NIH Clinical Center Health Equity Initiative

CCRHB February 16, 2024

NIH Clinical Center's Health Equity in Clinical Care Strategy

Mission Statement:

The NIH Clinical Center is committed to continuous improvement of quality and health outcomes for our patients. Part of this continuous improvement of patient health outcomes is identifying and monitoring healthcare disparities with the goal to address them in a measurable manner.

NIH Clinical Center's Health Equity in Clinical Care Strategy

Purpose:

In response to the Joint Commission Health Equity Standard to identify healthcare disparities in the patient population and to stratify quality and safety data using sociodemographic characteristics, the NIH Clinical Center has developed an action plan and approach to identifying and addressing healthcare disparities in our patient population.

Leadership:

- Dr. Colleen Hadigan, MD, MPH: Chief Medical Officer
- Dr. David Lang, MD, MPH: Chief, Office of Patient Safety and Clinical Quality
- Tricia Coffey, MS: Chief Health Information Officer, Department of Clinical Research Informatics
- Cecelia Henry, MS, RN: Scientific Diversity Advisor

NIH Clinical Center's Health Equity in Clinical Care Strategy Contd.

Activities:

- Establish an annual data report on inpatient health outcomes beginning with Fiscal Year 2022
- Identify focus areas for addressing healthcare disparities that are captured from the data report
- Monitor and evaluate subsequent annual reports to document and measure progress
- Evaluate and stratify patient satisfaction survey data acquired through Press Ganey by sociodemographic characteristics where possible in addition to the annual data report

Sociodemographic Characteristics and/or Social Determinants of Health:

- Sex
- Age
- Race
- Ethnicity
- English vs non-English Language
- Insurance Status
- Z-codes

Z-Code Data

- Z-codes are identified and assigned by HIMD through chart review
- When a Z-code is present it means there is documented findings related to patients
  - Z-55 – codes related to education and literacy
  - Z-56 – codes related to unemployment or job insecurity
  - Z-59 – codes related to housing insecurity
- Important to note that the absence of a Z-code does not mean that the items were systematically assessed and found not present

Outcomes:

- LOS – length of stay (days) – from EMR
- Death during hospitalization – from EMR
- Death w/in 30 days of discharge – from EMR
- Unplanned admission to ICU – tracked by OPSCQ, does not include planned admission per protocol or post-op ICU care
- CLABSI – Central line Associated Blood Stream Infections – combination EMR pull of line data, positive cultures and chart review by HES
- CAUTI – Catheter Associated Urinary Tract Infections – combination EMR pull of catheter data, positive cultures and chart review by HES
- Surgical Site Infection - combination EMR pull of surgery, positive cultures and chart review by HES
- Falls – extracted from EMR and Events Reporting System

FY 2022 Inpatient Sociodemographic Characteristics

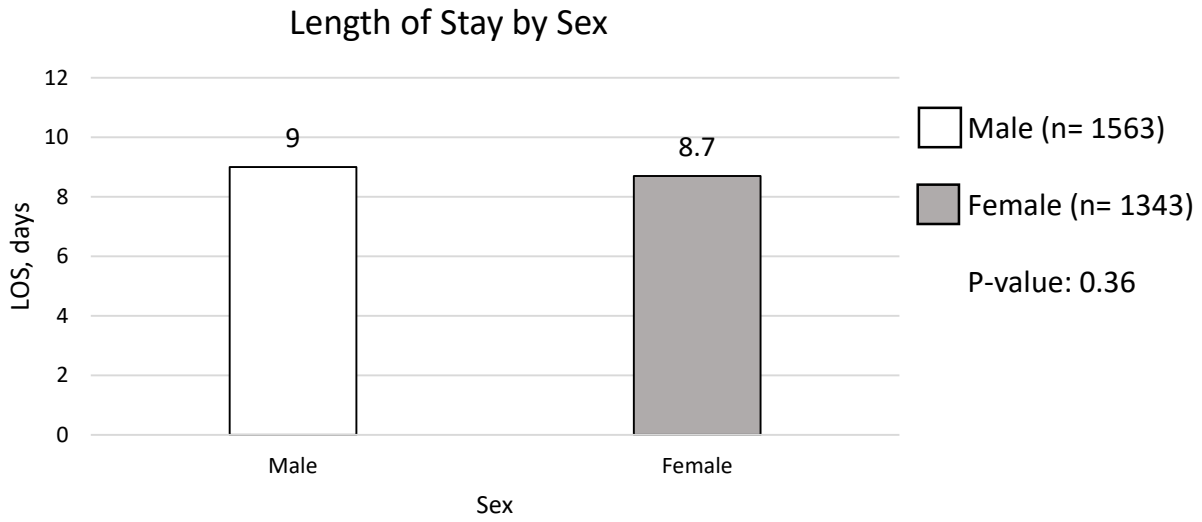
Characteristics	Total (n=2,906)
Age, mean, years	45
Age groups, n (%)	
0-18 years	263 (9)
19-34 years	660 (23)
35-49 years	375 (13)
50-64 years	1063 (37)
65-79 years	496 (17)
80+ years	49 (2)
Sex, n (%)	
Male	1563 (54)
Female	1343 (46)
Language, n (%)	
English	2596 (89)
Spanish	202 (7)
Other	99 (3)
SDH Z-codes, n (%)	
Total	124 (4)
Z55	7 (.24)
Z56	78 (3)
Z59	66 (2)

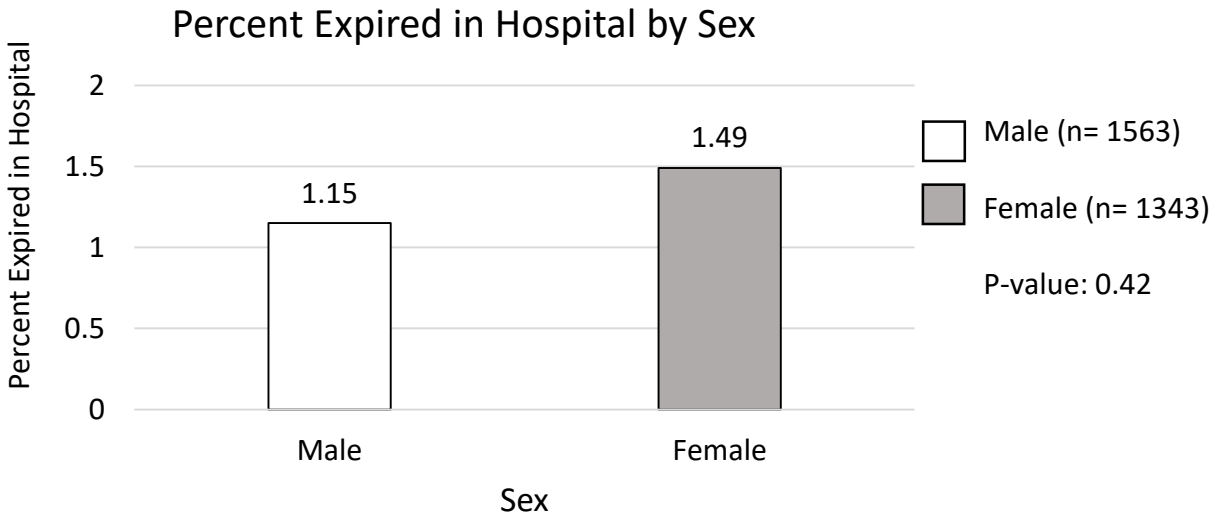
Characteristic	Total (n=2,906)
Racial groups, n (%)	
Am Indian/Alaskan Native	19 (0.7)
Asian	195 (6.7)
Black/AA	449 (15)
Hawaii/Pacific Island	7 (0.2)
White	1930 (66)
Multiple Race	90 (3.1)
Unknown	216 (7.4)
Ethnicity, n (%)	
Latin/Hispanic	393 (14)
Non Latin/Hispanic	2422 (86)
Insurance Status, n (%)	
Insured	1261 (43.5)
Uninsured	645 (22)
Unknown	1000 (34.5)

