



Declining Medicare reimbursement trends in lateral skull base and neurotologic procedures from 2000 to 2024

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Introduction

Concerning trends in Medicare procedure reimbursement have been observed across various fields including subfields of Otolaryngology and Neurosurgery¹⁻⁵. However, the landscape of Medicare reimbursement for lateral skull base and neurotologic procedures is currently unclear. Understanding the financial health of this niche field is imperative in ensuring consistent and adequate patient care going forward.

Thus, the purpose of this study is to comprehensively characterize and evaluate reimbursement trends for lateral skull base and neurotologic procedures between the years of 2000 and 2024.

Methods and Materials

- The publicly available physician fee scheduling Look-Up Tool from the Centers for Medicare and Medicaid Services (CMS)⁶ was utilized to gather Medicare reimbursement rates for lateral skull base and neurotologic procedures by Current Procedural Terminology (CPT) code between 2000 and 2024.
- Reimbursement rates were then adjusted for inflation to 2024.
- Trend analyses were performed including overall-adjusted and yearly adjusted percent changes for each code.

CPT Code	Description	Reimbursement (\$)			Total % Change	% /Year Change
		2000 (unadjusted)	2000 (adjusted)	2024		
62100	Craniotomy for repair of dural/cerebrospinal fluid leak, including surgery for rhinorrhea/otorrhea	1624.75	2968.60	1580.91	-46.7	-1.9
69910	Labyrinthectomy; with mastoidectomy	1019.19	1862.18	1005.11	-46.0	-1.9
61526	Craniectomy, bone flap craniotomy, transtemporal (mastoid) for excision of cerebellopontine angle tumor	3372.66	6162.24	3331.90	-45.9	-1.9
69806	Endolymphatic sac operation; with shunt	931.96	1702.80	935.66	-45.1	-1.9
61530	Craniectomy, bone flap craniotomy, transtemporal (mastoid) for excision of cerebellopontine angle tumor; combined with middle/posterior fossa craniotomy/craniectomy	2990.55	5464.08	3061.14	-44.0	-1.8
61519	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; meningioma	2854.39	5215.30	2935.68	-43.7	-1.8
61520	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; cerebellopontine angle tumor	3597.82	6573.63	3704.62	-43.6	-1.8
62121	Craniotomy for repair of encephalocele, skull base	1508.64	2756.46	1569.26	-43.1	-1.8
61596	Transcochlear approach to posterior cranial fossa, jugular foramen or midline skull base, including labyrinthectomy, decompression, with or without mobilization of facial nerve and/or petrous carotid artery	2342.02	4279.14	2452.63	-42.7	-1.8
69950	Vestibular nerve section, transcranial approach	1672.34	3055.56	1759.15	-42.4	-1.8
69805	Endolymphatic sac operation; without shunt	985.02	1799.74	1043.38	-42.0	-1.8
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	2617.44	4782.36	2772.61	-42.0	-1.8
61591	Infratemporal post-auricular approach to middle cranial fossa (internal auditory meatus, petrous apex, tentorium, cavernous sinus, parasellar area, infratemporal fossa) including mastoidectomy, resection of sigmoid sinus, with or without decompression and/	2891.4	5282.92	3082.21	-41.7	-1.7
69960	Decompression internal auditory canal	1753.53	3203.90	1899.82	-40.7	-1.7
69955	Total facial nerve decompression and/or repair (may include graft)	1811.47	3309.76	1985.57	-40.0	-1.7
