

Coding for High-Complexity Office Visits on the Rise

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Key Takeaways

- Outpatient evaluation and management (E/M) visits, also known as office visits, are billed by providers with a complexity of 1-5, based on the level of medical decision making required or time associated with the visit.
- In 2006, 25 percent of outpatient E/M visits were coded as high-complexity (level 4 or 5), and that percentage steadily increased over time to 38 percent of visits in 2022. This increase was consistent across age categories, geographic regions, insurance types, and most provider specialties.
- High-complexity coding results in higher costs to both patients and payers.

Overview

When a person goes to the doctor for an outpatient Evaluation and Management (E/M) visit, also known as an office visit, a provider will code the visit at a level of complexity based on time spent with the patient and/or medical decision making on behalf of the patient.

That code, in turn, affects the amount paid to the provider for the visit. Prior studies have shown that coding for higher intensity E/M visits has increased over time.^{1,2} This report analyzes trends in the documented complexity of outpatient E/M visits from 2006 to 2022 and estimates the added overall and patient-paid costs due to the increase in coding of higher-complexity visits across time.



This report estimates added costs from the increase in coding of higher-complexity visits.

Background

Healthcare providers bill payers using Current Procedural Terminology (CPT®) codes that document the services they provide. One type of such services is an E/M visit, which includes outpatient office visits—either in-person, online/virtual, or at home—as well as discussions with patients in inpatient and emergency settings.

Outpatient E/M visits can be for a wellness visit or can be problem-oriented with a focus on an acute or chronic condition. E/M services do not include performing procedures such as diagnostic tests, radiology, surgeries, or therapies.

E/M visits are coded with a complexity from level 1, indicating a short face-to-face interaction with a patient and minimal or no medical decision making, to level 5, indicating a longer interaction with a patient and/or complex medical decision making with a high risk of morbidity. For example, a 99203 (Level 3) CPT code would indicate moderate medical decision making for a new patient taking the provider 30 to 44 minutes in time regarding the care of the patient. Higher E/M levels coded on claims correspond with higher visit complexity and therefore correspond to higher costs for payers. In cases where the patient pays a deductible or coinsurance (compared to a flat copay), higher level codes may result in higher costs for the patient as well.

Prior studies using data from commercially insured and Medicare patients have pointed to an increase in coding for higher level E/M visits in recent years, in both outpatient and emergency room settings. In particular, a report by the Kaiser Family Foundation demonstrated an increase in level 4 or 5 E/M visits from 22 percent in 2004 to 43 percent in 2021 among commercially insured patients in physician office, urgent care, and emergency department settings.³ Further, a study of Medicare patients demonstrated an increase in higher-intensity coding for emergency



This report examines E/M visits from 2006-2022 across multiple insurance types.

department visits, from 46 percent in 2006 to 58 percent in 2012.⁴ These and other analyses, including from the U.S. Department of Health and Human Services,⁵ demonstrate that higher complexity claims growing at a faster rate than lower complexity claims is one driver of increased healthcare costs.

This report analyzes trends in the documented complexity of outpatient E/M visits from 2006 to 2022 and estimates the added overall and patient costs due to the increase in coding of higher intensity visits over time. This paper is unique in that it includes commercial, Medicare, and Medicaid claims, giving the perspective of a payer that has members in all lines of business. This also better represents the makeup of the population of U.S. patients in a multi-payer system.

Methods

Study population. This study used a 25 percent random sample of Elevance Health affiliated plan members with at least one claim for an outpatient E/M visit from 2006 to 2022. The final study population included approximately 14.8 million commercially insured members, 0.5 million Medicare Advantage members, and 4.3 million Medicaid beneficiaries.

Visit identification. One random outpatient E/M visit was identified for each member in the sample. New patient visits were identified using CPT codes 99201-99205 and established patient visits using CPT codes 99211-99215. Visits relating to COVID-19 testing were excluded.

Complexity level. The last digit of each code corresponds to the complexity level. For the purposes of this paper, high-complexity visits were defined as levels 4 or 5, and low-complexity visits as levels 1, 2, or 3. In 2021, CPT code 99201 was removed by the American Medical Association (AMA) as a useable code, so level 1 and 2 visits were combined in this paper into one category to be consistent across years.

Patient and visit characteristics. This analysis identified the patient's age, region of residence, insurance type (commercial, Medicare Advantage, Medicaid), if they were a new or established patient, provider specialty type, and primary diagnosis at the time of the visit. Visits with a primary diagnosis of certain common conditions—including acne, actinic keratosis, eczema, skin cancer (non-melanoma), benign neoplasm, psoriasis, anxiety, depression, pharyngitis, sinusitis, arrhythmia, hypertension, vascular disease, Crohn's disease, irritable bowel syndrome, joint disorders, and dorsalgia (back pain)—were flagged; these diagnoses were identified with the 10th revision of the International Classification of Diseases (ICD-10) which are included on the E/M claim to identify the chief complaint or diagnosis of the patient.

Trends analysis. The percentage of visits for each complexity level was calculated yearly across the study timeframe. Trends in high-complexity visits were also analyzed by the patient and visit characteristics above.

