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Preliminary Evaluation Findings

NJHI-Expecting Success in Cardiac Care

Presentation to the NJHI-ES Learning Network

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Joel Cantor, ScD
Professor and Director
Center for State Health Policy

Acknowledgements

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- CSHP project team

  Derek DeLia, PhD, Associate Research Professor

  Manisha Agrawal, Research Analyst

  Katherine Hempstead, PhD, CSHP Assistant Research Professor and DHSS Center for Health Statistics Director

Evaluation Questions

1. Did NJHI-ES hospitals improve CHF process of care scores more or faster than they would have without the program?
2. Did NJHI-ES hospitals reduce readmissions and emergency department visits following CHF discharge more or faster than they would have without the program?
   - ✓ Did NJHI-ES hospitals reduce racial/ethnic disparities in readmissions/ED use?

Evaluation Timeline

- Preliminary results – today
  - Summary of Project Director Survey findings
  - CHF Process Indicator analysis plan
  - Readmission preliminary results through 2007
- Results through 2008 – early next year
  - CHF Process Indicator analysis
  - Readmission and ED visit analysis
- Final results through 2009 – early 2011

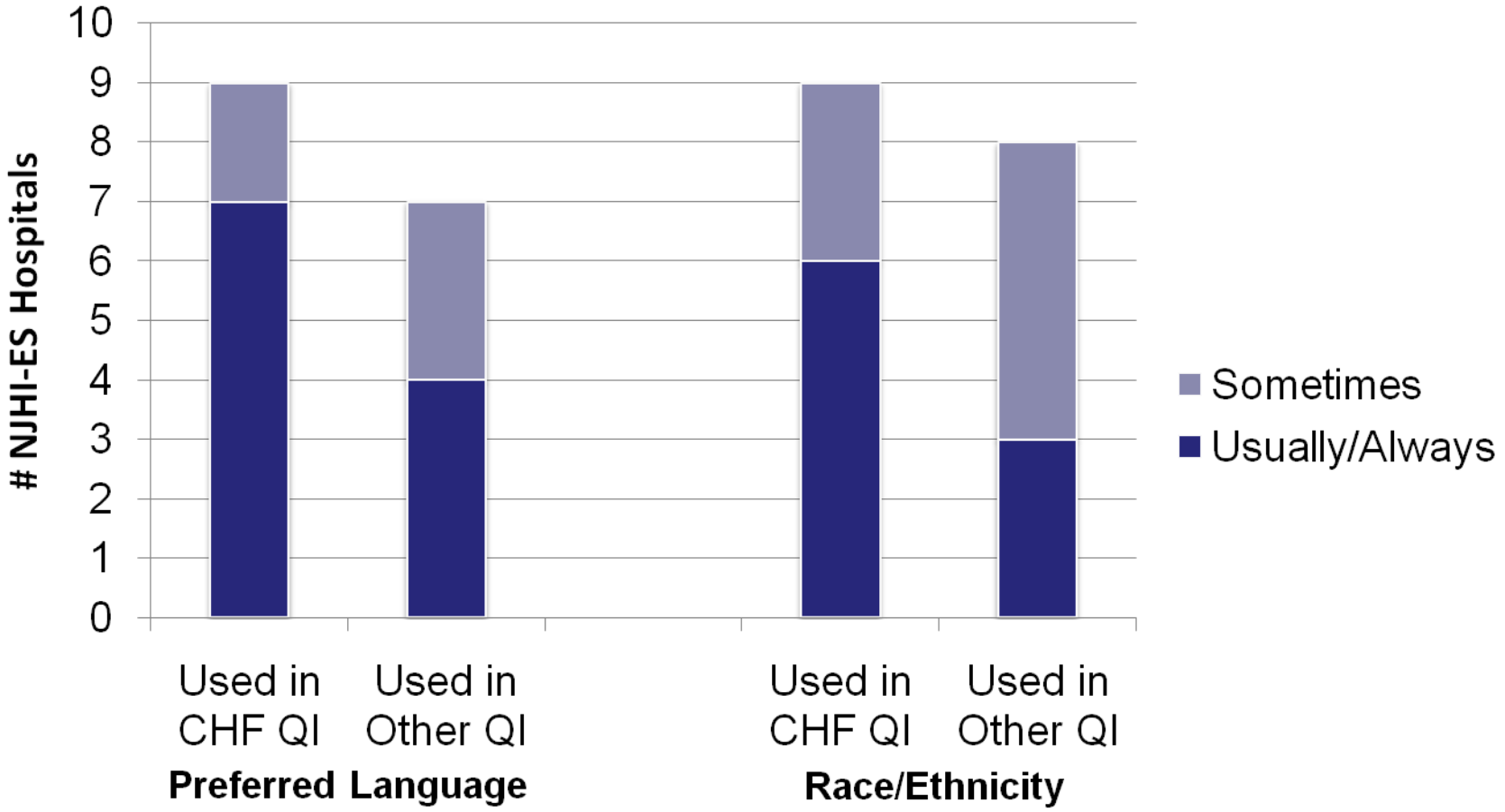
Project Director Survey

- 10 page self-administered questionnaire
- March-April 2009
- N=10
- Asked about 6 domains
  - Ratings of NJHI-ES program resources
  - Status of data on race/ethnicity & preferred language
  - Roles of advance practice nurses
  - Use of specific care management strategies
  - Engagement of senior hospital officials in ES activities
  - ES sustainability and legacy
- THANK YOU!

