

The Impact of COVID-19 on Rates of Pressure Injuries Among Hospitalized Patients Across the United States

Amalia E. Gomez-Rexrode BS¹, Megan Lane MD^{2,3}, Kathryn Ashbaugh BA³, Neil Kamdar MA³, Erika D. Sears MD, MS^{2,3}

¹University of Michigan Medical School, Ann Arbor, MI; ²University of Michigan, Department of Surgery, Section of Plastic Surgery, Ann Arbor, MI; ³Institute for Healthcare Policy and Innovation, Ann Arbor, MI

Purpose

- Hospital-acquired pressure injuries (HAPIs) are never-events causing significant morbidity
- COVID-19 impacted all aspects of hospital care, yet its effects on the rates of HAPIs is unknown
- We aimed to characterize the pandemic's early impact on HAPI rates and composition of HAPI stages among hospitalized patients across the US

Methods

- Analyzed encounter-level data from Optum, a nationwide healthcare insurance claims database representing beneficiaries of a single private payer
- Performed bivariate analysis to compare baseline patient characteristics
- Conducted an interrupted time series analysis to determine rates and composition of HAPI stages among hospitalized patients within 90 days of admission before (January 2018 to February 2020) and after (March 2020 to December 2020) the onset of the pandemic

Results

- HAPIs were identified in 59,175 episodes of care, representing 59,019 unique patients and corresponding to an **overall HAPI rate of 2.65%**
- Baseline characteristics did not vary significantly across the two time periods
- **HAPI rates were consistent with no significant differences in rates following the onset of the pandemic ($p=0.30$)** (Figure 1)
- **Composition of HAPI stages remained consistent across the pandemic** (unspecified, stages 1-4, $p=0.62, 0.80, 0.22, 0.23, 0.52$) except for a significant decrease in unstageable/deep tissue pressure injuries (-0.088% , $p=0.013$) (Figure 2)

Conclusion

- While hospital resources were overall strained at the peak of the COVID-19 pandemic, including severe staff and supply shortages, no significant differences were identified in HAPI rates among the study's cohort of privately insured patients

