Classifying Hospitals
January 27, 2009 at 12:00 pm ET

AHRQ Quality Indicators (QI) Learning Institute

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Agenda

- Welcome
- Key choices in classifying hospitals
- Examples from public reports
- Assigning hospitals to categories: the role of uncertainty
- Advanced topic: Using probabilities to assign categories
- Questions and discussion

Tentative Webinar Schedule

Orientation:

October - Designing Your Reporting Program

Measures/Data/Analysis:

November - Selecting Measures & Data

December - Key Choices in Analyzing Data for the Report

Today - Classifying Hospitals

Reporting/Disseminating/Promoting:

February - Displaying the Data

March - Web Site Design & Content

April - Marketing & Promoting Your Report

Evaluation:

May - Evaluation of Public Reporting Program

Closing:

June - Highlights From the Learning Institute

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Learning Objectives

You will learn how to:

- Identify the key choices and common methods used to classify hospitals into performance categories
- Describe the advantages and disadvantages of each method
- Describe the role of uncertainty when classifying hospitals
- Advanced topic: understand how probability might be used to classify hospitals

Classifying Hospitals

- What does it mean to "classify"?
  - Assigns hospitals to a category of performance based on certain criteria
    - For example, one-star, two-star, three-star
  - Makes a normative judgment about how a hospital should perform
  - Implies a benchmark: a standard of performance
  - Sometimes implies a punishment for failing to meet the standard or a reward for exceeding the standard

Classifying Hospitals

- Why classify hospitals?
  - Inform choices when comparing performance
    - Results in decisions based on “meaningful” differences
    - Incorporate trade-offs (e.g. quality vs. cost)
  - Create incentives to improve performance
  - Learn about best practices
  - Reflect system-wide goals
  - Communicate organizational “value-added”
    - The difference between actual and expected performance

Categories of Performance

- Types of categories
  - Relative: Worse than average, average, better than average
    - Compared to “peer” performance
  - Absolute: Low performance, medium performance, high performance
    - Compared to “highest achieved” performance
  - Change: Increased performance, same performance, decreased performance
    - Compared to the hospital’s own historical performance

Categories of Performance

Category	Advantages	Disadvantages
Relative	Comparative reporting	Quality improvement
Absolute	Quality improvement	Pay-for-performance
Change	Pay-for-performance	Comparative reporting

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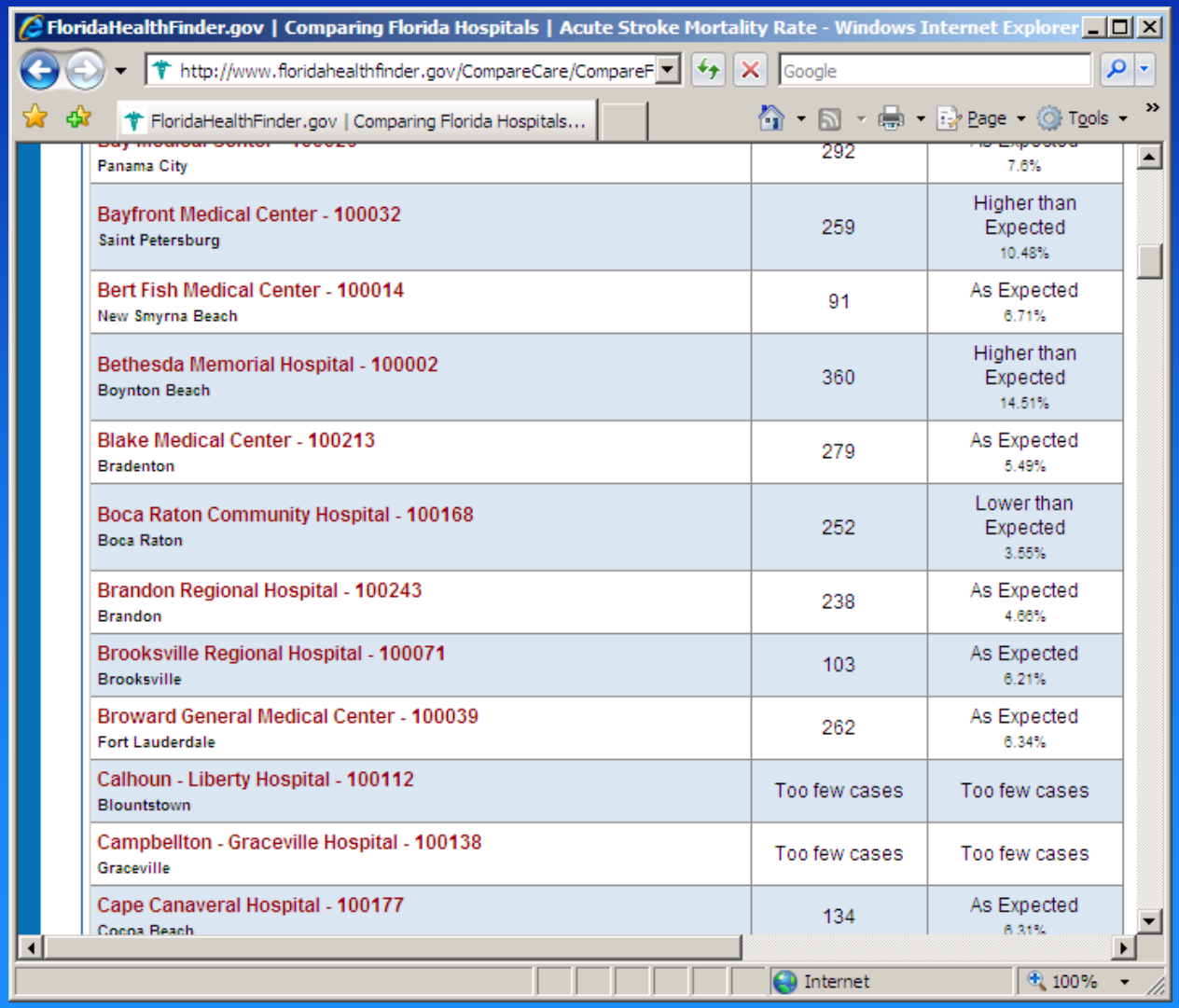
Example: Florida Health Finder

