



Hip & Knee Center



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# Time Required for Planned and Unplanned Episodes of Care in Revision Joint Replacement

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# Acknowledgements



**AAHKS<sup>®</sup>**

AMERICAN ASSOCIATION OF  
HIP AND KNEE SURGEONS

**Health Policy Fellowship**



## **Consulting Payments**

- OsteoRemedies

## **Research Support**

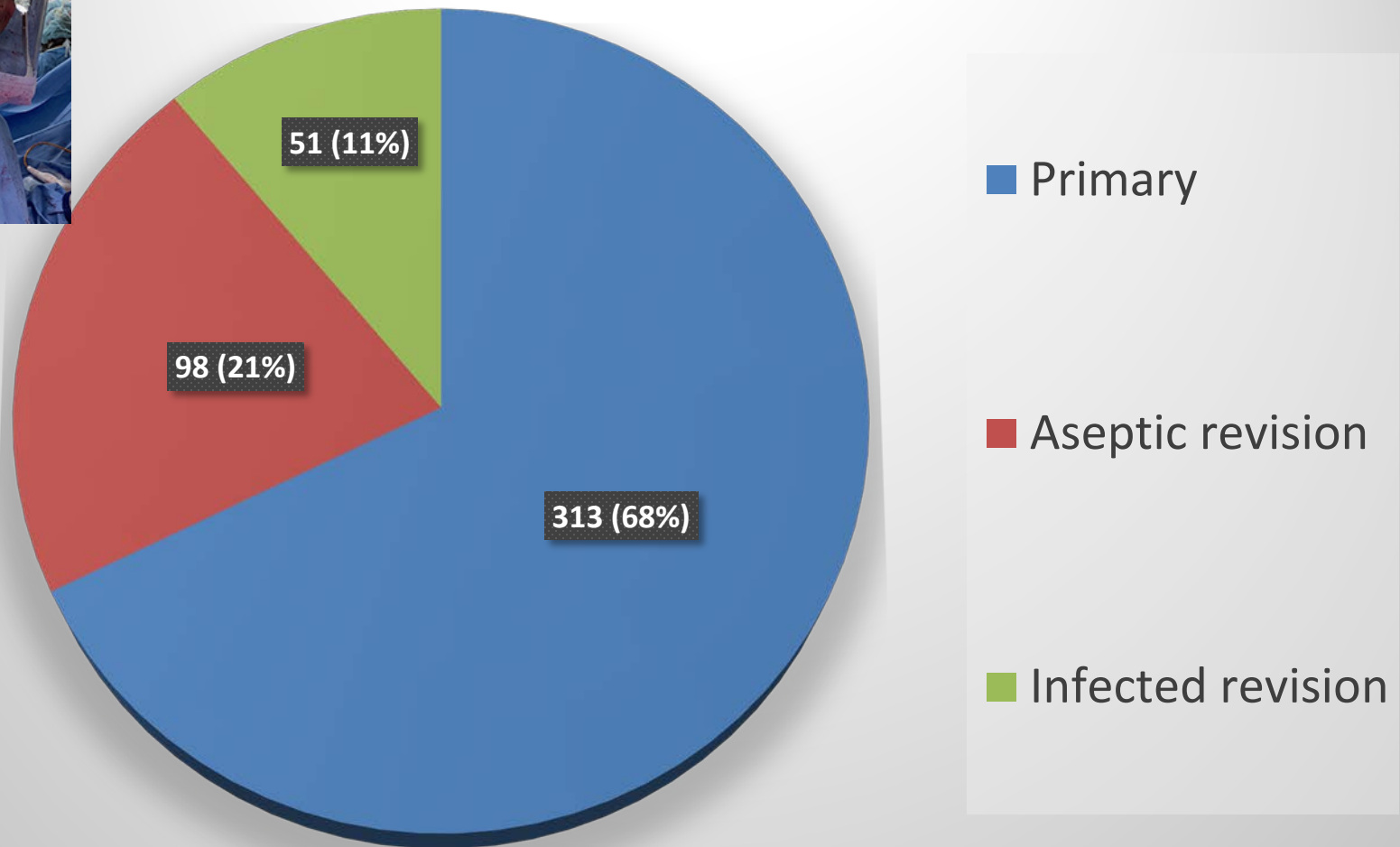
- IU SOM Medical Student Program for Research and Scholarship

