

Telehealth Visits Frequently Billed at Lower Level of Service Than Office Visits

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Key Findings:

- For both primary and specialty care, telehealth visits are more frequently coded with a lower level-of-service billing code than in-person office visits of the same specialty.

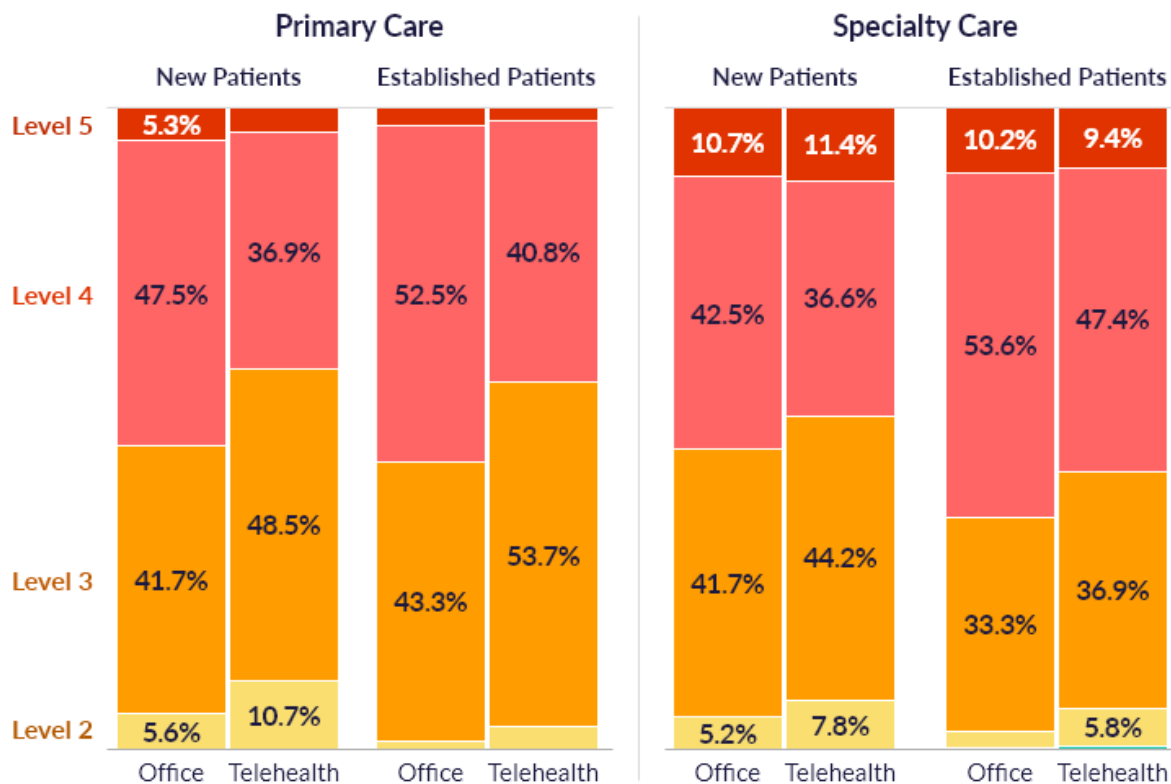
Some studies have suggested that telehealth visits are more often used for chronic disease management, existing patient follow-up, and medication management, which are typically considered less complex visits than new patient visits or visits that require a physical assessment.¹

To better understand the level of care provided through telehealth versus office visits, we evaluated the level-of-service (LOS) billing codes for 1,313,724 telehealth visits and 5,254,896 office visits from January 1, 2022, through June 30, 2023. Higher LOS codes represent more complex patient encounters, with LOS 1 being the least complex and LOS 5 the most complex.² We matched patients in the telehealth cohort to patients in the office visit cohort by age, sex, race, ethnicity, social vulnerability index (SVI), census region, rural or urban area, specialty, chief complaint, and whether the patient was a new or established patient.