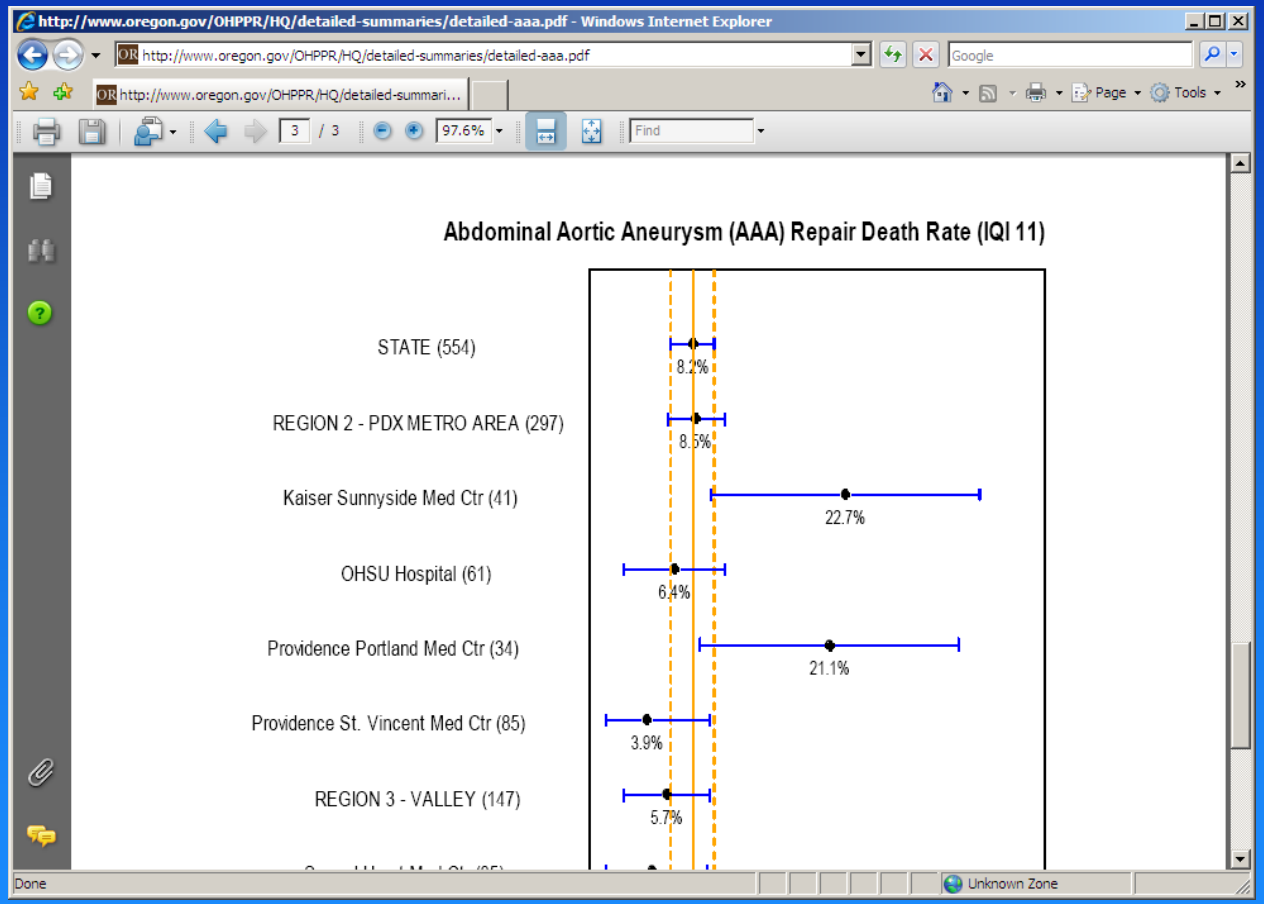


Panama City	292	7.6%
Bayfront Medical Center - 100032 Saint Petersburg	259	Higher than Expected 10.48%
Bert Fish Medical Center - 100014 New Smyrna Beach	91	As Expected 6.71%
Bethesda Memorial Hospital - 100002 Boynton Beach	360	Higher than Expected 14.51%
Blake Medical Center - 100213 Bradenton	279	As Expected 5.49%
Boca Raton Community Hospital - 100168 Boca Raton	252	Lower than Expected 3.55%
Brandon Regional Hospital - 100243 Brandon	238	As Expected 4.66%
Brooksville Regional Hospital - 100071 Brooksville	103	As Expected 6.21%
Broward General Medical Center - 100039 Fort Lauderdale	262	As Expected 6.34%
Calhoun - Liberty Hospital - 100112 Blountstown	Too few cases	Too few cases
Campbellton - Graceville Hospital - 100138 Graceville	Too few cases	Too few cases
Cape Canaveral Hospital - 100177 Cocoa Beach	134	As Expected 6.31%