## **Fellowship Funding**

- OMEGA

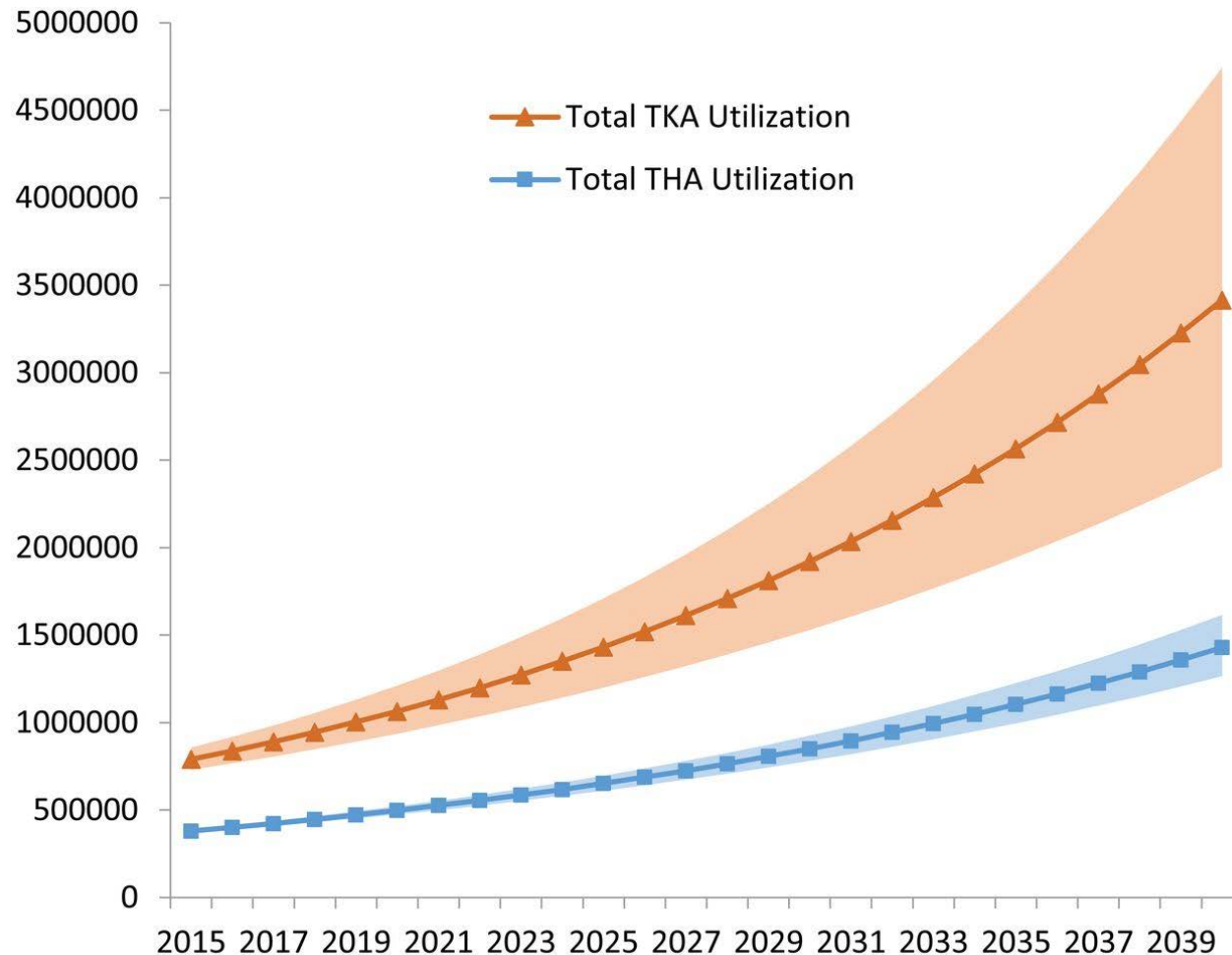


## My Clinical Practice



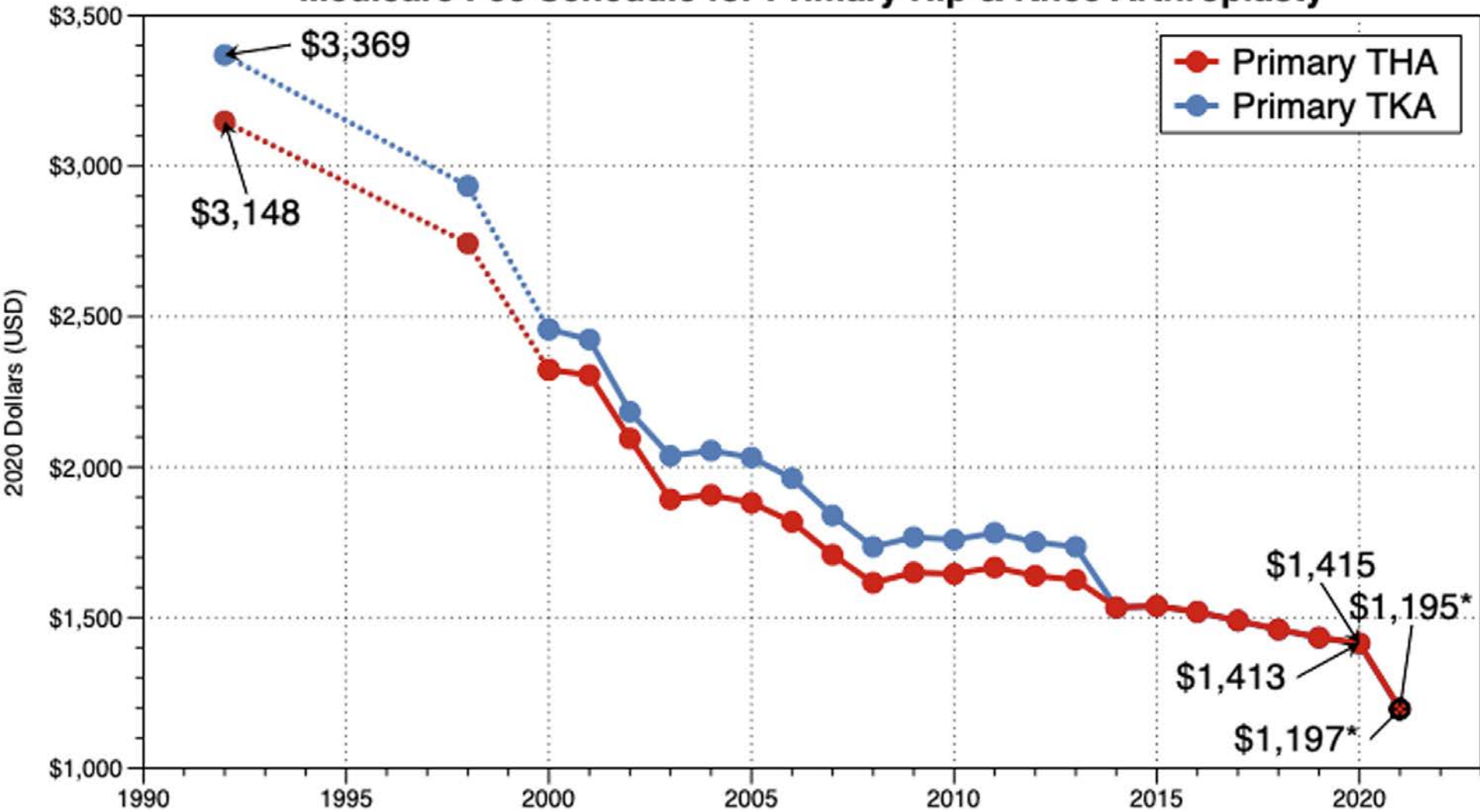


