Catheter-Associated Urinary Tract Infection and the Equity Gap Behind Compliance

Policy trends in Critical Access versus Acute Care Hospitals following CMS CoP 485.64

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Background

Policy Mandate

- CMS Conditions of Participation (CoP) 485.64 requires Critical Access Hospitals (CAH) to maintain programs for infection prevention, antimicrobial stewardship, and healthcare-associated infection (HAI) surveillance.[1]

Implementation setting

- CAHs are essential to rural care delivery, but often operate with limited staffing, infection prevention expertise, and surveillance infrastructure than larger Acute Care Hospitals (ACHs).[2]

Reason for CAUTI focus

- Catheter-associated urinary tract infections (CAUTIs) were selected because evidence suggested that they were least disrupted during COVID-19 than several other HAIs.[3,4]

Policy Question

- If regulatory expectations are similar, do CAHs and ACHs show similar trends in CAUTI outcomes and urinary catheter use?

Objective: **To assess whether national CAUTI Standardized Infection Ratio and urinary catheter Standardized Utilization Ratio trends differed between Critical Access Hospitals and Acute Care Hospitals after CoP 485.64 implementation.**

Methods

Data source
National Healthcare Safety Network (NHSN) public-use data
↓
Study period
2016 to 2024, with 2019 used as the CoP 485.64 policy marker
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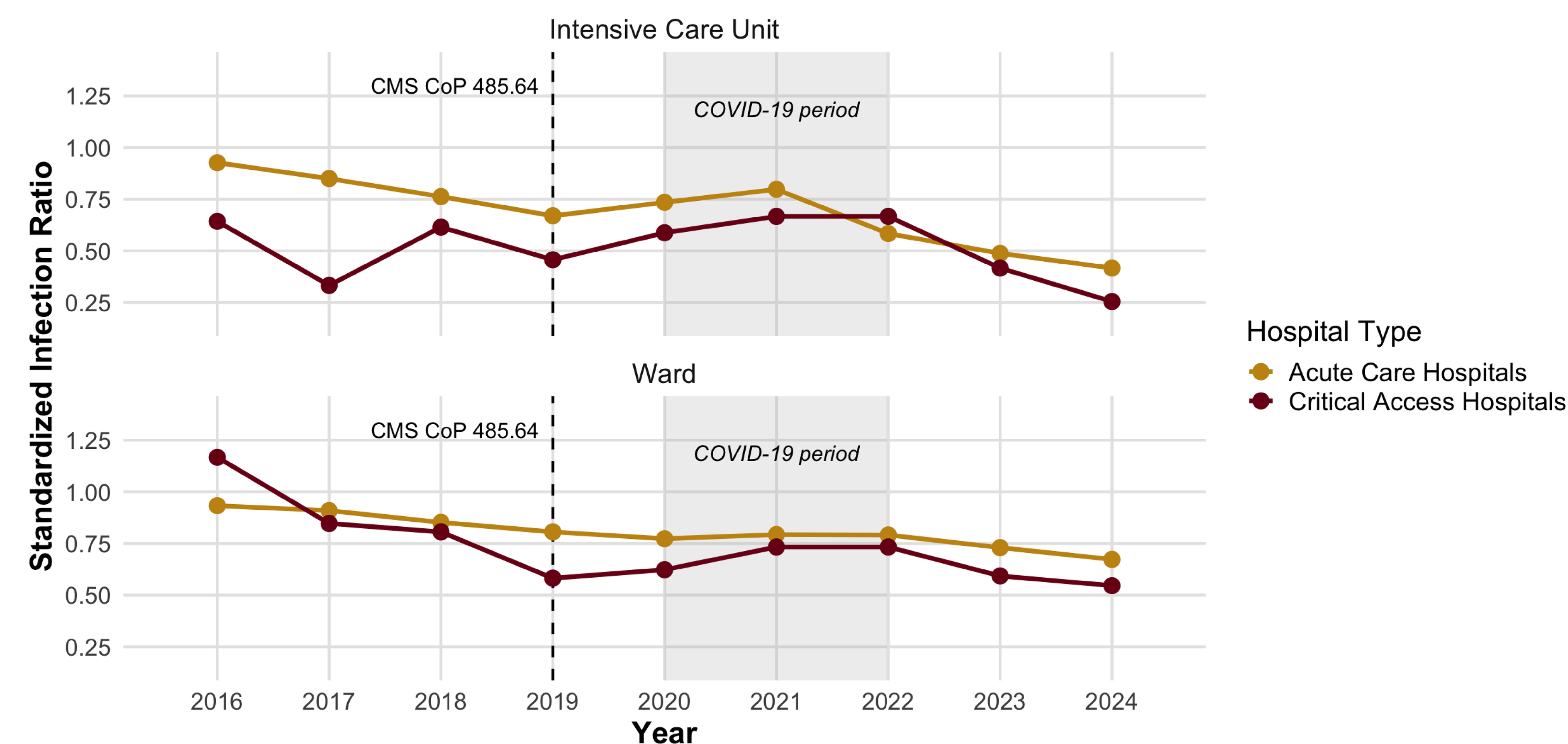
Comparison groups
Critical Access Hospitals (CAHs) and Acute Care Hospitals (ACHs)
↓
Outcomes and utilization measures
CAUTI Standardized Infection Ratio (SIR)
Urinary catheter Standardized Utilization Ratio (SUR)
↓
Facility-level stratification
ICU, ward, and overall hospital settings
↓
Analytic approach
Descriptive time-trend analysis comparing CAH and ACH patterns following policy implementation

