

# **Variability in Measured Quality**

## **Recommendations for Data Display**

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# Introduction

- When should a summary measure (aka Stars) be shown?
- Measures of variability
  - Range
  - Mean or Median in each rating category
- Considerations: Performance as
  - Positive (e.g., survival, providing recommended care)  
vs.
  - Negative (e.g., mortality, failure to provide care, “defect rate”)
- Recommendations

# Angioplasty Mortality

- Difference from best to worst = 69%
- Hospitals included = 14
- Average performance in each Star category
  - \* 0.87%
  - \*\* 0.72%
  - \*\*\* 0.59%
  - \*\*\*\* 0.54%
- Recommendation: Show Stars

# Bypass Surgery Mortality

- Difference from best to worst = 10%
- Hospitals included = 14
- Average performance in each Star category
  - \* 1.50%
  - \*\* 1.46%
  - \*\*\* 1.40%
  - \*\*\*\* 1.37%
- Recommendation: Do NOT Show Stars

# Cardiac Valve Surgery Mortality

- Difference from best to worst = ???
- Hospitals included = 12
- Average performance in each Star/Quadrant category

	<u>Mortality</u>	<u>Volume</u>
*	N/A	N/A
**	N/A	N/A
***	Better than Average	71
****	Better than Average	308

- Recommendation: Use LFG rating to determine stars; zero stars for Did Not Report

# Heart Attack Best Practices

- Difference from best to worst = 71x
- Hospitals included = 61
- Average performance in each Star category
  - \* 12%
  - \*\* 5%
  - \*\*\* 2.5%
  - \*\*\*\* 1%
- Recommendation: Show Stars

# Heart Failure Best Practices

- Difference from best to worst = 59x
- Hospitals included = 61
- Average performance in each Star category
  - \* 28%
  - \*\* 17%
  - \*\*\* 9%
  - \*\*\*\* 4.5%
- Recommendation: Show Stars

# Stroke Mortality

- Difference from best to worst = 6.9x
- Hospitals included = 59
- Average performance in each Star category
  - \* 19%
  - \*\* 12%
  - \*\*\* 9%
  - \*\*\*\* 5.8%
- Recommendation: Show Stars



# Weight Loss Surgery Volume

- Difference from best to worst = 90x
- Hospitals included = 29 (21 w/data)
- Average performance in each Star/Quadrant category (hospital volume)

*	44
**	70
***	116
****	248
- Recommendation: Use LFG rating to determine stars; zero stars for Did Not Report

# Hip Fracture Mortality

- Difference from best to worst = 0 to 12%
- Hospitals included = 59
- Average performance in each Star category
  - \* 6.4%
  - \*\* 3.6%
  - \*\*\* 1.8%
  - \*\*\*\* 0.3%
- Recommendation: Show Stars

# Hip Replacement Mortality

- Difference from best to worst = 0 to 5%
- Hospitals included = 42
- Average performance in each Star category
  - \* 1.6%
  - \*\* 0%
  - \*\*\* 0%
  - \*\*\*\* 0%
- Recommendation: Do NOT Show Stars

# Pneumonia Best Practices

- Difference from best to worst = 18x
- Hospitals included = 62
- Average performance in each Star category
  - \* 18%
  - \*\* 12%
  - \*\*\* 7.5%
  - \*\*\*\* 5%
- Recommendation: Show Stars

# Patient Safety Practices

- Difference from best to worst = 2.7x
- Hospitals included = 75 (66 w/data)
- Average performance in each Star category
  - \* 463 points
  - \*\* 633
  - \*\*\* 812
  - \*\*\*\* 957
- Recommendation: Show Stars (not LFG Quadrants) and zero stars for Did Not Report

# Use of Intensivists in ICU

- Difference from best to worst = N/A
- Hospitals included = 71 (64 w/data)
- Average performance in each Star category
  - \* Willing to report publicly (31)
  - \*\* Good early stage effort (3)
  - \*\*\* Good progress (4)
  - \*\*\*\* Fully implemented (26)
- Recommendation: Use LFG rating to determine stars; zero stars for Did Not Report

# Use Computers to Order Medications, Tests and Procedures

- Difference from best to worst = N/A
- Hospitals included = 75 (69 w/data)
- Average performance in each Star category
  - \* Willing to report publicly (36)
  - \*\* Good early stage effort (14)
  - \*\*\* Good progress (4)
  - \*\*\*\* Fully implemented (14)
- Recommendation: Use LFG rating to determine stars; zero stars for Did Not Report

# Patient Experience

- Difference from best to worst = 53%
- Hospitals included = 47
- Average performance in each Star category
  - \* 54%
  - \*\* 60%
  - \*\*\* 65%
  - \*\*\*\* 73%
- Recommendation: Show Stars



# Conclusions

- 13 Quality measures will be shown
- Recommend suppressing Star ratings for two (bypass surgery mortality and hip replacement mortality) due to insufficient variation
- Recommend using 15%/50%/85% thresholds except for certain Leapfrog Group Measures