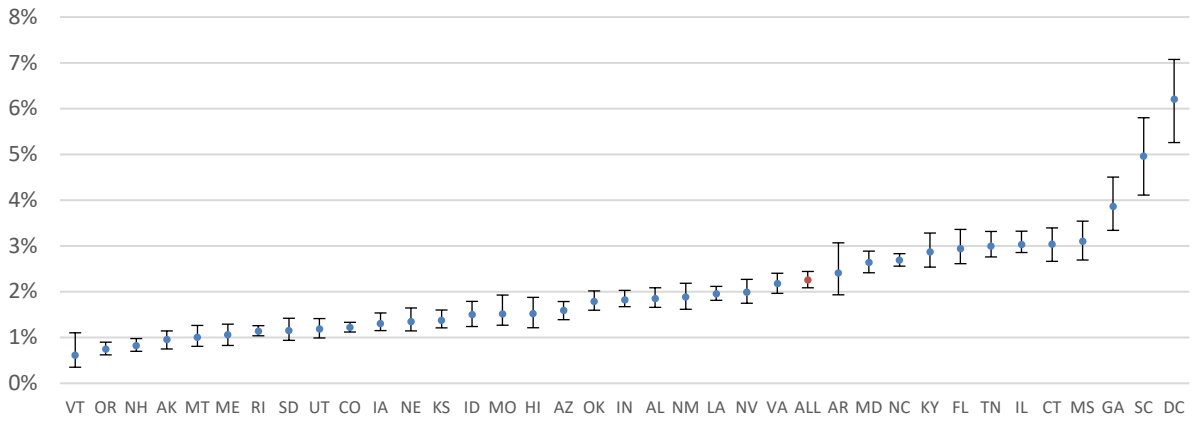
By Jurisdiction



We project that DME, the medical equipment category with the smallest share, comprises 2.3% of ultimate medical costs for AY 2024. DME accounts for about 28% of total medical equipment costs. The 90% confidence interval for this estimate ranges from a low of 2.1% to a high of 2.4%. The variation across jurisdictions for the estimated DME share is relatively large, ranging from 0.6% to 6.2%.

Figure 4: Projected DME Cost Share of Total Medical Costs With 90% Confidence Interval

By Jurisdiction



When a worker is first injured, the critical care needed on their journey to recovery typically involves treatments that require physician services and the use of facilities such as hospitals and possibly ambulatory surgical centers. At later stages, prescription drugs and, when needed, medical equipment take on a larger share of medical services. Figure 5 shows the study-states' projected incremental medical equipment share of medical costs, as well as the share for each of its categories, at different claim maturities. We observed some interesting patterns:

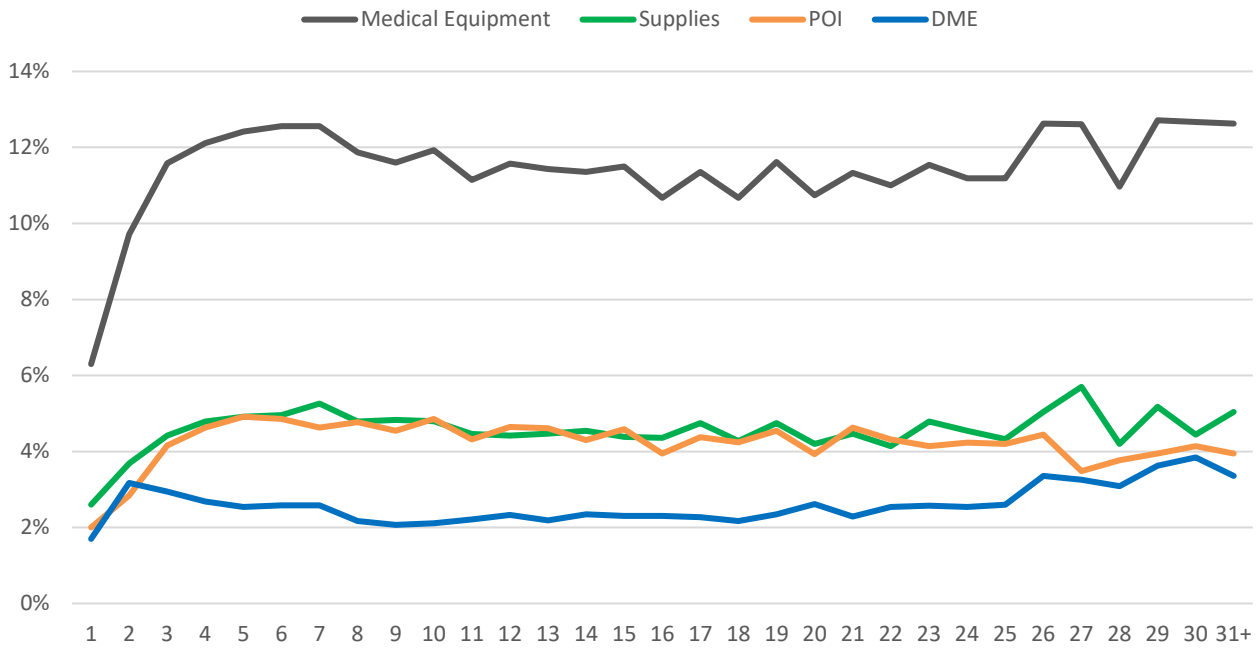
- For claims less than one year old, the incremental medical equipment share is 6%. This low share is largely due to costlier medical services during the initial stages of claim development, such as diagnostic services, inpatient or outpatient surgeries, and emergency room visits.
- The incremental share of medical equipment doubles from 6% in the first RSY to 12% in the third RSY. The rise can be attributed to a shift away from those more costly medical services to maintenance treatment of the condition.
- The steep increase in the incremental share of medical equipment and its categories quickly levels off. From the third RSY to ultimate, the share for medical equipment fluctuates between approximately 11% and 13%. The relative stability in the later stages of a claim's life indicates that most medical equipment items are prescribed and delivered early during treatment. Once delivered, there are few recurring costs beyond maintenance or minor supplies.
- As a claim matures, the incremental cost share patterns for POI and Supplies track closely with that of medical equipment. Compared to POI and Supplies, the incremental DME cost share is relatively stable throughout the claim life.