61606	Resection or excision of neoplastic, vascular or infectious lesion of infratemporal fossa, parapharyngeal space, petrous apex; intradural, including dural repair, with or without graft	2629.74	4804.84	2907.74	-39.5	-1.6
69150	Radical excision external auditory canal lesion; without neck dissection	921.58	1683.83	1021.35	-39.3	-1.6
61590	Infratemporal pre-auricular approach to middle cranial fossa (parapharyngeal space, infratemporal and midline skull base, nasopharynx), with or without disarticulation of the mandible, including parotidectomy, craniotomy, decompression and/or mobilization	2733.1	4993.69	3033.72	-39.2	-1.6
69905	Labyrinthectomy; transcanal	840.71	1536.07	936.13	-39.1	-1.6
69970	Removal of tumor, temporal bone	1912.62	3494.58	2145.36	-38.6	-1.6
61616	Resection or excision of neoplastic, vascular or infectious lesion of base of posterior cranial fossa, jugular foramen, foramen magnum, or C1-C3 vertebral bodies; intradural, including dural repair, with or without graft	2925.87	5345.90	3344.57	-37.4	-1.6
61605	Resection or excision of neoplastic, vascular or infectious lesion of infratemporal fossa, parapharyngeal space, petrous apex; extradural	1905.74	3482.01	2183.97	-37.3	-1.6
61608	Resection or excision of neoplastic, vascular or infectious lesion of parasellar area, cavernous sinus, clivus or midline skull base; intradural, including dural repair, with or without graft	2860.31	5226.12	3278.23	-37.3	-1.6
69535	Resection temporal bone, external approach	2342.23	4279.52	2691.76	-37.1	-1.5
61597	Transcondylar (far lateral) approach to posterior cranial fossa, jugular foramen or midline skull base, including occipital condylectomy, mastoidectomy, resection of C1-C3 vertebral body(s), decompression of vertebral artery, with or without mobilization	2521.68	4607.40	2968.10	-35.6	-1.5
61592	Orbitocranial zygomatic approach to middle cranial fossa (cavernous sinus and carotid artery, clivus, basilar artery or petrous apex) including osteotomy of zygoma, craniotomy, extra- or intradural elevation of temporal lobe	2684.94	4905.69	3175.37	-35.3	-1.5
69155	Radical excision external auditory canal lesion; with neck dissection	1393.18	2545.50	1648.72	-35.2	-1.5
69554	Excision aural glomus tumor; extended (extratemporal)	2155.34	3938.05	2558.56	-35.0	-1.5
69552	Excision aural glomus tumor; transmastoid	1344.76	2457.03	1609.91	-34.5	-1.4
61607	Resection or excision of neoplastic, vascular or infectious lesion of infratemporal fossa, parapharyngeal space, petrous apex; intradural, including dural repair, with or without graft	2449.84	4476.14	3039.44	-32.1	-1.3
61595	Transtemporal approach to posterior cranial fossa, jugular foramen or midline skull base, including mastoidectomy, decompression of sigmoid sinus and/or facial nerve, with or without mobilization	1948.06	3559.33	2429.90	-31.7	-1.3
61598	Transpetrosal approach to posterior cranial fossa, clivus or foramen magnum, including ligation of superior petrosal sinus and/or sigmoid sinus	2229.4	4073.37	2862.22	-29.7	-1.2
69550	Excision aural glomus tumor; transcanal	828.26	1513.33	1084.41	-28.3	-1.2
61615	Resection or excision of neoplastic, vascular or infectious lesion of base of posterior cranial fossa, jugular foramen, foramen magnum, or C1-C3 vertebral bodies; extradural	2133.53	3898.20	2824.89	-27.5	-1.1
62120	Repair of encephalocele, skull vault, including cranioplasty	1571.76	2871.79	2096.64	-27.0	-1.1
				Average	-38.5	-1.6

