Discouraging The Routine Use Of Occupational and/or Supervised Physical Therapy After Carpal Tunnel Release Measure Performance

Qualified Entity Public Report

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OVERVIEW

Acumen, LLC conducts policy research in support of Federal, state, and local health care and social policy programs. We leverage our vast data resources to improve information available to policymakers on topics such as quality measurement, payment policy, drug and vaccine safety, health insurance markets, value-based purchasing, and healthcare fraud, waste, and abuse. Our work reflects our belief that policymakers, healthcare providers, and the public should have the best available information upon which to base their decisions.

Acumen produced this report as part of our participation in the Centers of Medicare & Medicaid Services (CMS) Qualified Entity (QE) program. Under the QE Certification Program (QECP), CMS provides standardized extracts of Medicare Parts A and B claims data and Part D prescription drug event data to QEs to combine these data with other data sources to generate reports that give insights into quality performance. For more information, visit https://www.qemedicaredata.org/.

The purpose of this report is to evaluate providers of carpal tunnel syndrome release procedures with respect to their post-operative patient care, specifically on the avoidance of routine use of occupational and/or supervised physical therapy after carpal tunnel release. The American Academy of Orthopaedic Surgeons (AAOS) clinical guideline for the management of carpal tunnel syndrome indicates, based on moderate evidence, that postoperative supervised therapy should not be routinely prescribed after carpal tunnel release (CTR).[1] Inappropriate prescription of routine physical or occupational therapy accrues unnecessary healthcare costs on patients and insurers without improving patient outcomes. Several studies have revealed a gap in providers' quality of care, indicating variation in the routine use of postoperative occupational and/or physical therapy after carpal tunnel release surgery across facilities and surgeons in the United States.[2,3,4]

[1] American Academy of Orthopaedic Surgeons. 2024. "Management of Carpal Tunnel Syndrome Evidence-Based Clinical Practice Guideline." https://www.aaos.org/globalassets/quality-and-practice-resources/carpal-tunnel/carpal-tunnel-2024/cts-cpg.pdf.

[2] Harris, Alex H. S., Esther L. Meerwijk, Qian Ding, Amber W. Trickey, Andrea K. Finlay, Eric M. Schmidt, Catherine M. Curtin, Erika D. Sears, Teryl K. Nuckols, and Robin N. Kamal. 2020. "Testing Proposed Quality Measures for Treatment of Carpal Tunnel Syndrome: Feasibility, Magnitude of Quality Gaps, and Reliability." *BMC Health Services Research* 20 (1). https://doi.org/10.1186/s12913-020-05704-6.

[3] Harris, Alex H S, Qian Ding, Amber W Trickey, Andrea K Finlay, Eric Schmidt, Catherine Curtin, Erika D Sears, et al. 2022. "Do Proposed Quality Measures for Carpal Tunnel Release Reveal Important Quality Gaps and Are They Reliable?" *Clinical Orthopaedics and Related Research* 480 (9): 1743–50. https://doi.org/10.1097/corr.0000000000002175.

[4] Shah, Romil, Steven Zhang, Kevin Li, Laurence C Baker, Alex, and Robin N Kamal. 2020. "Physical and Occupational Therapy Use and Cost after Common Hand Procedures." *The Journal of Hand Surgery* 45 (4): 289-297.e1. https://doi.org/10.1016/j.jhsa.2019.09.008.

This report addresses the purpose and goals of the QECP by evaluating provider performance on the *Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release* measure. The measure, which calculates the rate of avoidance of routine therapy after carpal tunnel release, is used to evaluate provider performance nation-wide, as well as across time, between states, and with specific patient populations.

The results included in this report were calculated with Medicare Fee-for-Service (FFS) claims data from CMS and commercial claims data. Section 1 of this report describes the *Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release* measure and its specifications and Section 2 displays the measure results.

1 MEASURE DESCRIPTION

The *Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release* measures the rate of avoidance of routinely prescribed postoperative physical (PT) and/or occupational therapy (OT) within 6 weeks after carpal tunnel release. The measure was developed by the American Society for Surgery of the Hand (ASSH) and the AAOS. Detailed measure specifications are available in the AAOS Management of Carpal Tunnel Syndrome Technical Report.[5]

The following sections describe features of the *Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release* measure.