See Appendix A for the projected incremental medical equipment share of medical cost by RSY.

Figure 5: The Projected Incremental Medical Equipment Share of Medical Costs

AY 2024

By Relative Service Year

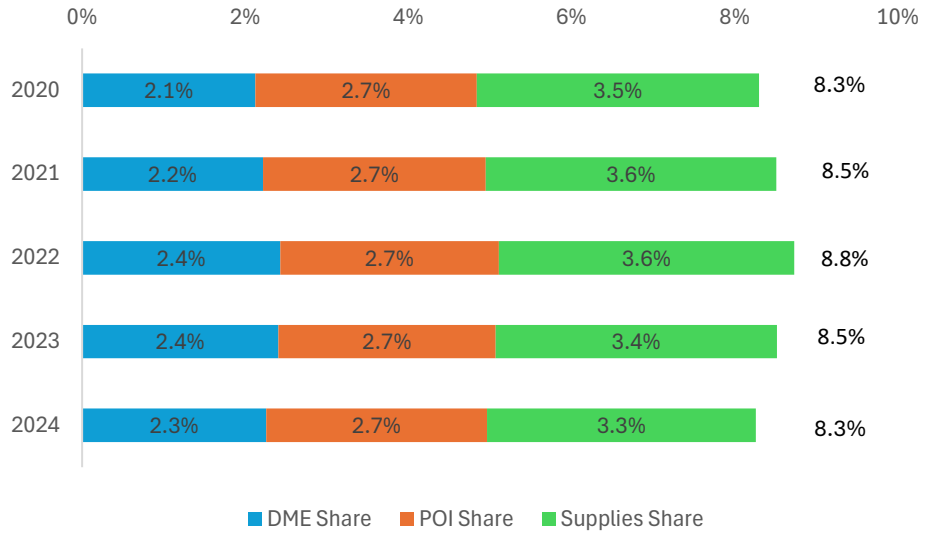


MEDICAL EQUIPMENT COST SHARE TRENDS

In addition to AY 2024 projections, we also examined medical equipment cost trends across the accident years.

Figure 6 shows the projected DME, POI, and Supplies shares in total medical costs for AYs 2020 to 2024. The combined medical equipment cost share ranges from 8.3% to 8.8%. The ultimate cost shares have remained relatively stable, with no clear upward or downward trend. By category, DME cost share increased gradually from AY 2020 to 2022; POI cost share is mostly stable at 2.7%; while Supplies cost share decreased slightly in AYs 2023 and 2024.

Figure 6: The Projected Medical Equipment Cost Share by Categories



While in recent years the overall changes in the projected DME, POI, and Supplies shares of total medical costs appear small, there are more pronounced trends when examining the top DME, POI, and Supplies codes over a longer period. Figures 7 to 9 illustrate the reported costs of top DME, POI, and Supplies codes as a percentage of total reported medical equipment costs in each service year over the study period.

Figure 7 shows the top DME codes. The reported cost share of DME Miscellaneous (HCPCS code E1399) almost doubled from 6% in SY 2012 to 11% in SY 2020. After that, it grew at an even faster rate to 16% in 2024. As such, E1399 is driving up the DME cost share.

E1399 is a catch-all code for items without specific HCPCS designations. The code is often used for new, customized, or specialized equipment, making it subject to payer discretion. Because it is broad and does not describe a specific item, DME billed under payment code E1399 is typically not bound by fee schedule maximums. This means reimbursement amounts vary widely depending on the payer and the documentation provided. Together, these factors likely contributed to the rising cost share associated with E1399.

See Appendix A for the top DME, POI, and Supplies shares of medical equipment cost.