For primary care, we found that across both telehealth and office visits, visits coded with an LOS of 3 or 4 were the most common. However, more than half (53.7%) of primary care telehealth visits for established patients were coded at LOS 3 compared to 43.3% of primary care office visits. Conversely, 40.8% of primary care telehealth visits were coded at LOS 4, while more than half (52.5%) of primary care office visits for established patients were coded at LOS 4, as shown in Figure 1.

For specialty care, we found that both telehealth and office visits for established patients were coded at LOS 4 most frequently. Our analysis found 64.1% of specialty office visits were coded at LOS 4 or 5, compared to 56.8% of specialty telehealth visits. We saw similar trends in new patient telehealth and office visits for both primary and specialty care.

Level-of-Service Codes for Telehealth and Office Visits by Type of Care



"Level-of-Service Codes for Telehealth and Office Visits by Type of Care," 2023. EpicResearch.org

Figure 1. Proportion of telehealth and office visits with each LOS billing code stratified by established or new patient and primary or specialty care.

Telehealth visits were, on average, consistently billed at a lower level of service than office visits of the same type, with one exception. New patient specialty telehealth visits were billed at LOS 5 slightly more frequently than office visits of the same type. However, patients might self-select into an in-person office visit if they feel they need a higher level of care, or the proximity of additional tests, services, and providers in an office setting might help a provider facilitate additional assessment that might increase the level of service provided during the visit. Additional research is needed to assess whether these or other factors might contribute to these differences.

These data come from Cosmos, a HIPAA-defined Limited Data Set of more than 214 million patients from 218 Epic organizations including 1,235 hospitals and more than 26,800 clinics, serving patients in all 50 states and Lebanon. This study was completed by two teams that worked independently, each composed of a clinician and research scientists. The two teams came to similar conclusions. Graphics by Brian Olson.

References

1. Ward K, Vagholkar S, Sakur F, Khatri NN, Lau AYS. Visit Types in Primary Care with Telehealth Use During the COVID-19 Pandemic: Systematic Review. *JMIR Med Inform.* 2022;10(11):e40469. Published 2022 Nov 28. doi:10.2196/40469
2. American Medical Association. Evaluation and Management (E/M) Service Guidelines. <https://www.ama-assn.org/system/files/2023-e-m-descriptors-guidelines.pdf>. Accessed August 11, 2023.

Data Definitions

Term	Definition
Study period	1/1/2022 - 6/30/2023
Study population	Telehealth or office visit encounters that have a billing code in the 99201-99215 range, that do not have a prior encounter in the same department specialty in the 90 days before the encounter, and that had a chief complaint documented
Exposures	<p>Telehealth encounter - any encounters of types:</p> <ul style="list-style-type: none"> • Telemedicine • E-Visit • E-Consult • Telephone with a CPT billing code • Office Visit with a CPT billing code of 99441, 99442, or 99443 • Appointment with a CPT billing code of 99441, 99442, or 99443 <p>Office visit encounter</p> <ul style="list-style-type: none"> • Encounters with a type of Office Visit or Appointment unless the encounter has a CPT billing code 99441, 99442, or 99443
Outcomes	<p>Encounter associated billing codes:</p> <ul style="list-style-type: none"> • For new patients: <ul style="list-style-type: none"> ○ 99201-99205 ○ Higher last digit is more severe • For returning patients <ul style="list-style-type: none"> ○ 99211-99215 ○ Higher last digit is more severe
Patient Matching	<p>Chief complaint Department specialty grouper Race/Ethnicity Census Region Sex Age SVI</p> <ul style="list-style-type: none"> • Quartile <p>RUCA</p> <ul style="list-style-type: none"> • Rural-Urban <p>New vs. returning patient</p>
Primary Care Encounter	An encounter with a department specialty of one of the following: Adolescent Medicine, Adult Health, Adult Medicine, Ambulatory Care, Chronic Care, Clinical Child & Adolescent, Developmental, Developmental and Behavioral Pediatrics, Family Medicine, Federally Qualified Health Center (FQHC), General Care, General Internal Medicine, General Practice, Internal Medicine, Internist, Medical, Medical Clinic, Pediatric Internal Medicine, Pediatrics, Physician's Office, Preventative Medicine, or Primary Care
Specialty Care Encounter	An encounter with a department specialty of one of the following: Addiction Medicine, Addiction Psychiatry, Addiction Support Services, Chemical Dependency, Allergy, Allergy and Immunology, Immunology, Pediatric Allergy, Pediatric Allergy/Immunology, Pediatric Immunology, Audiology, Pediatric Audiology, Adult Congenital Heart Disease, Advanced Heart Failure and Transplant Cardiology, Cardiac Electrophysiology, Cardiac Rehabilitation, Cardiology, Cardiovascular Disease, Clinical Cardiac Electrophysiology, Electrophysiology, Interventional Cardiology, Pediatric Cardiology, Pediatric Cardiology Center, Case Management, Dental, Dental