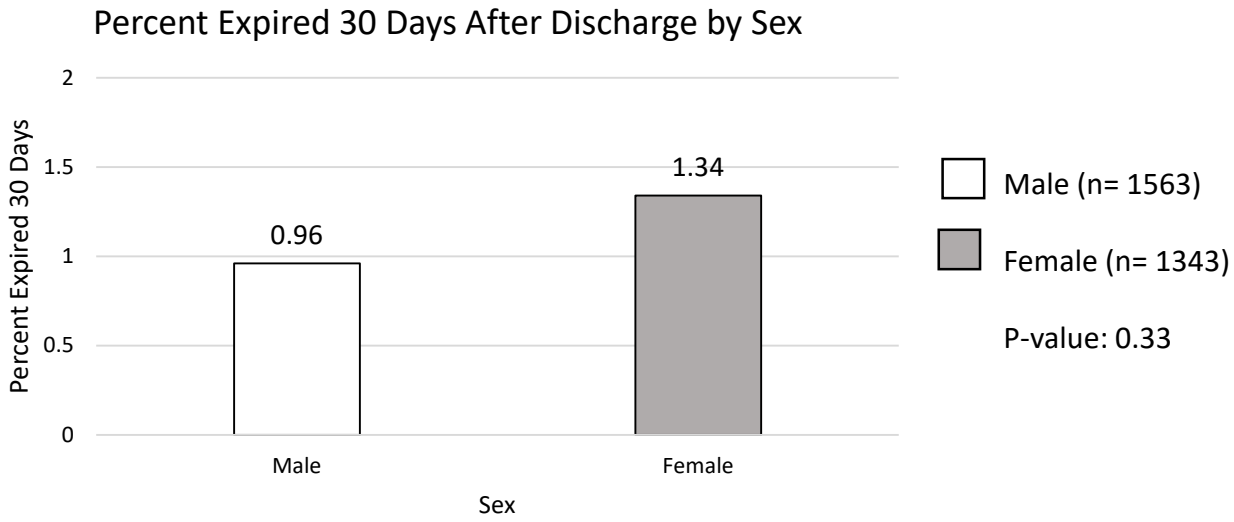
FY 2022 Inpatient Outcome Measures

Outcome	Total (n=2,906)
Length of Stay, days	
• Mean (sd)	9 (17)
• Median (IQR)	4 (2,8)
• range	1-284
Death in Hospital, n (%)	38 (1.3)
Death <30 day d/c, n (%)	33 (1.1)
Unplanned ICU, n (%)	135 (4.6)
CLABSI, n (%)	15 (0.5)
CAUTI, n (%)	5 (0.17)
Surgical Site Infection, n (%)	12 (0.4)
Falls, n (%)	28 (0.96)

Health Outcomes by Sex







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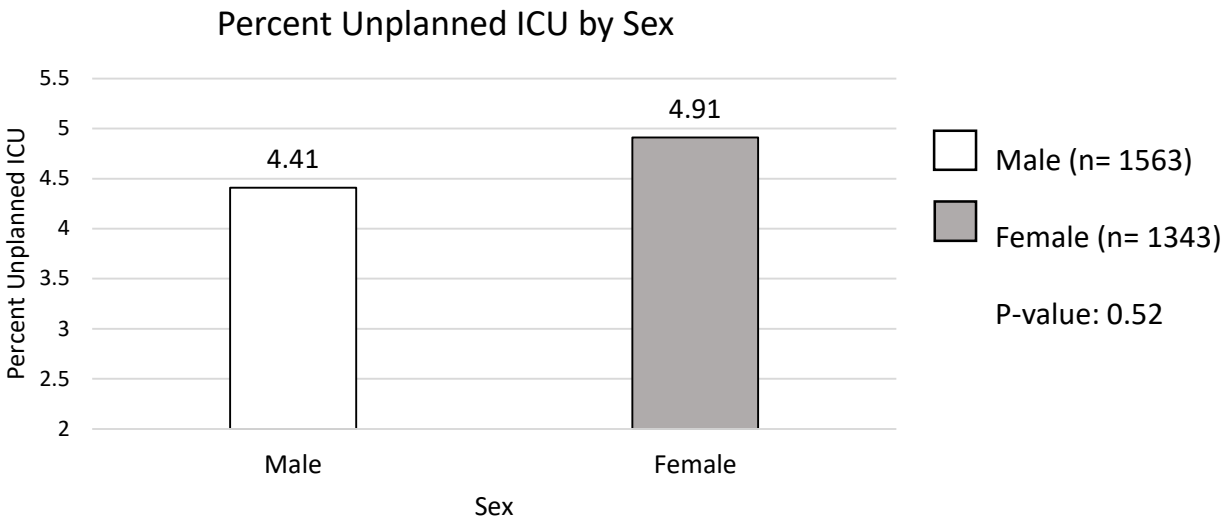