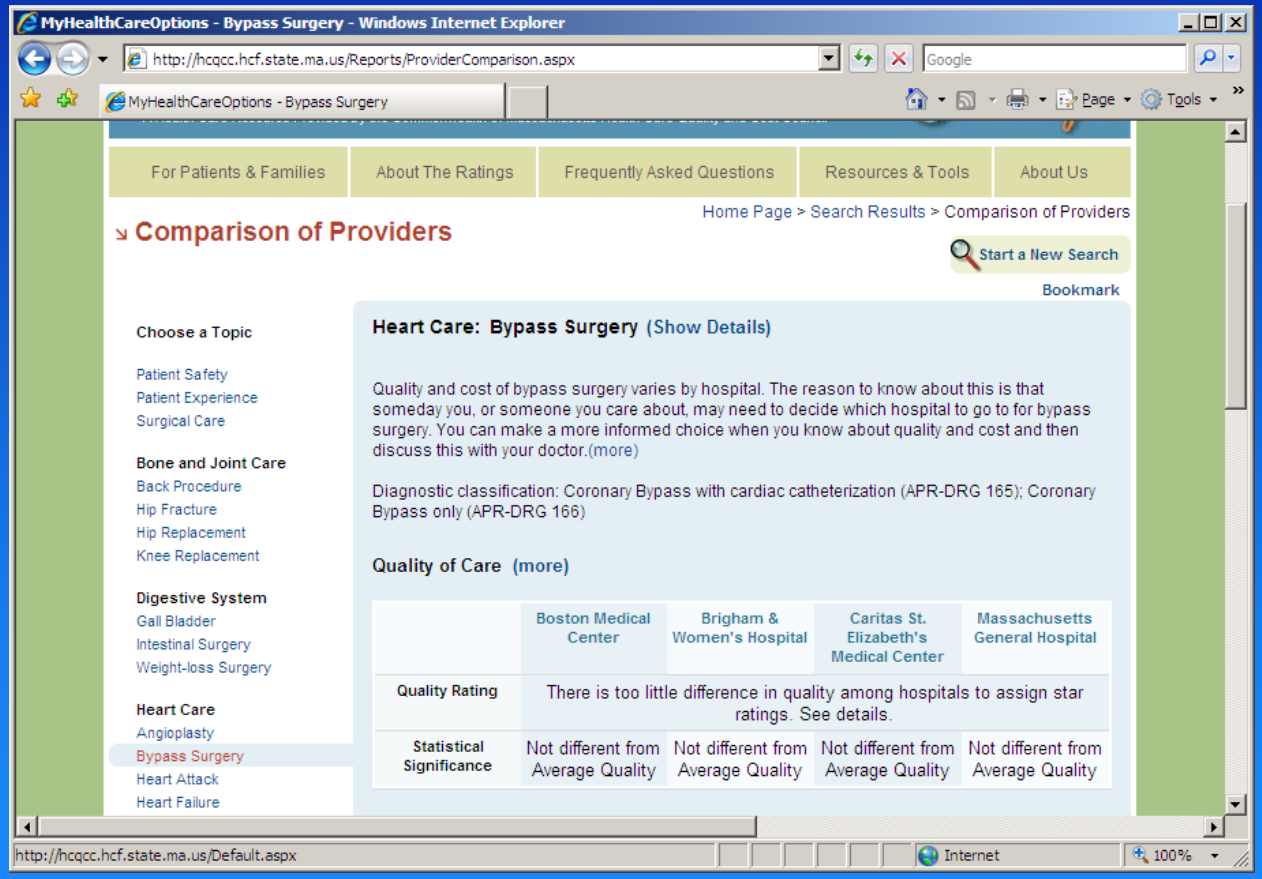
Example: Iowa Healthcare Collaborative

City	Hospital Name	2003 Volume	2003	2004 Volume	2004	2005 Volume	2005	2006 Volume	2006	2007 Volume	2007	2003-2007 Combined Volume	2003-2007 Combined	Comment
National Risk-Adjusted Rate					1.18%		1.20%		1.14%					
Iowa Statewide Risk-Adjusted Rate			1.16%		1.29%		1.41%		1.11%		1.35%		1.26%	
Iowa Statewide Volume		8929		9474		9531		10348		9236		47518		
Ames	Mary Greeley Medical Center			167	○	351	○	220	○	230	○	968	○	
Bettendorf	Trinity at Terrace Park					111	●	381	○	299	○	791	○	
Cedar Rapids	Mercy Medical Center	355	○	307	○	324	○	331	○	246	○	1563	○	
Cedar Rapids	St. Luke's Hospital	552	★	409	★	543	○	566	○	479	○	2549	★	
Clinton	Mercy Medical Center			73	○	155	○	164	○	145	○	565	○	
Council Bluffs	Alegent Health Mercy Hospital							45	○	87	○	132	○	
Council Bluffs	Jennie Edmundson Hospital	115	●	117	○	122	○	122	○	102	○	578	○	
Davenport	Genesis Medical Center	1718	●	1841	○	1847	○	2507	○	1873	○	9786	○	3
Des Moines	Iowa Lutheran Hospital	225	○	285	○	317	○	311	○	256	○	1394	○	
Des Moines	Iowa Methodist Medical Center	730	★	740	○	660	○	571	○	512	○	3213	○	