General Practice, Dental Public Health, Dentistry, Orthodontics, Pediatric Dentistry, Pedodontics, Periodontics, Prosthodontics, Dermatology, Dermatopathology, Pediatric Dermatology, Diabetes Educator, Diabetes Services, Emergency Medicine, Pediatric Emergency Medicine, Endocrinology, Endocrinology, Diabetes & Metabolism, Pediatric Endocrinology, Otolaryngology, Otolaryngology/Facial Plastic Surgery, Pediatric Otolaryngology, Ambulatory Family Planning Facility, Infertility, Reproductive Endocrinology, Reproductive Endocrinology and Infertility, Reproductive Endocrinology/Infertility, Clinical Genetics (M.D.), Genetics, Medical Genetics, Pediatric Genetics, Elder Care Services, Geriatric Medicine, Gerontology, Gastroenterology, Hepatology, Pediatric Gastroenterology, Gynecology, Maternal & Fetal Medicine, Maternal and Fetal Medicine, Midwifery, Obstetrics, Obstetrics & Gynecology, Obstetrics and Gynecology, Urogynecology, Women's Health, Women's Health Care, Ambulatory, Hematology, Hematology and Oncology, Hematology-Oncology Clinic, Hematology-Oncology Specialty Care Area, Medical Oncology, Oncology, Pediatric Hematology, Pediatric Hematology and Oncology, Pediatric Hematology-Oncology, Pediatric Oncology, Home Care, Home Health Services, Home Therapy Services, In-Home Clinical Assessments, Home Hospice, Hospice, Hospice and Palliative Medicine, Hospice Services, Palliative Medicine, Pastoral Care, Pediatric Palliative Medicine, Respite Care, Infection Control, Infectious Disease, Infectious Diseases, Pediatric Infectious Disease, Lactation Consultant, Lactation Services, Anticoagulation, Behavioral Health, Behavioral Health Clinic, Counseling, Developmental – Behavioral Pediatrics, Domestic Abuse Support Services, Marriage and Family Therapy, Mental Health, Neuropsychology, Pediatric Psychology, Post Trauma Therapy and Support, Psychology, Psychotherapy, Social and Spiritual Support, Dialysis Clinic, Nephrology, Outpatient Hemodialysis Clinic, Pediatric Nephrology, Clinical Neurophysiology, Neurology, Neurology Clinic, Neurophysiology, Pediatric Neurology, Spinal Cord Injury Medicine, Dietician, Family Nutrition Services, Nutrition, Nutrition Support, Nutrition, Pediatric, Occupational Medicine, Preventative Medicine/ Occupational Environmental Medicine, Cornea Ophthalmology, Glaucoma Ophthalmology, Glaucoma Specialist, Neuro- Ophthalmology, Ophthalmology, Ophthalmology Clinic, Pediatric Ophthalmology, Pediatric Ophthalmology and Strabismus Specialist, Retina Ophthalmology, Retina Specialist, Adult Reconstructive Orthopaedic Surgery, Foot & Ankle Surgery, Foot and Ankle Surgery, Hand Surgery, Joint Surgery, Orthopaedic Surgery of the Spine, Orthopaedic Trauma, Orthopedic, Orthopedic Surgery, Pediatric Orthopaedic Surgery, Pediatric Orthopedic Surgery, Interventional Pain Medicine, Pain, Pain Clinic, Pain Management, Pain Medicine, Pathology, Neonatal-Perinatal Medicine, Neonatology, Perinatology, Perioperative, Pharmacy, Outpatient Rehabilitation Clinic, Physical Medicine and Rehabilitation, Rehabilitation, Orthotics, Pediatric Podiatry, Podiatric, Podiatry, Child and Adolescent Psychiatry, Geriatric Psychiatry, Neuropsychiatry, Pediatric Psychiatry, Psychiatric/Mental Health, Psychiatry, Occupational Therapy, Osteopathic Medicine, Pediatric Occupational Therapy, Pediatric Physical Medicine and Rehabilitation, Pediatric Physical Therapy, Pediatric Rehabilitation, Pediatric Rehabilitation Medicine, Physical Rehabilitation, Physical Therapy, Community Health, Community Health/Public Health, Housing Assistance and Shelter Services, Pediatric Social Services, Psychiatric/Mental Health, Community, Public Health, Public Medicine, Social Care, Social Services,