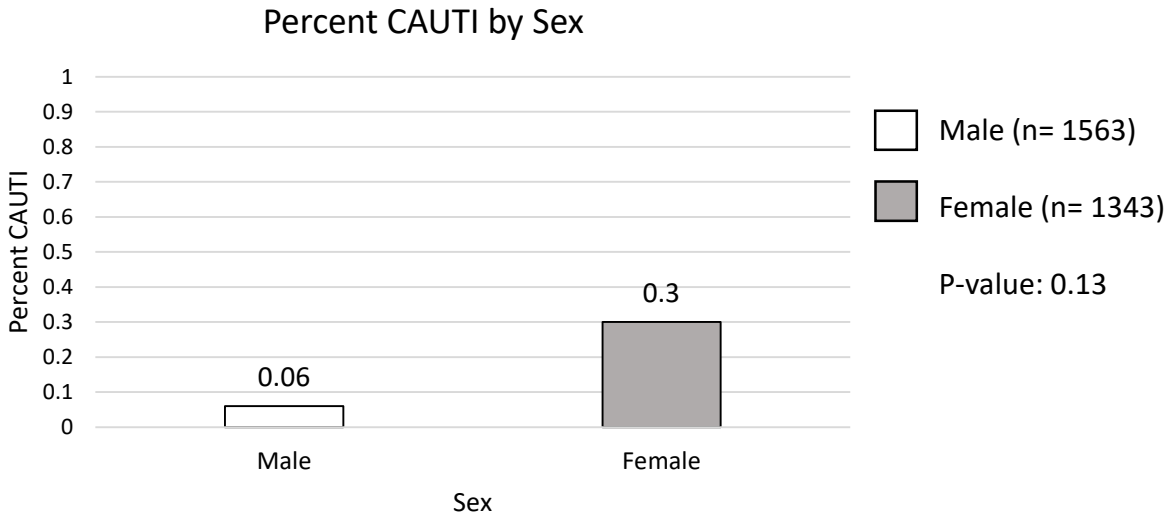

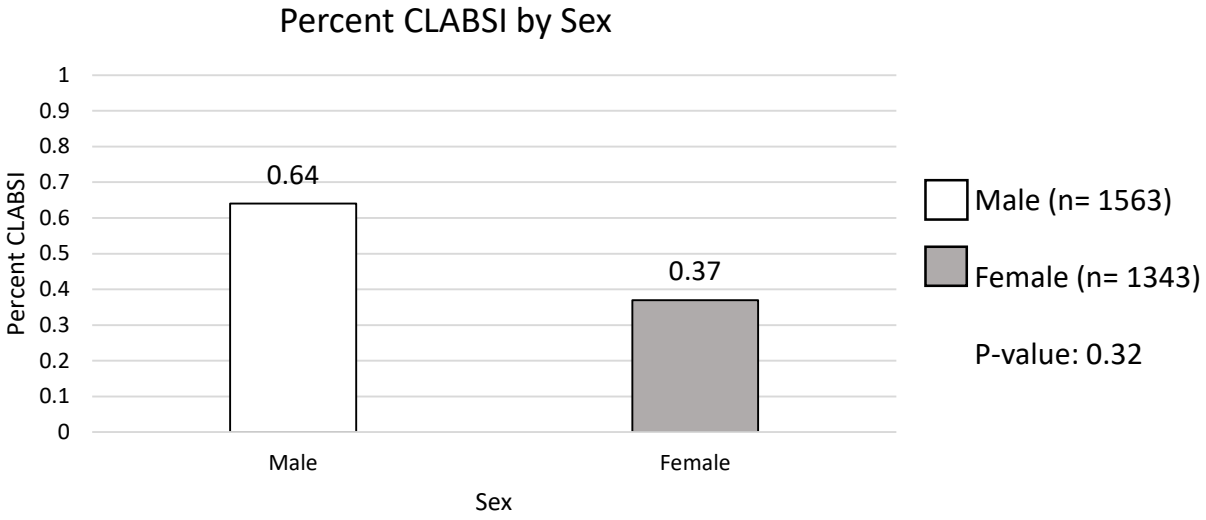

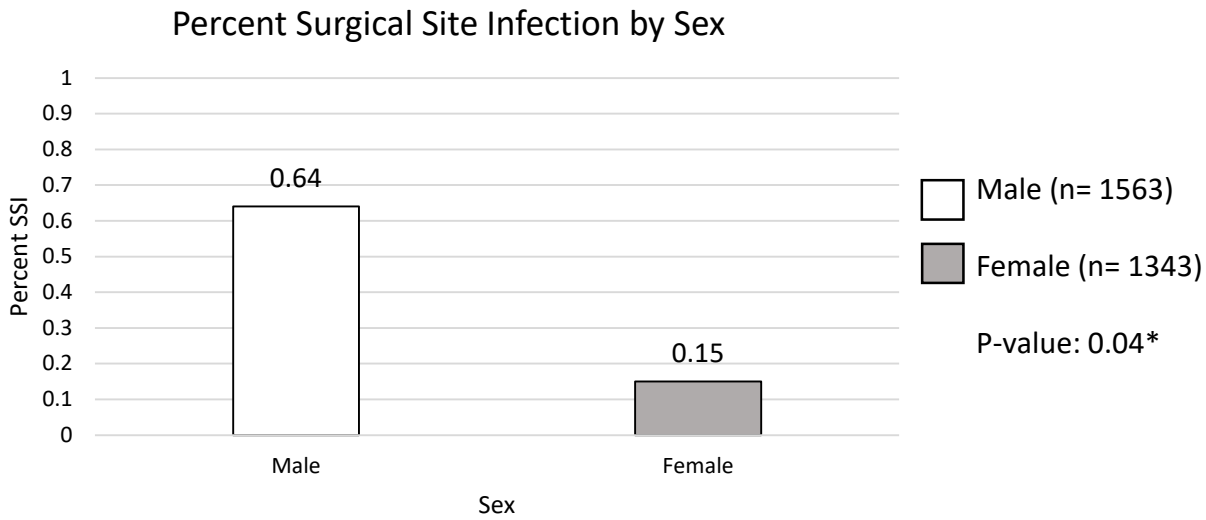

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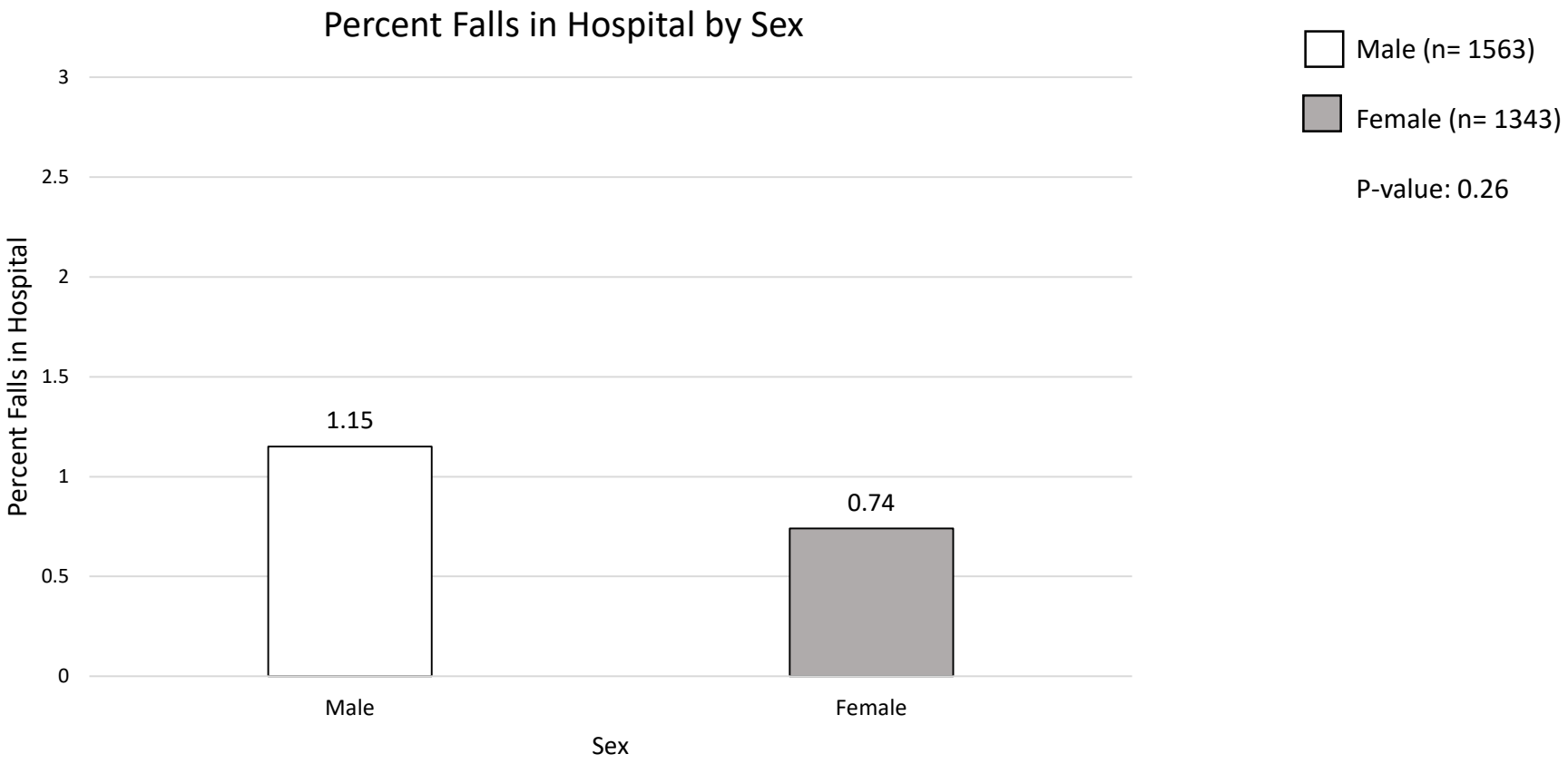
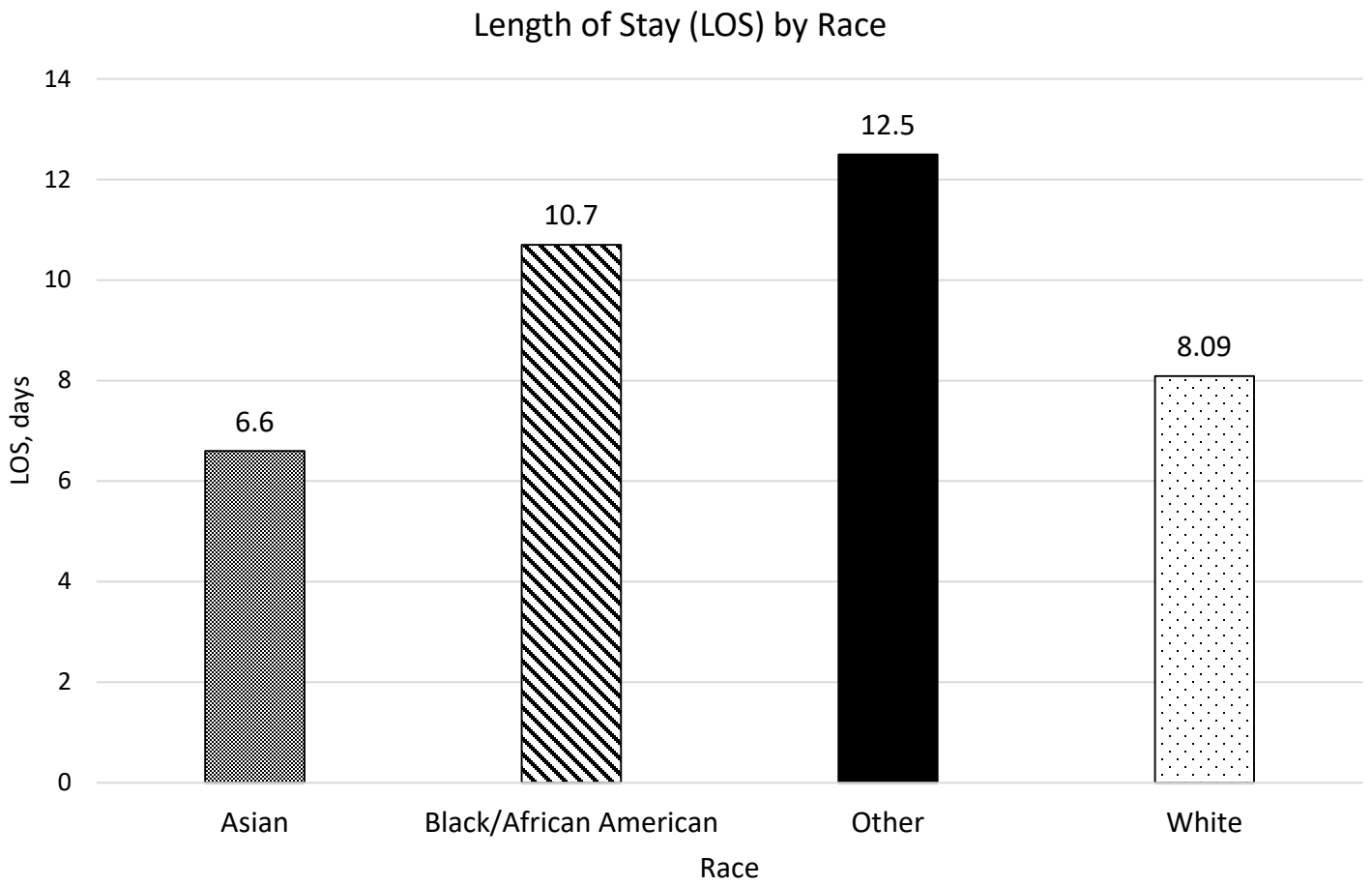