1.1 Denominator

The denominator for the measure is adult patients aged 18+, with a diagnosis of carpal tunnel syndrome, who underwent carpal tunnel release.

1.2 Numerator

The numerator for the measure is patients who underwent carpal tunnel release and did not receive postoperative physical therapy (low, moderate, or high complexity) or occupational therapy (low, moderate, or high complexity) within 6 weeks (42 days) of carpal tunnel release.

1.3 Measurement Period

The measure is calculated using a one-year period.

1.4 Measure Calculation

This measure calculates the percentage of adult patients aged 18+, with carpal tunnel syndrome, who received surgical carpal tunnel release and who were not routinely prescribed postoperative physical or occupational therapy within 6 weeks after release.

The interpretation of measure results is that higher rates indicate better performance. That is, a provider with better performance will have a rate closer to 100%, whereas a provider who is inappropriately prescribing supervised OT/PT after CTR will have a lower rate.

[5] American Society for Surgery of the Hand, and American Academy of Orthopaedic Surgeons. 2019. "Management of Carpal Tunnel Syndrome Technical Report." https://www.aaos.org/globalassets/quality-and-practice-resources/carpal-tunnel/cts-measures-technical-report-2019-update.pdf.

1.5 Data and Study Period

The measure is calculated using national Medicare FFS claims data from CMS and commercial claims data for 2020-2021.

2 MEASURE RESULTS

This section summarizes the results for the *Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release* measure for calendar years (CY) 2020 and 2021. Section 2.1 shows measure components (denominator and numerator counts) and rates (the avoidance of postoperative OT/PT rates after CTR) at the national and state levels, and Section 2.2 examines components and rates by patient age and sex. Finally, Section 2.3 displays denominator counts and measure rates by month.

2.1 Measure Results at the National and State Levels

Table 1 displays the measure results at the national level for CY 2020 and 2021.

Table 1. National Avoidance of Routine OT/PT after CTR Rates

	Medicare FFS + Commercial	Medicare FFS	Commercial
CY 2020			
Denominator	139,606	126,093	13,513
Numerator	113,898	102,119	11,779
Rate	81.59%	80.99%	87.17%
CY 2021			
Denominator	136,202	121,755	14,447
Numerator	109,113	96,639	12,474
Rate	80.11%	79.37%	86.34%

Figure 1 and Figure 2 show the measure results at the state level. West Virginia had the highest rate of avoidance of postoperative OT/PT after CTR surgeries in CY 2020 and CY 2021, with rates of approximately 93% in both years. Indiana and Kansas were among the states with the lowest rates in CY 2020, at approximately 70% and 72%, respectively. Indiana was also among the states with the lowest rates in CY 2021, together with North Dakota, at approximately 69% and 67%, respectively.