Cost analysis. A cost analysis was conducted to determine the added overall cost and out-of-pocket cost to individuals based on the changes in coding level from 2006 to 2022. This analysis used the average prices of visits at each complexity level in 2022 to project what 2022 costs would have been if the distribution of complexity levels remained the same as it had been in 2006. Using 2022 prices isolates the cost impact of E/M coding changes rather than inflation. This analysis capped costs at the highest 1 percent to reduce the influence of outliers.

Findings

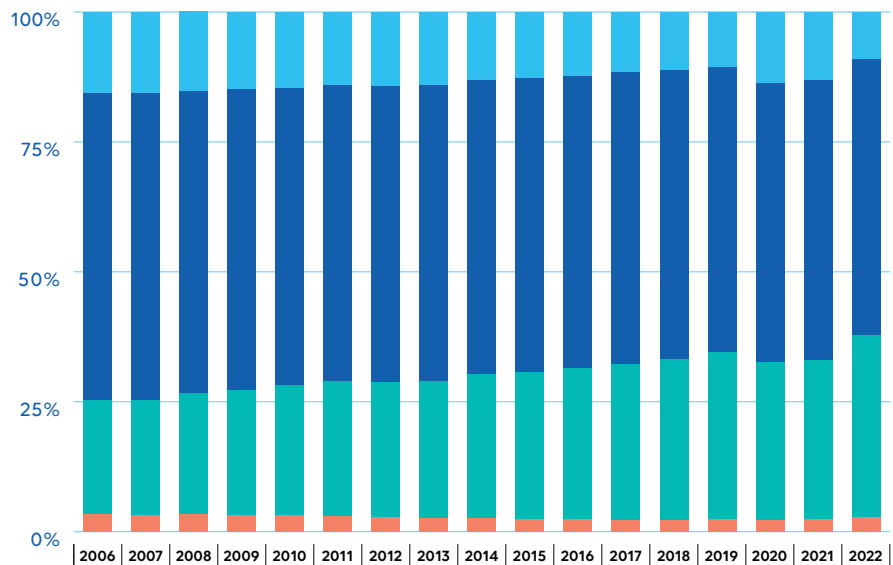
Trends Analysis

Between 2006 and 2022, there were steady increases in the proportion of high-complexity outpatient E/M visits. (Figure 1)

In 2006, 25 percent of E/M visits were level 4/5, increasing to 38 percent of all visits in 2022. This represents a 13-percentage point increase in level 4/5 visits over the course of 16 years. This increase was due to increases in level 4 visits, as the proportion of level 5 visits remained relatively stable. One exception to the steady incline in level 4/5 visits was a decline in 2020 and 2021, coinciding with the COVID-19 pandemic, although they rebounded to the original trend in 2022.

Figure 1
Percentage of Visits by Complexity Level, All Insurance Types

- 1/2
- 3
- 4
- 5



Additionally, Figures 2-4 demonstrate similar patterns across all types of insurance coverage. Over time, there were consistent increases in level 4/5 visits regardless of insurance type. The most extreme result is that over half of Medicare Advantage outpatient E/M visits were coded at level 4/5 in 2022. In comparison, the share was 31 percent in 2006.