Data on preferred language and race/ethnicity

- All 10 hospitals report that **preferred language** is “usually or always” recorded accurately
- 7 report NJHI-ES helped improve completeness and accuracy of **race/ethnicity** data
- 9 report using race/ethnicity data in quality improvement “much more often” (6) or “a little more often” (3) as a result of NJHI-ES

Use of data on preferred language and race/ethnicity in quality measurement and improvement activities



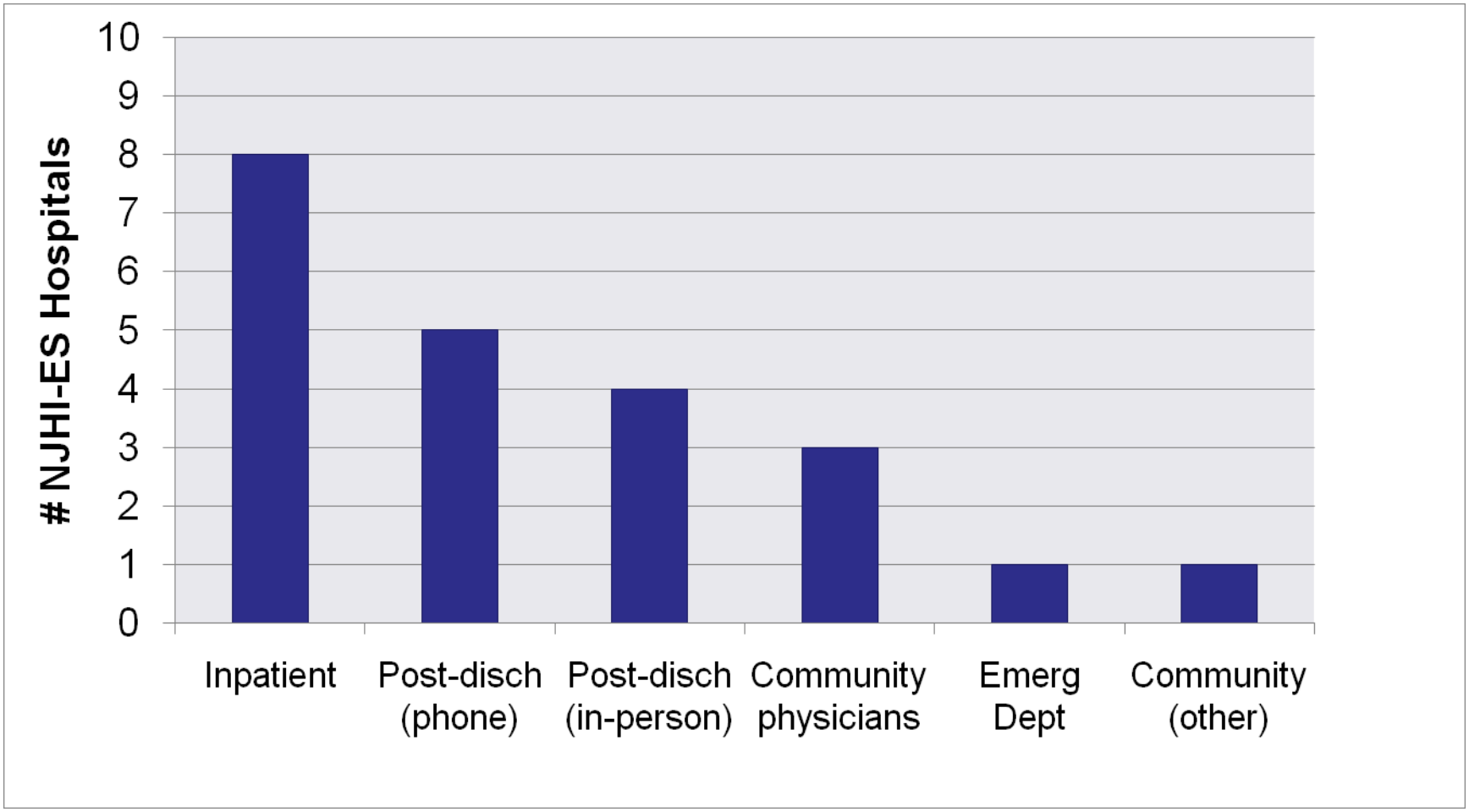
Get with the Guidelines

- 5 adopted GWTG for CHF during NJHI-ES
- GWTG met or exceeded expectations
  - 1 greatly exceeded, 3 modestly exceeded
- Sustaining GWTG for CHF after NJHI-ES will be challenging
  - 3 will discontinue altogether, 1 will reduce use, *but* 3 will expand
  - Most cite time/labor intensiveness as barrier
- 5 use GWTG for stroke and 1 for CAD