Figure 1. Measure Results by State, CY 2020

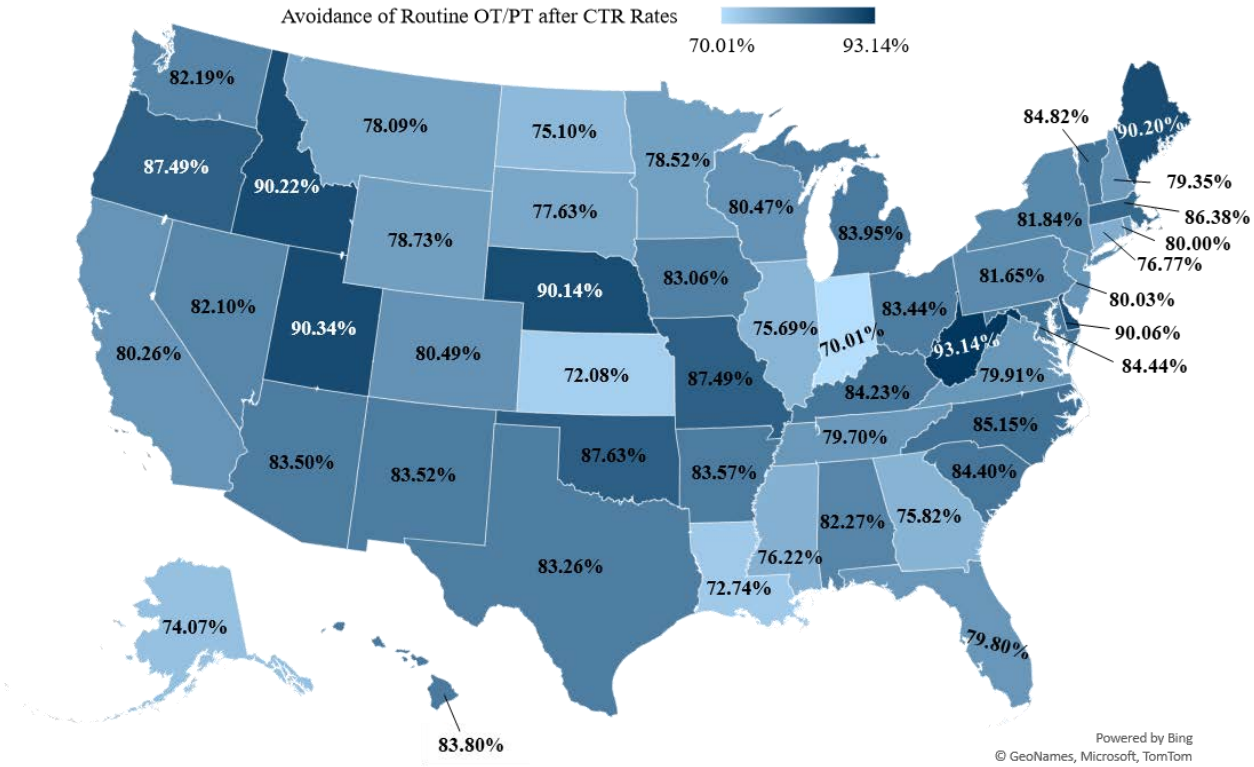
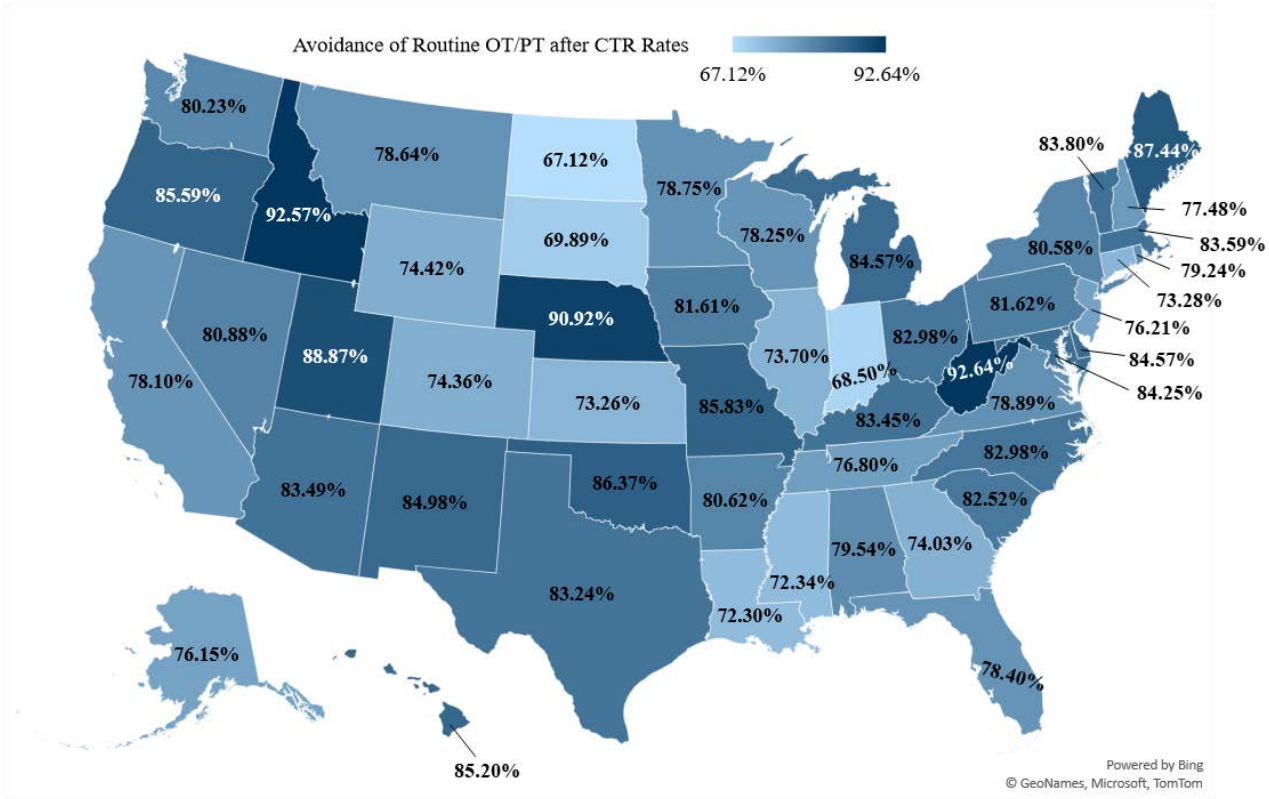