Figure 2
Percentage of Visits by Complexity Level, Commercial

- 1/2
- 3
- 4
- 5

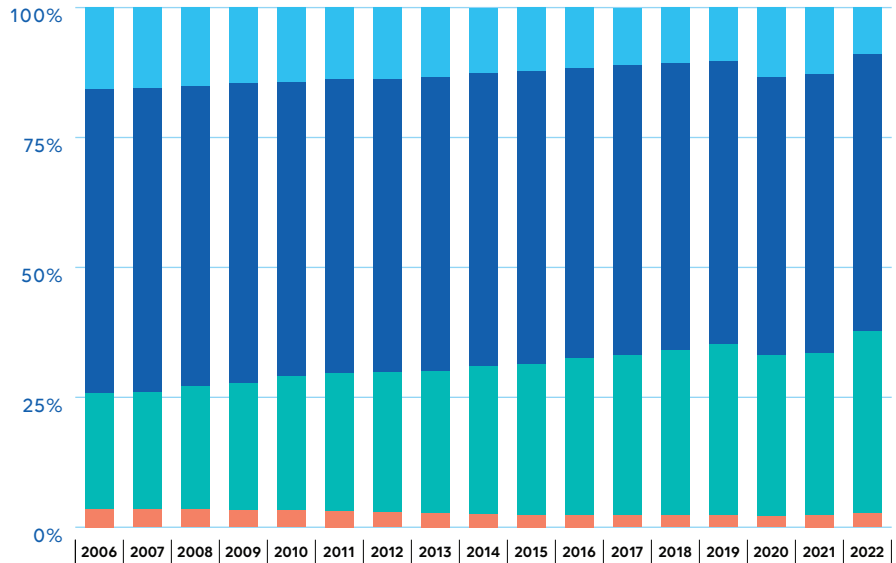


Figure 3
Percentage of Visits by Complexity Level, Medicare Advantage

- 1/2
- 3
- 4
- 5

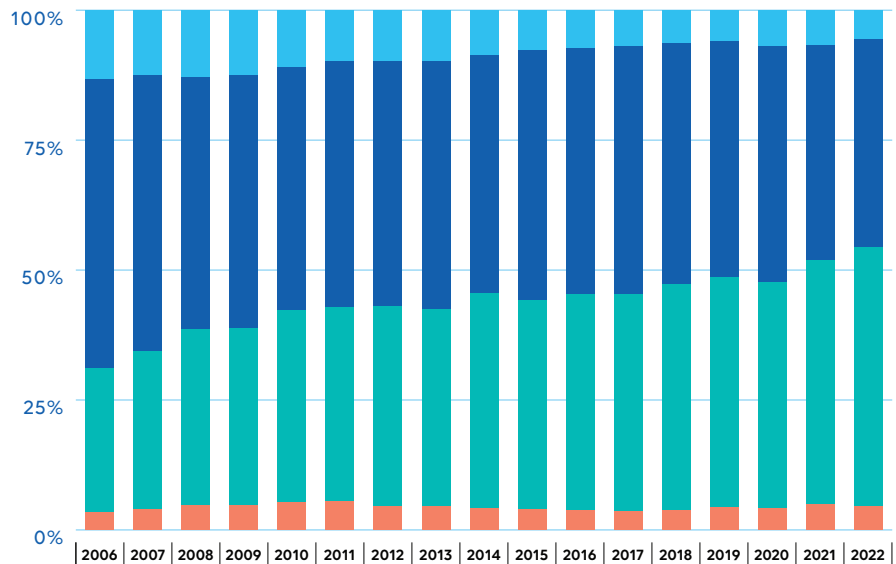
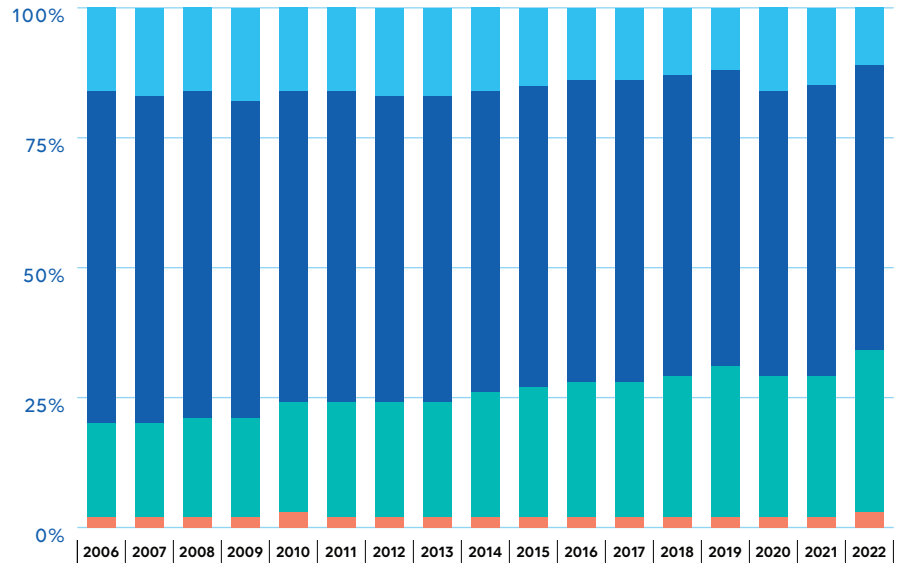


Figure 4

Percentage of Visits by Complexity Level, Medicaid

- 1/2
- 3
- 4
- 5

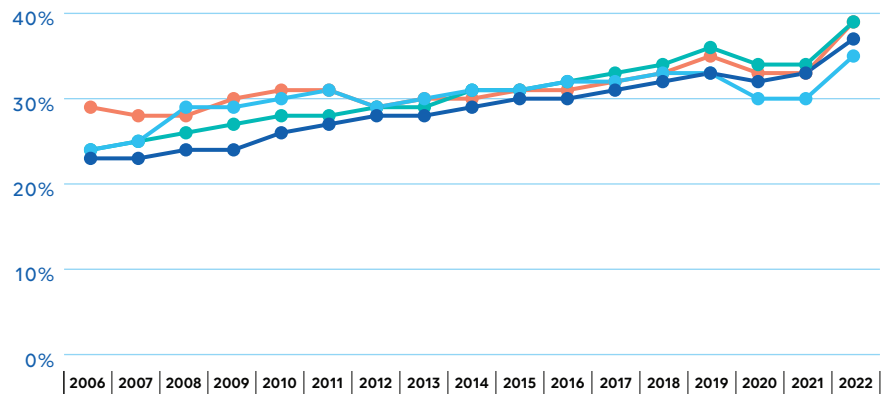


Region. Figure 5 shows regional patterns in the usage of level 4/5 codes. Consistently, all regions experienced an increase in the proportion of level 4/5 codes over time. Though all regions had a decrease in level 4/5 visits during 2020 and 2021, they all experienced a sharp increase in level 4/5 visits going into 2022.