Example: Oregon



Example: Massachusetts



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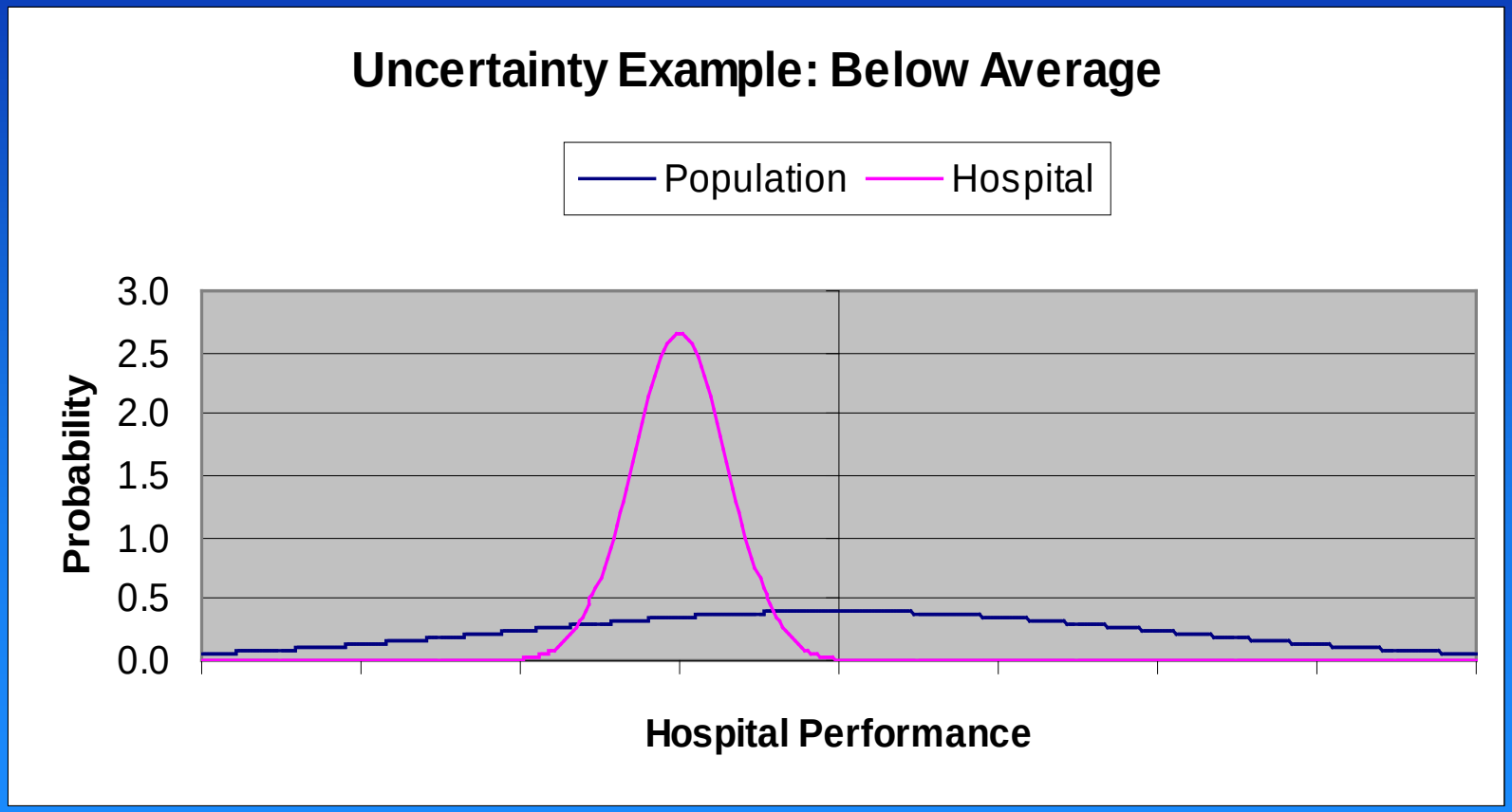
Uncertainty

- Why is there uncertainty?
  - Inference to the general population
- What is the role of uncertainty?
  - In comparative reporting, uncertainty decreases the chances for a good decision
    - A decision not based on actual or meaningful differences in performance
  - In pay-for-performance, uncertainty decreases the incentives to improve performance
    - A given level of effort may not result in as much improvement as expected