Youth Community Services, Pediatric Pulmonology, Pulmonary Clinic, Pulmonary Disease, Pulmonology, Thoracic Diseases, Pediatric Radiation Oncology, Radiation Oncology, Pediatric Rheumatology, Rheumatology, Sleep Center, Sleep Medicine Assisted Living Facility, Long Term Acute Care, Long Term Care Facility, Long Term Care Facility General Nursing Unit, Long Term Care Facility Skilled Nursing-Short Term Rehabilitation Unit, Long-Term Care, Memory Care, Skilled Nursing Facility, Hearing and Speech, Pediatric Speech Therapy, Speech and Language, Speech Pathology, Speech Therapy, Exercise & Sports, Pediatric Sports Medicine, Sports Medicine, Ambulatory Surgery Center, Bariatrics, Breast Surgery, Burn Surgery, Cardiothoracic Surgery, Colon and Rectal Surgery, Female Pelvic Medicine and Reconstructive Surgery, General Surgery, Maxillofacial Surgery, Oral Surgery, Orthopaedic Surgery, Pediatric Cardiothoracic Surgery, Pediatric Neurosurgery, Pediatric Plastic Surgery, Pediatric Surgery, Pediatric Trauma Surgery, Plastic and Reconstructive Surgery, Plastic Surgery, Plastic Surgery within the Head & Neck, Spine Surgery, Surgical, Surgical Oncology, Surgical Services Clinic, Thoracic Surgery, Transplant Surgery, Trauma Surgery, Vascular Surgery, Abdominal Transplant, Blood and Marrow Transplant, Pediatric Transplant Hepatology, Transplant, Transplant Hepatology, Transplantation, Travel Medicine, Urgent Care, Urgent Care Center, Pediatric Urology, Proctology, Urology, Vascular Neurology, Vascular Specialist, or Wound Care

Table 1: Level-of-Service Codes for Telehealth and Office Visits by Type of Care

Specialty	Patient Type	Visit Type	Total Encounters	Level 1	Level 2	Level 3	Level 4	Level 5
Primary Care	Established	Office Visit	2,658,772	0.1%	1.3%	43.3%	52.5%	2.8%
		Telehealth	664,693	0.1%	3.4%	53.7%	40.8%	2.0%
	New	Office Visit	91,660	0.0%	5.6%	41.7%	47.5%	5.3%
		Telehealth	22,915	0.0%	10.7%	48.5%	36.9%	3.9%
Specialty Care	Established	Office Visit	2,169,956	0.3%	2.5%	33.3%	53.6%	10.2%
		Telehealth	542,489	0.6%	5.8%	36.9%	47.4%	9.4%
	New	Office Visit	334,508	0.0%	5.2%	41.7%	42.5%	10.7%
		Telehealth	83,627	0.0%	7.8%	44.2%	36.6%	11.4%