# Projections of Primary THA/TKA



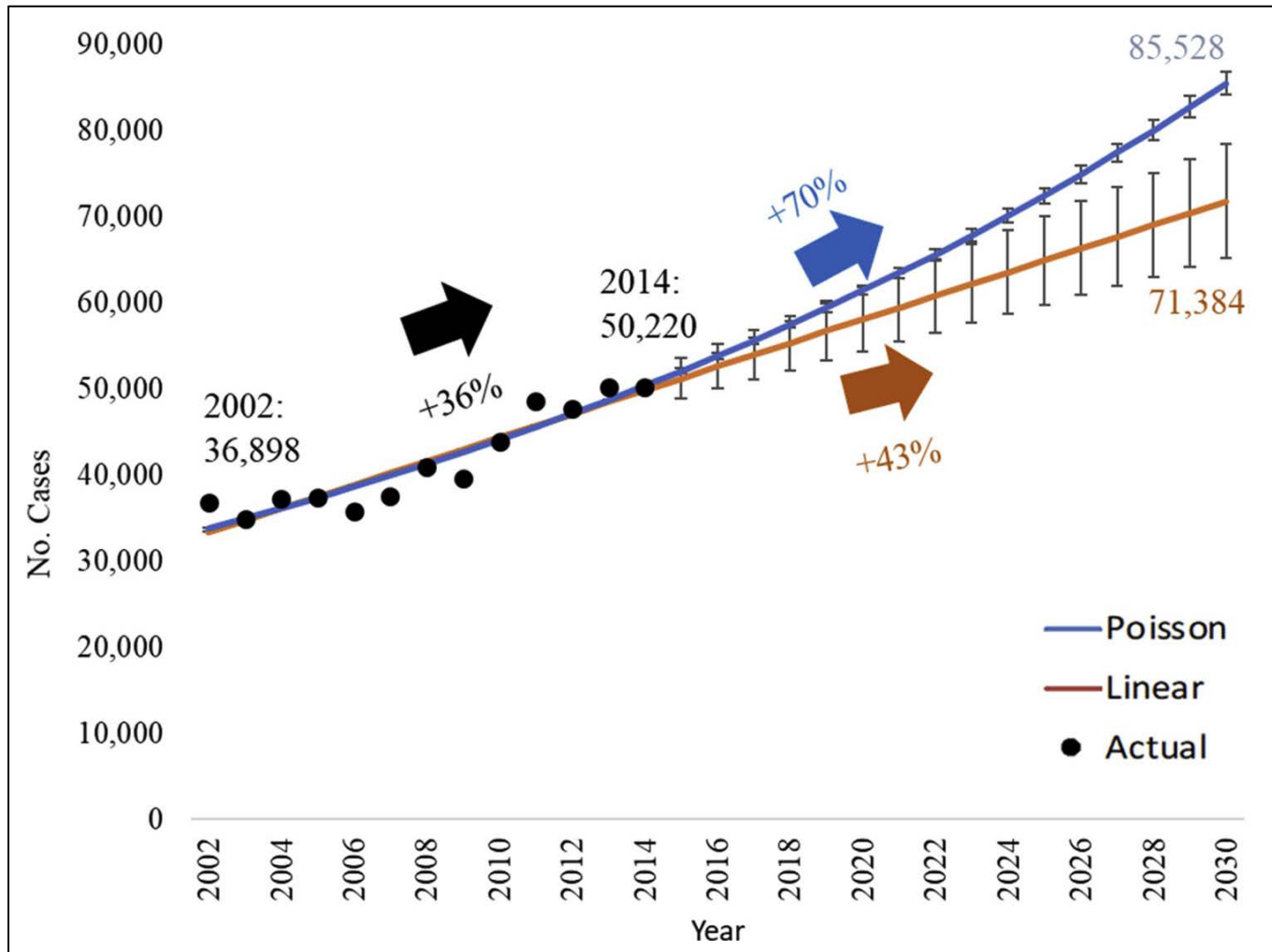


## Medicare Fee Schedule for Primary Hip & Knee Arthroplasty





# Projections of Revision TJA