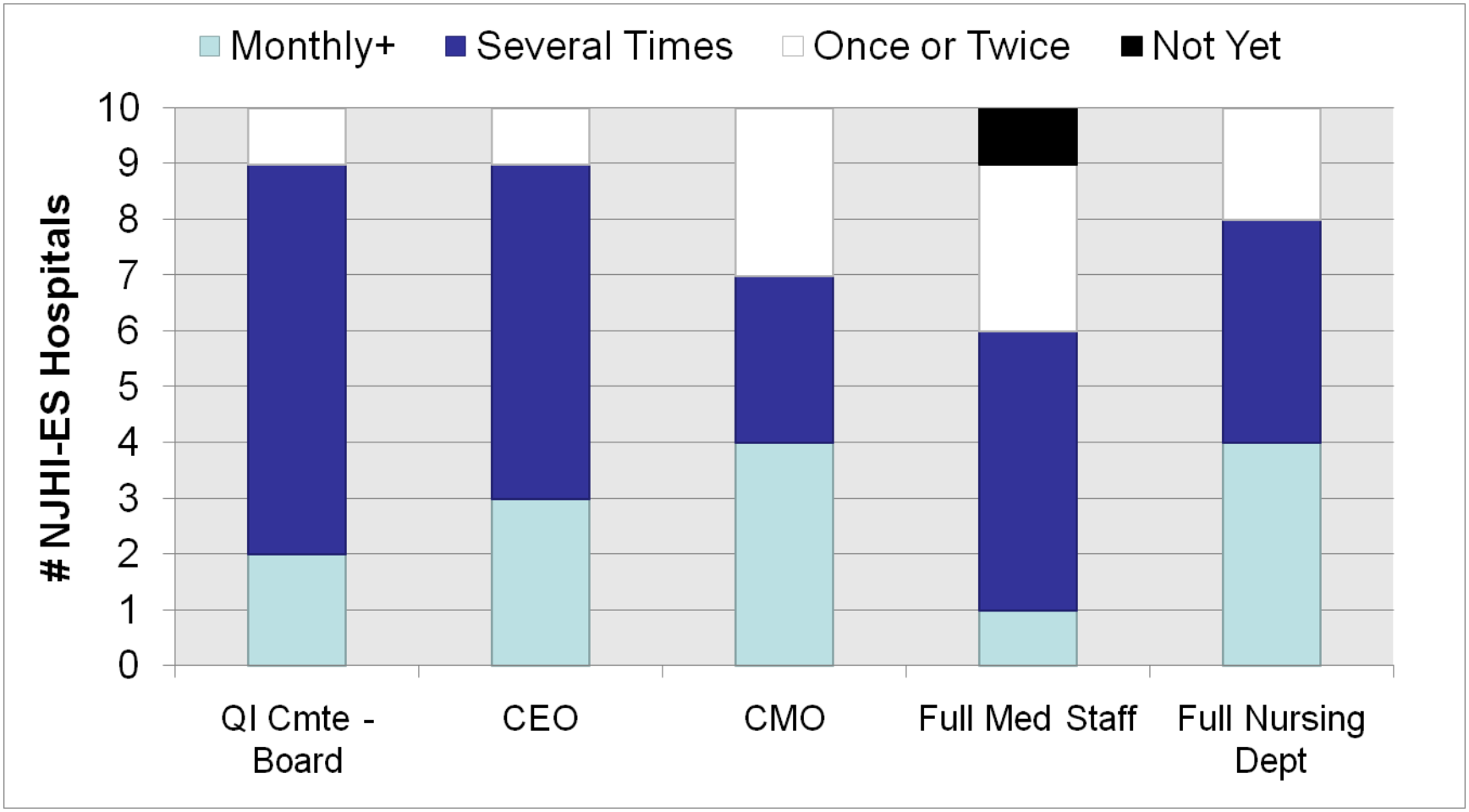
Advance Practice Nurses

- All hospitals employ APNs as part of NJHI-ES
  - From 0.2 FTE to 5.0 FTEs (mean 1.5 FTE APNs)
- APNs will continue to be an important part of CHF strategies after NJHI-ES
  - 6 continue in same roles
  - 3 will expand roles
  - 1 will reduce roles
  - 0 will eliminate APN roles
- APNs have a variety of roles working with patients and families
  - Communication/liaison with medical and nursing staff
  - Patient education, follow-up, home visits
  - Direct clinical care