Figure 7: Top DME Codes' Share of Medical Equipment Cost

By Service Year

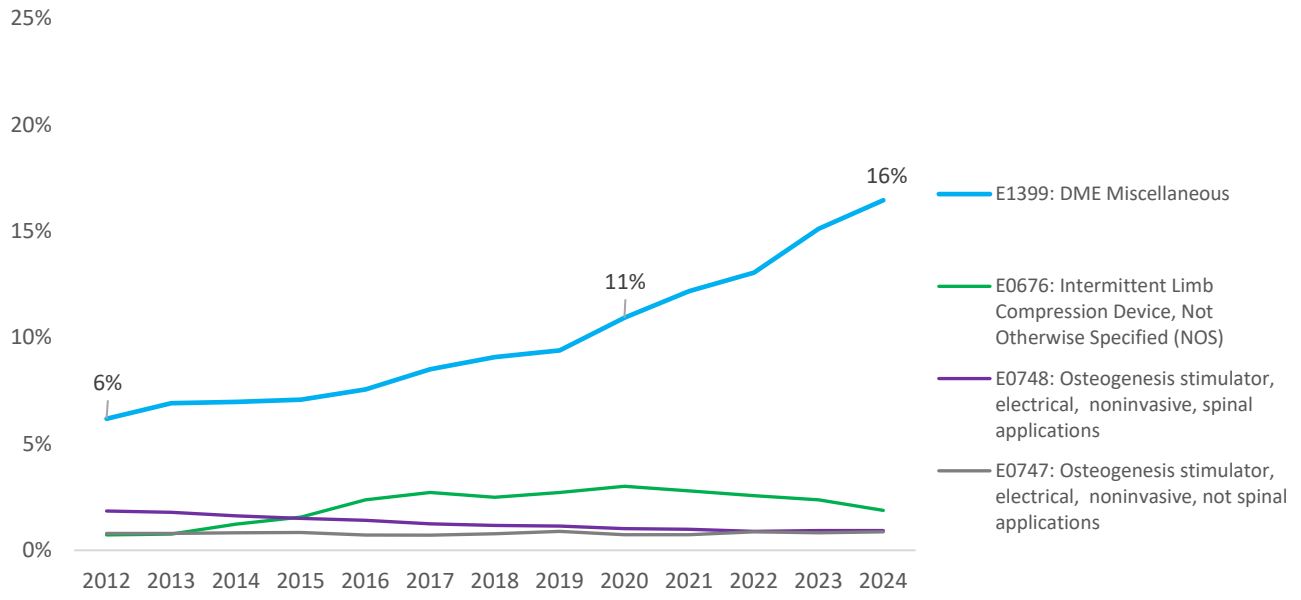
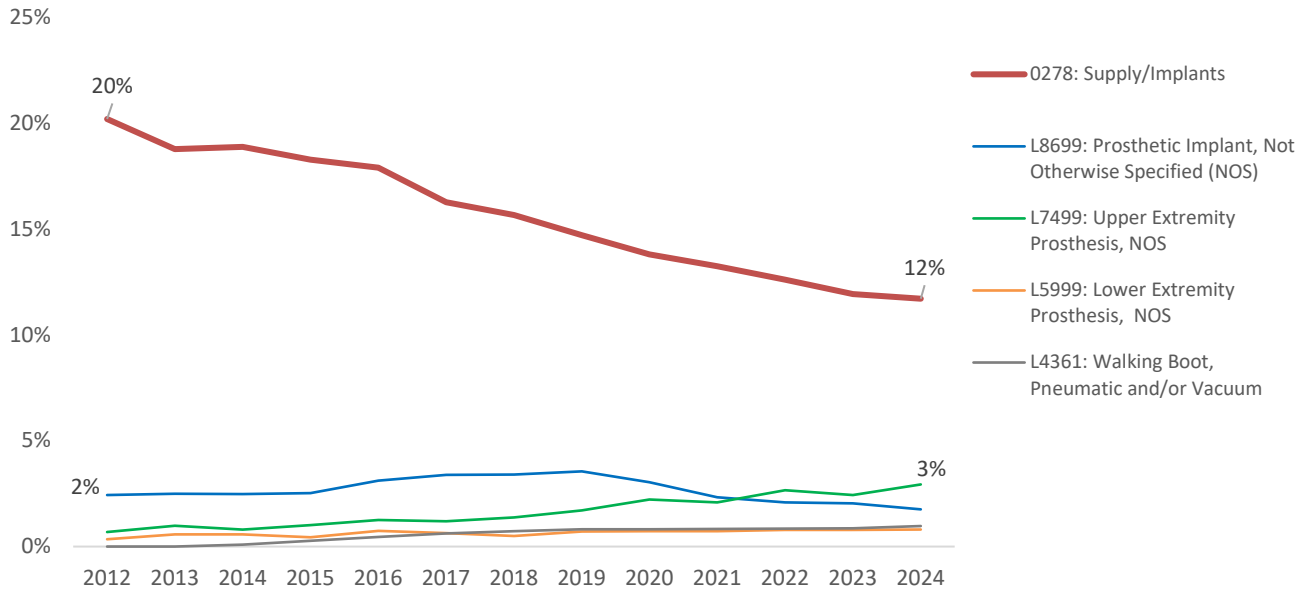


Figure 8 shows the reported medical equipment cost share of top POI codes. Supply/Implants (revenue code 0278) was once the medical equipment code with the largest share, accounting for more than 20% of medical equipment cost in SY 2012. However, 0278's cost share has decreased steadily over the years and in 2024 stands at 12%.

Revenue code 0278 is used to categorize "Other Implantable Devices". This code encompasses surgically implanted devices intended to remain in the patient for therapeutic, diagnostic, or prosthetic purposes. Examples include stents, artificial joints, shunts, grafts, pins, plates, screws, and certain types of radioactive seeds. The decline in cost share of code 0278 can be attributed to several factors, including changes in Medicare reimbursement rules for revenue codes[3] and observed declines in surgery rates within hospital inpatient episodes for workers compensation claims in NCCI jurisdictions.[4]

Figure 8: Top POI Codes' Share of Medical Equipment Cost

By Service Year



[3] Medicare generally does not provide separate reimbursement for many revenue codes unless specific criteria are met—such as the item having pass-through status or being billed with an appropriate HCPCS code. For states that adopted Medicare-based fee schedules between 2012 and approximately 2017, this policy change may have contributed to a decline in the cost share of revenue codes that were previously reimbursed separately.