Figure 5

Percentage of Level 4/5 Visits by Region, All Insurance Types

- Northeast
- Midwest
- South
- West

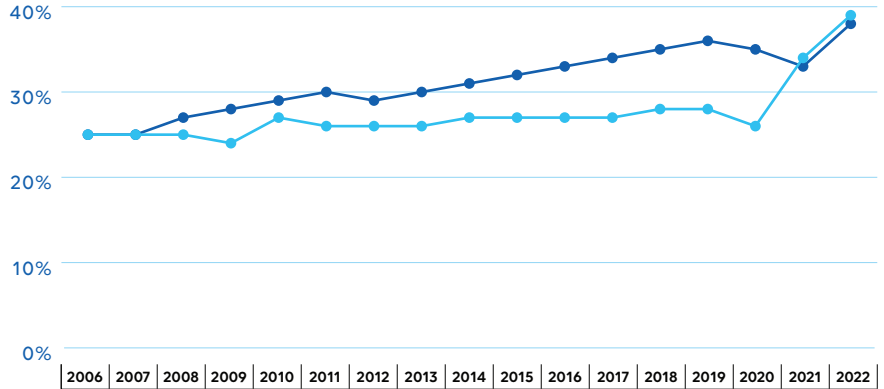


New vs. Established Patients. Visits for new patients versus established patients were analyzed separately. (Figure 6) While there was a steady increase in the percentage of level 4/5 visits over time in established patients, the trend was flatter in new patients until 2021, when there was a sharp increase.

Figure 6

Percentage of Level 4/5 Visits by New vs. Established Patients, All Insurance Types

■ New
■ Established

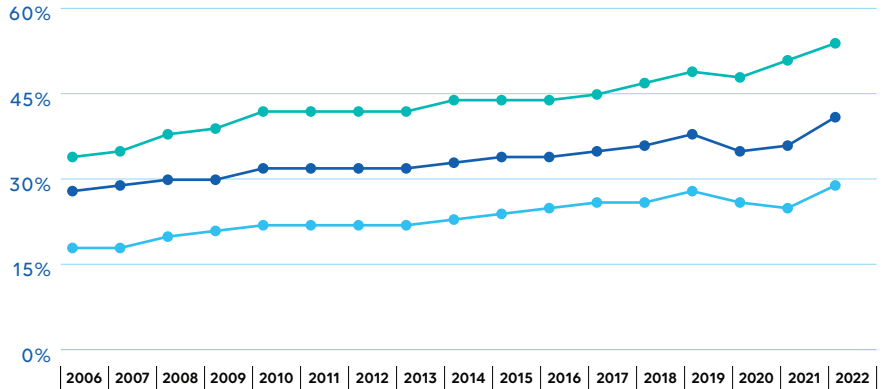


Age. By age, there are similar patterns to the overall trend in level 4/5 visits. (Figure 7) Throughout the study period, there were increasing rates of high-complexity codes across all age groups. Given that people could develop more medically complex conditions as they age, seniors (65+) have more level 4/5 codes than younger cohorts (22-64 and 21 and below). Regardless of age group, there was a decrease in the use of level 4/5 codes in 2020 followed by a return to an increasing trend by 2022.

