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Monitoring  
Team**

University of Minnesota

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# **Quality Peer Groups for CAHs: FMT Work in Progress**

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# Background

- FMT financial peer groups are defined by:
  - Net patient revenue, long-term care, provider-based rural health clinic, government ownership, Census Region
- Currently, FMT quality performance peer groups are defined by state and by HRSA region
  - Many measures have small patient volume for CAHs
- Useful for planning Flex Program activities, but...
  - Wide range in number of CAHs per state
  - Variation in CAH characteristics within states & regions



# Research Question / Purpose

- What's the best way to compare CAHs on quality performance?
  - Is it fair to compare CAHs that have very different patient volumes, are structured differently, offer different services, etc.?
- **Purpose of Project: identify peer groups of CAHs for analyzing quality performance.**



# Goals for Selecting Indicators

- Applicable to a range of quality measures
- Significantly related to quality performance
- Limited number of indicators (3-5) and categories (2-4) for each indicator
- Distribution of CAHs across categories
- Minimize high correlations between indicators



# Methods

- Review of literature and information from quality measurement programs
- Analysis of AHA Annual Survey data, FMT CAH data, Hospital Compare data
- Expert opinion



## **Review of Literature**

- Comparisons based on size/volume, CAH status, other hospital characteristics
- Many comparisons less relevant for CAHs (e.g., teaching status, specialty designation)

## **Quality Measurement Programs**

- Minimum volume for reporting/making data public
- CAHs vs. other hospitals
- No evidence of peer groups within CAHs



# Potential Indicators

- **Size/Volume** (e.g., inpatient admissions, emergency and outpatient visits)
- **Scope/Scale of Services** (e.g., OP & IP surgery, obstetrics, swing beds)
- **Staffing** (e.g., RN + LPN FTEs, physicians with privileges)
- **Payer Mix** (Medicare & Medicaid share of inpatient days)
- **Geographic Location** (Census Regions)
- **Other Hospital Characteristics** (e.g., system membership, accreditation)



# Analysis

- Step 1: Analyze distribution of CAHs for potential indicators
- Step 2: Select potential indicators for further analysis
- Step 3: Compare performance on quality measures among CAHs *by categories* of indicators and variation *within categories* of selected indicators