APNs work across settings



Engagement of Hospital Leadership Very Extensive

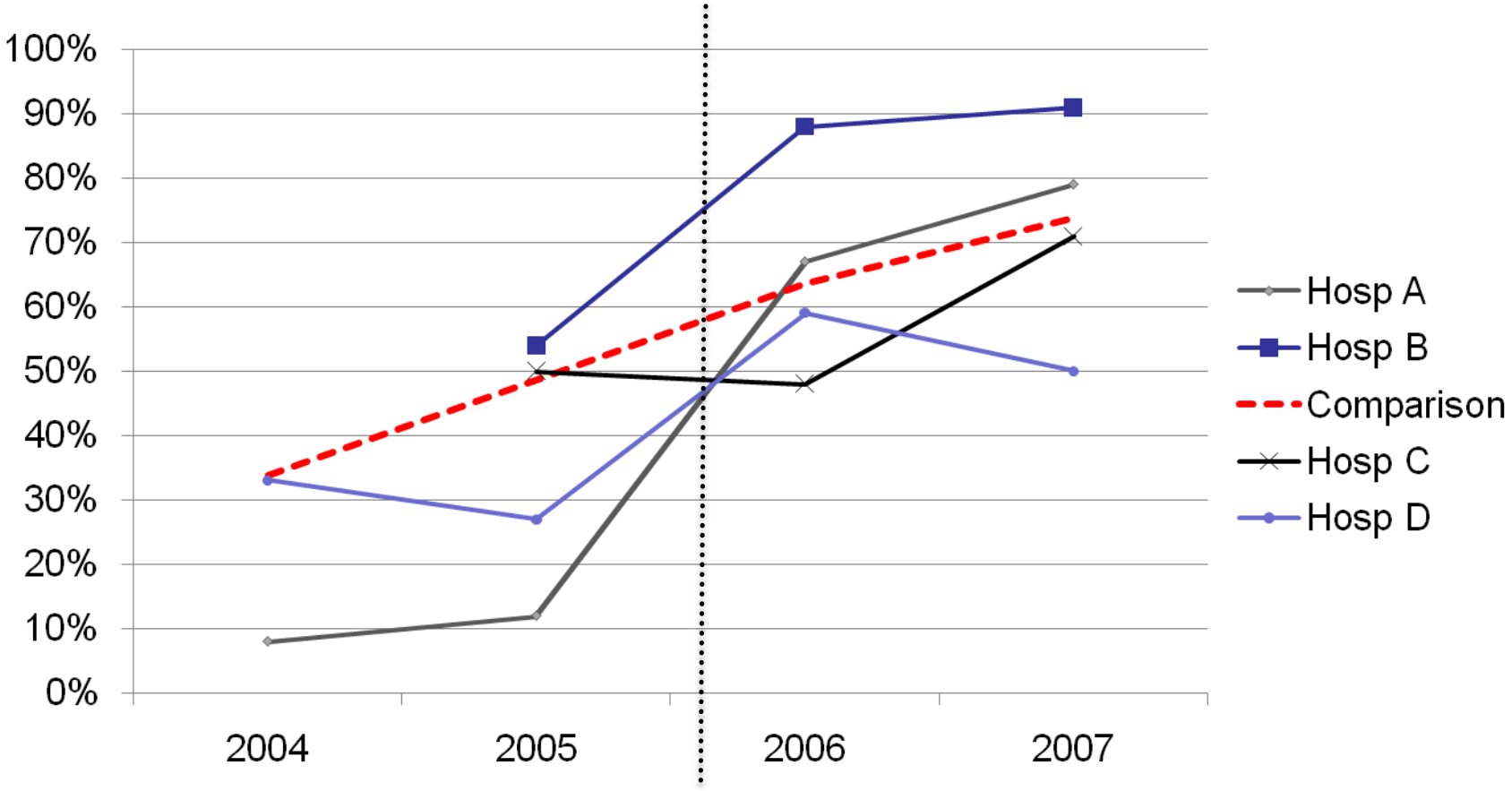


CMS Process Indicators Analysis Plan

- Hospital-level CHF indicators
  - summary, LVF assessment, discharge instructions, ACEI/ARB, smoking cessation
  - CMS HospitalCompare Database 2004-2009 linked to AHA Annual Survey
- Comparative trend analysis for each indicator, adjusting for selected hospital characteristics ("difference-in-difference" models)
  - Compare to non-New Jersey peer hospitals
  - Metro location, # staffed beds, teaching status, ownership (non-profit, public), and payer mix (% Medicare and % Medicaid patients), local demographics
- First results (through 2008) late this year