Figure 7

Percentage of Level 4/5 Visits by Age, All Insurance Types

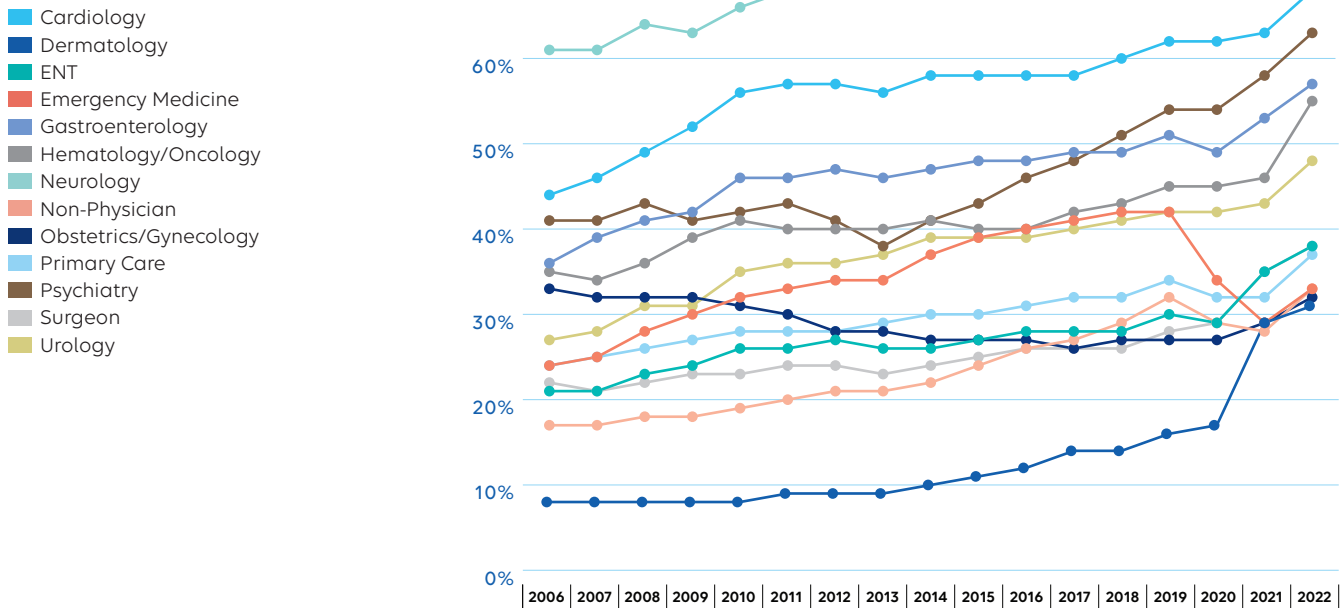
■ 21 and Below
■ 22-64
■ 65 and Above



Provider Specialty. Trends in the percentage of level 4/5 visits were examined by 11 provider specialties. (Figure 8) While there was a wide range in the percentage of visits coded as high-complexity among the specialties, most of the specialties had a relatively steady increase in high-complexity visits over time, with some exceptions.

From 2006 to 2019, there was an upward trend in high-complexity visits in all specialties except for obstetrics and gynecology (OB/GYN), where the percentage of level 4/5 visits decreased from 33 percent in 2006 to 27 percent in 2017. Dermatologists had the lowest percentage of high-complexity visits among the selected specialties and had a gradual increase in the percentage over time, until 2021 when they experienced a sharp increase; in 2019, only 16 percent of dermatology visits were level 4/5, compared to 31 percent in 2022. Emergency medicine physicians had the largest drop in percentage of high-complexity visits in 2020 and 2021, and only partially rebounded in 2022.

Figure 8
Percentage of Level 4/5 Visits
by Specialty,
All Insurance Types



Primary Diagnosis. Trends in coding for specific primary diagnoses were explored, to a) better understand the trends observed by specialty, and b) understand if the overall increasing trend might be due to shifting case mixes, rather than increasing complexity for the same diagnosis.

Figure 9 shows trends for six common dermatologic conditions. There were large increases in the percentage of level 4/5 visits in 2021 and 2022 for acne, eczema, and psoriasis, which were the key drivers of the increase in the percentage of level 4/5 codes for dermatologic conditions.

There was also a notable overall increase in level 4/5 codes being used for anxiety and depression (Figure 10), with an approximately 30 percentage point increase from 2006 to 2022, though with small decreases in the mid-2010's for depression and during the COVID-19 pandemic in 2020 for both conditions. This follows a similar pattern in the proportion of level 4/5 visits seen by psychiatrists over the study period.

Figure 11 represents a higher percentage of level 4/5 codes over time for upper respiratory infections such as pharyngitis and sinusitis until the start of the COVID-19 pandemic, when the percentage of visits coded as high-complexity dropped dramatically. Many visits for pharyngitis and sinusitis are seen by primary care and emergency medicine physicians as well as non-physician clinicians, which may be related to the drop in high-complexity visits among these specialties during the pandemic.

Other specific conditions are shown below and generally demonstrate a steady rise in the use of level 4/5 codes. (Figures 12-14)

