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Reports

Trends in Billing Secure Messages at Ophthalmology Practices across the United States

Many public and private health care payors expanded reimbursement for telemedicine services at the onset of the coronavirus disease 2019 pandemic, including asynchronous communication between patients and clinicians through secure messages (also known as E-visits).[1] Secure messaging systems enable patients to send health care−related questions directly to their physicians and are leveraged by primary care and specialty physicians to provide timely health advice, monitor chronic conditions, and facilitate follow-up care. Secure messaging between patients and clinicians has been associated with improved perceptions of care, including strengthening of the patient−physician relationship and reduction in uncertainty between visits.[2,3] Asynchronous messaging has also been associated with improved clinical outcomes mediated thorough improved self-management and self-efficacy.[4] However, the increasing volume of patient-initiated messages has raised concerns over the potential negative effects of increased time spent responding to asynchronous messages on clinician well-being.[5,6] Increased uncompensated time providing clinical care has been associated with elevated rates of burnout among physicians. Clinical practices may encourage billing for E-visits to provide compensation for clinicians responding to patient messages. However, the patterns in billing for secure messages by ophthalmologists have not been reported and may provide insight into the evolving mechanisms of care delivery within the specialty. This study leverages data from the American Academy of Ophthalmology IRIS Registry (Intelligent Research in Sight) to describe national trends in E-visit billing across ophthalmology practices in the United States.

This cross-sectional study using deidentified electronic health record data from the IRIS Registry (including >70% of ophthalmology practices in the United States) was approved by the Mass General Brigham Institutional Review Board. E-visits are asynchronous, patient-initiated communications with a physician through an online patient portal. We used Current Procedural Terminology (CPT) codes to identify E-visits (CPT, 99421−3) and clinic visits (CPT, 99201−15 and 92002−14) performed between January 2020 and December 2022 as previously described.[1] The E-visit CPT codes used to bill for online digital evaluation and management services that last 5 to 10 minutes, 11 to 20 minutes, or ≥21 minutes of cumulative time for up to 7 days. We excluded claims from nonophthalmology clinicians and those with an unknown specialty. We collected data on the frequency of e-visit codes, the associated International Classification of Diseases diagnosis codes, the subspecialty of the billing physician, and geographic location of the billing provider. We report the monthly number of E-visit claims and number of practices billing E-visits. We describe E-visit billing across ophthalmology subspecialties and identify the most common diagnoses associated with E-visit claims. We report medians and interquartile ranges for continuous variables. Analyses were performed using R, version 4.2.3 (R Foundation, 2023).

This study included 5521 E-visit claims for secure messages from 354 ophthalmology practices. E-visit claims were identified across the United States during the study interval (20.9% South, 14.8% Midwest, 32.8% Northeast, and 31.5% West census region). The most frequently used CPT codes for E-visits were 99421 (5−10 minutes; n = 2379; 42.9%), 99422 (11−20 minutes; n = 2081; 37.6%), and 99423 (≥21 minutes; n = 1079; 19.5%). Monthly E-visit claims peaked in April 2020 and declined thereafter (median [interquartile range]: 2020, 200 [139−409] claims per month; 2021, 37 [21−85] claims per month; 2022, 21 [19−28] claims per month; Fig 1). Similarly, the number of practices billing for E-visits peaked in April 2020 and declined over the following 2 years (median [interquartile range]: 2020, 67 [47−114] practices; 2021, 18 [14−29] practices; 2022, 14 [13−15] practices). The ophthalmology specialties most frequently using E-visits for secure messages included comprehensive (n = 2797; 50.6%), retina (n = 820; 14.8%), and glaucoma (n = 713; 12.9%; Fig E2, available at http://aaojournal.org). The most common diagnosis codes associated with E-visit codes were cataract (n = 1227; 22.2%), dry eye (n = 1033; 18.7%), and glaucoma (n = 896; 16.2%).

E-visit billing for secure messages by ophthalmologists peaked at the start of the coronavirus disease 2019 pandemic and has declined since. Other medical specialties have demonstrated evidence of a rebound in E-visit billing since mid-2021;[1] however, this has not been observed in ophthalmology practices that participate in the IRIS Registry. Several factors may contribute to the low utilization of E-visit billing among ophthalmologists including lack of awareness of E-visit billing codes, uncertainty in reimbursement for asynchronous services, and concerns regarding negative patient perceptions for billing messages.[7] Compared with other medical specialties, ophthalmologists may rely more heavily on examination findings that cannot be conveyed effectively through asynchronous mechanisms, resulting in inclination toward in-person interactions.