[4] Raji H. Chadarevian, "The Cost Conundrum: How Medical Utilization Shapes Future Cost", p. 18, p. 21, p. 22, p. 24, p. 34. www.ncci.com/Articles/Documents/AIS2025-Cost-Conundrum.pdf.

Figure 9 shows the reported cost share of top codes for medical Supplies. In contrast to DME and POI, we observed diverging trends among the top Supplies codes. Altogether, the downward trends more than offset the upward trends, resulting in a slight decrease in Supplies cost share in recent years.

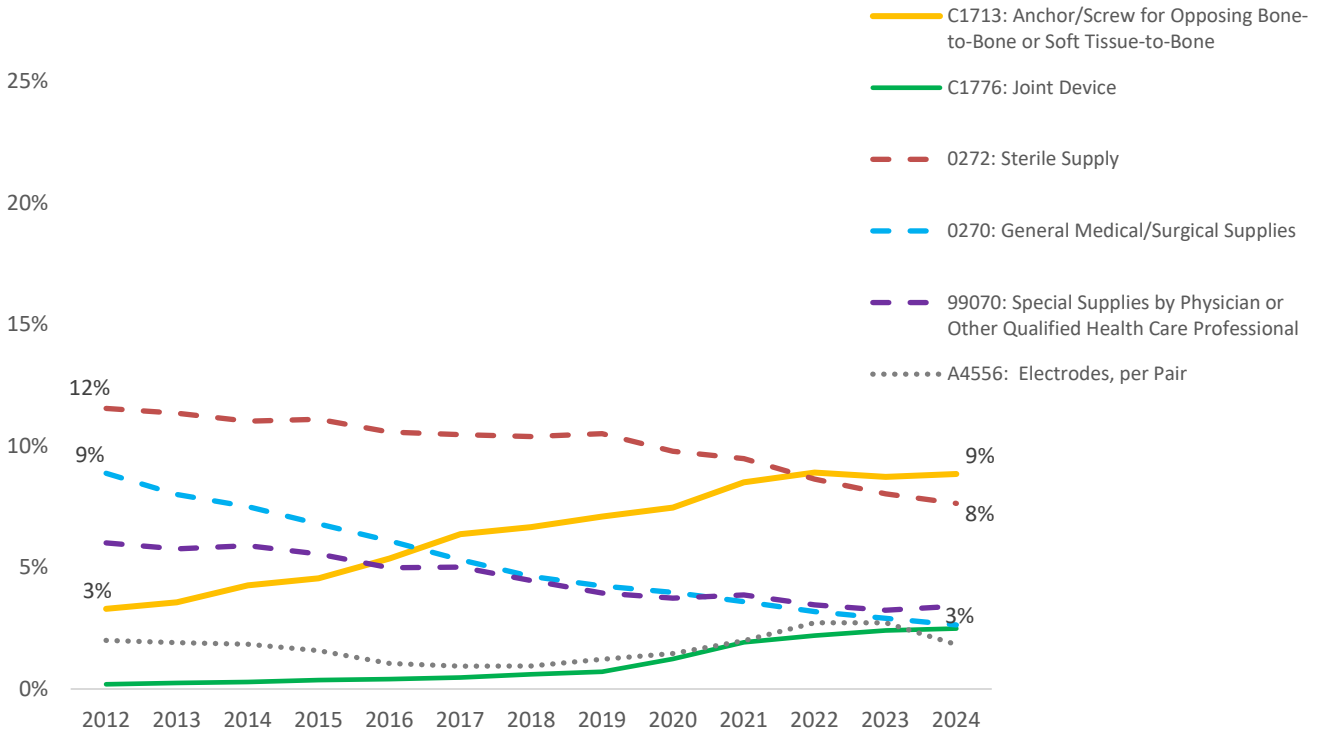
Anchor/screw for opposing bone-to-bone or soft tissue-to-bone (HCPCS code C1713) is used for implantable anchors or screws that fix bone to bone (e.g., fracture stabilization) or attach soft tissue to bone (e.g., tendon or ligament repair). C1713 is associated with surgical implants—usually expensive and packaged differently depending on the provider—and is typically billed in an ambulatory surgical center or hospital outpatient setting. C1713's cost share has kept rising.

On the other hand, three codes—represented by dashed lines below—are driving down the cost share of Supplies.

- General Medical/Surgical Supplies (Revenue code 0270) saw the biggest cost share decline from 9% in 2012 to 3% in 2024
- The cost share for Sterile Supply (Revenue code 0272) decreased steadily from 12% in 2012 to 8% in 2024
- The cost share for Special Supplies—those supplies provided by the physician or other qualified healthcare professional over and above those usually included with the office visit (CPT code 99070)—decreased at a similar rate as revenue code 0272