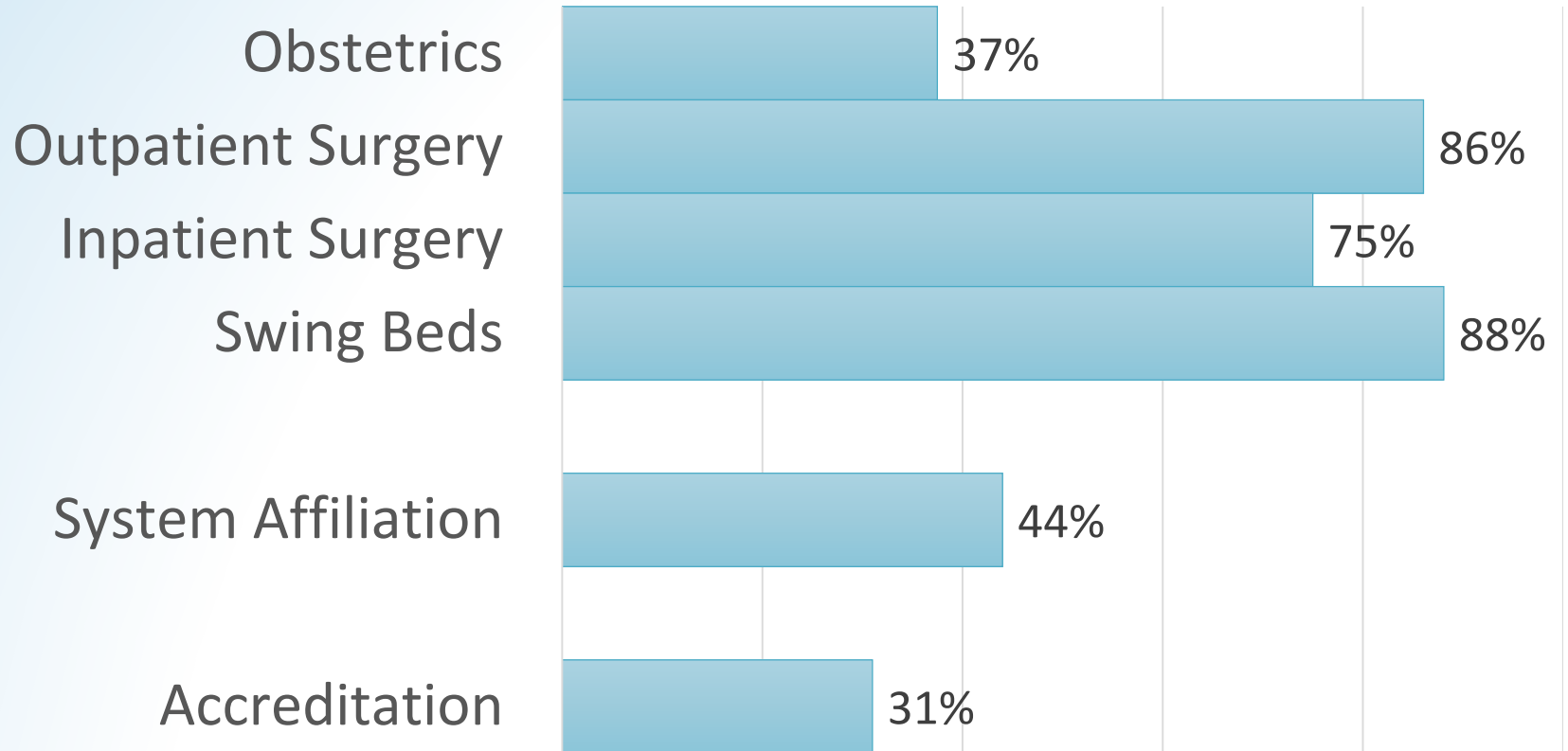


# Step 1: Analyze CAH Distribution

- **Annual inpatient admissions**
  - Categories:  $\leq 300$ , 301-700, and 701+
- **Annual outpatient/ER visits**
  - Categories:  $\leq 17k$ ,  $> 17k-35k$ , and  $> 35k$
- **Annual inpatient surgery volume**
  - Categories: none, 1-60, 61-180, and 180+
- **Census Region**
  - NE (5%), West (21%), South (26%), Midwest (47%)
- **Nurse FTE (RN+LPN) per 1000 patient days**
  - Categories:  $\leq 2$ , 2.1-4, and 4.1+
- **Medicare + Medicaid share of patient days**
  - Categories:  $< 70\%$ , 70.1-80%,  $> 80\%$