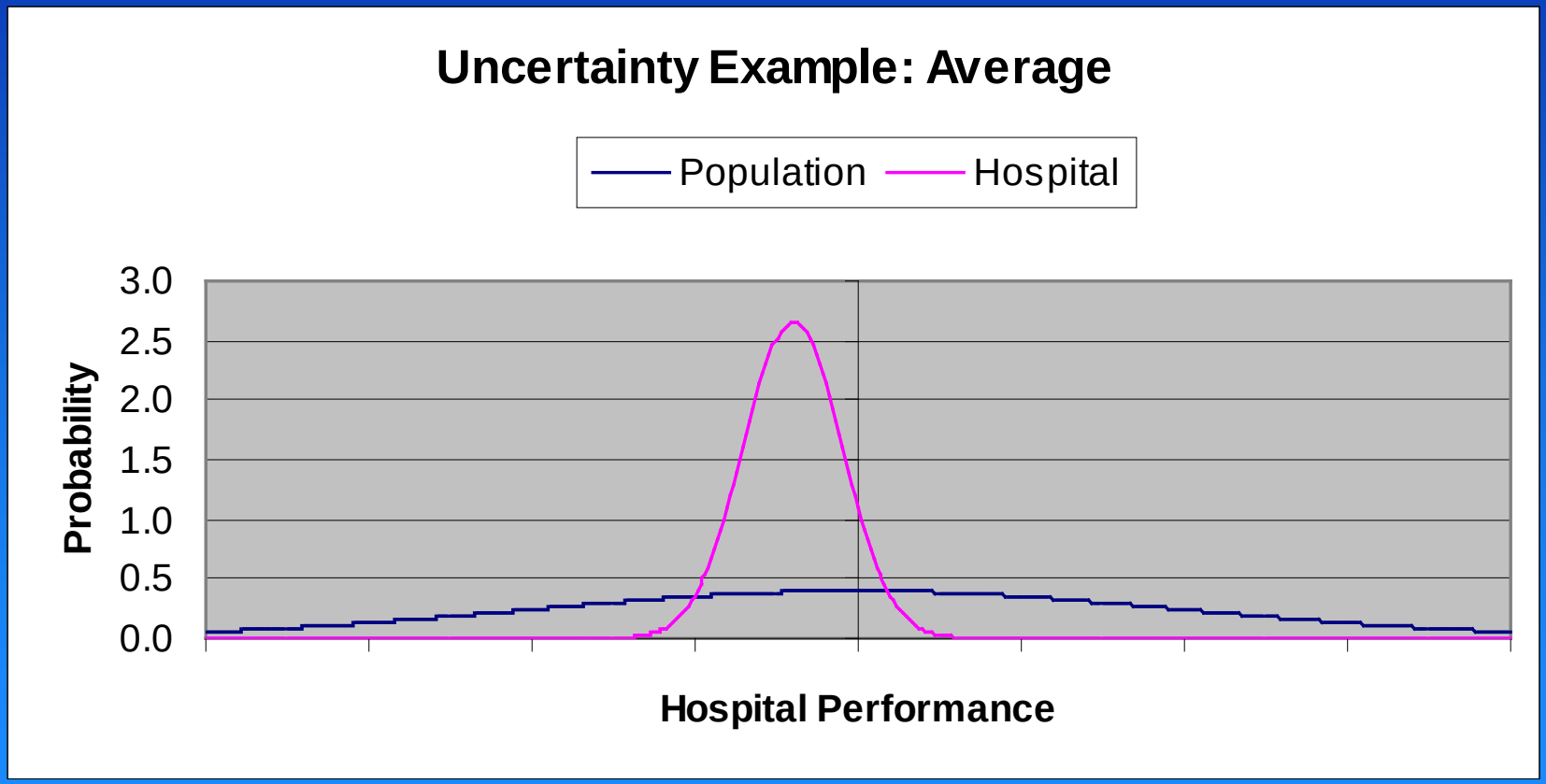
Uncertainty

- Addressing uncertainty
  - Computing a “confidence interval”
    - Each patient is a separate measure of the hospital’s performance (the “sample” of N patients)
    - Compute the mean and variance from the sample
    - Compute the standard error (SE) as sqrt(variance/N)
    - Lower bound = mean – 1.96 * SE
    - Upper bound = mean + 1.96 * SE
    - Confidence interval is “(lower bound, upper bound)”
  - Test of “statistical significance”
    - If the benchmark falls within the confidence interval

Uncertainty



Uncertainty



Uncertainty

IN-HOSPITAL MORTALITY, ACUTE MYOCARDIAL INFARCTION				
IQI 15	**Frequency**	**Percent**	**Cumulative Freq.**	**Cumulative Percent**
Below	235	11.31	235	11.31
Average	1747	84.07	1982	95.38
Above	96	4.62	2078	100.00

Uncertainty

IATROGENIC PNEUMOTHORAX				
PSI #6	Frequency	Percent	Cumulative Freq.	Cumulative Percent
Below	38	1.50	38	1.50
Average	2302	90.67	2340	92.16
Above	199	7.84	2539	100.00

Uncertainty

IN-HOSPITAL MORTALITY, HIP FRACTURE				
IQI #19	**Frequency**	**Percent**	**Cumulative Freq.**	**Cumulative Percent**
Below	48	2.52	48	2.52
Average	1786	93.90	1834	96.42
Above	68	3.58	1902	100.00

Questions

If you would like to pose a question to any of the speakers, please post it in the Q&A box on the right-hand side of your screen and press send