Figure 9: Top Supplies Codes' Share of Medical Equipment Cost

By Service Year



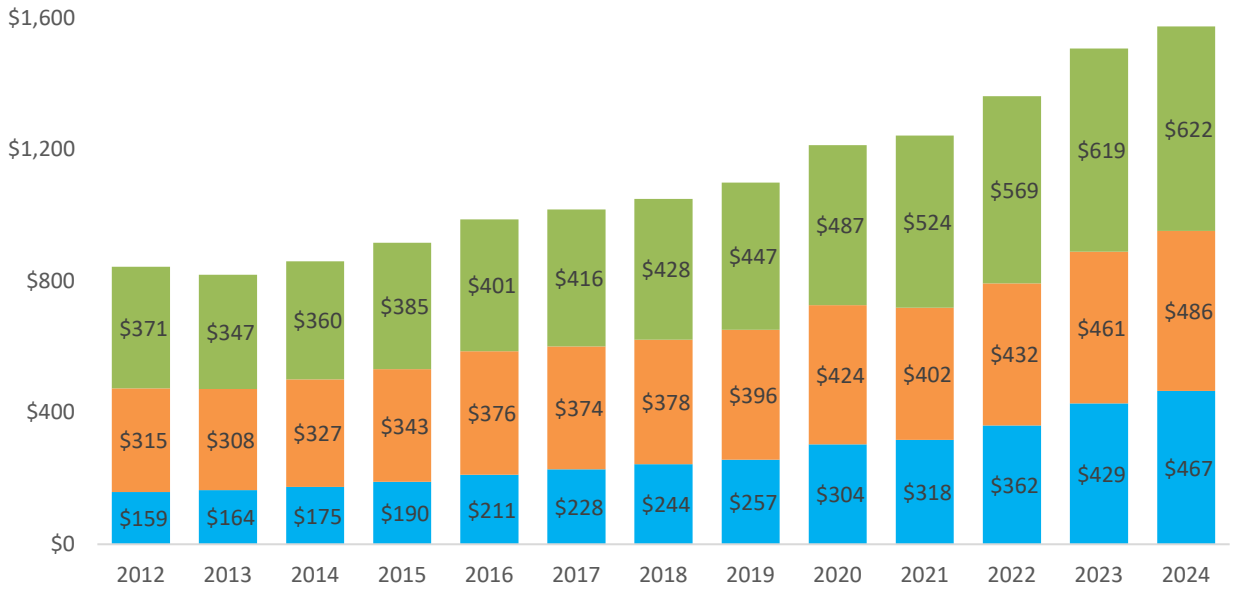
In SY 2012, reported medical equipment claims accounted for approximately 35% of all reported medical claims in this study. Since then, that share has steadily declined, reaching 28% by 2024. In contrast, the average reported cost of medical equipment has continued to rise over the same period.

Figure 10 shows the reported average DME, POI, and Supplies costs per claim with medical equipment.

DME is the smallest category of the three, but the average DME cost per medical equipment claim almost tripled from $159 in SY 2012 to $467 in SY 2024, an annual growth rate of around 9.4%. Supplies account for the largest share of medical equipment costs per claim. Back in 2012, the average supplies cost per medical equipment claim was $371. In 2024, that rose to $622, a 4.4% annual growth rate. POI saw a similar annual cost increase of 3.7% over the same period. The overall average cost per medical equipment claim increased by 87% from 2012 to 2024, an annual growth rate of approximately 5.4%, outpacing the annual medical inflation rate of 0.8% as measured by the medical equipment and supplies series of Consumer Price Index.[5]

Figure 10: Average DME, POI, and Supplies Cost per Medical Equipment Claim

By Service Year



[5] The annual medical inflation rate is calculated using the year-over-year growth from 2012 to 2024, based on Consumer Price Index (CPI) for All Urban Consumers (CPI-U) published by the US Bureau of Labor Statistics. The specific CPI series used is titled "Medical equipment and supplies in U.S. city average, all urban consumers, not seasonally adjusted." This series is designed to measure price changes specifically for medical equipment and supplies. Source: www.data.bls.gov/dataViewer/view/timeseries/CUUR0000SEMG.

CLOSING REMARKS

For AY 2024, we estimate the ultimate medical equipment share of total medical costs to be 8.3%. Supplies is the largest category of medical equipment, accounting for 3.3% of total medical costs. POI accounts for 2.7%, while DME accounts for 2.3% of total medical costs.

The estimated DME, POI, and Supplies cost shares vary significantly by state. A wide range of medical equipment price regulation and different injury mix contribute to state differences.

For claims that continue to require medical equipment over time, the estimated share of costs grows as the claim matures, reaching about 12% of medical expenditure after two years.

The average reported medical equipment cost increased by 87% from SY 2012 to SY 2024 (or 5.4% annualized), driven by sharp increases in reported average DME costs per medical equipment claim. To the extent that prices for medical equipment are impacted by economic factors such as the supply chain issues encountered in 2021-2022 and the potential impact of duties and tariffs, continued pressure on the costs of these products may filter into the workers compensation experience.

From wheelchairs and walkers to back braces, medical equipment plays a key role in helping injured workers return to work—but it's also a significant source of costs. Medical providers are uniquely positioned to identify savings, especially through lower-cost or generic alternatives. Like drug formularies, preferred options for devices and supplies can lead to significant cost savings.[6] Ultimately, delivering the right device at the right price and with quality service benefits all workers compensation stakeholders.

ACKNOWLEDGEMENT

We would like to thank our team members for their invaluable contributions throughout the course of this study. Special thanks to Wes Henning, Nedzad Arnautovic, Raji Chadarevian, Jon Sinclair, and Damon Raben for their insights and advice. Their expertise and dedication greatly enhanced the quality and depth of this research.

[6] Jean Paltzer and Jennifer Brockman, "Paltzer & Brockman: Is Your DME Partner Driving Results – or Driving Up Costs?", www.workcompwire.com/2025/09/paltzer-brockman-is-your-dme-partner-driving-results-or-driving-up-costs/?utm_source=wcr&utm_medium=email&utm_campaign=pos-1

APPENDIX A

Data Tables

All the values in the following table are shown as a percentage.