# Step 1: Analyze CAH Distribution





# Step 2: Indicators for Further Analysis

## – Patient volume

- Inpatient admissions
- Outpatient / ER visits
- Inpatient Surgery

## – Staffing

- RN+LPN FTEs/adjusted patient days

## – Geography

- Census Region

## – Other Hospital Characteristics

- System membership
- Accreditation

## – Payer Mix

- Medicare + Medicaid share of IP days



## Step 3: Compare CAH Performance on Process Measures

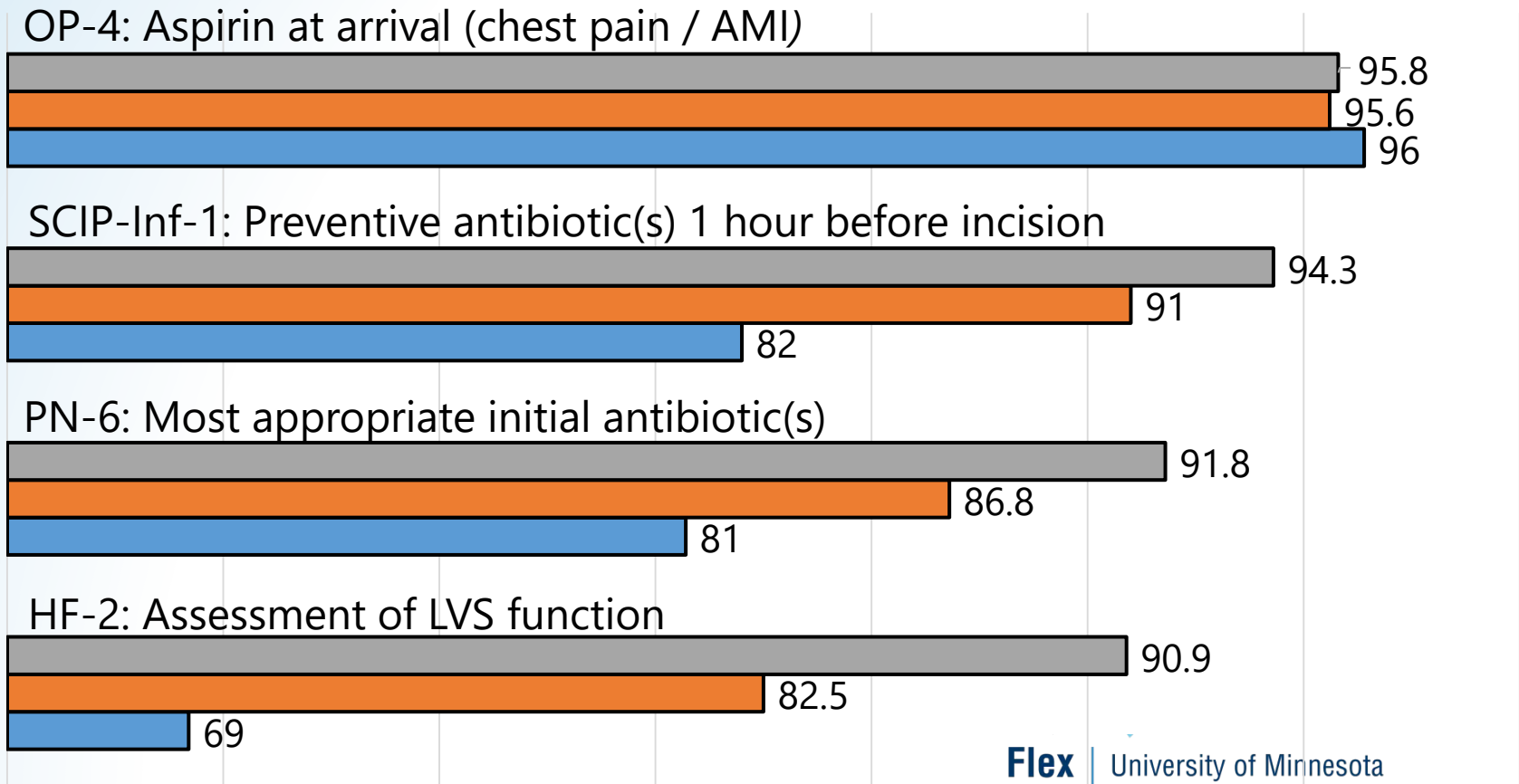
- Better performance is significantly related to:
  - higher volumes of inpatient admissions (13 measures); inpatient surgery (15), and OP/ER visits (13)
  - Location in Northeast census region (worst in South)
  - Affiliation with system (7 measures)
  - Accreditation (10 measures)
- No consistent relationship found for:
  - Medicare + Medicaid share of IP days
  - Nurse staffing and performance



