



PRE-PANDEMIC TRENDS OF OUTPATIENT RADIOLOGY EVALUATION AND MANAGEMENT CLAIMS: NATIONAL USAGE AND REIMBURSEMENT TRENDS FROM 2010 TO 2018



EMORY
UNIVERSITY

Suraj S. Parikh¹, Christopher B. Gustafson¹, Will S. Lindquaster², Rajoo Dhangan¹

1. University of Pittsburgh Medical Center Department of Radiology, 2. Emory University School of Medicine Division of Interventional Radiology and Image-Guided Medicine

Abstract

Purpose

To evaluate the usage and reimbursement trends in evaluation and management claims filed by radiologists in the outpatient setting among Medicare beneficiaries from 2010 to 2018.

Methods/Materials

Medicare claims from 2010 to 2018 were extracted from the Medicare Part B Physician/Supplier Procedure Summary Master File using the CPT codes for new and existing outpatient visits. Claims were filtered using the provider codes for radiology and interventional radiology. Inpatient hospital claims were excluded. Total volume, payment, and denied claims were analyzed in aggregate and by delivery setting.

Results

Total allowed outpatient E&M claims increased from 2010 to 2018 by 7.6% from 242,201 to 260,621. The volume of new patient visits increased by 17.7% from 59,096 to 69,582 and the volume of established patient visits increased by 4.3% from 183,105 to 191,039.

While a substantial volume decrease was noted in level 1 new patient visits (53.8%), this was overshadowed by large increases in level 3 and 4 new patient visits (39.9% and 42.1% respectively). A similar trend was seen for established patient visits with a 33.3% and 47.0% decrease in level 1 and 2 encounters, and a 54.3% and 46.3% increase in level 4 and 5 encounters. Most of these visits continue to occur in the office setting followed by on-campus outpatient hospitals. Average payment per encounter trended up from \$53.08 to \$64.73.

Conclusions

Outpatient evaluation and management claims from 2010 to 2018 increased by 7.6% from 242,201 to 260,621 driven largely by high growth in level 3 and 4 new patient visits and level 4 and 5 follow-up visits. Growth in these services overcame decreasing volumes in more straightforward visits. The increase in outpatient E&M services suggests a focus on clinical growth by interventional radiology as a specialty. It also serves as an opportunity for revenue growth in the setting of more recent increases in payment for E&M services proposed by Centers for Medicare and Medicaid Services (CMS).

Introduction

- In recent years, there has been a greater focus on interventional radiology outpatient clinic¹⁻³.
- Outpatient clinic can drive more referrals and increase the volume and complexity of procedural services⁴.
- In the setting of decreasing reimbursement for many image-guided procedures and recent changes in E&M codes resulting in higher reimbursement, a focus on outpatient clinic can help increase revenue for interventional radiology practices⁵⁻⁷.
- Trends in outpatient E&M services have not been comprehensively studied since 2009⁴.

Materials & Methods

This study was determined to be exempt from review by the institutional review board as only publicly available summary data without identifiable patient elements was used. Medicare Fee For Service claims from 2010 to 2018 were extracted from the Medicare Part B Physician/Supplier Procedure Summary Master File using the CPT codes listed in Table 1 for select evaluation and management (E&M) services including new and existing patient visits. The data was filtered to include claims only from radiologists and interventional radiologists and to exclude the inpatient hospital place of service.

The number of paid services was calculated by subtracting the denied services from the submitted services. The Medicare total professional component was collected from the "NCH payment amount" in the PPSMF for each CPT code. Utilization rates, reimbursements, and service setting were analyzed in aggregate and by complexity. Percentage of denied claims were analyzed for the aggregate.