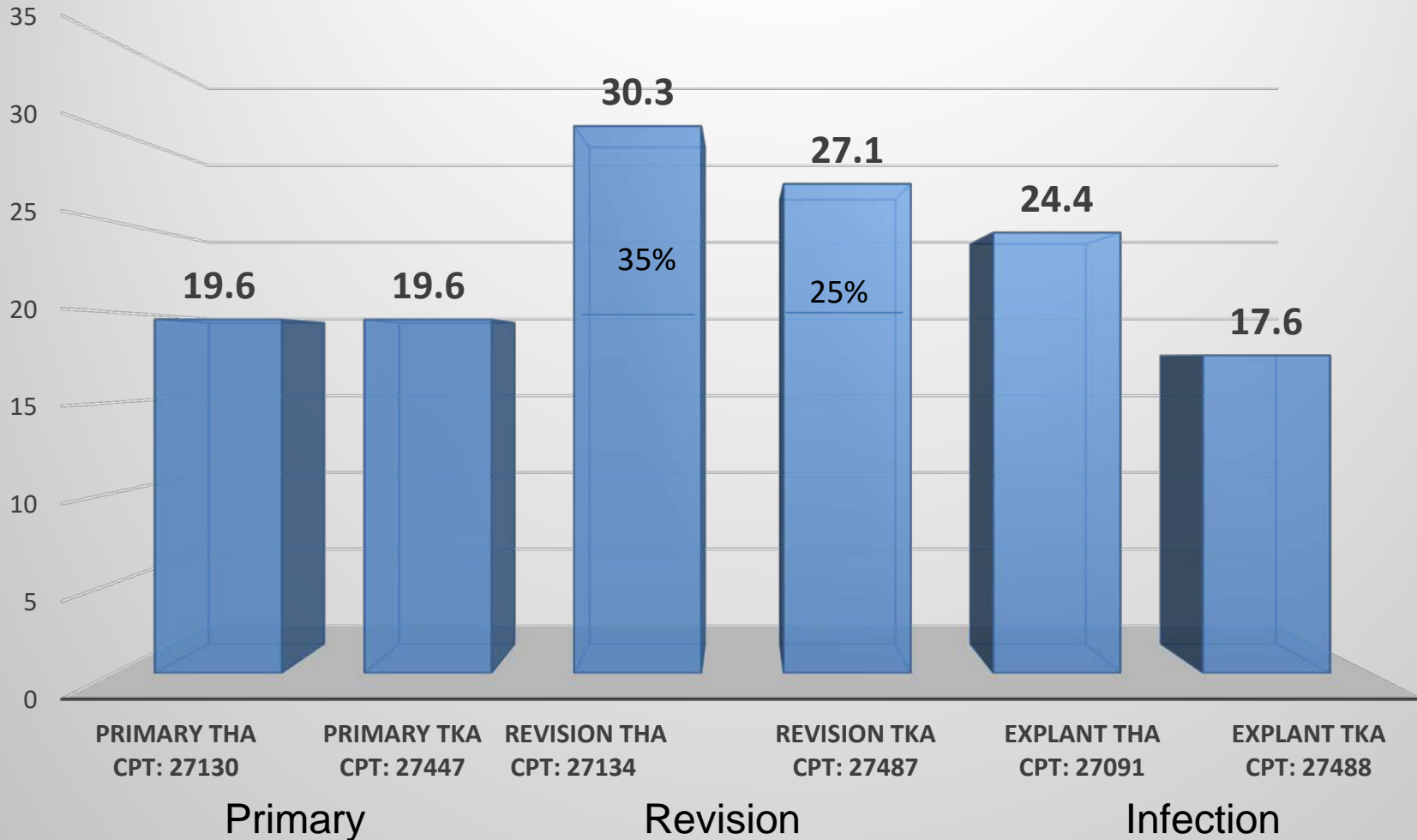
## Professional Liability Insurance







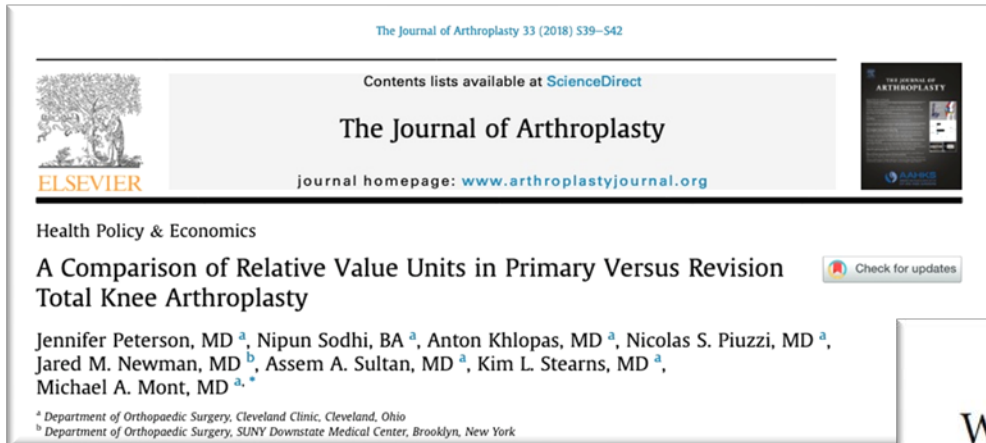
## 2022 Medicare Physician Fee Schedule wRVUs