# CAH Performance on Process Measures

## Annual Inpatient Admissions:

■ ≤300    ■ 301-700    ■ 701+

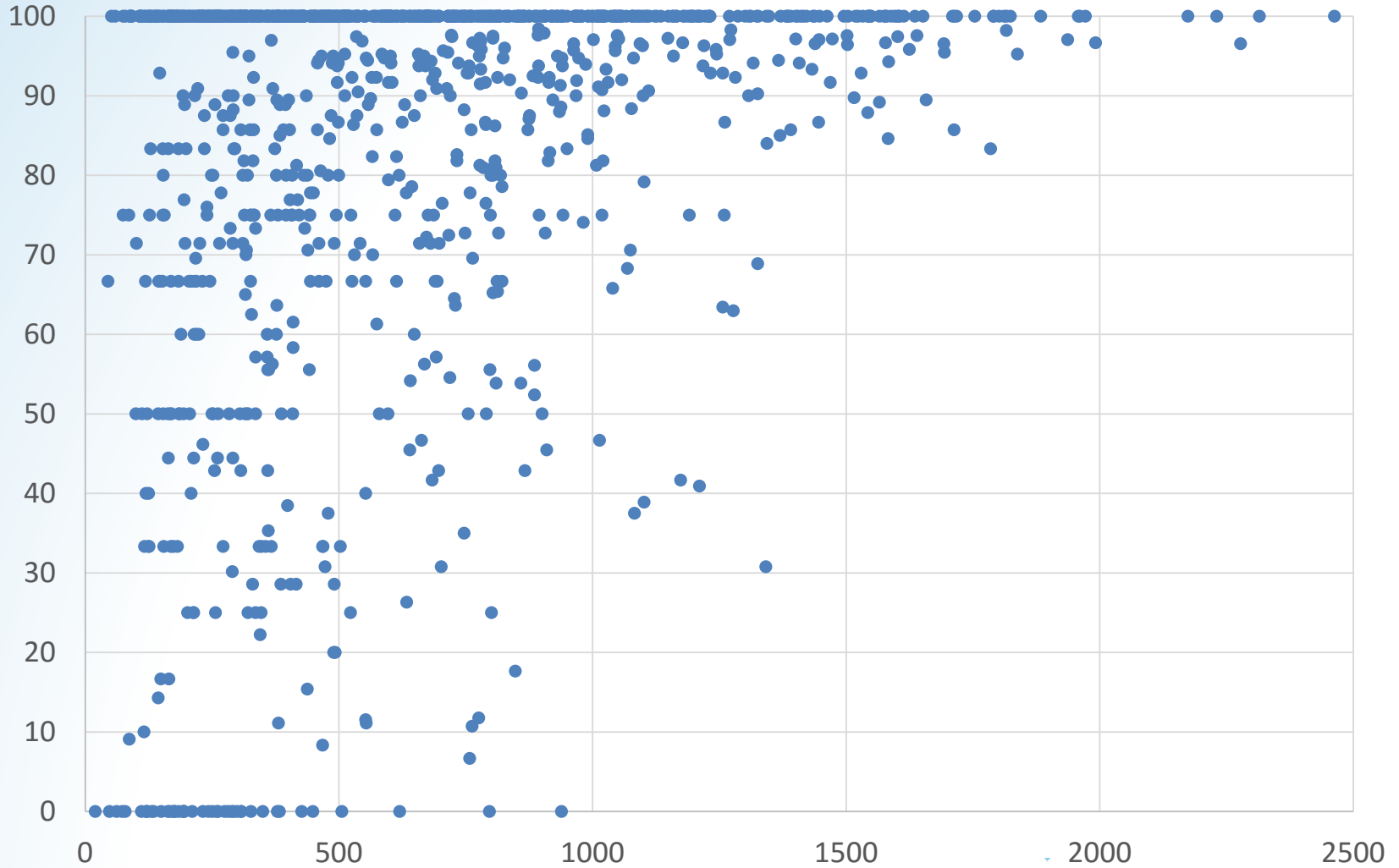


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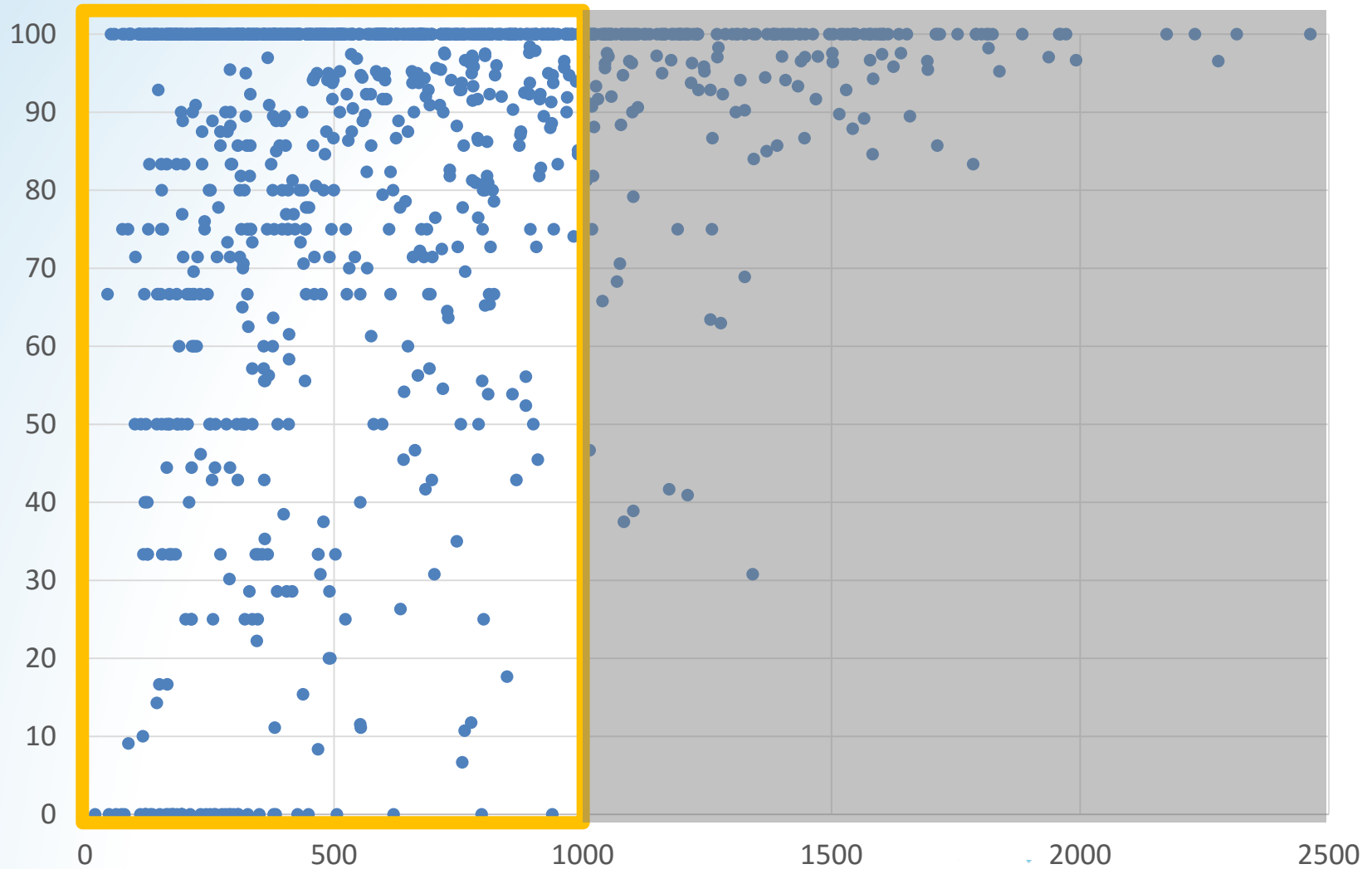