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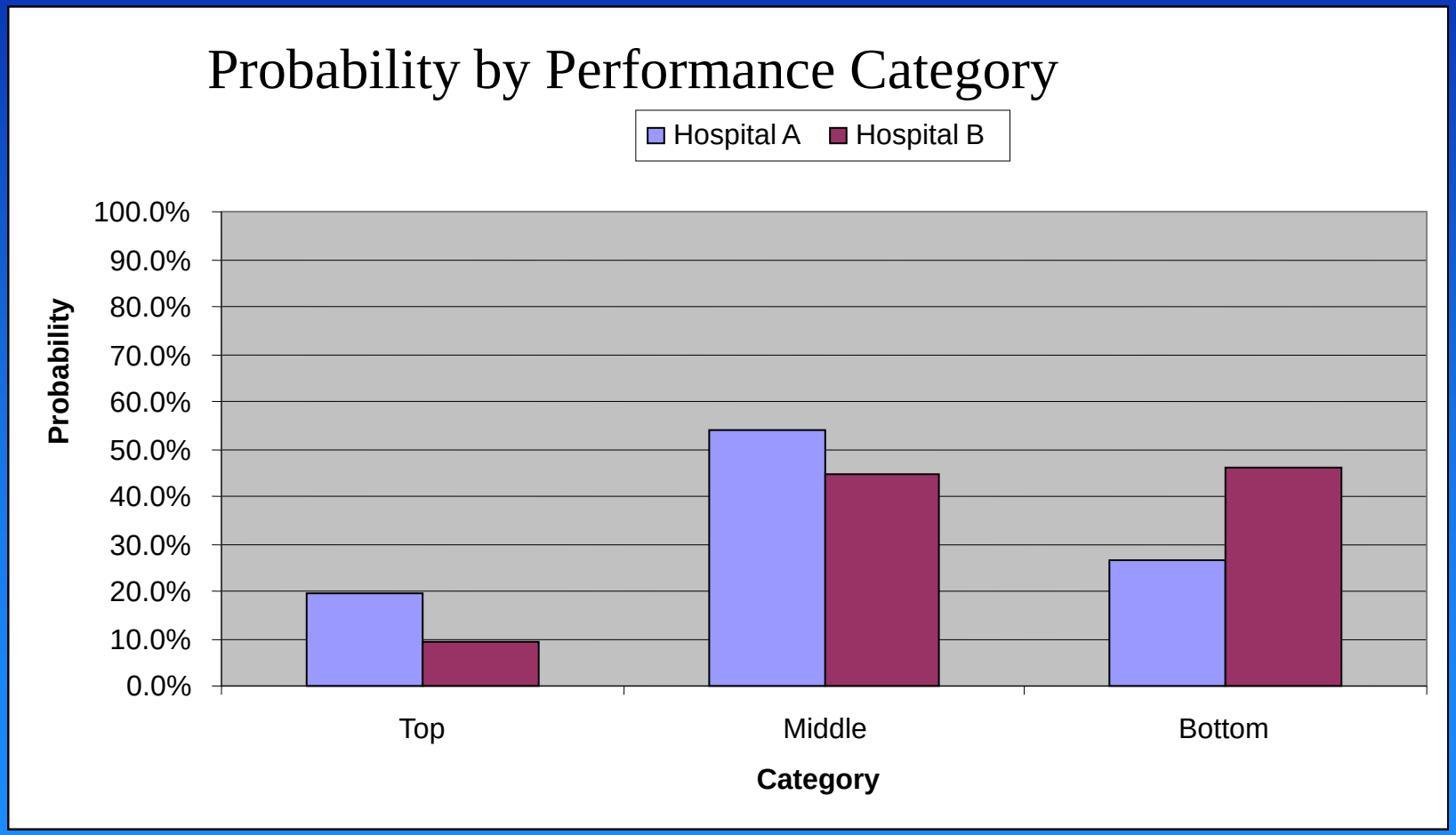
Probabilities

- An alternative approach to confidence intervals is to calculate a probability that a hospital is above or below the benchmark
- The method provides more useful information that may reflect how consumers actually make decisions
- For example, say a weather forecast provides a 20% chance of rain and an 80% chance of sunshine
  - Whether this information impacts a consumer's decision depends on what else the consumer might know other than the forecast
  - Is the consumer planning a picnic or staying indoors?