Outcomes by Sex

- Surgical site infection – increased frequency in men vs. women
  - Men (50%) and women (48%) were equally likely to have a surgical procedure
- RR of surgical site infection for men vs women

  RR 4.41 (95% CI 0.90-18.7) – not statistically significant
- Limitation – overall cases of surgical site infections small

Health Outcomes by Race



Asian (n= 195)

Black/African American (n= 449)

Other (n= 332)

White (n= 1930)

**White/Asian LOS did not differ, but was shorter than LOS for Black/AA and Other Race

Outcomes by Race

- Length of Stay was greater among Black/AA and Other (Mixed Race, Hawaii/Pacific Island, Am Indian/Native Alaskan) compared to White and Asian
- There were no significant difference by race in the following outcomes:
  - Death in hospital or within 30 days of d/c, unplanned ICU admission or falls
  - CLABSI, CAUTI and Surgical Site Infection also not significant, but may have been too few to detect differences across multiple race categories

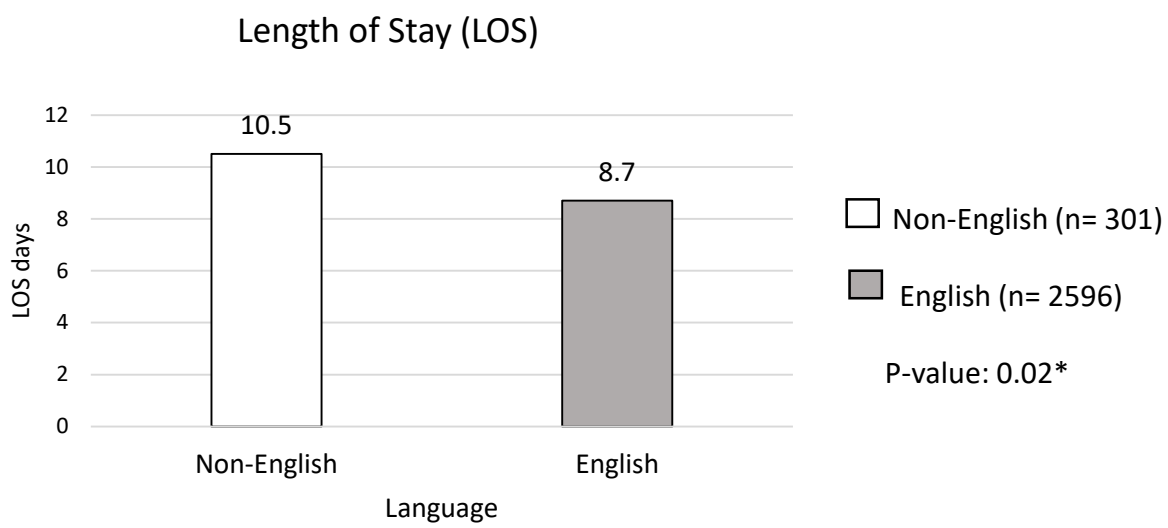
Outcomes by Age

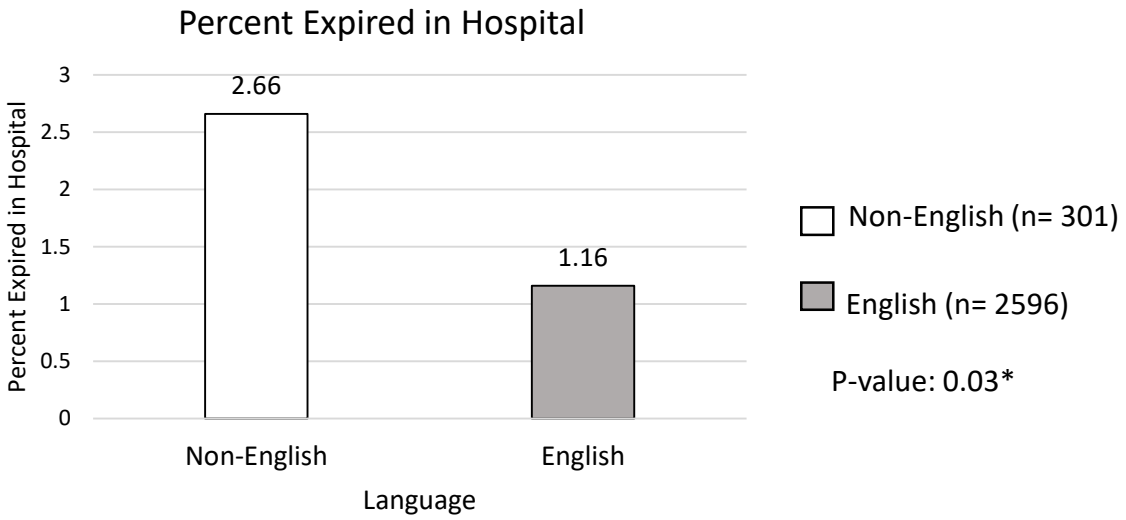
- There were no significant differences in Length of Stay or any measured outcome by age

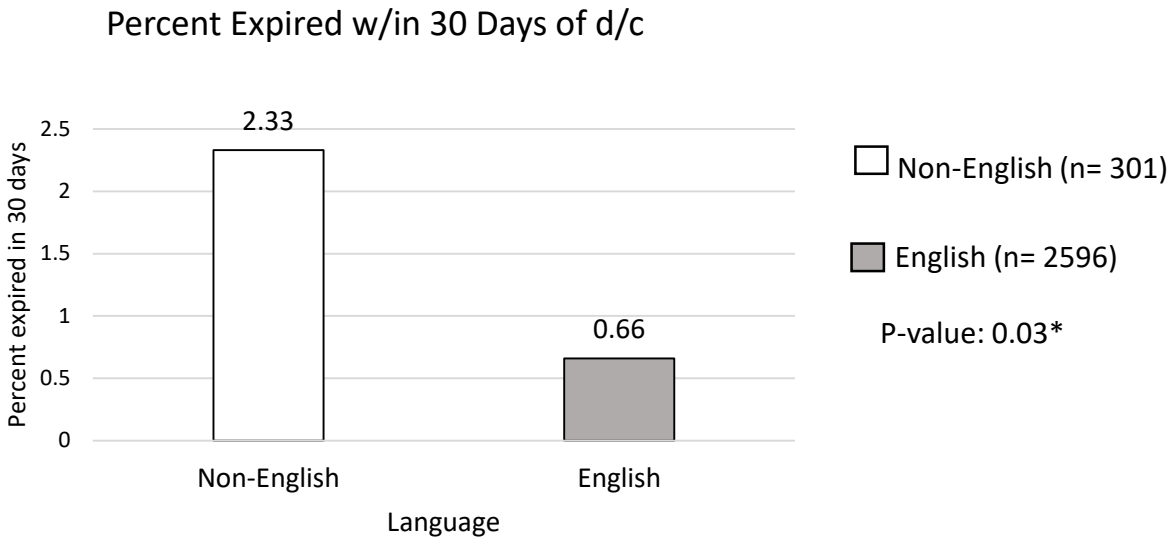
Outcomes by Ethnicity

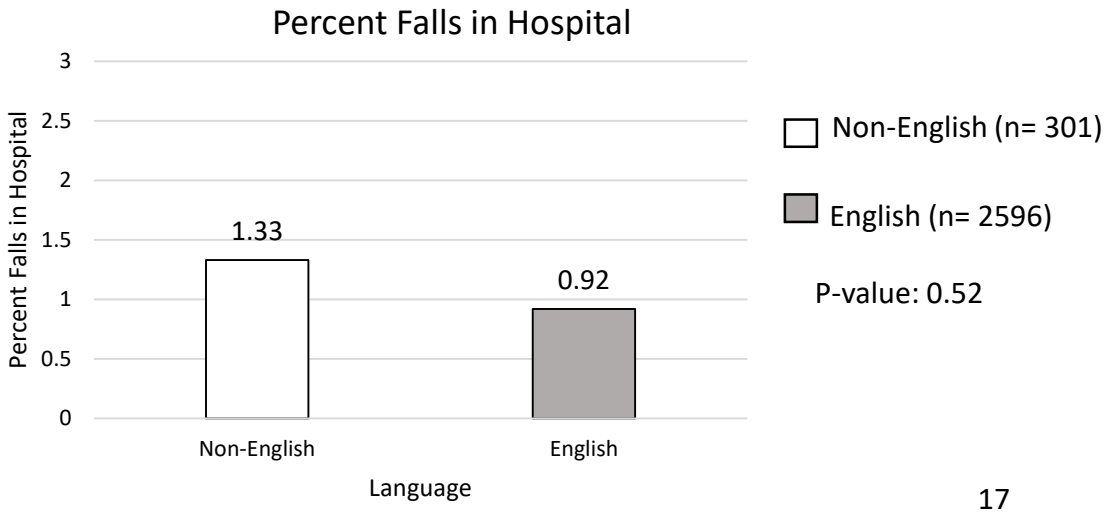
- There were no significant differences in Length of Stay or any measured outcome by ethnicity: Latin/Hispanic vs. Non-Latin/Hispanic