# Less reimbursement per minute in revisions

More demanding procedure

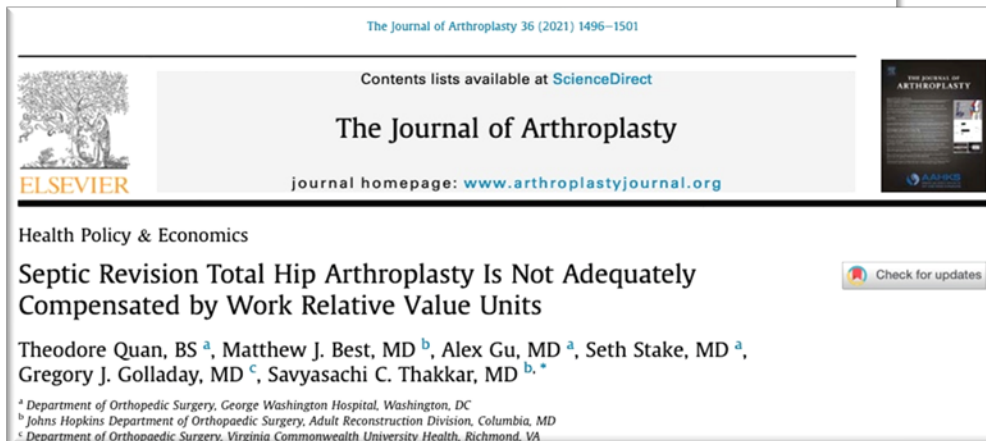


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## Work Relative Value Units Do Not Adequately Support the Burden of Infection Management in Revision Knee Arthroplasty

Linsen T. Samuel, MD, MBA, Daniel Grits, BS, Alexander J. Acuña, BS, Nicolas S. Piuze, MD, Carlos A. Higuera-Rueda, MD, and Atul F. Kamath, MD

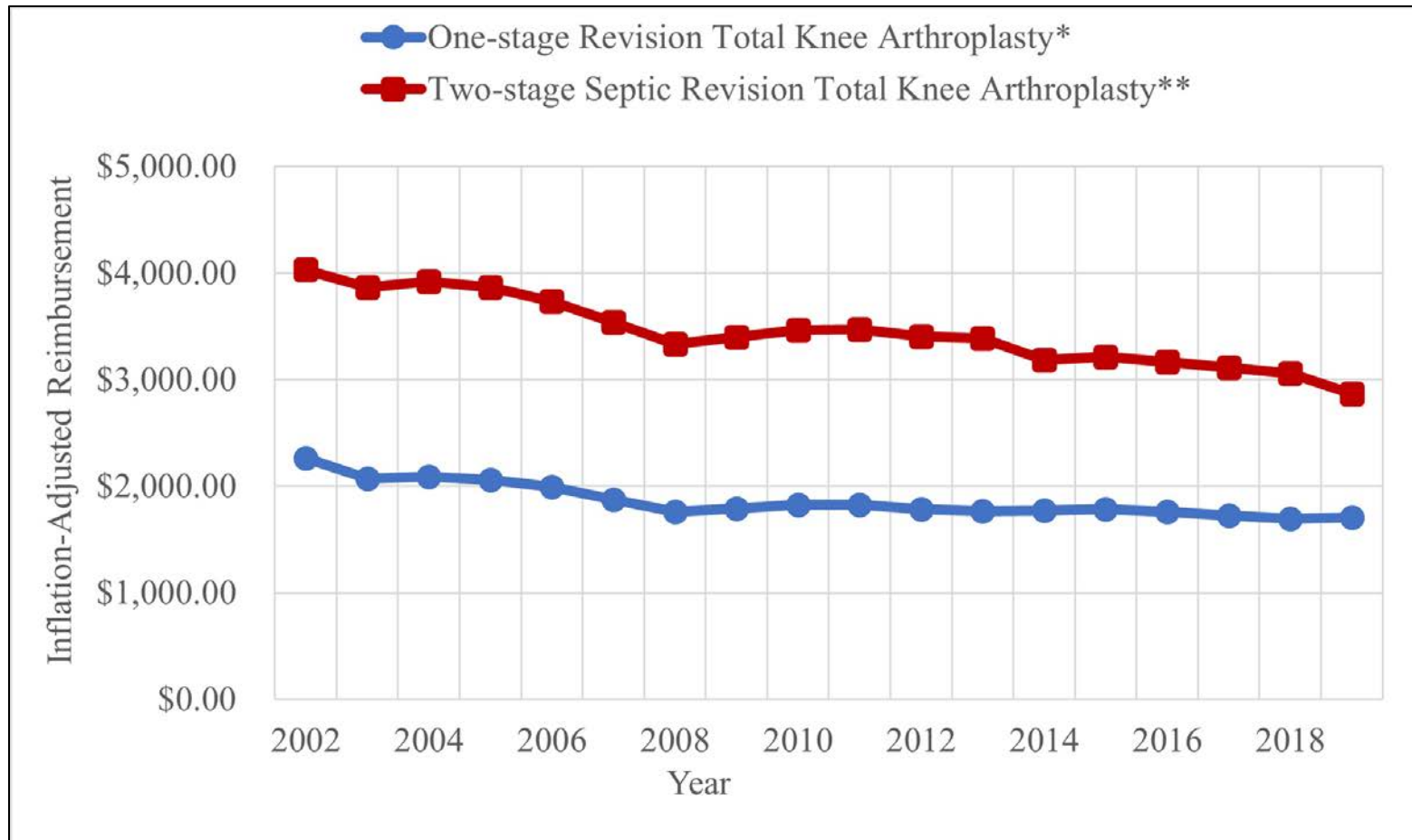
Investigation performed at the Cleveland Clinic Foundation, Cleveland, Ohio