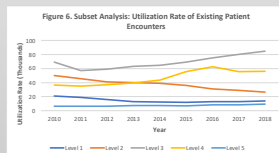
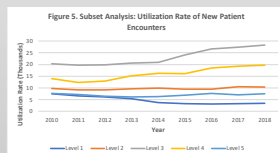
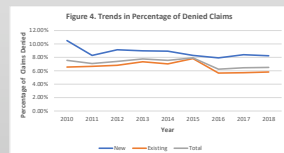
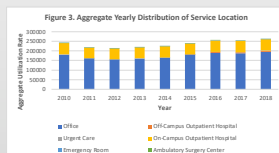
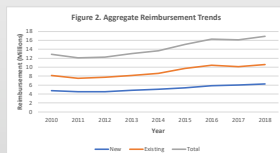
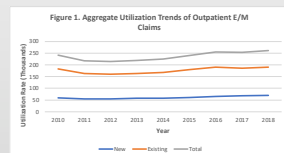
Table 1. New Patient Encounters

Level	Complexity	CPT Code
1	Self-Limited or Minor	99201
2	Low-Moderate	99202
3	Low-Moderate	99203
4	Moderate-High	99204
5	Moderate-High	99205

Table 1. Subsequent Patient Encounters

Level	Complexity	CPT Code
1	Self-Limited or Minor	99211
2	Self-limited or Minor	99212
3	Low-Moderate	99213
4	Moderate-High	99214
5	Moderate-High	99215

Results



Conclusion

- 7.6% increase in outpatient evaluation and management utilization rates from 2010 to 2018 driven by increased level 3 and 4 new and existing patient visits.
- New patient level 3 visits increased by 39.9% from 20,288 to 28,376 and existing patient level 3 visits increased by 22.4% from 69,142 to 84,682.
- New patient level 4 visits increased by 42.1% from 13,919 to 19,784 and existing patient level 4 visits increased by 54.3% from 36,450 to 56,254.
- Aggregate percentage of denied claims marginally decreased by 1.08%.
- Most outpatient E/M claims were successfully filled in the office setting which also saw the largest total increase over the 8-year time period.
- The largest percentage increase in claims filed was seen from providers in off-campus outpatient hospitals increasing from 0 in 2014 to 5,260 in 2018.

Limitations

- Medicare dataset so population is confined to elderly patients who may be more comorbid and thus likely to be treated as an inpatient.
- Dataset excludes evaluation and management of younger patients who may undergo elective procedures ie. uterine fibroid embolization weighting the data toward more comorbid patients.

References

- Brunner MC, Durham JD, Lewis CA, McClenny TE. Strategic initiatives in interventional radiology: the clinical imperative. *J Vasc Interv Radiol.* 2003 Sep;14(9 Pt 1):1099-101.
- Duszak R Jr, Mabry MR. Clinical services in interventional radiology: results from the national Medicare database and a Society of Interventional Radiology membership survey. *J Vasc Interv Radiol.* 2003 Jan;14(1):75-81.
- Khan N, Murphy TP, Soares GM, Zahir IS. Clinical services provided by interventional radiologists to Medicare beneficiaries in the United States, 2000-2003. *J Vasc Interv Radiol.* 2005 Dec;16(12):1753-7.
- Kwan SW, Valji K. Interventional radiologists' involvement in evaluation and management services and association with practice characteristics. *J Vasc Interv Radiol.* 2012 Jul;23(7):887-92.
- Lindquaster WS, Hawkins CM, Dhangan R. Reductions in Reimbursement and Relative Value Units for Interventional Radiology Procedures: Trends from 2011 to 2021 Compared with Those for Other Physician Specialties. *J Vasc Interv Radiol.* 2022 Aug;33(8):972-977.
- Schartz D, Young E. Medicare Reimbursement Trends for Interventional Radiology Procedures: 2012 to 2020. *J Vasc Interv Radiol.* 2021 Mar;32(3):447-452. doi: 10.1016/j.jvir.2020.12.007. Epub 2021 Jan 14.
- Centers for Medicare & Medicaid Services physician fee schedule look up tool. Available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PFSlookup/>. Accessed 20th March 2023.