



# Examining Reimbursement to Charge Ratios for All Otolaryngology Procedural Expenses Billed to Medicare: 2010-2019

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## INTRODUCTION

Examining and understanding Medicare reimbursement trends are necessary for promoting acceptable and fair compensation models in otolaryngology. This study aims to evaluate recent changes in Medicare reimbursement rates by examining the reimbursement to charge ratio (RCR) for otolaryngology procedural expenses billed to Medicare Part B from 2010 to 2019.

## METHODS

The 2010-2019 Physician Supplier and Procedure Summary file was queried to collect billing information, service counts, charges, and reimbursements of all procedures billed to Medicare Part B by otolaryngologists. All monetary values were adjusted to the 2019 US dollars. Weighted mean reimbursements and charges were calculated and their ratios were calculated as reimbursement-to-charge ratios (RCRs). The total changes and  $R^2$  values of these ratios were calculated to assess trends over time.

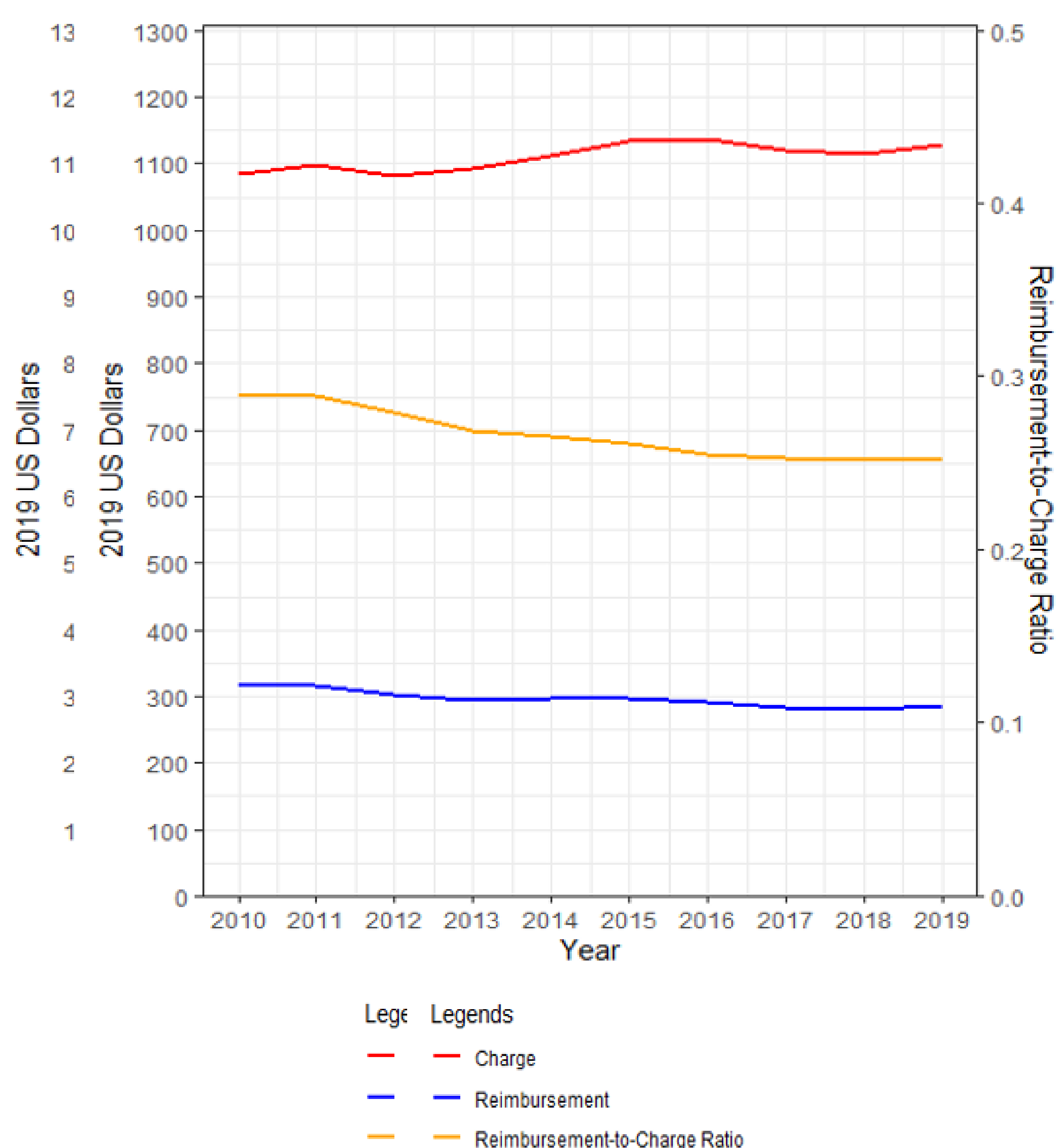
## RESULTS

- The total change in otolaryngology procedural charges increased by 3.9% per procedure from 2010-2019 while the total change of Medicare reimbursement decreased by 9.3% per procedure.
- For all otolaryngology procedures billed to Medicare between 2010 and 2019, the RCR decreased by 12.8% per procedure for the period ( $R^2=0.91$ ).
- Areas with the greatest decreases in RCR: procedures of the inner ear, external ear and trachea/bronchi which saw decreases in RCR values of 41.5%, 28.4% and 25.4% respectively.
- Medicare reimbursement is lagging behind increases in procedural charges billed to Medicare.

## Procedural Expenses and Reimbursements for Otolaryngology Services Billed to Medicare Part B

	Unadjusted Service Count	Enrollment-Adjusted Count	Charge Per Procedure	Reimbursement Per Procedure	RCR
2010	26,518,031	5,564	\$1,084.77	\$315.17	0.291
2011	27,950,742	5,717	\$1,099.33	\$317.84	0.289
2012	28,423,421	5,599	\$1,081.96	\$301.99	0.279
2013	28,503,468	5,437	\$1,093.23	\$294.41	0.269
2014	28,371,023	5,253	\$1,112.44	\$296.14	0.266