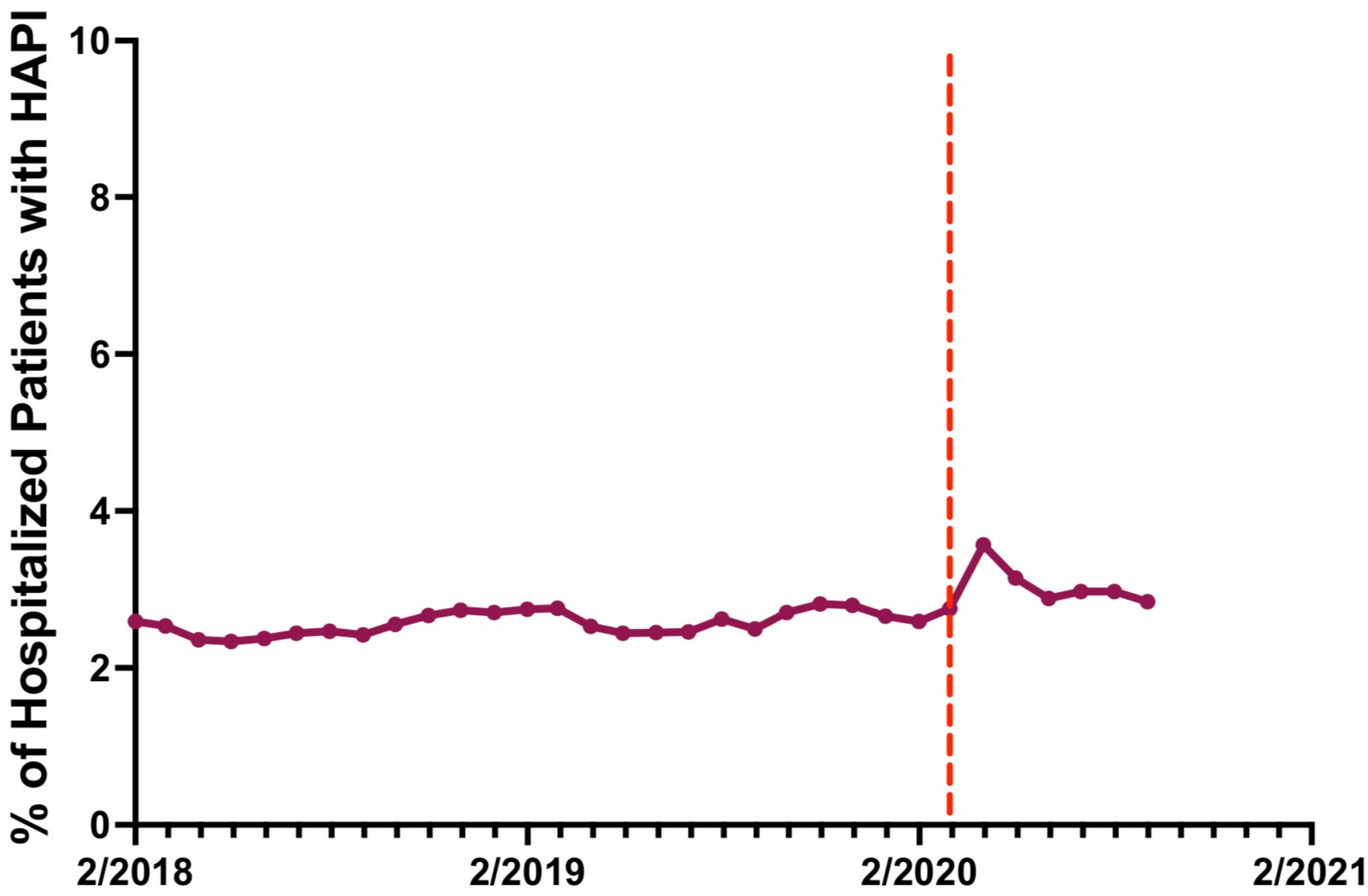


Figure 1

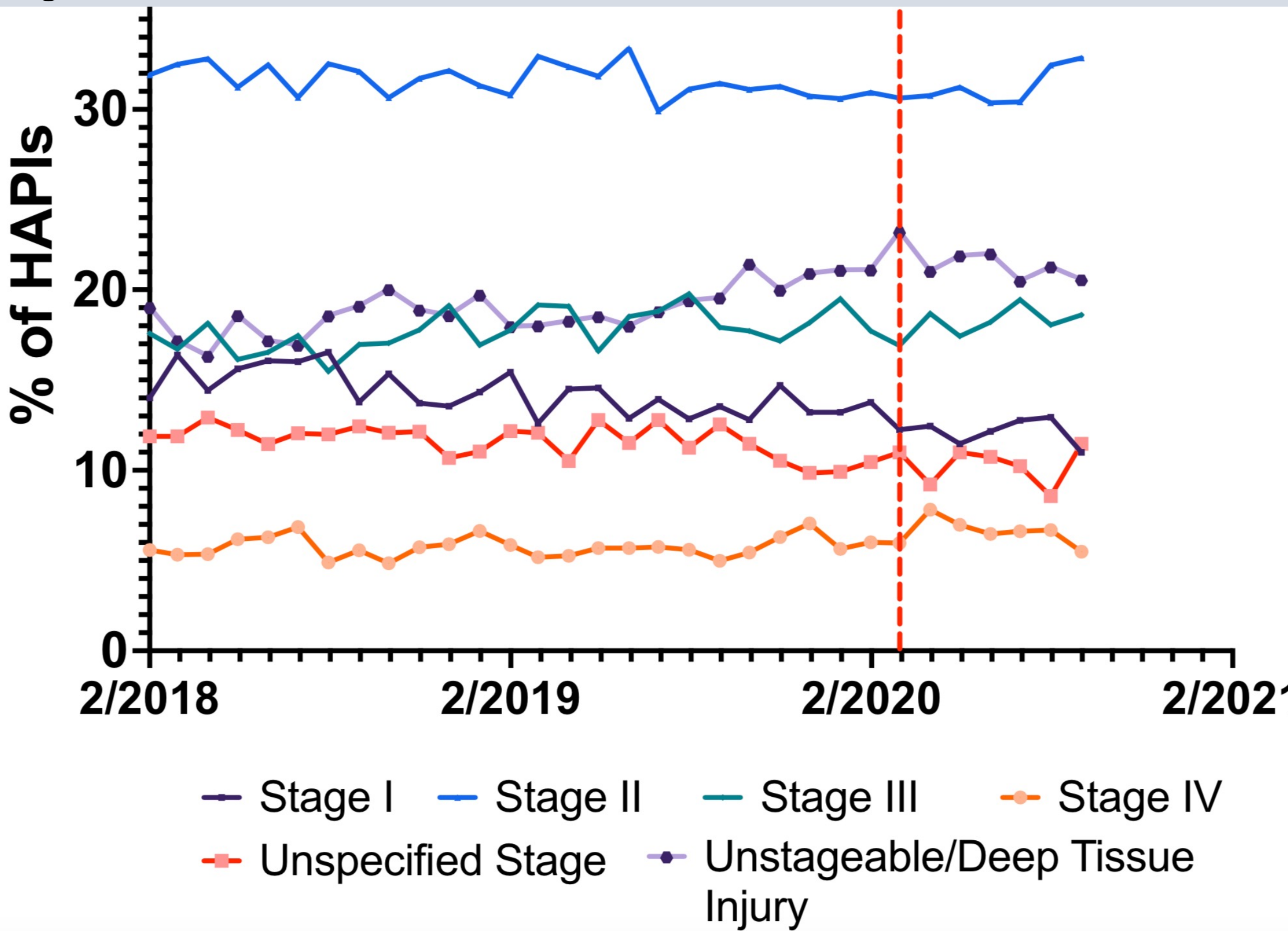


Figure 2