FIGURE 1:
THE ESTIMATED MEDICAL EQUIPMENT SHARE OF TOTAL MEDICAL COSTS FOR AY 2024—BY JURISDICTION

STATE	ESTIMATED	90% CI
ALL	8.3	8.0–8.6
AK	5.5	4.7–6.7
AL	10.6	9.9–11.5
AR	12.8	11.3–14.7
AZ	7.6	7.0–8.3
CO	4.1	3.9–4.5
CT	6.9	6.3–7.5
DC	11.8	10.3–13.3
FL	9.1	8.7–9.5
GA	8.6	7.9–9.4
HI	5.2	4.3–6.7
IA	7.8	7.1–8.7
ID	8.2	7.2–9.5
IL	8.5	8.0–9.0
IN	6.3	5.8–6.8
KS	5.4	4.5–7.0
KY	12.2	11.5–12.9
LA	10.4	9.7–11.2
MD	11.6	10.9–12.4

STATE	ESTIMATED	90% CI
ME	5.5	5.0–6.1
MO	8.5	7.8–9.9
MS	8.2	7.4–9.1
MT	7.1	6.3–8.1
NC	8.8	8.4–9.2
NE	9.3	8.5–10.4
NH	5.8	5.2–6.5
NM	7.2	6.4–8.1
NV	7.6	6.7–8.8
OK	9.6	8.8–10.6
OR	6.3	5.9–6.8
RI	7.6	7.0–8.5
SC	10.3	9.4–11.2
SD	10.9	10.1–12.0
TN	8.0	7.4–8.7
UT	8.6	7.7–9.6
VA	11.7	10.9–12.5
VT	5.4	4.3–7.0

APPENDIX A (Cont'd)

Data Tables

FIGURE 2:
THE ESTIMATED SUPPLIES SHARE OF TOTAL MEDICAL COSTS FOR AY 2024—BY JURISDICTION

STATE	ESTIMATED	90% CI
ALL	3.3	3.1–3.4
AK	2.2	1.8–2.7
AL	5.3	4.9–5.6
AR	5.2	4.7–5.8
AZ	2.8	2.5–3.2
CO	1.1	0.9–1.3
CT	1.4	1.2–1.6
DC	2.7	2.0–3.6
FL	4.4	4.1–4.6
GA	2.2	2.0–2.4
HI	1.5	1.2–2.2
IA	3.4	3.2–3.7
ID	3.5	2.8–4.0
IL	2.9	2.7–3.1
IN	1.7	1.5–2.0
KS	1.4	1.1–1.8
KY	5.2	4.8–5.8
LA	5.7	5.2–6.3
MD	4.5	4.1–4.9

STATE	ESTIMATED	90% CI
ME	2.7	2.4–3.1
MO	4.1	3.8–4.7
MS	2.2	1.8–2.6
MT	1.6	1.4–1.9
NC	2.8	2.6–3.0
NE	4.0	3.6–4.4
NH	2.9	2.6–3.3
NM	3.6	3.3–4.0
NV	2.9	2.5–3.4
OK	3.0	2.7–3.4
OR	2.6	2.3–2.9
RI	2.7	2.4–3.1
SC	2.6	2.1–3.9
SD	6.2	5.5–6.8
TN	2.4	2.1–2.7
UT	4.6	4.2–5.1
VA	6.0	5.5–6.5
VT	2.6	1.9–3.6

APPENDIX A (Cont'd)

Data Tables

FIGURE 3:
THE ESTIMATED POI SHARE OF TOTAL MEDICAL COSTS FOR AY 2024 – BY JURISDICTION

STATE	ESTIMATED	90% CI
ALL	2.7	2.6–2.8
AK	2.2	1.7–2.9
AL	3.4	2.9–4.0
AR	5.1	4.2–6.4
AZ	3.1	2.7–3.5
CO	1.7	1.5–2.0
CT	2.4	2.0–2.8
DC	2.9	2.3–3.5
FL	1.8	1.6–1.9
GA	2.4	2.2–2.7
HI	2.0	1.6–2.4
IA	2.9	2.5–3.6
ID	3.2	2.5–4.2
IL	2.4	2.2–2.7
IN	2.7	2.4–3.0
KS	2.5	1.7–3.9
KY	4.0	3.6–4.5
LA	2.7	2.3–3.2
MD	4.4	3.9–4.9

STATE	ESTIMATED	90% CI
ME	1.7	1.4–2.1
MO	2.8	2.5–3.4
MS	2.9	2.5–3.3
MT	4.4	3.8–5.0
NC	3.3	3.1–3.5
NE	3.8	3.4–4.4
NH	2.0	1.5–2.4
NM	1.5	1.0–2.2
NV	2.5	1.9–3.4
OK	4.7	4.0–5.5
OR	2.9	2.7–3.3
RI	3.8	3.4–4.3
SC	2.7	2.4–3.0
SD	3.3	2.8–4.1
TN	2.5	2.2–2.8
UT	2.7	2.2–3.2
VA	3.5	3.1–3.8
VT	2.2	1.7–3.1

APPENDIX A (Cont'd)

Data Tables

FIGURE 4:
THE ESTIMATED DME SHARE OF TOTAL MEDICAL COSTS FOR AY 2024—BY JURISDICTION

STATE	ESTIMATED	90% CI
ALL	2.3	2.1–2.4
AK	1.0	0.7–1.1
AL	1.9	1.7–2.1
AR	2.4	1.9–3.1
AZ	1.6	1.4–1.8
CO	1.2	1.1–1.3
CT	3.0	2.7–3.4
DC	6.2	5.3–7.1
FL	2.9	2.6–3.4
GA	3.9	3.3–4.5
HI	1.5	1.2–1.9
IA	1.3	1.2–1.5
ID	1.5	1.2–1.8
IL	3.0	2.9–3.3
IN	1.8	1.7–2.0
KS	1.4	1.2–1.6
KY	2.9	2.5–3.3
LA	2.0	1.8–2.1
MD	2.6	2.4–2.9

