

ENT and Plastic Surgeons in Performing Facial Aesthetic Procedures

Sumun Khetpal, MD; Joseph Lopez, MD, MBA; Derek Steinbacher, MD, DMD, FACS

Despite differences in training, plastic surgeons and otolaryngologists (ENT) often perform facial surgeries and rejuvenation procedures. With the increasing exposure of facial plastic surgery in otolaryngology residency programs, it remains unclear how common facial aesthetic procedures are distributed between the two surgical sub-specialties. This study evaluates the breakdown between ENT and plastic surgeons in common facial aesthetic procedures within the Medicare population. We hypothesize that plastic surgeons perform the majority of the facial aesthetic procedures, and foresee greater growth rates in such procedures within otolaryngology, when compared with plastic surgery, over time.

A retrospective review was performed for Medicare beneficiaries who underwent common facial surgical procedures. These procedures were determined from the 2019 American Society of Plastic Surgeons Plastic Surgery Statistics Report.¹ Compound annual growth rates (CAGR) for the number of procedures and corresponding reimbursement values were calculated for both plastic and ENT surgeons from 2010 to 2018.

In 2018, ENT surgeons performed a greater percentage of rhinoplasties (71%) and botulinum toxin injections (68%), relative to plastic surgeons. In contrast, blepharoplasties (84%), dermabrasions (83%), soft tissue fillers (69%), intense pulsed light treatment (74%), and laser skin resurfacing (70%) were more commonly performed by plastic surgeons. ENT surgeons had growth in botulinum toxin injections (8.25%), soft tissue fillers (44.22%), and rhytidectomy (3.09%), relative to plastic surgeons whose CAGRs for the aforementioned procedures were 4.32%, 19.25%, and -5.45%, respectively. In terms of total Medicare payments amongst plastic surgeons, blepharoplasty contributed to the majority of dollar value (\$16,281,914), while botulinum toxin type A comprised the greater amount of funding (\$5,673,748) for ENT surgeons. A comprehensive summary of results is shown in Table 1.

Our results reveal that plastic surgeons perform the majority of facial surgical interventions, as well as facial rejuvenation procedures, for Medicare beneficiaries.

Table 1. Facial Aesthetic Procedures in Plastic Surgery and Otolaryngology in Medicare Beneficiaries from 2010 to 2018

Characteristics	Overall	
	Plastic Surgery	Otolaryngology
Total services, n (2018)		
Blepharoplasty	5888	1114
Rhinoplasty	250	622
Dermabrasion	598	121
Neck lift	25	14
Rhytidectomy	76	74
Botulinum toxin type A	15,1581	31,4990
Soft tissue fillers	11,314	5109
Chemical peel	28	22
Intense pulsed light (IPL) treatment	7062	2535
Laser skin resurfacing	73,200	31,083
CAGR of no. of services, % (2010–2018)		
Total services, n (2018)		
Blepharoplasty	-5.54%	-4.00%
Rhinoplasty	-1.58%	-0.98%
Dermabrasion	12.44%	-0.89%
Neck lift	2.20%	4.30%
Rhytidectomy	-5.45%	3.09%
Botulinum toxin type A	4.32%	8.25%
Soft tissue fillers	19.25%	44.22%
Chemical peel	-18.79%	-3.39%
IPL treatment	7.77%	5.66%
Laser skin resurfacing	0.80%	-7.22%
Total medicare payments, \$ (2018)		
Blepharoplasty	\$16,281,914	\$2,928,686
Rhinoplasty	\$985,821	\$2,587,381
Dermabrasion	\$646,149	\$182,857
Neck lift	\$120,379	\$83,350
Rhytidectomy	\$475,789	\$590,252
Botulinum toxin type A	\$3,027,821	\$5,673,748
Soft tissue fillers	\$286,047	\$164,294
Chemical peel	\$23,389	\$13,214
IPL treatment	\$2,708,725	\$1,149,316
Laser skin resurfacing	\$5,958,838	\$2,631,392
CAGR of Medicare payments, % (2010–2018)		
Blepharoplasty	0.03%	-1.35%
Rhinoplasty	0.22%	1.74%
Dermabrasion	12.40%	3.84%
Neck lift	14.15%	11.40%
Rhytidectomy	1.22%	13.55%
Botulinum toxin type A	4.43%	-0.71%
Soft tissue fillers	0.86%	16.95%
Chemical peel	-15.11%	-2.16%
IPL treatment	9.89%	10.44%
Laser skin resurfacing	2.30%	-4.45%

From the Division of Plastic and Reconstructive Surgery, Yale School of Medicine, New Haven, Conn.

Received for publication May 28, 2021; accepted June 23, 2021.

Copyright © 2021 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

Plast Reconstr Surg Glob Open 2021;9:e3762; doi: 10.1097/GOX.0000000000003762; Published online 23 August 2021.

Nonetheless, ENT surgeons have a growing foothold in providing soft tissue fillers and botulinum toxins for such patients. Moreover, tissue fillers may restore defects caused by head and neck cancer resection, or alternatively, may be utilized for tracheoesophageal puncture site enlargement and nasal reconstruction.^{2–4} Botulinum toxin type A has unique applications within the field of otolaryngology, such as facial synkinesis and spasmodic dysphonia, in addition to cosmetic considerations.⁵

There are several limitations of this study that warrant consideration. First, we only included the top 10 highest volume aesthetic procedures in our analysis, thus

excluding other aesthetic procedures. Second, we examined Medicare beneficiaries, a specific subset of patients; thus, our results may not be generalizable to younger and healthier patients. Third, the database does not include the indications for procedures, and therefore, cannot provide explanations for particular specialty involvement in a given operation.

Plastic surgeons perform the majority of facial surgical interventions and facial rejuvenation procedures. Nonetheless, there has been an increase in the proportion of certain procedures, namely botulinum toxin injections and soft tissue fillers, performed by ENT surgeons. This suggests the growing versatility of otolaryngology and increasing engagement in cosmetic procedures among Medicare beneficiaries.

DISCLOSURE

All authors have no financial interest to declare in relation to the content of this article. This study did not receive any funding.

Derek Steinbacher, MD, DMD, FACS

Division of Plastic and Reconstructive Surgery
Department of Surgery, Yale School of Medicine
330 Cedar Street, Boardman Building, 3rd Floor
New Haven, CT 06510

E-mail: derek.steinbacher@yale.edu

REFERENCES

1. American Society of Plastic Surgeons. *Plastic Surgery Statistics Report*. Arlington Heights, Ill.: American Society of Plastic Surgeons; 2019:1–25.
2. Humphrey CD, Arkins JP, Dayan SH. Soft tissue fillers in the nose. *Aesthet Surg J*. 2009;29:477–484.
3. Tjoa T, Bunting G, Deschler DG. Injectable soft-tissue augmentation for the treatment of tracheoesophageal puncture enlargement. *JAMA Otolaryngol Head Neck Surg*. 2018;144:383–384.
4. Wilson YL, Ellis DA. Permanent soft tissue fillers. *Facial Plast Surg*. 2011;27:540–546.
5. Shinn JR, Nwabueze NN, Du L, et al. Treatment patterns and outcomes in botulinum therapy for patients with facial synkinesis. *JAMA Facial Plast Surg*. 2019;21:244–251.