Probabilities

- The probability that a hospital is in the bottom half of hospitals may be more or less important to a consumer
- The importance may depend on what else the consumer might know about that hospital that would tend to confirm or contradict that ranking
- Information from physician recommendations, other sources of quality information

Probabilities



Probabilities

- Both hospitals are most likely in the "average" category
- However, Hospital A is more likely to be in the "above average" category
- Hospital B is more likely to be in the "below average" category
- A consumer might want to select Hospital A over Hospital B if the consumer had other information that would also lead the consumer to select Hospital A

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Questions and discussion

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- Post it in the Q&A box on the right-hand side of your screen and press send

OR

- Click the “raise your hand” button to be un-muted and verbally ask a question

QILI Newsletter

Issue 1
December 12, 2008

QILI Newsletter

AHRQ Quality Indicators Learning Institute Biweekly Newsletter — https://ahrqqili.webexone.com

QILI Members (by State)

- Alabama Medicaid Agency
- Livermore, California AHRQ Chartered Value Exchange (CVE)
- Office of Statewide Health Planning and Development, California
- Colorado Hospital Association
- Connecticut Hospital Association
- Delaware Health Statistics Center, Division of Public Health, DHSS
- Florida Agency for Health Care Administration
- Georgia Hospital Association
- Iowa Healthcare Collaborative
- Illinois Department of Public Health
- Illinois Hospital Association
- The Joint Commission
- Indiana Hospital Association
- Kentucky Hospital Association
- Louisiana Health Care Quality Forum (CVE)
- Massachusetts Division of Health Care Finance and Policy
- Centers for Medicare and Medicaid Services
- Maryland Health Care Commission
- Maryland Hospital Association
- Maine Health Data Organization
- Maine Quality Forum
- Alliance for Health, Michigan (CVE)
- North Carolina Hospital Association
- New Jersey Department of Health and Senior Services
- Health Insight, Nevada (CVE)
- Division of Health Care Financing and Policy, Nevada DHHS
- Niagara Health Quality Coalition and Alliance for Quality Health Care
- Greater New York Hospital Association
- New York State Department of Health
- Oklahoma State Department of Health
- Office for Oregon Health Policy and Research, ODHS
- The Hospital & Healthsystem Association of Pennsylvania
- Tennessee Hospital Association
- Air Force Medical Support Agency
- Texas Department of State Health Services
- Health Net Federal Services
- Washington Governor's Office of Financial Management
- Puget Sound Health Alliance
- Center for Health Statistics, Washington State Department of Health
- Employer Health Care Alliance Cooperative, Wisconsin

What's New on the Extranet

Discussions

- *SSN and patient linage data elements* – Planning Committee member Kim Streit from the Florida Hospital Association asked how member programs link patients to data. Five members have replied to date. A Powerpoint presentation given by Susan McBride from Texas Tech University Health Science Center about the AHRQ/ NAHDO Readmissions Conference that addressed this issue was also posted.
- *Jeff Geppert's inquiry on present on admission data* – Faculty member Jeff Geppert inquired about how member programs document present on admission data. Two members have replied to date.
- *Key choices in analyzing data for the report – December Webinar* – There is a discussion folder for each Webinar where members can ask questions about the topic both before and after the events. After the November Webinar there was one member question about IDC-10 codes, which presenter Jeff Geppert answered. Because the December Webinar is a technical topic we anticipate a lot of questions.

Documents

- *CDC ICD-9-CM official guidelines for coding and reporting* – During the Webinar about selecting measures on November 17th there was a question about how to become familiar with ICD-9 codes. Jeff Geppert, suggested these guidelines, which have been posted in a document folder named "Administrative Data Resources."
- *AHRQ draft model reports* – During the Webinar about selecting measures, presenter Shoshanna Sofaer mentioned AHRQ's Model Public Reports. The DRAFT reports are posted in their own folder.

^ *Please post your questions & answers and relevant documents on the extranet so other members and faculty can respond.*

Upcoming Events

Key Choices in Analyzing Data Webinar
Monday, December 15th at 12:00 pm ET

3rd Extranet Training
Week of January 5th

*Emails to follow

December's Program Profile:
Texas Department of State Health Services

To Learn more, visit our extranet site: https://ahrqqili.webexone.com

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Questions? Please e-mail QualityIndicatorsLearning@ahrq.hhs.gov or call 202.292.6730.

AHRQuality Indicators

Next Webinar

Displaying the Data

February 24, 2009

Shoshanna Sofaer, Baruch College
Susan McBride, Texas Tech University

You are welcome to invite others from your organization

For More Information

- QI Learning Institute Web Forum: https://ahrqqili.webexone.com/
- QI Learning Institute E-Mail: QualityIndicatorsLearning@ahrq.hhs.gov
- QI Web Site: http://www.qualityindicators.ahrq.gov/
- QI Support E-Mail: support@qualityindicators.ahrq.gov