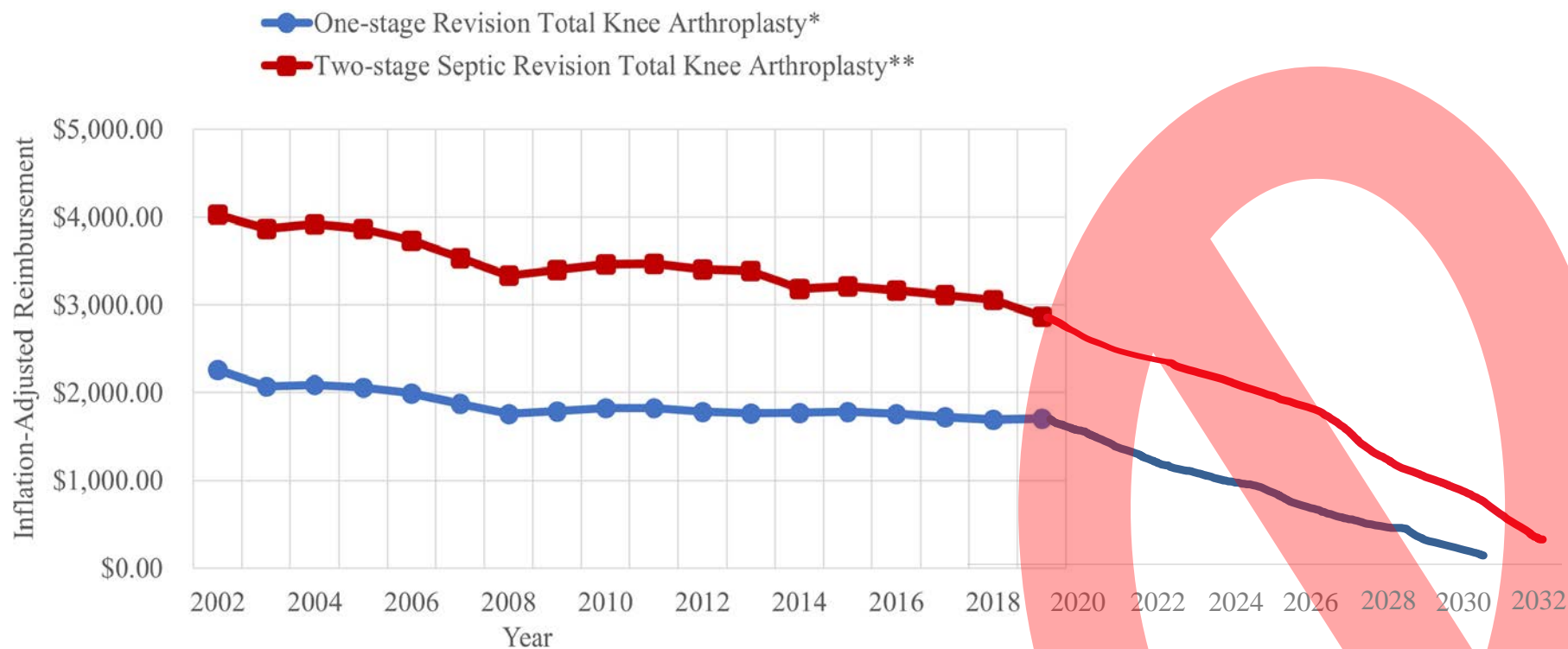


Lower reimbursement



# Inflation-Adjusted Medicare Fee Schedule rTKA







Quantify and compare **actual time**  
required for patient care **to CMS**  
**allowable time** reimbursed for revision  
TJA during entire episode of care



Amount of time (minutes) required for:

- Aseptic rTKA (n = 292)
- Aseptic rTHA (n = 63)
  
- Stage 1 (resection) + Stage 2 (reimplantation) rTKA (n = 64)
- Stage 1 (resection) + Stage 2 (reimplantation) rTHA (n = 69)

Procedures performed between Oct 2010 - Dec 2020

Single surgeon at single institution

Exclusions: Bilateral revisions, single component exchanges, cases without 90-day follow-up



## PLANNED ENCOUNTERS + UNPLANNED ENCOUNTERS

- From surgery scheduling through 90 days postop
- Questions via telephone and mobile platform
- Encounters up to 90 days postop requiring team time