STATE	ESTIMATED	90% CI
ME	1.1	0.8–1.3
MO	1.5	1.3–1.9
MS	3.1	2.7–3.5
MT	1.0	0.8–1.3
NC	2.7	2.6–2.8
NE	1.3	1.1–1.6
NH	0.8	0.7–1.0
NM	1.9	1.6–2.2
NV	2.0	1.7–2.3
OK	1.8	1.6–2.0
OR	0.7	0.6–0.9
RI	1.1	1.0–1.3
SC	5.0	4.1–5.8
SD	1.2	0.9–1.4
TN	3.0	2.8–3.3
UT	1.2	1.0–1.4
VA	2.2	2.0–2.4
VT	0.6	0.4–1.1

APPENDIX A (Cont'd)

Data Tables

FIGURE 5:
THE ESTIMATED INCREMENTAL SHARE OF MEDICAL COSTS FOR AY 2024

RSY	MEDICAL EQUIPMENT	DME	POI	Supplies
1	6.4	1.7	2.0	2.6
2	9.7	3.2	2.8	3.7
3	11.6	2.9	4.2	4.4
4	12.1	2.7	4.6	4.8
5	12.4	2.5	4.9	4.9
6	12.5	2.6	4.9	5.0
7	12.5	2.6	4.6	5.3
8	11.8	2.2	4.8	4.8
9	11.7	2.1	4.5	4.8
10	11.9	2.1	4.9	4.8
11	11.0	2.2	4.3	4.5
12	11.4	2.3	4.6	4.4
13	11.4	2.2	4.6	4.5
14	11.4	2.3	4.3	4.5
15	11.6	2.3	4.6	4.4
16	10.7	2.3	3.9	4.4
17	11.4	2.3	4.4	4.7
18	10.8	2.2	4.2	4.3
19	11.8	2.3	4.5	4.7
20	10.8	2.6	3.9	4.2
21	11.4	2.3	4.6	4.5
22	11.1	2.5	4.3	4.1
23	11.5	2.6	4.1	4.8
24	11.4	2.5	4.2	4.5
25	11.3	2.6	4.2	4.3
26	12.8	3.4	4.4	5.0
27	12.5	3.3	3.5	5.7
28	11.1	3.1	3.8	4.2
29	12.8	3.6	3.9	5.2
30	12.7	3.8	4.1	4.4
31+	12.7	3.4	3.9	5.0

APPENDIX A (Cont'd)

Data Tables

FIGURE 7:
TOP DME CODES' REPORTED SHARE OF MEDICAL EQUIPMENT COST

Service Year	E1399	E0676	E0748	E0747
2012	6.2	0.7	1.8	0.8
2013	6.9	0.8	1.8	0.8
2014	7.0	1.2	1.6	0.8
2015	7.1	1.6	1.5	0.8
2016	7.6	2.4	1.4	0.7
2017	8.5	2.7	1.2	0.7
2018	9.1	2.5	1.2	0.8
2019	9.4	2.7	1.1	0.9
2020	10.9	3.0	1.0	0.7
2021	12.2	2.8	1.0	0.7
2022	13.1	2.6	0.9	0.9
2023	15.1	2.4	0.9	0.8
2024	16.5	1.9	0.9	0.9

FIGURE 8:
TOP POI CODES' REPORTED SHARE OF MEDICAL EQUIPMENT COST

Service Year	0278	L8699	L7499	L4361	L5999
2012	20.2	2.4	0.7	0.0	0.3
2013	18.8	2.5	1.0	0.0	0.6
2014	18.9	2.5	0.8	0.1	0.6
2015	18.3	2.5	1.0	0.3	0.4
2016	17.9	3.1	1.3	0.5	0.7
2017	16.3	3.4	1.2	0.6	0.6
2018	15.7	3.4	1.4	0.7	0.5
2019	14.7	3.6	1.7	0.8	0.7
2020	13.8	3.0	2.2	0.8	0.7
2021	13.2	2.3	2.1	0.8	0.7
2022	12.6	2.1	2.7	0.8	0.8
2023	11.9	2.0	2.4	0.9	0.8
2024	11.7	1.8	2.9	1.0	0.8

APPENDIX A (Cont'd)

Data Tables

FIGURE 9:
TOP SUPPLIES CODES' REPORTED SHARE OF MEDICAL EQUIPMENT COST

Service Year	C1713	C1776	0272	0270	99070	A4556
2012	3.3	0.2	11.5	8.9	6.0	2.0
2013	3.6	0.2	11.4	8.0	5.8	1.9
2014	4.3	0.3	11.0	7.5	5.9	1.8
2015	4.6	0.4	11.1	6.8	5.6	1.6
2016	5.4	0.4	10.6	6.1	5.0	1.1
2017	6.4	0.5	10.5	5.3	5.0	0.9
2018	6.7	0.6	10.4	4.6	4.5	1.0
2019	7.1	0.7	10.5	4.2	4.0	1.2
2020	7.5	1.2	9.8	4.0	3.7	1.5
2021	8.5	1.9	9.5	3.6	3.9	2.0
2022	8.9	2.2	8.6	3.2	3.5	2.7
2023	8.7	2.4	8.0	2.9	3.2	2.7
2024	8.8	2.5	7.6	2.6	3.4	1.8

APPENDIX B

Study Data

Data used in this study is from NCCI's Medical Data Call (MDC). The MDC captures transaction-level detail on WC medical bills processed on or after July 1, 2010, including dates of service, charges, payments, procedure codes, and diagnosis codes. Carriers are not required to report transactions for services provided more than 30 years after the date of the injury.