# HF-2 Performance by Admissions





# HF-2 Performance by Admissions





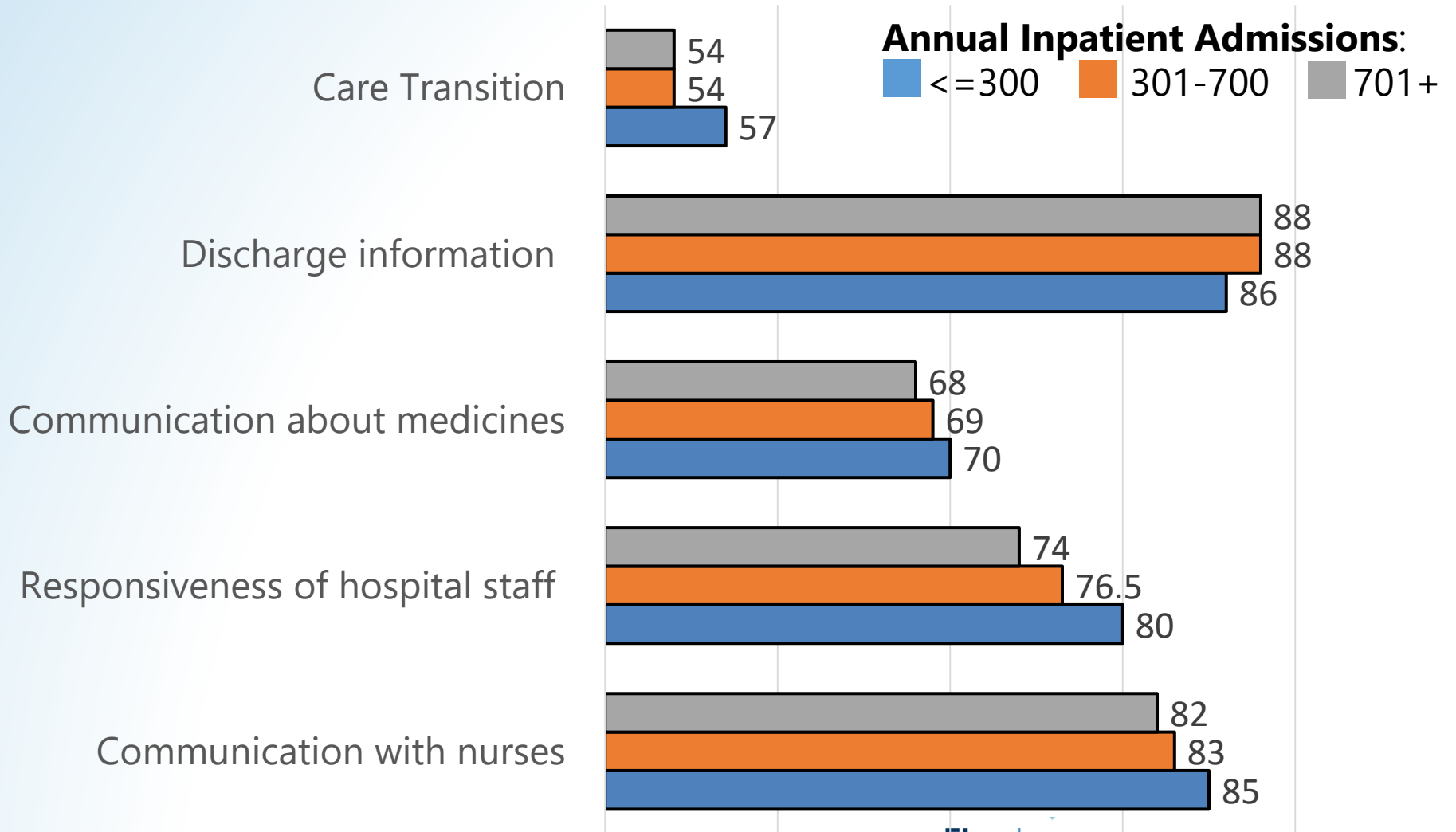
## Step 3: Compare CAH Performance on HCAHPS

- Lower volumes of IP admissions and IP surgery = significantly higher HCAHPS scores *except* for discharge info measure
- Significant differences by Census Region on 9 measures; West has lower performance on 8 measures
- Mostly insignificant relationships between HCAHPS performance and system affiliation or accreditation
- Trend for higher nurse staffing to be related to higher HCAHPS performance, but small differences