Table 1. Reimbursement rates in 2000 (unadjusted and inflation-adjusted) and 2024 by CPT code, ordered by magnitude of negative percentage change between 2000-2024.

Results

- Medicare reimbursement rates for 35 distinct lateral skull base and neurotologic CPT codes were evaluated between 2000 and 2024.
- All codes experienced a decline in reimbursement rate after adjusting for inflation (Table 1 and Figure 1).
- While the average unadjusted reimbursement rate for all CPT codes increased by 12.4%, the average adjusted reimbursement rate decreased by 38.5%.
- CPT codes with the largest overall decline were 62100 (repair of CSF leak by craniotomy, -46.7%), 69910 (transmastoid labyrinthectomy, -46.0%), and 61526 (translabyrinthine resection of posterior fossa tumor, -45.9%).
- The least overall decline was observed for code 62120 (repair of encephalocele, skull vault, -27.0%).
- The average yearly adjusted change for all codes was -1.6%.
- Linear regression on the average of procedure reimbursements adjusted by inflation demonstrates an acceleration of negative change in the latest years (Figure 1):

- 2000-2024: -\$43.21/year
- 2014-2024: -\$82.85/year
- 2019-2024: -\$136.22/year

Medicare Reimbursement by CPT Code between 2000-2024

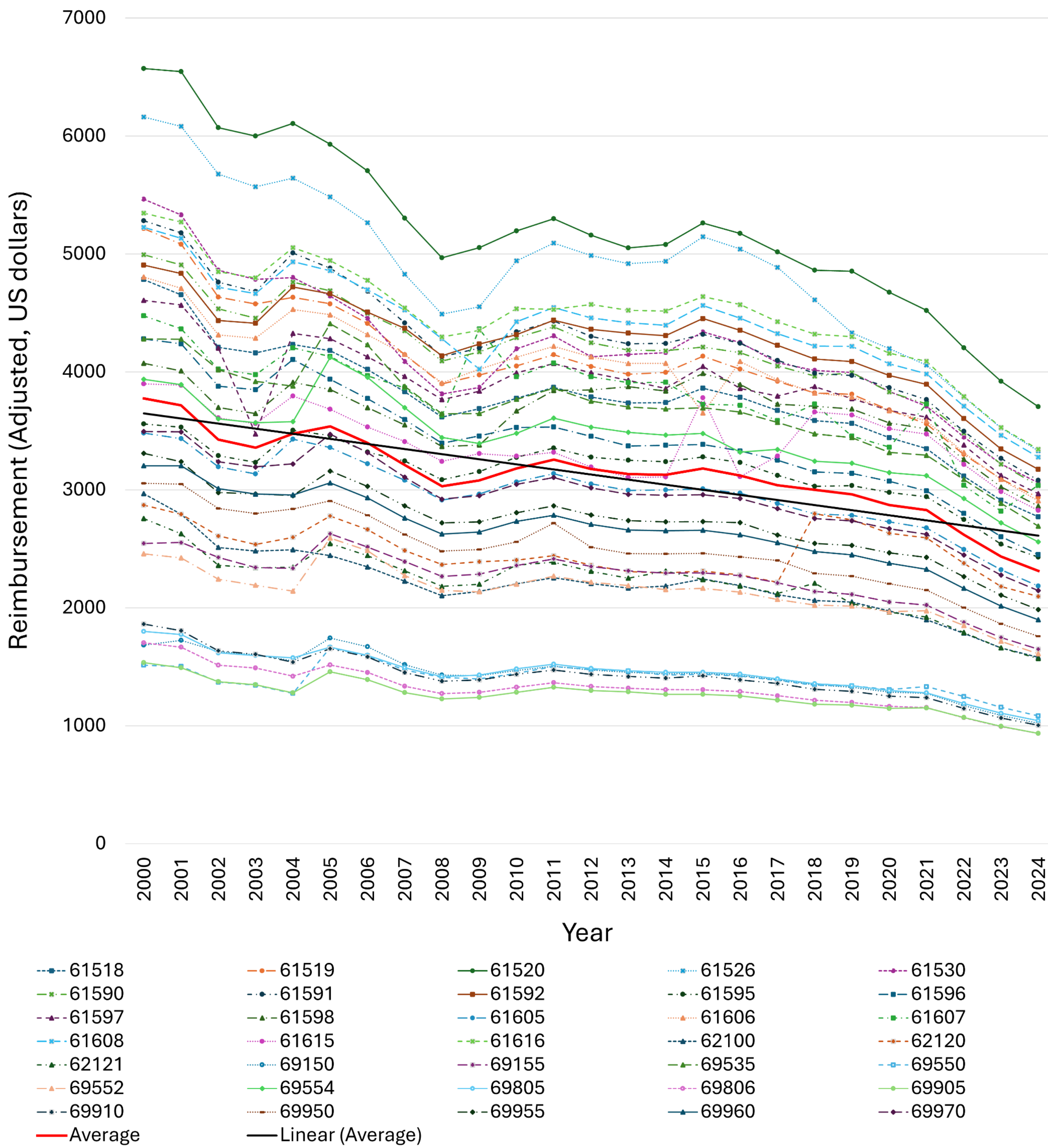


Figure 1. Inflation-adjusted Medicare reimbursement trends by CPT code between 2000-2024. Average reimbursement of all CPT codes (red solid line) demonstrating an overall downward trend on regression (black solid line).

Conclusions

This is the first study to closely investigate Medicare reimbursement trends for lateral skull base and neurotologic procedures. A concerning and persistent decline in reimbursement rates across all specified procedures is seen when accounting for inflation between 2000 and 2024. Moreover, this downtrend appears to accelerate in the latest years. Recognizing these patterns is paramount in advocating for and ensuring the development of adequate reimbursement policies surrounding lateral skull base and neurotologic procedures.

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