For this study, we used MDC experience evaluated near the end of July 2025 for:

- Medical services provided between January 1, 2011, and near the end of July 2025 for Accident Years 1982–2024
- The 36 jurisdictions AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, and VT

Jurisdiction-specific results are based on state of jurisdiction. Data is used with permission.

As of July 2025, SY 2024 has not been fully reported to NCCI. To account for this, a transactional cutoff was applied so that all years were on the same basis. This was done by limiting transactions to those occurring prior to the end of the first quarter of the following year. For example, for SY 2022, we only include those transactions occurring by the end of first quarter of 2023.

APPENDIX C

Accident Year Methodology

The accident year estimate of the ultimate medical equipment share of total medical costs entails two steps:

Step 1: estimate total medical payments by relative service year, i.e., the payment pattern

Step 2: estimate incremental medical equipment shares by relative service year (RSY)

The estimated accident year medical equipment share is a weighted average of incremental medical equipment shares with medical payment pattern serving as weights.

In the example below, Table A illustrates hypothetical medical payments for five accident years and three relative service years arranged in a parallelogram shape. Table B shows the same but for medical equipment share. For the AY 5 and RSY 1 cell, the reported medical equipment cost share is 5% ($7.50 medical equipment cost/$150 total medical cost). Assume the claims are completely settled and there is no further development beyond the third relative service year.

Table A

Medical Payments

AY	RSY 1	RSY 2	RSY 3
1			40
2		60	50
3	170	40	50
4	180	45	
5	150		

Table B

Medical Equipment Share of Medical Payments

AY	RSY 1	RSY 2	RSY 3
1			11%
2		9%	13%
3	6%	10%	12%
4	7%	12%	
5	5%		

The goal is to estimate the not yet reported medical payments in Table A and the corresponding cost share of medical equipment in Table B. Below is one such estimate colored in red.

Table A1

Medical Payments

AY	RSY 1	RSY 2	RSY 3
1			40
2		60	50
3	170	40	50
4	180	45	40
5	150	50	45

Table B1

Medical Equipment Share of Medical Payments

AY	RSY 1	RSY 2	RSY 3
1			11%
2		9%	13%
3	6%	10%	12%
4	7%	12%	12%
5	5%	10%	12%

APPENDIX C (Cont'd.)

Accident Year Methodology

The ultimate medical payment for AY 5 is estimated to be $150 + $50 + $45 = $245.

The weights used in calculating the medical equipment share are:

For RSY 1, $W_1 = 150 / 245 = 61.2\%$

For RSY 2, $W_2 = 50 / 245 = 20.4\%$

For RSY 3, $W_3 = 45 / 245 = 18.4\%$

The ultimate medical equipment cost share is then calculated as 5% x 61.2% + 10% x 20.4% + 12% x 18.4% = 7.3%.

Several well-known methods were used to achieve Step 1:

a. Distribution-free single incremental and block incremental chain ladder methods as described in [2] and [3]
b. Cross-classified GLM models with Gamma and Inverse Gaussian (IG) distributions as described and fitted in [3]
c. Log-link models that assume age-to-age loss development factors, or link ratios, are lognormally distributed as described in [4]

To select the best method for each jurisdiction, we conducted out-of-sample testing. In out-of-sample testing, the methods above were fitted on SYs 2011–2019 (the training set) and used to predict medical payments in SYs 2020–2023 (the test set). We calculated Mean Squared Error (MSE) as the average squared difference between the actual and predicted values. The methods were then ranked, and the one with the lowest MSE was deemed the best fitting method. However, if the best fitting method was GLM Inverse Gaussian (IG), then the second-best fitting method was chosen. The GLM IG model exhibited unreasonably wide confidence intervals for some states; therefore, after careful consideration, we excluded the GLM IG model.

Here is the selected model for each jurisdiction:

Model	Jurisdictions
Single Incremental	AK, AZ, CO, DC, FL, HI, IA, IL, IN, KS, LA, ME, MO, and NH
Block Incremental	CT, ID, MS, SD, and VA
GLM Gamma-Log	ALL, AL, AR, GA, KY, MD, MT, NE, NM, OK, OR, SC, UT, and VT
Log Link	NC, NV, RI, and TN

To complete Step 2, an incremental medical equipment cost share is assumed for each RSY, based on the average of observed values. For example, in Table B1, RSY 3 uses the average medical equipment cost share from AYs 1 to 3—specifically, (11% + 13% + 12%) / 3 = 12% —which is then applied to AYs 4 and 5.

To derive a 90% confidence interval around the point estimate, a bootstrapping approach was used. That is, a medical payment model (Step 1) and the incremental medical equipment cost share (Step 2) projections were simulated 10,000 times. The type of bootstrapping procedure used depends on the model selected. That is, it can take the form of non-parametric or parametric bootstrapping as described in [3].

The methodology used in this study is partially based on ideas presented in a previously published NCCI paper [1].

REFERENCES

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