# HCAHPS Performance by Admissions



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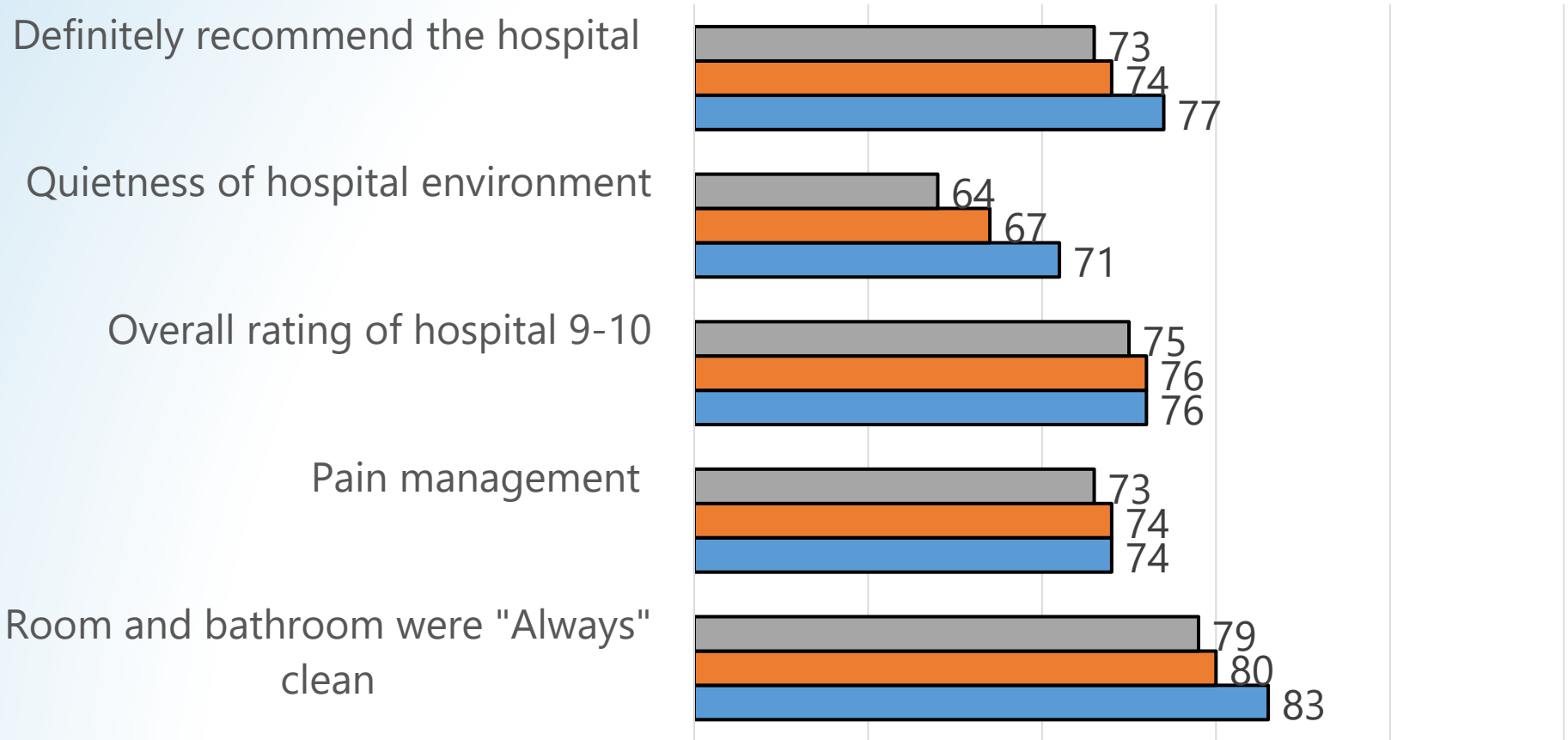
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# HCAHPS Performance by Admissions