**Total Episode of Care**



Current Procedural Terminology (CPT®)  
Implementation Framework

## Aseptic Revision

Revision THA  
CPT: 27134

Revision TKA  
CPT: 27487

Preservice evaluation time	90	60
Intraservice time	240	200
Postservice time		
Immediate	40	30
Other hospital	178	138
Office visits	69	92
<b>Total time</b>	<b>617 min</b>	<b>520 min</b>





# CMS Allowable Times

## First stage

Prosthesis Removal    Spacer Insertion  
CPT: 27488                      CPT: 11981

Preservice time	90	26
Intraservice time	120	5
Postservice time		
Immediate	30	5
Other hospital	138	
Office visits	92	

Total                      470 min

36 min

## Second stage

rTKA                      Spacer Removal  
CPT: 27487                      CPT: 11982

60	24
200	10
30	5
138	
92	

520 min

39 min

**Total Time:**  
**1065 min**



## First stage

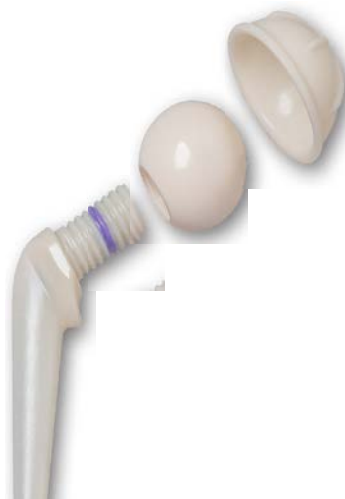
Prosthesis Removal    Spacer Insertion  
CPT: 27091                      CPT: 11981

Preservice time	79	26
Intraservice time	178	5
Postservice time		
Immediate	30	5
Other hospital	198	
Office visits	92	
<b>Total</b>	<b>577 min</b>	<b>36 min</b>

## Second stage

rTHA                      Spacer Removal  
CPT: 27134                      CPT: 11982

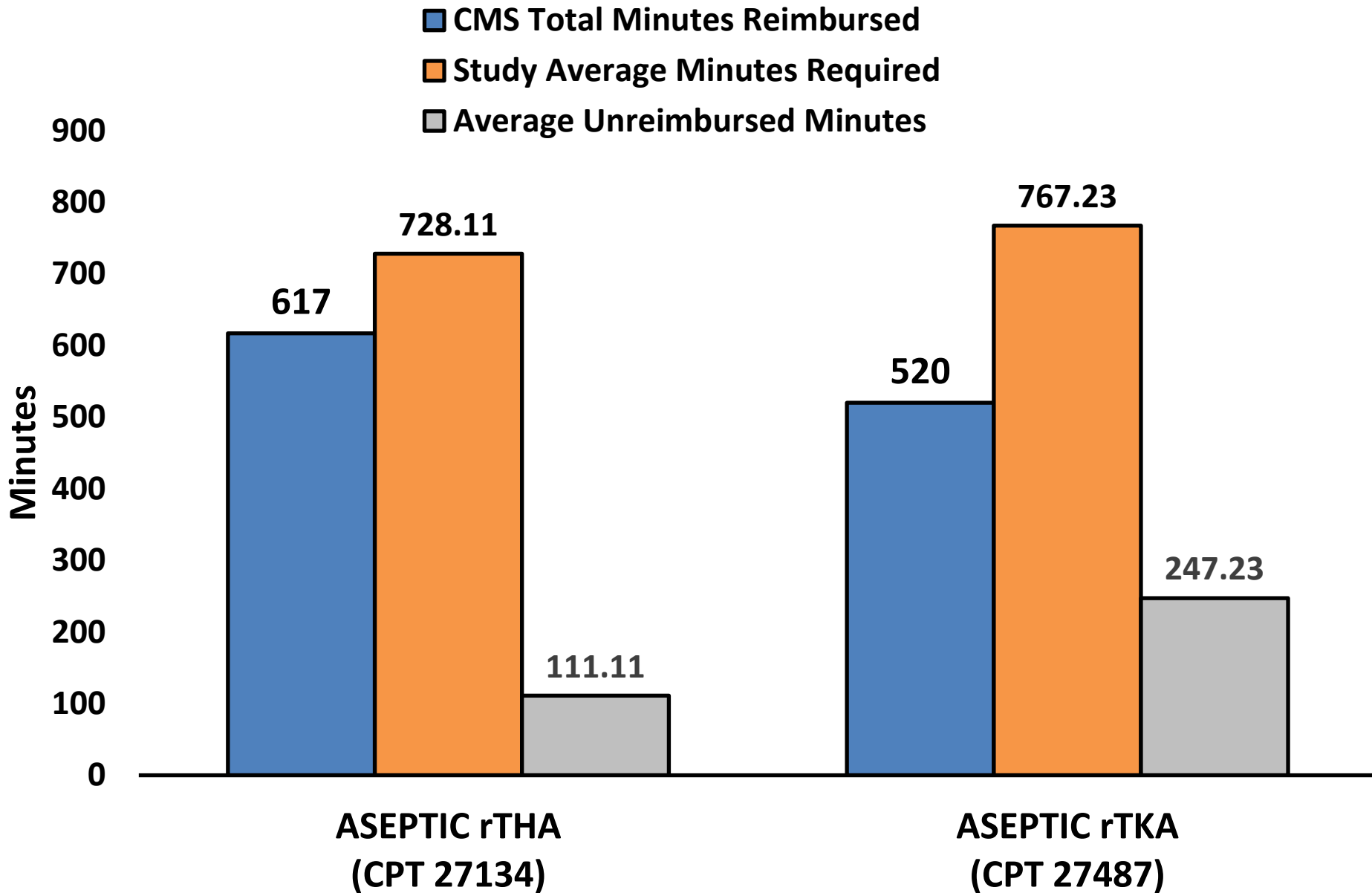
90	24
240	10
40	5
178	
69	
<b>617 min</b>	<b>39 min</b>