Figure 2. Measure Results by State, CY 2021



2.2 Measure Results by Patient Characteristics

Acumen calculated avoidance of routine OT/PT after CTR rates by patient characteristics. Table 2 displays rates among patients aged under 65 and those aged 65 and older. Table 3 compares rates among female patients and male patients.

In CY 2020 and CY2021, avoidance of routine OT/PT after CTR rates among patients aged under 65 were approximately 4 percentage points higher than the rates among patients aged 65 and older. The avoidance of routine OT/PT after CTR rates among male patients were higher than among female patients in both years, by approximately 2 percentage points in CY 2020 and 3 percentage points in CY 2021.

The trends of differences by age and by sex varied by data source. In both years, Medicare FFS patients aged 65 and older had lower avoidance rates, by approximately 2 percentage points. Similarly, female Medicare FFS patients had lower avoidance rates than their male counterparts in both years, by approximately 3 percentage points. For commercial data, patients aged under 65 and older patients had similar avoidance rates in CY 2020, while in CY 2021 the avoidance rate among patients aged under 65 was approximately 3 percentage points lower than among older patients. Female patients in commercial data had lower avoidance rates in both years – the difference increased from approximately 2 percentage points in CY 2020 to approximately 3 percentage points in CY 2021. All differences in avoidance of routine OT/PT after CTR rates by age and by sex were statistically significant at the one percent level (except for the difference in CY 2020 rates by age in commercial data, which was not statistically significant).[6]

Table 2. Avoidance of Routine OT/PT after CTR Rates by Patient Age

	Medicare FFS + Commercial			Medicare FFS			Commercial		
	Total	**Under 65**	**65 and Older**	**Total**	**Under 65**	**65 and Older**	**Total**	**Under 65**	**65 and Older**
CY 2020									
Denominator	139,606	26,670	112,936	126,093	15,121	110,972	13,513	11,549	1,964
Numerator	113,898	22,636	91,262	102,119	12,560	89,559	11,779	10,076	1,703
Rate	81.59%	84.87%	80.81%	80.99%	83.06%	80.70%	87.17%	87.25%	86.71%
CY 2021									
Denominator	136,202	25,369	110,833	121,755	13,121	108,634	14,447	12,248	2,199
Numerator	109,113	21,129	87,984	96,639	10,605	86,034	12,474	10,524	1,950
Rate	80.11%	83.29%	79.38%	79.37%	80.82%	79.20%	86.34%	85.92%	88.68%

[6] Statistical significance is based on the chi-square proportion tests.