2015	28,325,164	5,104	\$1,133.04	\$296.05	0.261
2016	29,009,194	5,091	\$1,137.58	\$290.38	0.255
2017	28,748,703	4,918	\$1,121.75	\$283.42	0.253
2018	28,731,540	4,789	\$1,114.86	\$281.29	0.252
2019	28,701,700	4,666	\$1,127.62	\$285.81	0.253
Tot. Change	2,183,669 (8.2%)	-898 (-16.1%)	42.85 (3.9%)	-29.36 (-9.3%)	-0.04 (-12.8%)
$R^2$	0.55	0.95	0.61	0.85	0.91

## Trends of Charges, Reimbursements and RCR for Otolaryngology Procedures: 2010-2019



## DISCUSSION

- Decreasing reimbursement rates limits access to care for Medicare patients if physicians increase the billed amount to compensate for declining reimbursement or refuse to accept Medicare patients entirely.
- As adequate reimbursement declines, the financial burden on the patient increases as they are often responsible for paying the increasing amount of unreimbursed expenses.
- The decline in reimbursement rates disproportionately affects the vulnerable, elderly and uninsured populations.
- The population of geriatric patients within otolaryngology is expected to grow from 17.9% in 2010 to almost 30% by 2030, likely indicating a larger geriatric use of otolaryngology services and subsequent increased Medicare billing.<sup>1</sup>
- When compared to similar studies, our findings align with trends of decreasing reimbursement rates seen in general surgery, neurosurgery, plastic surgery and orthopedic surgery.<sup>2-5</sup>

## LIMITATIONS

- The exclusive usage of Medicare databases to examine otolaryngology reimbursement rates despite the presence of other pay sources such as Medicaid, individual private payers and private third-party payers
- The varying complexity of similar procedures billed to Medicare could not be accounted for

## CONCLUSIONS

The RCR for all billed otolaryngologic procedure expenses has steadily decreased from 2010 to 2019. Moving forward, increased understanding and reaction to these trends will be critical for taxpayers, Medicare recipients, U.S. and state policymakers and care providers in order to ensure available and affordable access to quality otolaryngology care.

## REFERENCES

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