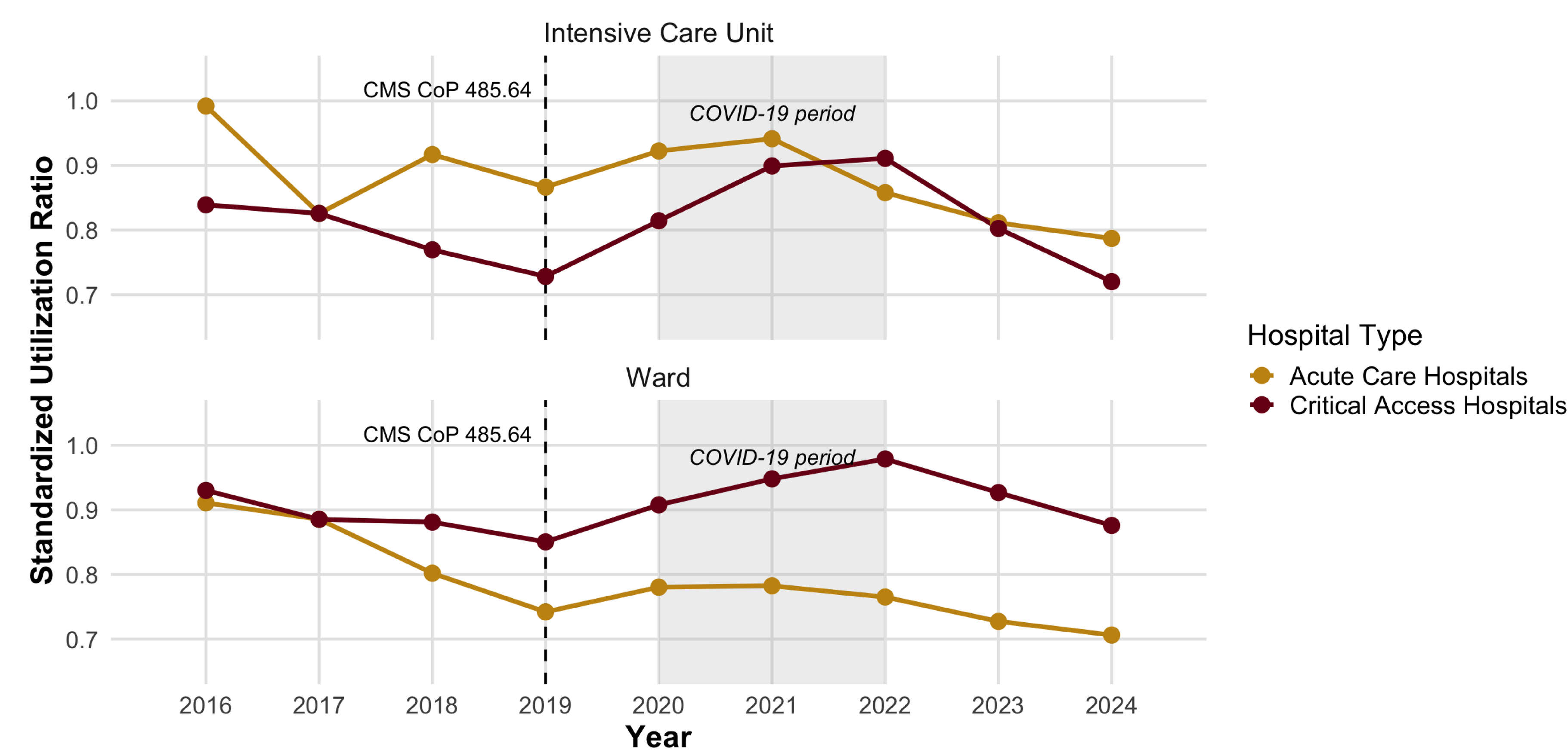
Results

CAUTI Standardized Infection Ratio Trends by Hospital Type



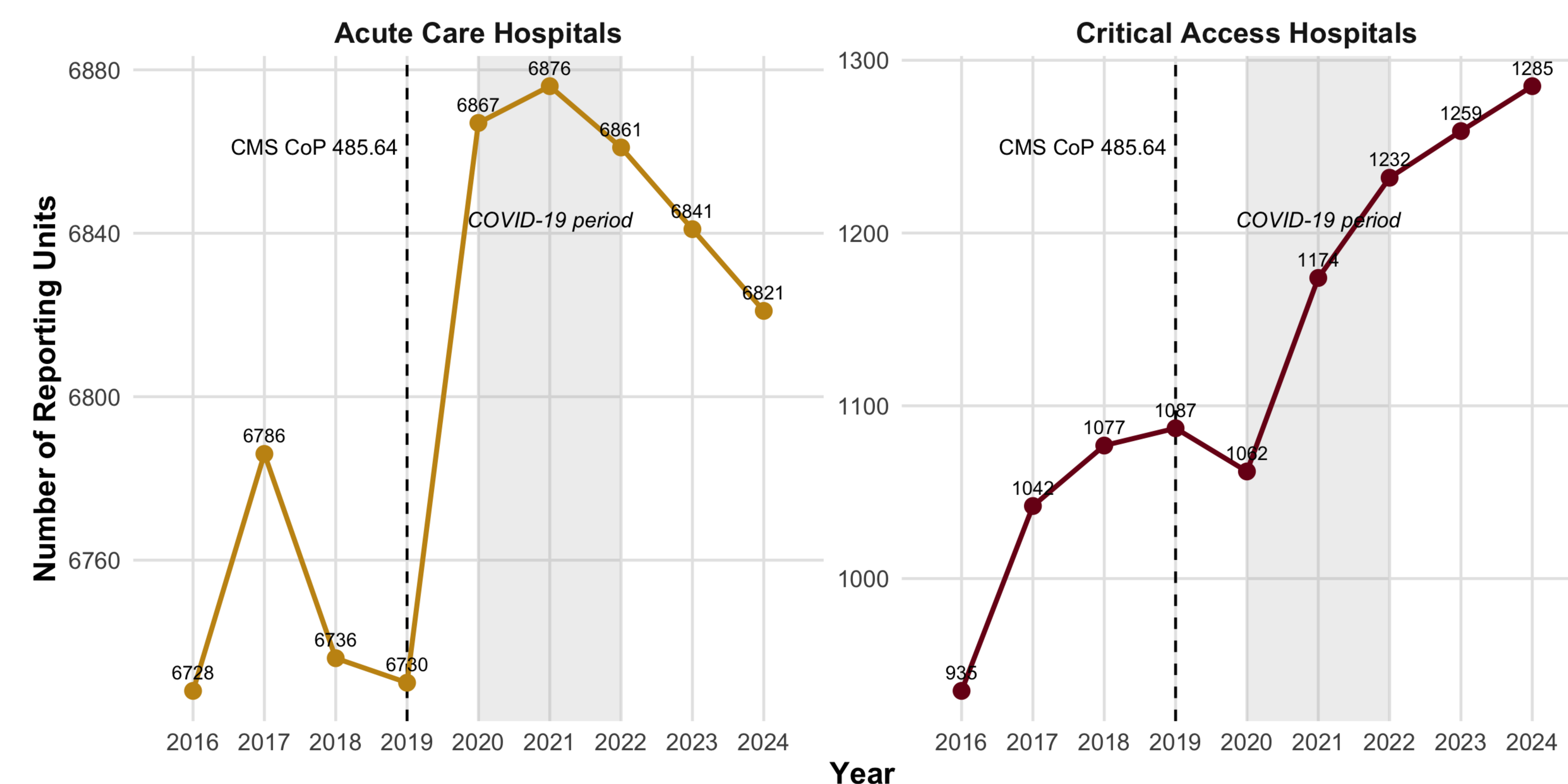
CAUTI SIR remained below 1.0 across most years and settings for both ACHs and CAHs, suggesting observed CAUTI events were generally lower than predicted, with trends remaining favorable after the 2019 CoP 485.64 policy marker.

Standardized Utilization Ratio Trends by Hospital Type



Urinary catheter SUR remained below 1.0 for both hospital groups, but CAHs showed relatively higher ward catheter utilization than ACHs after 2019, suggesting persistent catheter-use burden in lower-resource settings.

Overall Reporting Units by Year and Hospital Type



After the 2019 CoP 485.64 marker, CAH reporting units increased steadily while ACH reporting remained high and stable, suggesting a potential positive policy effect on surveillance participation among Critical Access Hospitals.

Policy Implications

1. **Implementation capacity differs across hospital types**
   CoP 485.64 depends on staffing, surveillance infrastructure, data systems, and access to infection prevention expertise.[5]
2. **Risk adjustment is not resource adjustment**
   SIR and SUR improve comparison using predicted values, but they do not measure whether hospitals have the resources needed to implement prevention work.[6,7]
3. **SIR should be interpreted alongside SUR**
   Low SIR values suggest favorable reported healthcare-associated infection outcomes, while SUR adds catheter-utilization context to CAUTI prevention patterns.[8]

Conclusion

- **CAHs showed favorable CAUTI SIR trends, but relatively higher catheter SUR suggests that infection outcomes alone may not capture implementation burden.**
- **Equity-focused policy support should strengthen CAH infrastructure, surveillance capacity, and infection prevention resources without lowering patient-safety goals.[9]**

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