Controversy exists on the use of E-visit billing for secure messages. Proponents argue that asynchronous patient communication offers a convenient mechanism for patients to interact with their physician and improves health care engagement. Billing for asynchronous patient communication may offer clinicians compensation for an increasingly time-consuming clinical responsibility and may provide practices with an additional source of revenue.[1] However, there are concerns that E-visit billing may discourage patient-initiated messages and reduce overall communication between patients and clinicians.[2] Communication hesitancy may disproportionately affect individuals with health insurance plans that may not cover E-visit services or those with high deductible plans.

This study has several limitations. Certain types of practices, such as academic medical centers, may be underrepresented in the registry, limiting the generalizability of the results. Miscoding may exist, given the recent introduction of many telehealth service-related billing codes. The registry does not contain payment data, which precludes further investigation into financial factors driving billing practices. Further

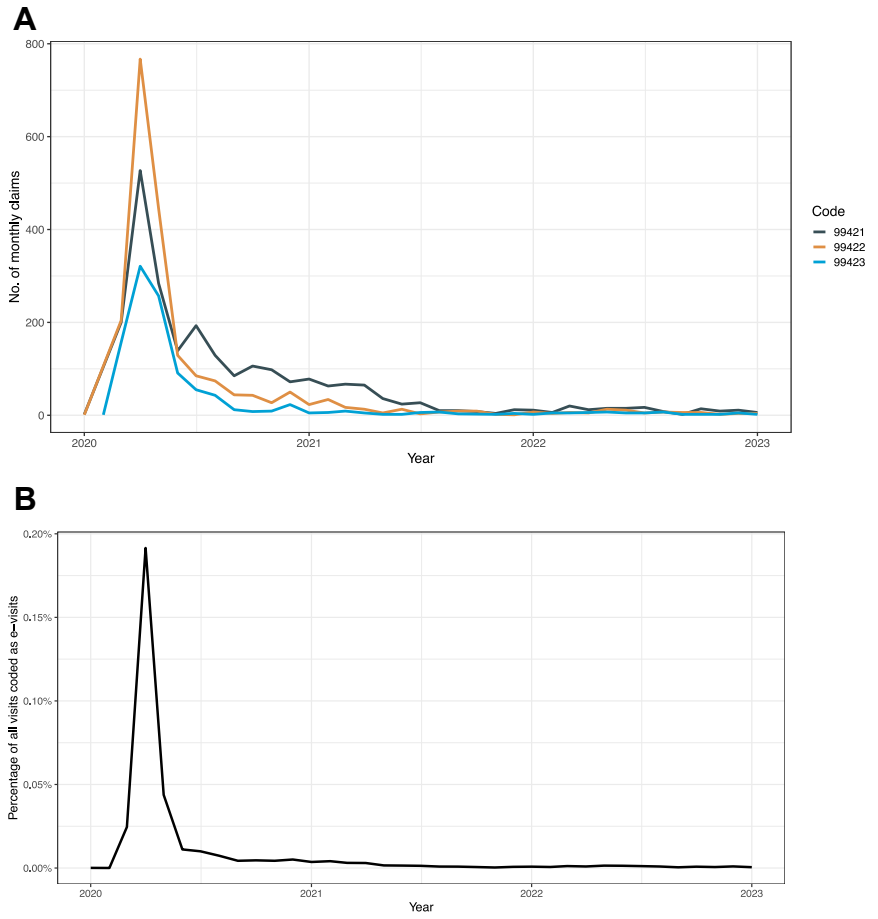

Figure 1. Monthly E-visit billing claims for secure messages by ophthalmologists participating in the IRIS Registry. **(A)** The number of E-visit claims and **(B)** the percentage of all visits coded as E-visits. IRIS = Intelligent Research in Sight.

work is needed to understand trends in the volume of asynchronous patient communications encountered by ophthalmology practices.

Results from this registry-based analysis suggest that although ophthalmologists made use of E-visit codes during the coronavirus disease 2019 pandemic, there was no evidence of return to use of this code in the postpandemic era. Our findings in this quantitative analysis of trends in E-visit billing support the need for additional qualitative research into asynchronous communication between patients and physicians to better understand the factors driving communication mechanisms in ophthalmology practices. Future efforts should aim to provide the benefits of secure messaging to patients while supporting clinician well-being and ensuring equitable access to care.

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Abbreviations and Acronyms:
CPT = Current Procedural Terminology; **IRIS** = Intelligent Research in Sight.

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