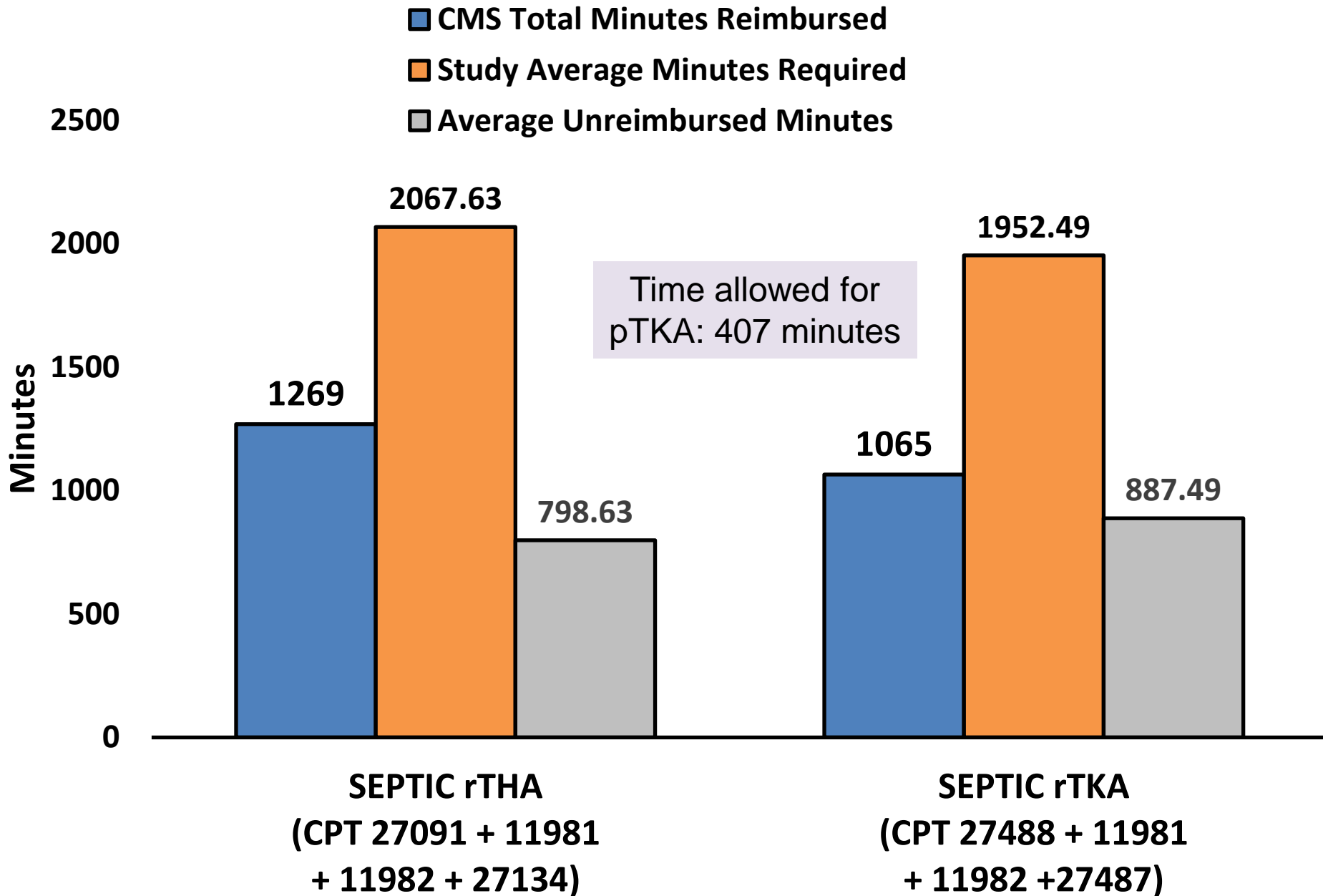
**Total Time:**  
**1269 min**



# Aseptic Revisions



# Septic Revisions





Time required exceeds time reimbursed

Most pronounced for septic revisions

Consistent with prior studies

- More work = lower reimbursement
  - Samuel, LT et al., *Work Relative Value Units Do Not Adequately Support the Burden of Infection Management in Revision Knee Arthroplasty*. J Bone Joint Surg Am, 2020. 102(3): p. 230-236
  - Quan, T et al., *Septic Revision Total Hip Arthroplasty Is Not Adequately Compensated by Work Relative Value Units*. J Arthroplasty, 2020.



Dis-incentivizing surgeons from complex and time-consuming procedures reduces access to care

Findings can be used to advocate for legislative reform



# What can you do to help?

**Don't** post tourniquet times on social media

Bill 99024 – Post-op f/u global

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