Percentage of High-Complexity Visits by Primary Diagnosis, All Insurance Types

Figure 9
Dermatologic

- Acne
- Actinic Keratosis
- Benign Neoplasm
- Eczema
- Psoriasis
- Skin Cancer

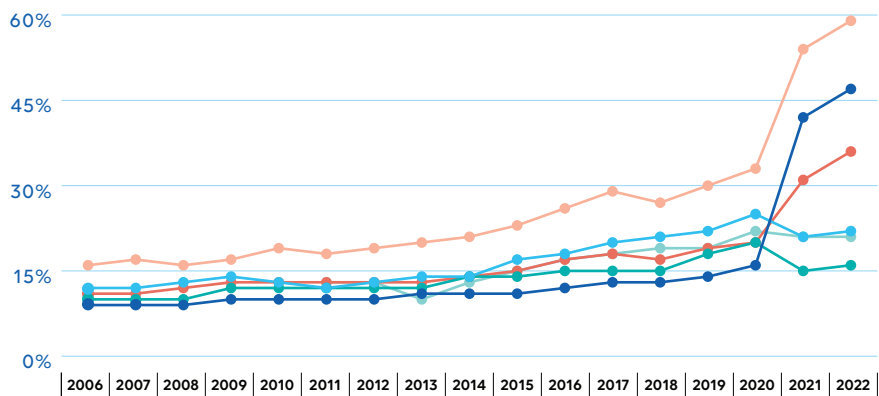


Figure 10
Mental Health

■ Anxiety
■ Depression

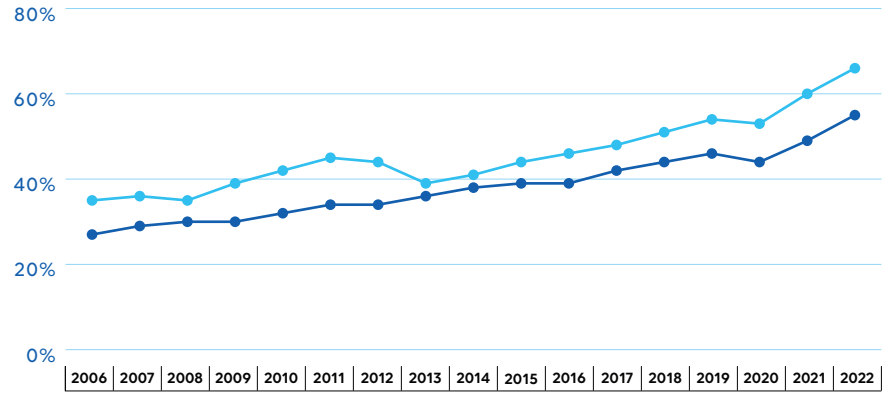


Figure 11
Upper Respiratory

■ Pharyngitis
■ Sinusitis

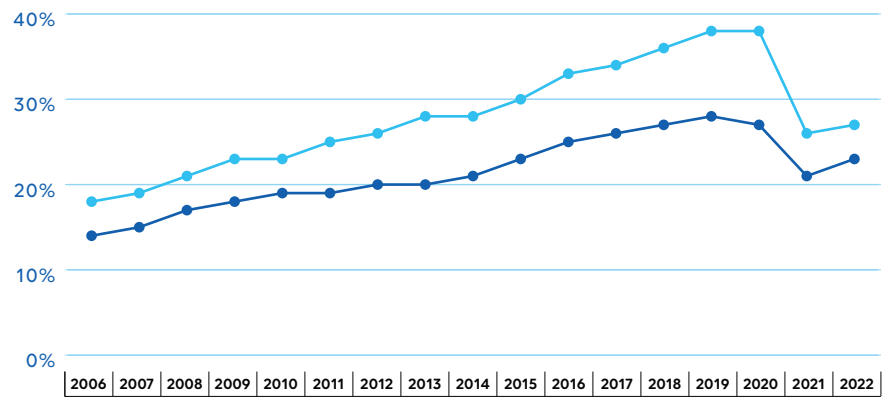


Figure 12
Cardiovascular

■ Arrhythmia
■ Hypertension
■ Vascular Disease

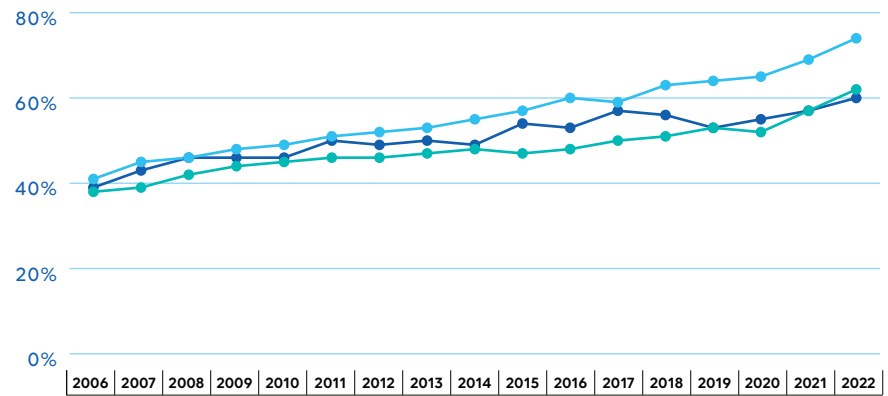


Figure 13

Gastrointestinal

- Crohn's Disease
- Irritable Bowel Syndrome

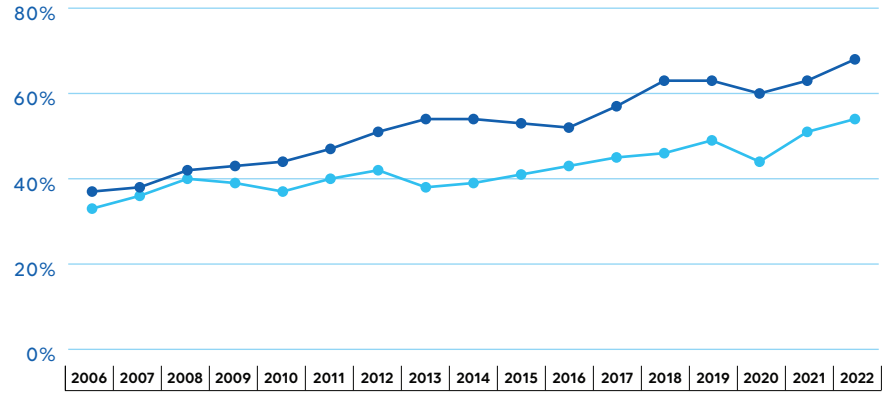
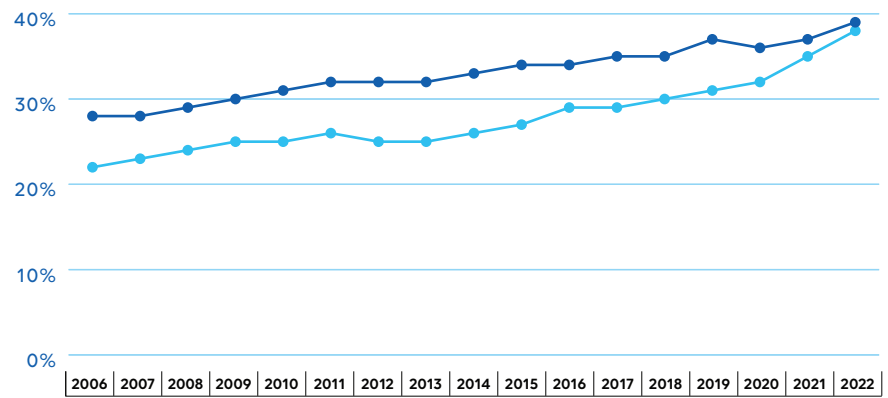