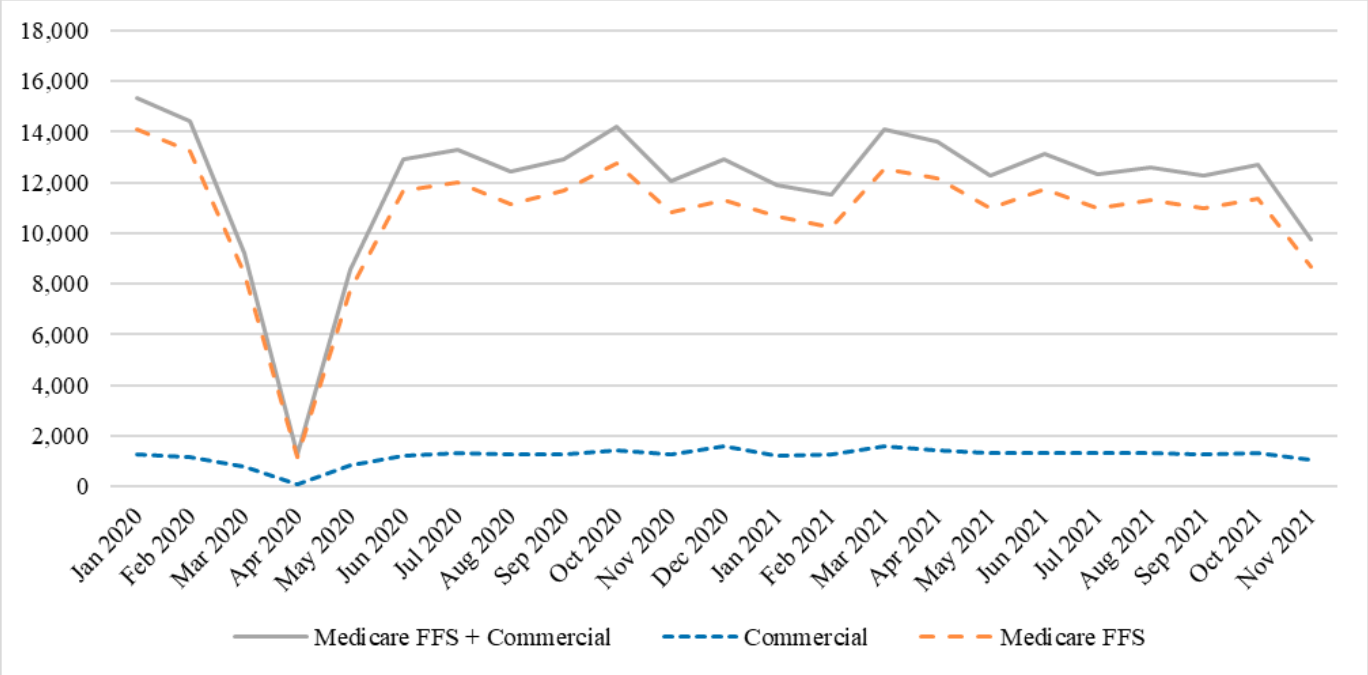
Table 3. Avoidance of Routine OT/PT after CTR Rates by Patient Sex

	Medicare FFS + Commercial			Medicare FFS			Commercial		
	Total	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**
CY 2020									
Denominator	139,602	76,426	63,176	126,093	67,627	58,466	13,509	8,799	4,710
Numerator	113,894	61,506	52,388	102,119	53,895	48,224	11,775	7,611	4,164
Rate	81.58%	80.48%	82.92%	80.99%	79.69%	82.48%	87.16%	86.50%	88.41%
CY 2021									
Denominator	136,200	74,650	61,550	121,755	65,137	56,618	14,445	9,513	4,932
Numerator	109,111	58,787	50,324	96,639	50,680	45,959	12,472	8,107	4,365
Rate	80.11%	78.75%	81.76%	79.37%	77.81%	81.17%	86.34%	85.22%	88.50%

2.3 Measure Results by Month

Figure 3 and Figure 4 provide the CTR counts and avoidance of routine OT/PT after CTR rates, respectively, over time. The total number of CTRs remained fairly stable over time, with the most notable change in counts occurring in early 2020. The count decreased substantially from 15,354 in January 2020 to 1,277 in April 2020. CTR procedure volume stabilized in June 2020 at 12,897, and remained between approximately 11,000 and 14,000 through the end of CY 2021.[7]

Figure 3. Monthly CTR Surgery (Denominator) Counts



[7] To properly determine whether a patient received routine OT/PT within 6 weeks of CTR, Acumen counted CTR surgeries through November 19, 2021. As a result, November 2021 counts are lower, and December 2021 CTR counts are not displayed.

Similarly, the rate of avoidance of routine OT/PT after CTR remained fairly stable over time. There was a decrease in early 2020: the overall rate decreased from 86.9% in March 2020, the highest rate across both years, to 76.5% in April 2020. The rate increased by May 2020 to 79.6% and remained within the 79%-84% range through the end of CY 2021.

Figure 4. Monthly Avoidance of Routine OT/PT After CTR Rates