Example: Discharge Instruction Trends

Three Selected *NJ Hospital Quality Initiative* Invited Participants



Readmission and ED Use Analysis Plan

- Readmissions and ambulatory emergency department (ED) visits following CHF hospitalization
  - All New Jersey Hospitals
  - NJ Uniform Hospital Bill and Death Records for 2002-2009 reported to NJ DHSS
- Index Admission
  - First admission with principal dx of CHF in 12 months
- Possible Outcome Measures
  - 30 day readmissions and ED visits
  - Number of readmissions and ED visits over a fixed period (e.g., 12 mo)
  - Time to first readmission and ED visit
  - 30 day mortality rate

Readmission and ED Use Analysis Plan (continued)

- Statistical Modeling
  - Adjust for characteristics at index admission: age, sex, race/ethnicity, expected payer, year, comorbidities (Charlson index for now)
  - ES hospital trend versus all other NJ hospitals
  - Did ES hospitals reduce readmissions/ED visits faster than others?
    - Overall and for selected subgroups
- Analytic Considerations
  - Which outcome measures?
  - What is the best way to adjust for risk/comorbidities?
  - All-cause or CHF-specific readmissions/ED visits?
  - Readmissions/ED visits to *own hospital* or *any NJ hospital*?
  - Subgroups of special interest (e.g., race/ethnicity, expected payer, age groups, etc.)?

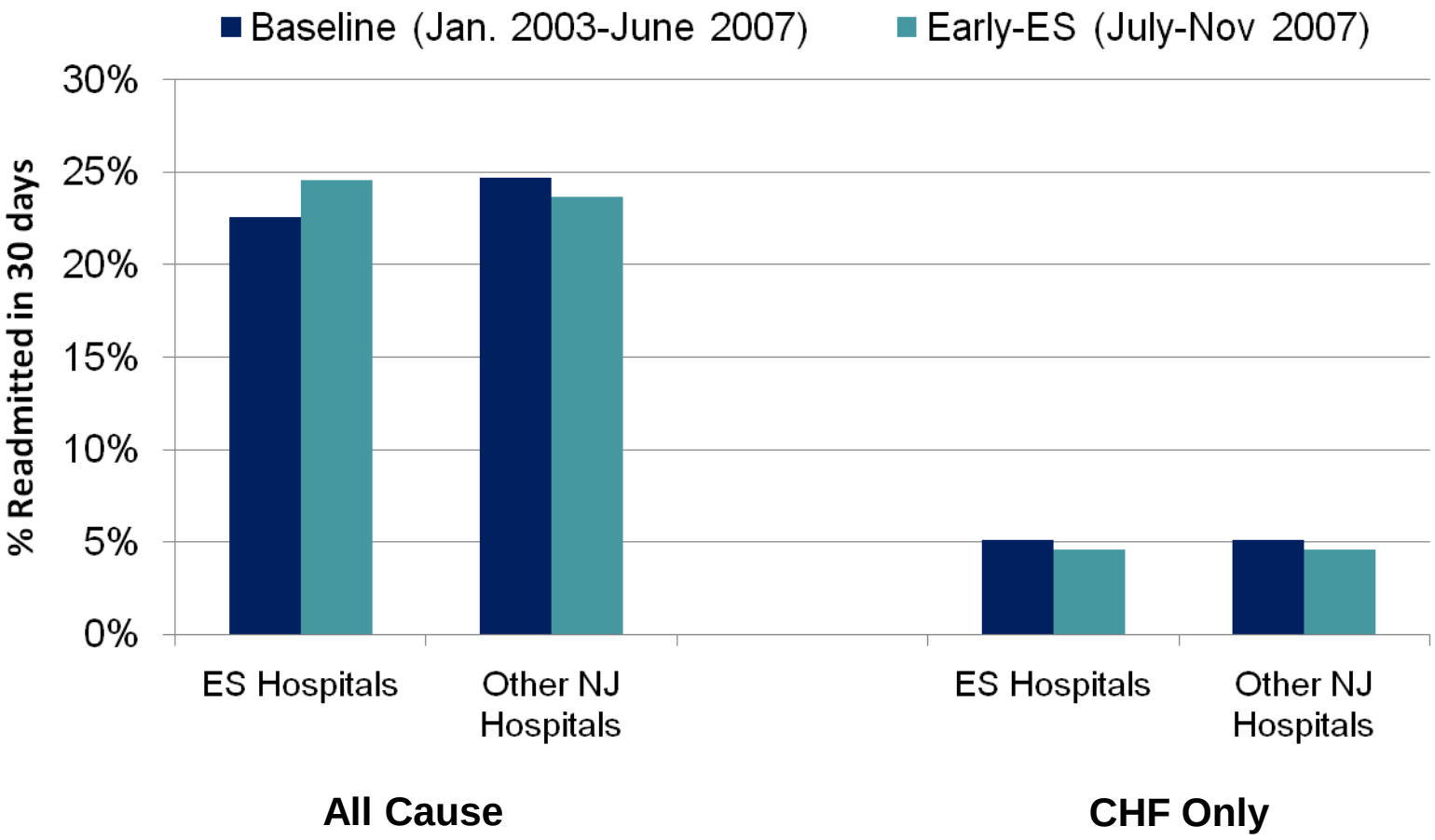
Preliminary Findings:

CHF Inpatient Readmissions

- 30-day inpatient readmission rates to any NJ hospital
- Index admissions January 2003-November 2007
  - Baseline - 1/2003 to 6/2007
  - Early NJHI-ES - 7/2007-11/2007 (first 5 months only!)
- Expecting Success hospitals compared to other NJ hospitals
  - Mostly unadjusted statistics (one multivariate model)
- Readmissions for CHF only (just a bit on all-cause readmissions)
- Various subgroups

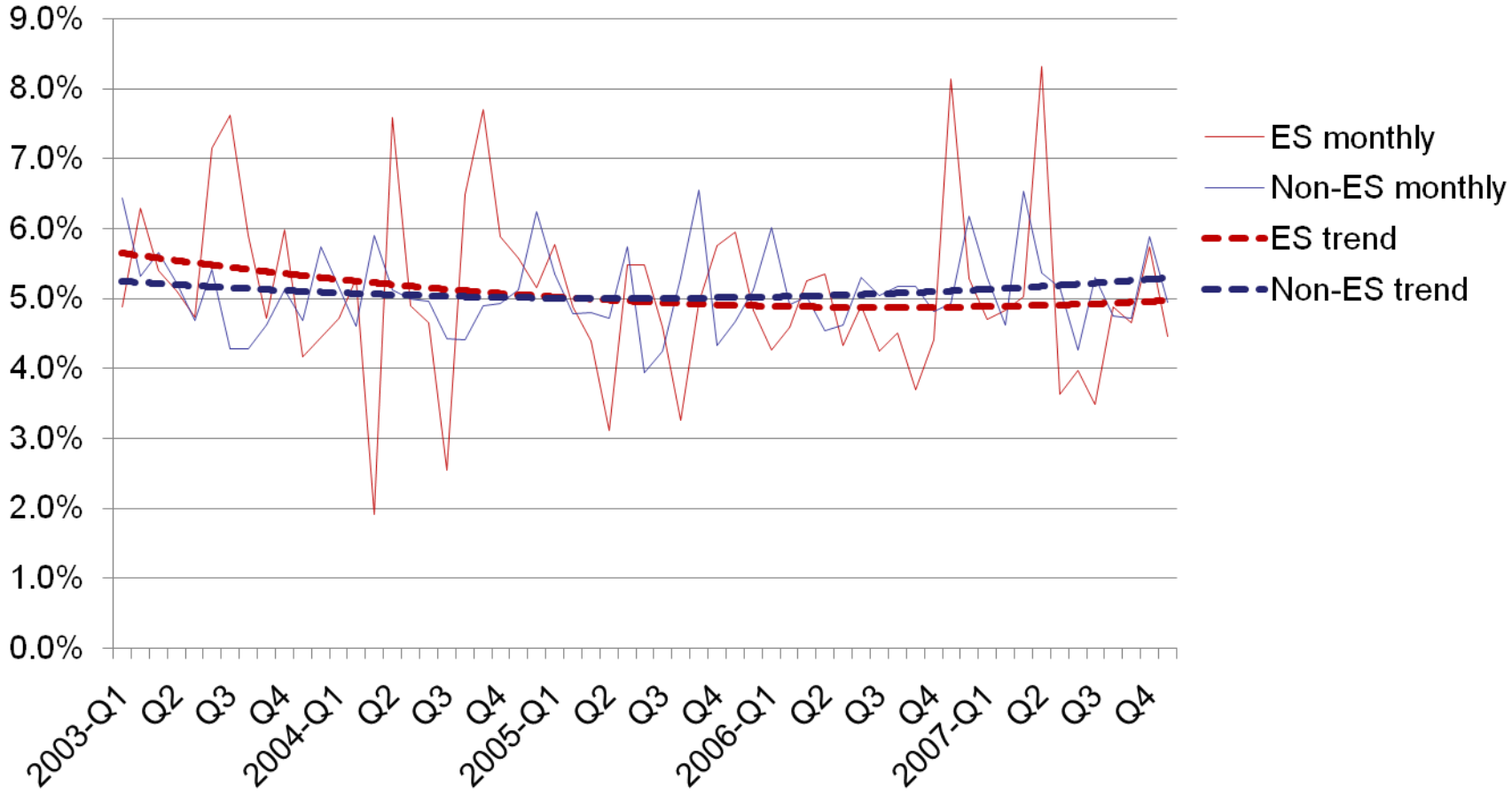
Preliminary Findings:

CHF Inpatient Readmissions



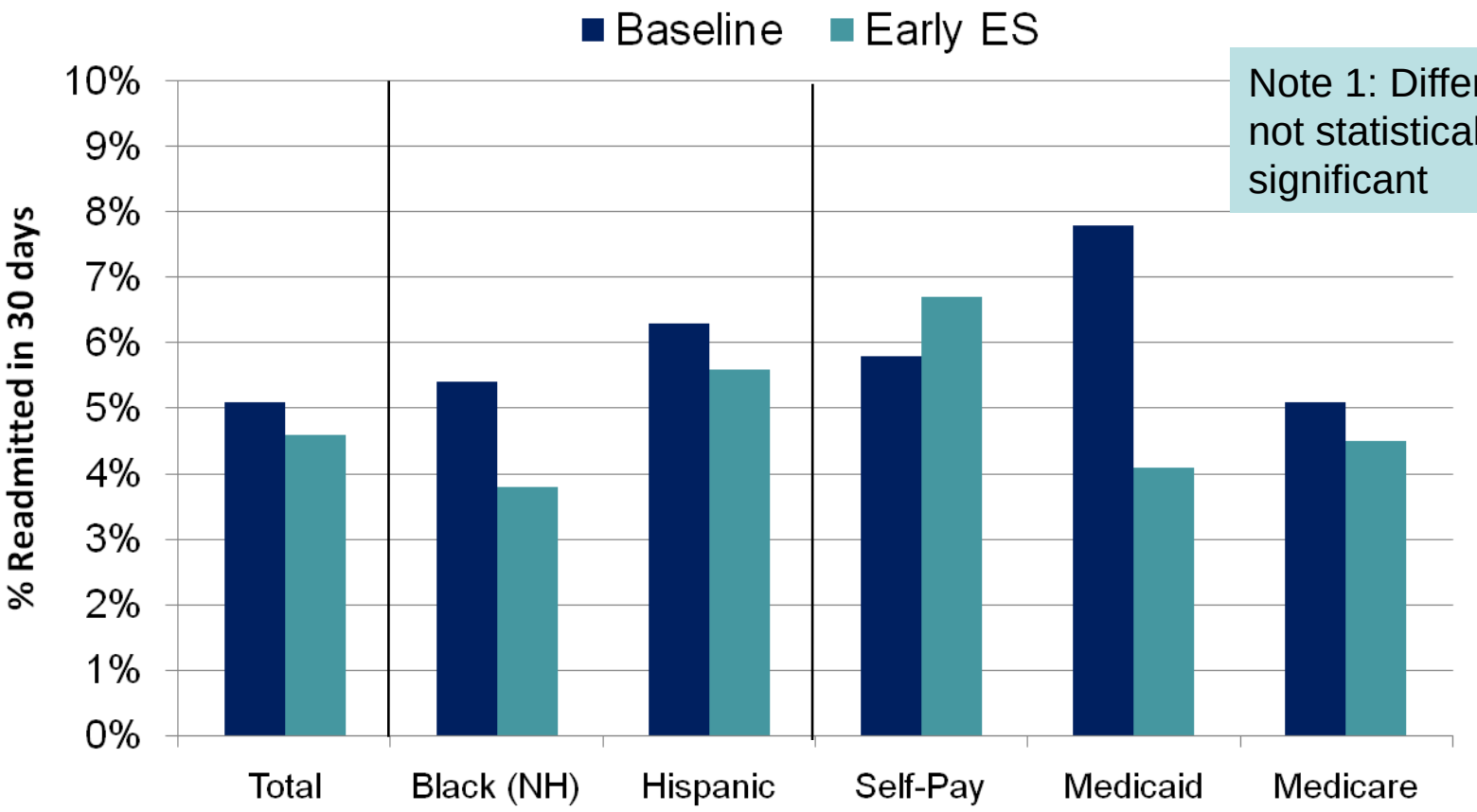
Preliminary Findings:

30-day CHF readmission rate



Preliminary Findings:

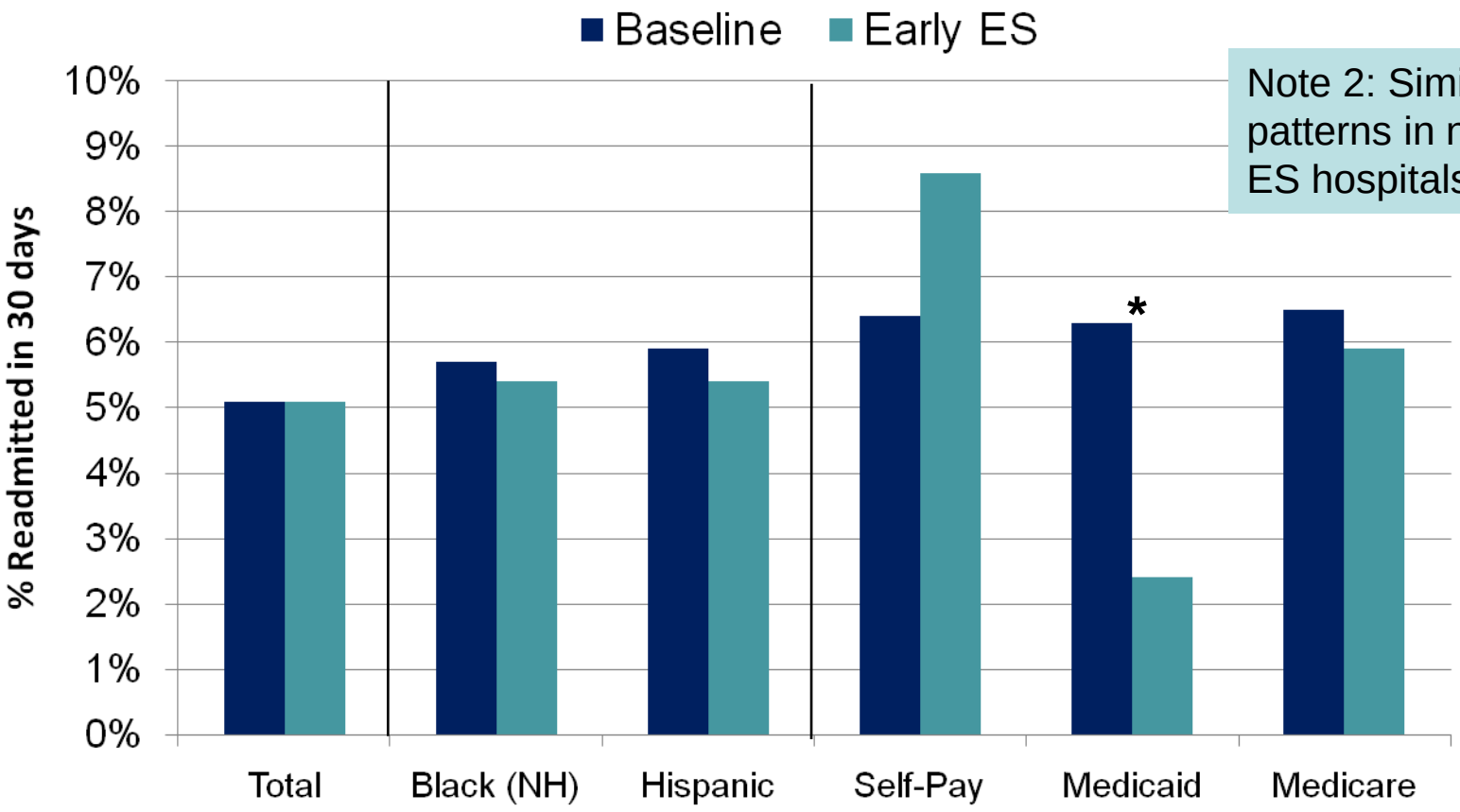
ES Hospital CHF 30-Day Readmissions



Note 1: Differences not statistically significant

Preliminary Findings:

Non-ES Hospital CHF 30-Day Readmissions



Note 2: Similar patterns in non-ES hospitals

*p<0.05

Preliminary Findings:

Multivariate Model Results - *part 1*

Variable	All Patients	Medicaid Patients
	Percentage Points	
Age (per year)	<0.01%	***-0.14%***
Female (male-reference group)	***-0.55%***	-1.40%
White, non-Hispanic	*reference group*	
Black, non-Hispanic	0.40%	1.04%
Hispanic	***0.81%***	1.79%
Other/DK race/ethnicity	***-0.51%***	-0.07%
Private Insurance	*reference group*	
Medicaid	***1.69%***	---
Medicare	***0.44%***	---
Other Payer	-0.76%	---
Self-Pay	***1.59%***	---

Bold indicates p<0.05

Preliminary Findings:

Multivariate Model Results – *part 2*

Variable	All Patients	Medicaid Patients
	Percentage Points	
Charlson Index (per condition)	***0.41%***	***0.85%***
Year (per year)	-0.06%	0.10%
July-Nov 2007 (all hospitals)	-0.23%	***0.58%***
Expecting Success Hospital (all years)	0.04%	-4.37%
July-Nov 2007 – ES Hospital	-0.63%	-0.15%

Bold indicates p<0.05

Readmission Discussion Questions

- All-cause or CHF-specific?
- Readmissions and ED visits to *own hospital* or any *NJ hospital*?
- Subgroups of special interest (e.g., race/ethnicity, expected payer, age groups, etc.)?
  - How do we best reflect your target populations?
- Which outcome measures?
  - 30 day readmissions and ED visits
  - Number of readmissions and ED visits over a fixed period (e.g., 12 months)
  - Time to first readmission and ED visit
  - 30 day mortality rate