Figure 14

Musculoskeletal

- Dorsalgia
- Joint Disorders



Cost Analysis

Using 2022 visit prices, the following cost projections estimate the impact that increases in coding complexity have had on the average cost of a visit.

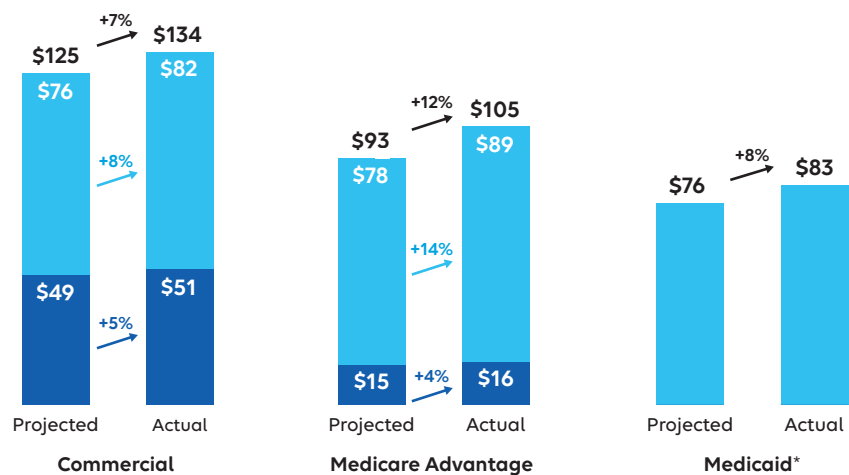
These projections were performed by calculating what the average cost of an outpatient E/M visit would be in 2022 if the distribution of coding complexities remained at 2006 levels (see Figures 1–4 for distribution by level in 2006 versus 2022).

Among commercial members, the average cost of a visit would have been \$125 instead of \$134, representing a 7 percent increase in cost per visit due to increasing visit complexity levels alone (i.e., regardless of inflation). (Figure 15) The out-of-pocket costs for individuals would have been \$49 instead of \$51, a 5 percent increase. In the Medicare Advantage population, the average cost of a visit increased by 12 percent—from \$93 to \$105—due to increased coding complexity. The share of the cost borne by Medicare Advantage members increased by 4 percent. Finally, in the Medicaid population, the cost of an average E/M visit would have been \$76, rather than the actual \$83, an 8 percent increase. (Cost sharing for Medicaid patients was negligible.)

This analysis demonstrates that shifts in the coding of visit complexity have resulted in increased overall and individual paid costs for outpatient E/M visits across types of insurance coverage.

Figure 15
2022 Projected and Actual Costs

■ Plan Paid
■ Patient Paid



*Patient paid costs were negligible for Medicaid and not included.

Note. Projected costs represent 2022 costs if E/M levels remained at their 2006 distributions. The black arrows represent the percent increase in total cost (patient paid plus plan paid), while the dark blue arrows represent the percent increase in patient paid costs and the light blue arrows represent the percent increase in plan paid costs.

Discussion

High-complexity coding for outpatient E/M visits steadily increased from 2006 to 2022 for patients of all ages, of all insurance types, and in all regions of the country.

While there was some variation, the increase was observed across almost all provider specialties. This increase is one factor contributing to higher healthcare costs, as the increase in E/M complexity levels alone resulted in a 7 to 12 percent increase in the total cost of outpatient office visits and a 4 to 5 percent increase in patient paid costs for commercial and Medicare Advantage patients.



New CMS rules on coding, in effect in 2021, may have driven trends in dermatology E/M visits.

This analysis supports previously reported trends of increasing high-complexity level coding in commercially insured patients,⁶ and further confirms that the increase in outpatient E/M coding level is occurring for Medicare Advantage and Medicaid beneficiaries as well.

One interesting finding is the changes in coding trends during the COVID-19 pandemic. This analysis shows that the decline in high-complexity coding in 2020 and 2021 is most pronounced for emergency medicine physicians (practicing in an outpatient, non-emergency department setting, such as an urgent care center) and non-physician clinicians (e.g., physician assistants, nurse practitioners, therapists); for existing patients (as opposed to new patients) in 2020 only; and among the diagnoses evaluated, for pharyngitis and sinusitis. This may suggest that visits for acute respiratory illness increased during this time, but potentially with less time per patient. Conversely, there is an increase in the use of level 4/5 in 2020-2021 in visits relating to select dermatologic conditions, as well as joint disorders and arrhythmias.