Health Outcomes by Language (English vs Non-English)









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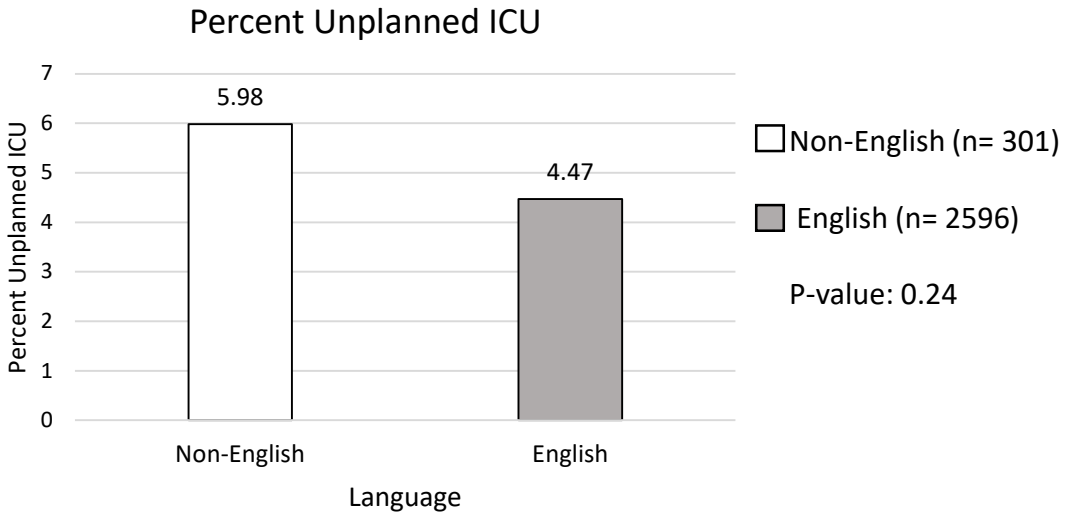
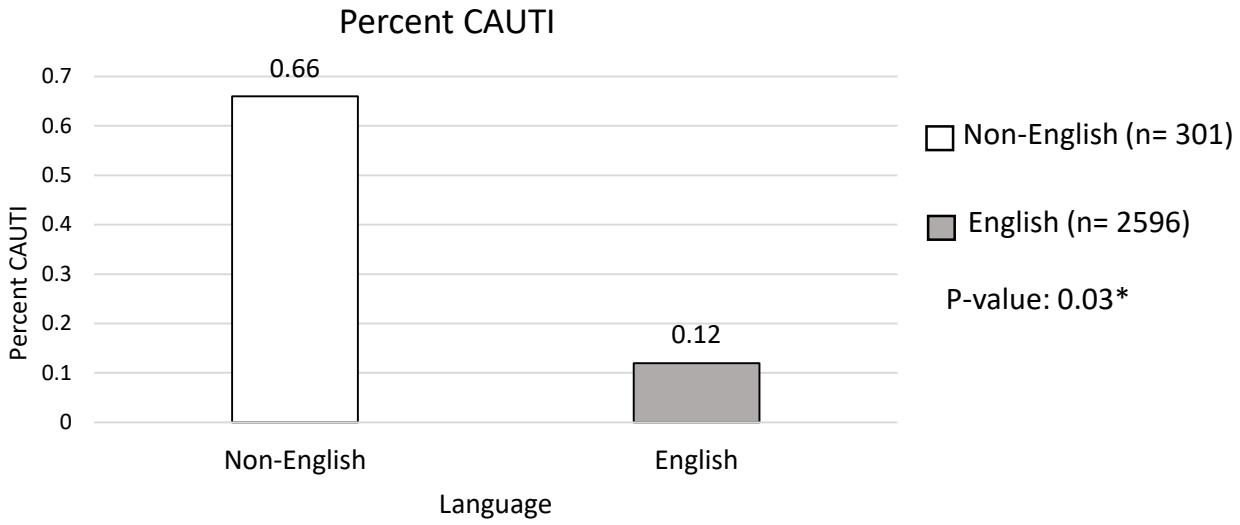
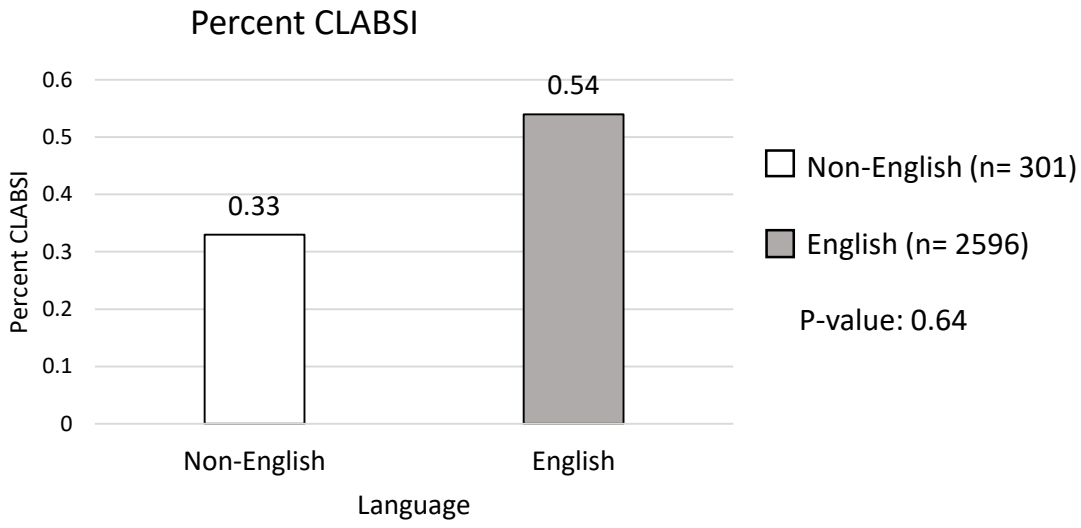
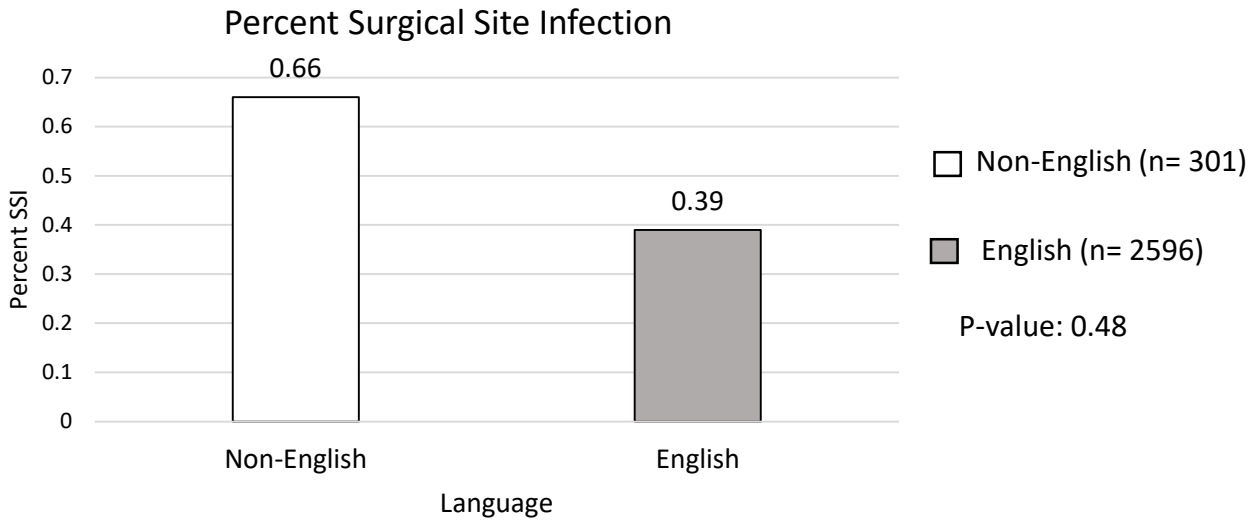








Outcomes by Language (English vs Non-English)