## Annual Inpatient Admissions:

■ ≤300    ■ 301-700    ■ 701+

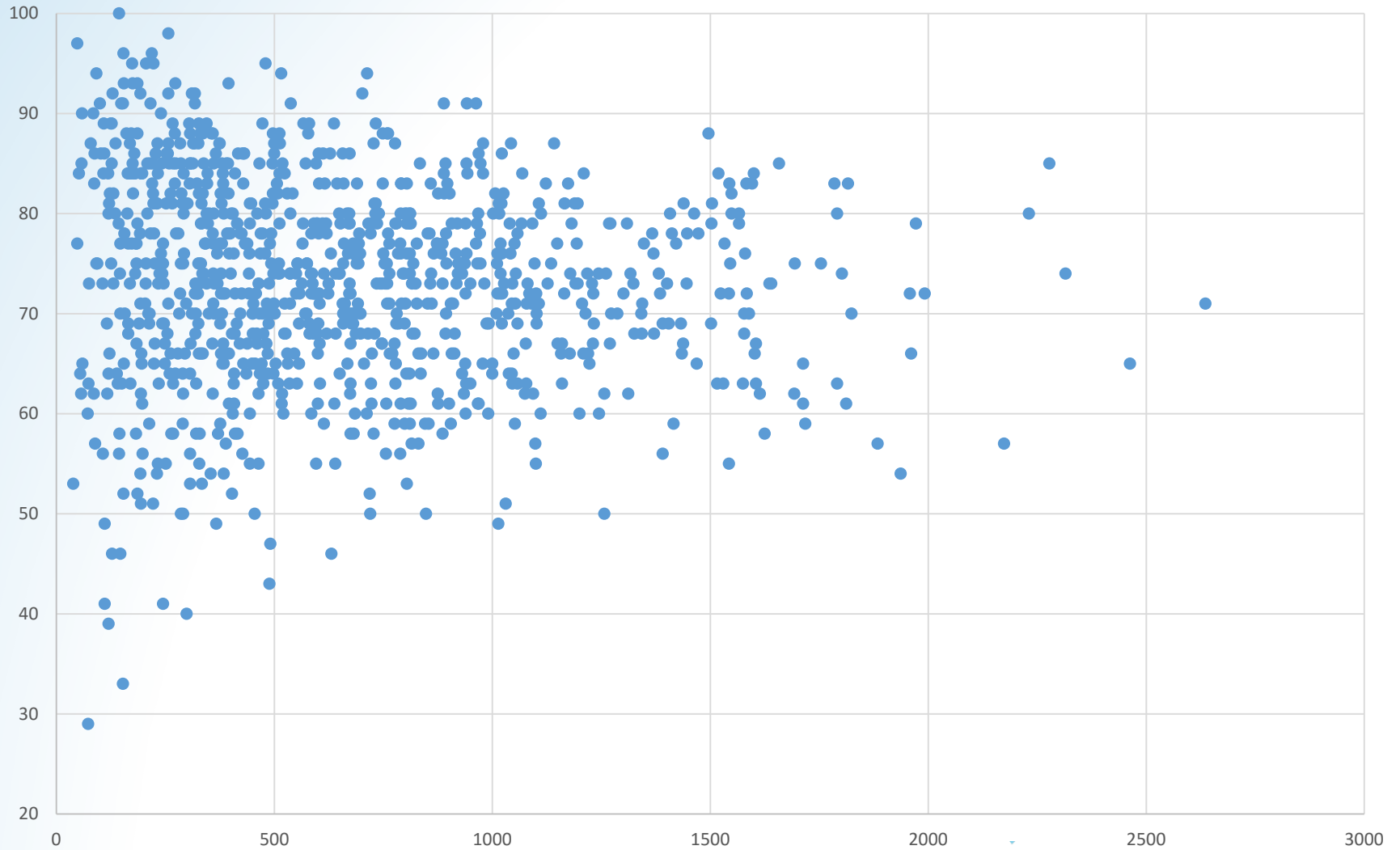


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# Patients Who Definitely Recommend the Hospital by Admissions (N=921 CAHs)





# Conclusions

- High correlations between some characteristics
- Several hospital characteristics are significantly related to performance on process and HCAHPS measures
- Volume is positively related to process performance and negatively related to HCAHPS performance
- Considerable variation in quality performance *within* groups of CAHs



# Questions for Discussion

- Does your State Flex Program, hospital association, or CAH quality network use any peer group indicators to analyze CAH quality performance?
- How do you think quality peer group indicators should be used?



# Questions for Discussion

- Which of the proposed indicators would be useful for comparing the quality performance of CAHs in your state with similar CAHs?
  - Inpatient admissions
  - Outpatient / ER visits
  - Inpatient Surgery
  - System membership
  - Accreditation
  - Census Region
- Are there any alternative indicators that you think would be useful?



# Additional Information:



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