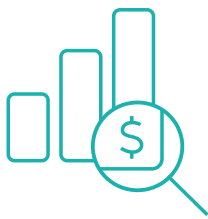
Another relevant change that occurred late in the study timeframe was the new Centers for Medicare & Medicaid Services (CMS) rules on coding E/M visits that went into effect on January 1, 2021, intended to simplify the coding process.⁷ These rules eliminated patient history and physical exam as elements for code selection, modified criteria for medical decision making, and removed CPT code 99201, among other changes. Despite this, however, there were no drastic changes in E/M levels in 2021 after the new rules were implemented, but rather a beginning of a rebound from 2020 for most categories examined.

However, beginning in 2021, there were dramatic increases in dermatology visits for levels 4/5. Recent guidance for coding dermatologic conditions—which stemmed from the CMS rule changes—direct dermatologists to code at higher intensities for office visits; in particular, when a dermatologist discusses active prescription management with a patient, the new coding guidance suggests that level 4 is appropriate. This is the likely

reason for the sudden increase in high-complexity coding for acne, psoriasis, and eczema that started in 2021. This interpretation is also supported by previous literature that marks an increase in level 4 dermatology visits after the 2021 changes.⁸ While this analysis does not show an immediate impact on most other examined specialties, it is possible that more specialties could have coding guidance changes which will alter the proportion of level 4/5 visits. With ever-changing guidance, more research would need to be done in the future on the proportion of level 4/5 codes in each specialty.

Implications and Interventions

Elevance Health is working to address the increase in costs that are a direct result of the increase in coding complexity over time.



If not for health plans' efforts, increases in high-complexity coding might be greater.

One solution in use is Elevance Health's provider initiative for identifying and correcting inaccurate high-complexity coding. Under this program, providers with high frequencies of level 4/5 codes are identified and reimbursement is adjusted to reflect the level consistent with the diagnosis provided. Additional efforts by Elevance Health focus on educating providers on appropriate coding for E/M visits and offering benchmarks to compare their coding practices to their peers. Further, Elevance Health's Special Investigation Unit seeks to identify fraud or abuse in healthcare claims. If not for these efforts, the increases in high-complexity coding may be even greater.

While research is sparse in this area, further analysis could shed light on the reasons behind the increase in higher-cost E/M visits. For instance, future research could explore if the increase in high acuity visits are associated with factors such as increasing patient acuity; advances in technology; changes in CMS, AMA, or other guidelines for coding practices; increased electronic health record documentation; or management of new treatments such as biologics. A better understanding of the factors causing providers to code at higher levels may inform policies or insurer interventions aimed at ensuring accurate coding of E/M visits or establishing new thresholds for high-complexity visit coding to prevent further increases in coded complexity.

Conclusion

Evidence across all insurance types suggests that providers are coding at higher-complexity E/M levels in the outpatient setting than in the past.

While more research needs to be conducted to investigate what is behind this increase in level 4/5 codes, these trends show the importance of health plans' efforts to ensure coding appropriateness. Without such interventions, healthcare costs will rise for all stakeholders.

Endnotes

- ¹ Schwartz, H., et al. (2023, February 27). Outpatient Visits Billed at Increasingly Higher Levels: Implications for Health Costs. Peterson Center on Healthcare – Kaiser Family Foundation: Health System Tracker. Retrieved August 9, 2023, from <https://www.healthsystemtracker.org/brief/outpatient-visits-are-increasingly-billed-at-higher-levels-implications-for-health-costs/>.
- ² Burke, L.G., et al. (2018, January 30). Are Trends in Billing for High-Intensity Emergency Care Explained by Changes in Services Provided in the Emergency Department? An Observational Study among US Medicare Beneficiaries. *BMJ Open*, 8(1). Retrieved August 9, 2023, from <https://doi.org/10.1136/bmjopen-2017-019357>.
- ³ Schwartz, H., et al. (2023, February 27).
- ⁴ Burke, L.G., et al. (2018, January 30).
- ⁵ Office of Inspector General. (2012, May 8). Coding Trends of Medicare Evaluation and Management Services Report. Department of Health and Human Services. Retrieved August 9, 2023, from <https://oig.hhs.gov/oei/reports/oei-04-10-00180.asp>.
- ⁶ Schwartz, H., et al. (2023, February 27).
- ⁷ Self, C., Moore, K., & Church, S. L. (2020, November). The 2021 Office Visit Coding Changes: Putting the Pieces Together. *Family Practice Management*, 27(6), 6–11. Retrieved August 9, 2023, from <https://www.aafp.org/pubs/fpm/issues/2020/1100/p6.html#fpm20201100p6-ut1>.
- ⁸ Tassavor, M., Shah, A., & Ungar, J. (2021, June 21). Dermatology Resident Billing and the Impact of 2021 Evaluation and Management Coding Changes. *Cureus*, 13(6). Retrieved August 9, 2023, from <https://doi.org/10.7759/cureus.15810>.

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