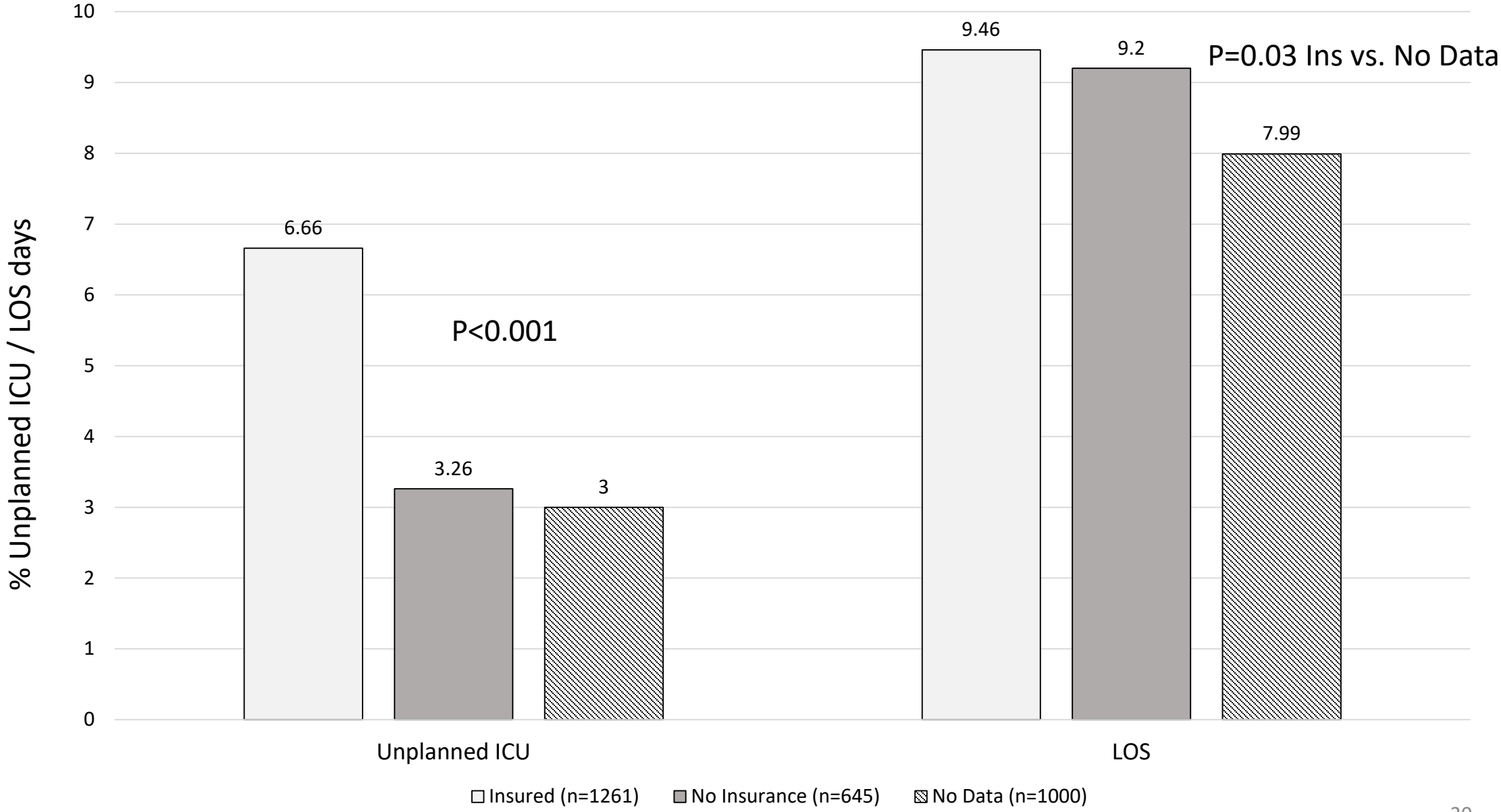
- Length of Stay, Death in Hospital, Death w/in 30 days of d/c and rate of CAUTI all greater among Non-English
- RR of Death in Hospital Non-English vs English

  RR 2.30 (95% CI 1.06-4.97)
- RR of Death w/in 30 days of D/C Non-English vs English

  RR 2.41 (95% CI 1.05-5.54)
- RR of CAUTI for Non-English vs English

  RR 5.75 (95% CI 0.96-34.3) – not statistically significant
  - Limitation – very few cases of CAUTI

Health Outcomes by Insurance Status



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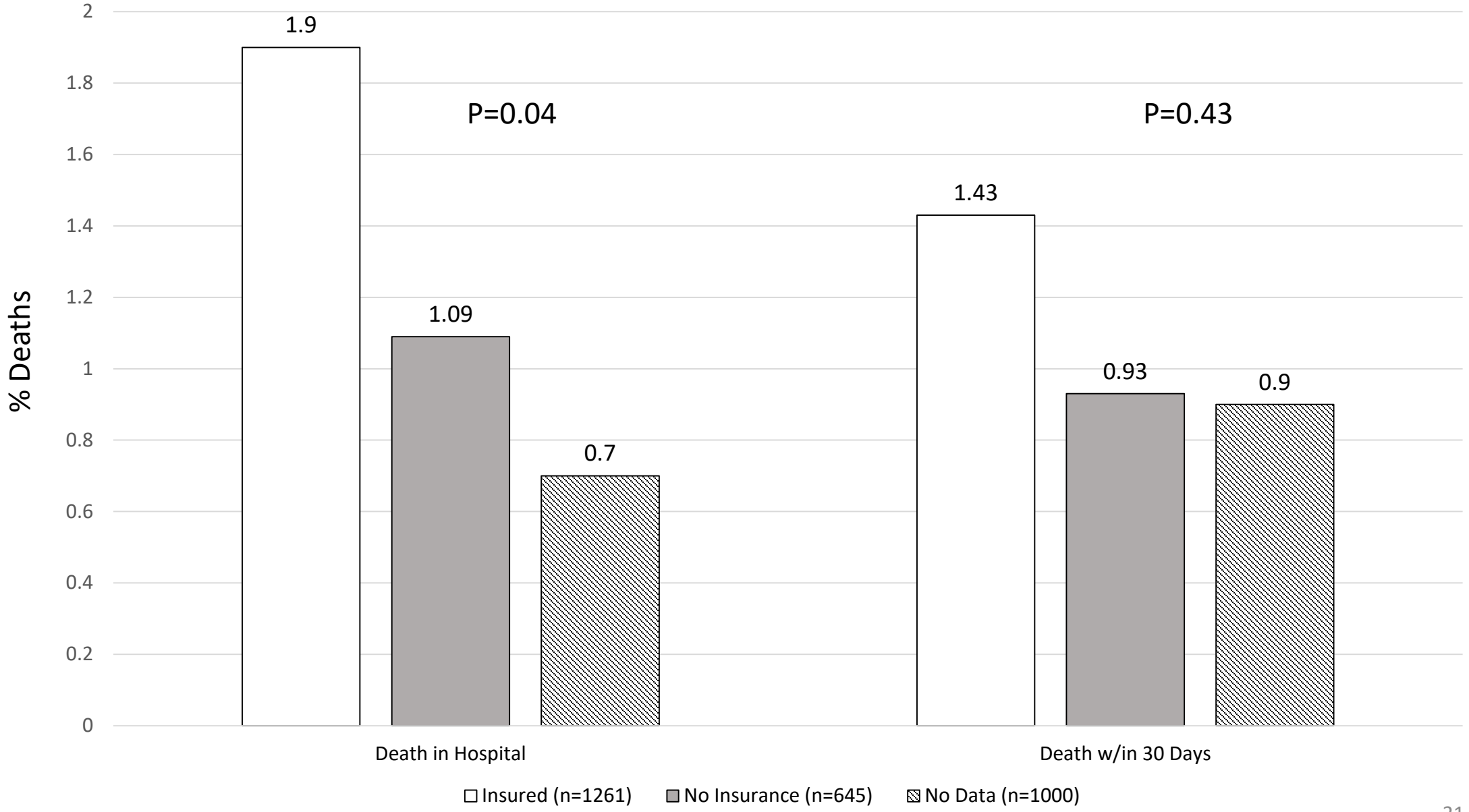

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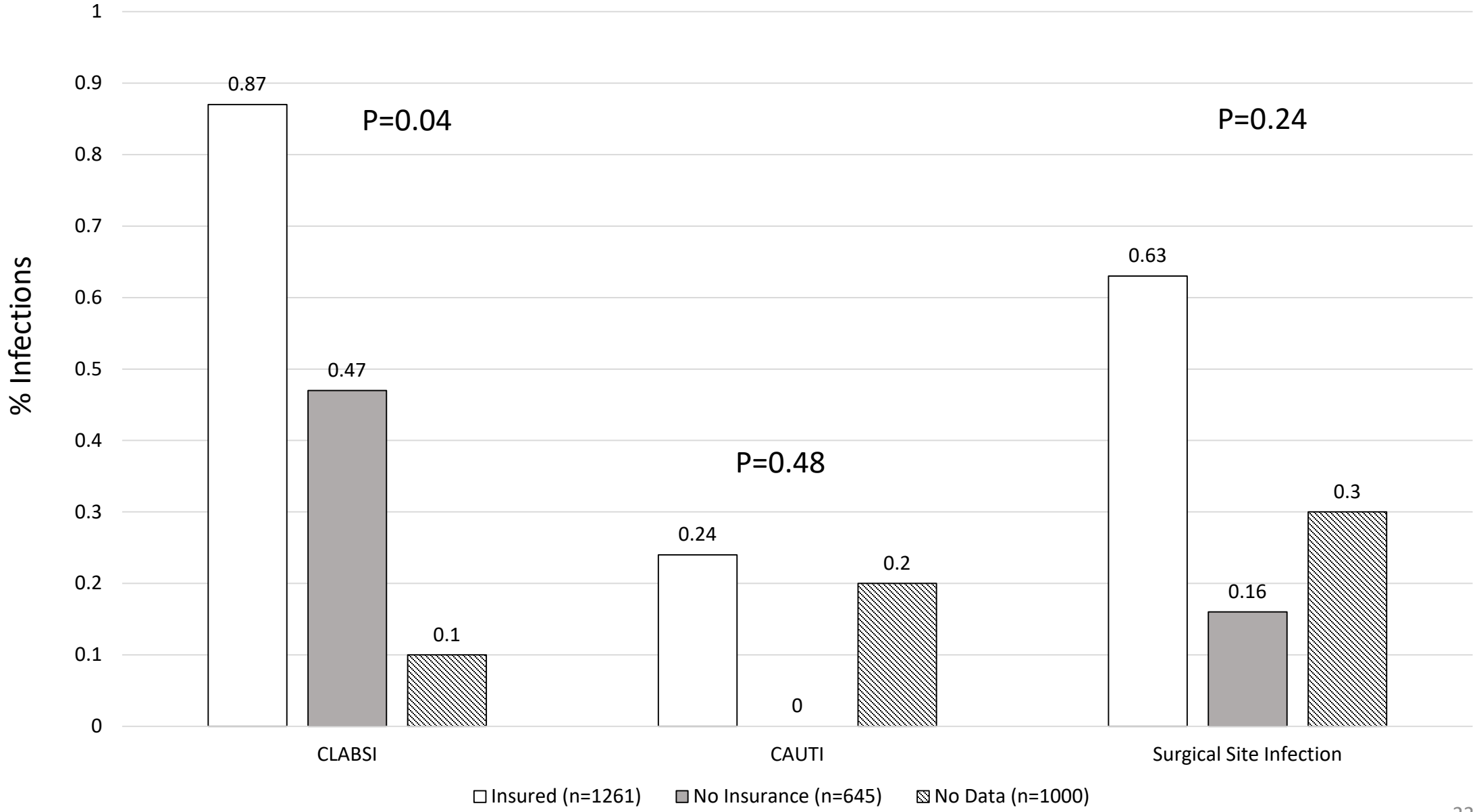

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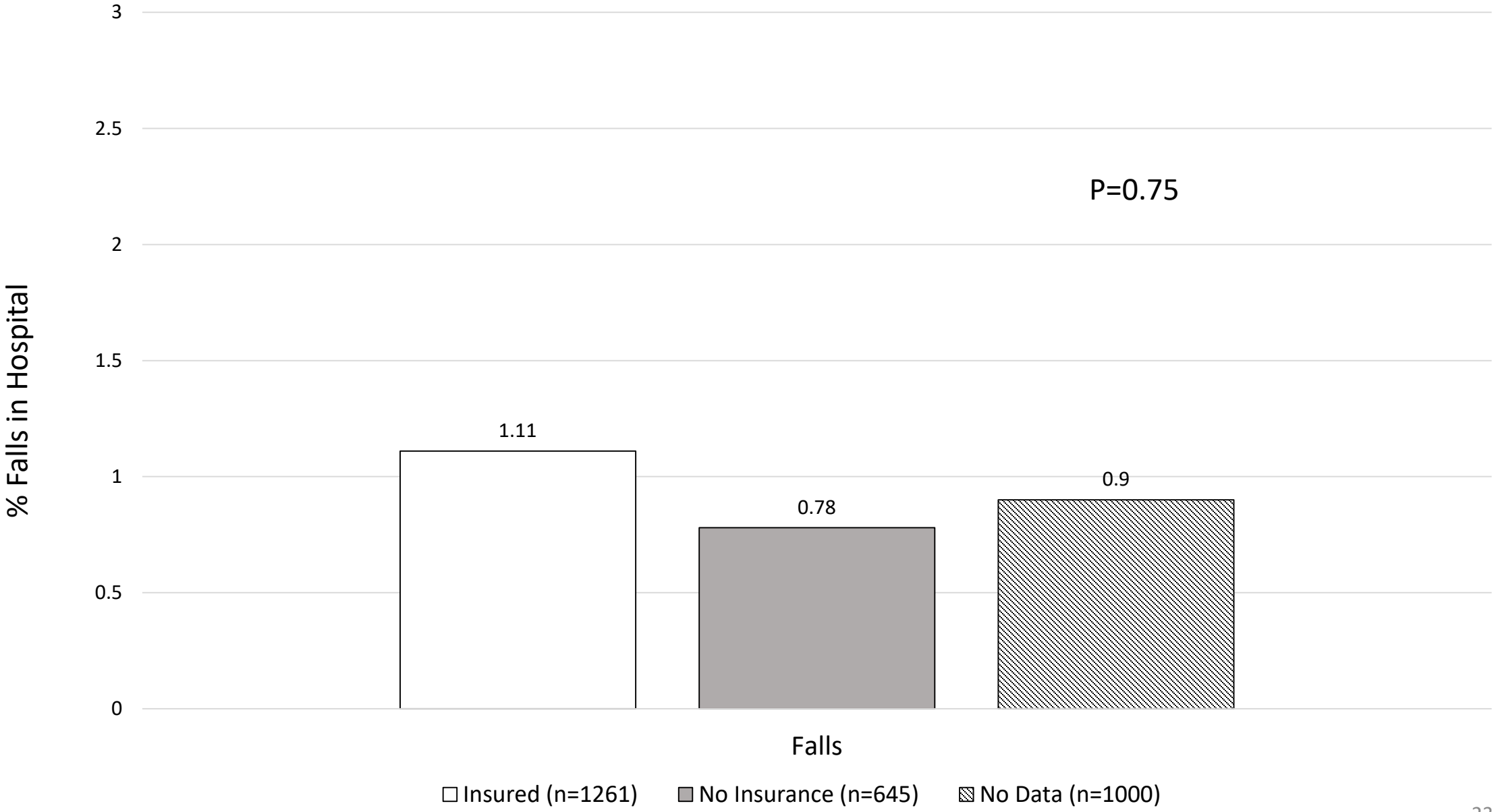


Outcomes by Insurance Status

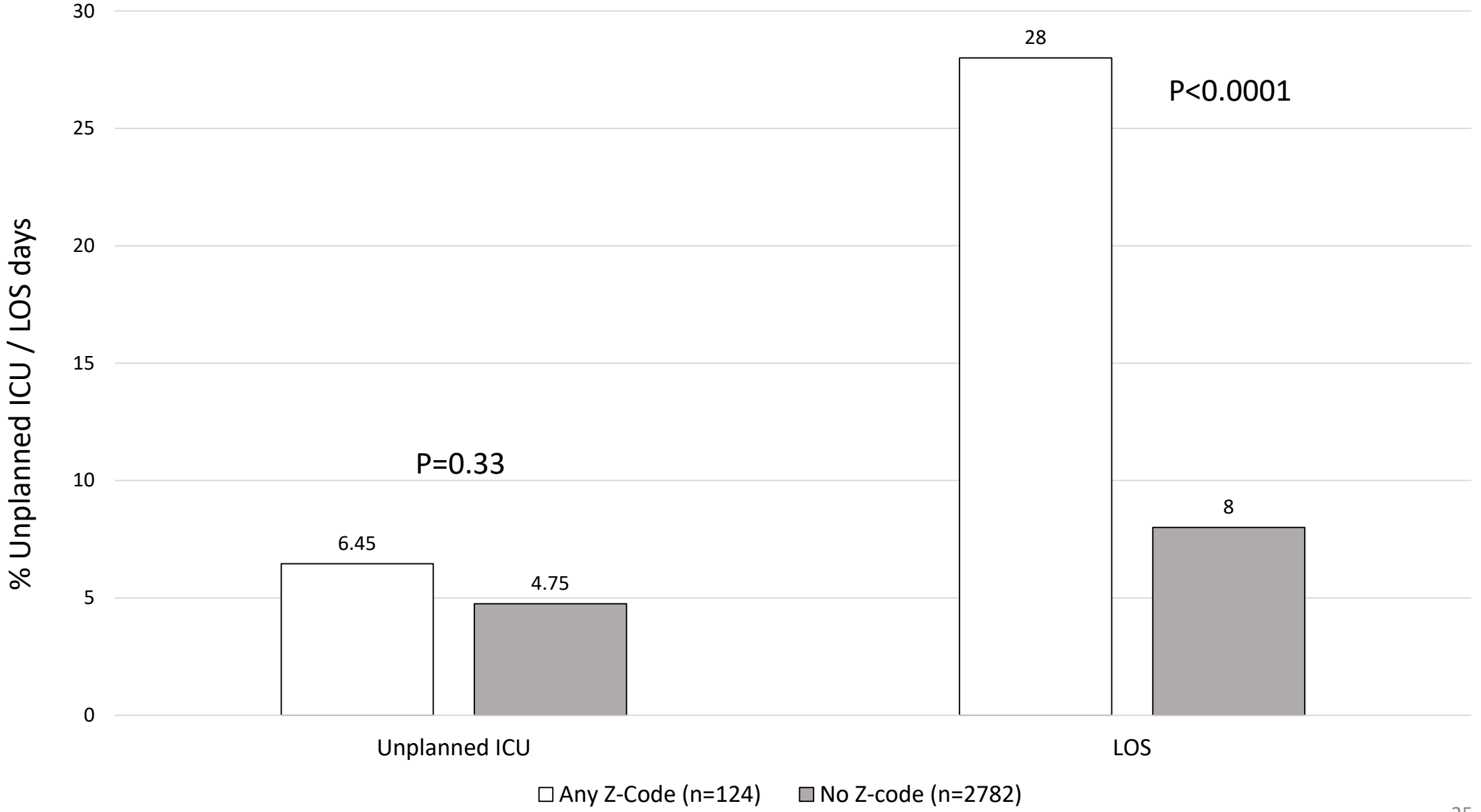
- Length of Stay longer for Insured vs. No Data on Insurance
- Unplanned ICU admission more common among Insured*
  - RR 2.15 (95% CI 1.53-3.02)
- Death in Hospital more common among Insured*

  RR 2.24 (95% CI 1.16-4.30)
- CLABSI more frequent among Insured*

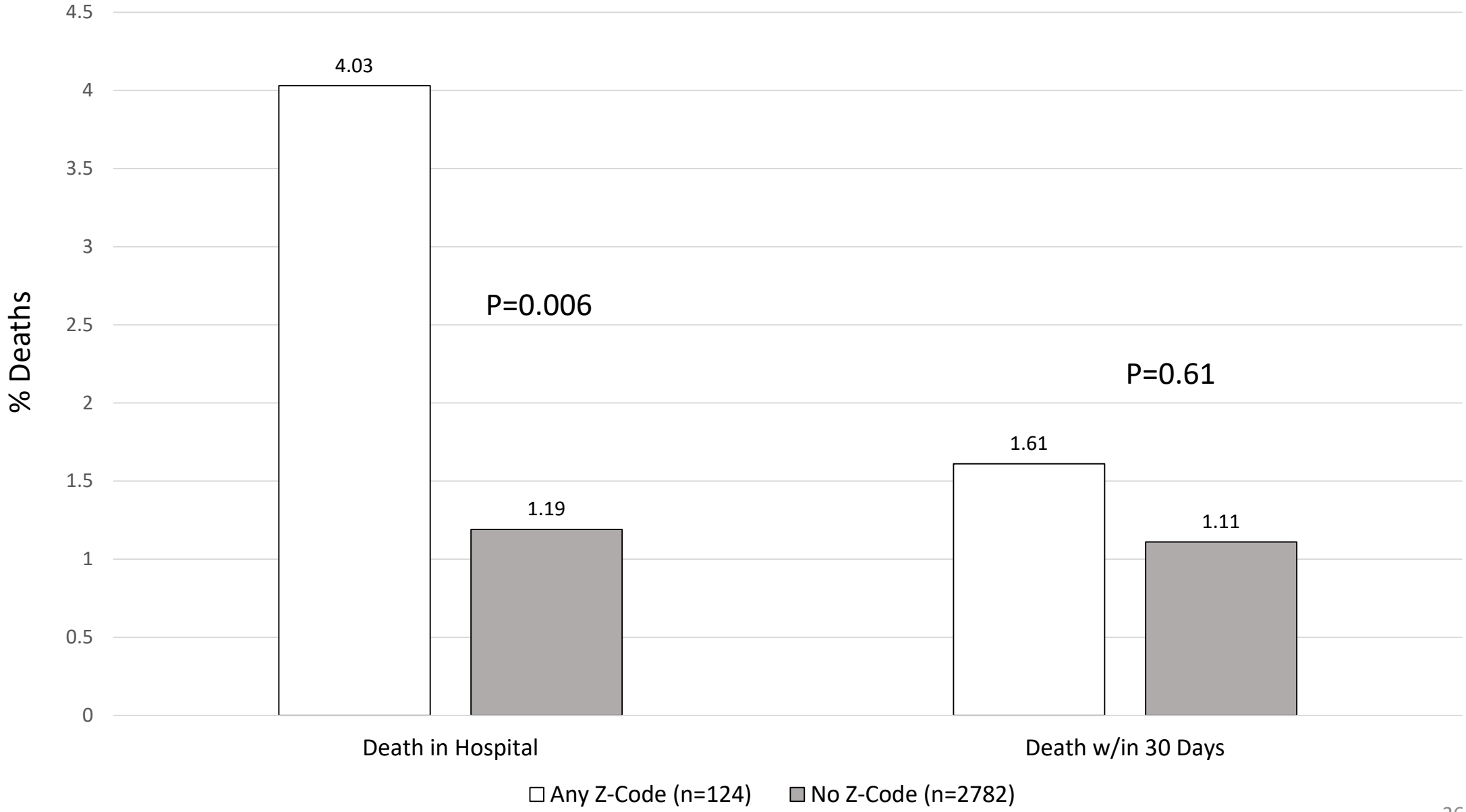
  RR 3.59 (95% CI 1.14 – 11.24)

* Combined No Insurance and No data on Insurance for RR

Health Outcomes by Any Z-code



Health Outcomes by Z-Codes



Outcomes by Z-Codes

- Length of Stay significantly longer for patients with any Z-code
- Death in Hospital more common in patients with any Z- code
  - RR 3.40 (95% CI 1.35 – 8.55)
- No differences in Death w/in 30 days of D/C, Unplanned ICU admissions, Falls, CLABSI, CAUTI or Surgical Site Infections by presence of Z-codes
  - Limitation – absence of a Z- code does not mean the patient was assessed

Summary:

- Sex and Age
  - Slight increase rate of SSI in males
  - No other differences
- Race
  - LOS greater for Black/AA and 'Other' vs. Asian or White
- Hispanic/Latin Ethnicity
  - No significant differences in outcomes
- Language
  - Non-English speaking patients had longer LOS, more CAUTI and more likely to die in hospital or within 30 days
- Insurance
  - ***Insured*** had greater LOS, unplanned ICU, death in hospital and CLABSI
  - Significant missing data (n=1000)
- Z-Codes
  - Any Z-code was associated with greater LOS and death in hospital

Next Steps:

- Review findings with the Health Equity Working Group
- Identify specific projects designed to address disparities recognized
- Repeat analyses for FY2023 and future years

- Language
  - Patients with limited proficiency in English have unique vulnerabilities
  - In 2023 the CC created a Language Access Policy:

"The CC provides language access services to patients and their caregiver(s) with Limited English Proficiency to promote the patient's care in a culturally and linguistically appropriate manner, consistent with applicable federal law, regulation and policy. These services are available in oral, written, and electronic form, as well as in sign language, at no cost to patients or their caregivers"

  - This Policy included establishing proficiency requirements for bilingual healthcare staff

Language Access at the CC Bilingual Staff Fluency Testing

Brenda Robles, CMI, Manager, NIH CC Language Interpreter Program

Bilingual Staff Fluency Testing

Bilingual Fluency Testing identified as a best practice for hospitals

Testing tools successfully used by hospitals nationwide

M23-2 Language Access in the Clinical Center approved 1/3/2023

- ✓ Intended for staff with patient care duties
- ✓ Requires assessing and documenting staff fluency in non-English languages
- ✓ Similar to processes for verifying other staff competencies
- ✓ Necessary to ensure patient safety
- ✓ 149 Staff have been tested thus far with 70% success rate

Questions and Discussion