**Data presentation design iterations** August 20, 2015 <max@masnick.net> v1 [64c04a00] Catheter-Associated Urinary Tract Infections v1 # infections compared to expectation Details Summary Hospital 2x to 5x more than expected Higher than expected Hospital A ↓ Lower than expected 5x to 2x fewer than expected Hospital B 6x higher 1 1 6x lower v2 [840e29e6] Catheter-Associated Urinary Tract Infections v1 Hospital # infections compared to expectation Summary Details Hospital A Higher than expected 2x to 5x more than expected 5x to 2x fewer than expected ↓ Lower than expected Hospital B 6x higher 1 1 6x lower Hospital 1 detailed information v3 [09903ff1] Catheter-Associated Urinary Tract Infections v1 Observed vs. expected infections # infections compared to expected Hospital This graph shows how the observed number of infections in this hospital compares to the range of expected infections for this hospital. Higher than expected Hospital A 2x to 5x more than expected The width of the bar indicates confidence in the data. Smaller width means greater confidence. ↓ Lower than expected Hospital B 5x to 2x fewer than expected 1 Higher than expected 6x higher 1 1 6x lower 2x to 5x more than expected v4 [98dac4a2] 6x higher 1 1 6x lower Catheter-Associated Urinary Tract Infections v1 Close Infections compared to expected Confidence  $\bullet \bullet \bullet \bullet \bullet$ Details Hospital 1 • 0 0 0 0 Hospital 2 Details Hospital 1 detailed information Observed vs. expected infections v5 [2eebd689] This graph shows how the observed number of infections in this hospital compares to the Catheter-Associated Urinary Tract Infections v5.1 range of expected infections for this hospital. The width of the bar indicates confidence in the data. Smaller width means greater # infections compared to expected Confidence in data confidence. • 0 0 0 0 • 0 0 Hospital 1 1 Higher than expected  $\bullet \bullet \bullet \circ$ . . . Hospital 2 2x to 5x more than expected 6x higher 1 1 6x lower v6 [3fe968ec] Catheter-Associated Urinary Tract Infections v1 A note on comparing hospitals # infections compared to expected Confidence in data The specific numbers from observed vs. infected data are **not** directly comparable between hospitals. Details Hospital 1 For example, if Hospital A has 2x more infections than expected and Hospital B has 2.5x • 0 0 0 0 • • 0 Details infections more than expected, Hospital A is not necessarily better than Hospital B. Hospital 2 In this situation, it is correct to consider both hospitals to be "worse than expected" and v7 [cb951f2f] consider the confidence in the estimate (wider bar = lower confidence) in making your Catheter-Associated Urinary Tract Infections (CAUTI) q1 # infections compared to expected Confidence in data Close O O Hospital 1 • • • • • Details Hospital 2 • O O O O Details Hospital 1 had: 38 observed infections, compared to around 8 estimated infections during 2,220 days when patients had catheters. How to read this table: This is an observed rate of 171 infections per 10,000 days when patients had catheters. # infections compared to expected Confidence in data The estimate for the number of infections is not exact. This means that Hospital 1 has O O O Much fewer observed infections than expected between 2.6x to 6.6x more than the expected number of infections. High confidence Somewhat fewer observed infections than expected Moderate confidence Close ● ● ○ ○ Observed infections no different than expected O Low confidence ● ● ● ○ Somewhat more observed infections than expected Much more observed infections than expected Hospital 1 had: 38 observed infections, compared to around 8 estimated infections during 2,220 days when patients had catheters ("catheter-days"). v8 [280c2303] Catheter-Associated Urinary Tract Infections (CAUTI) q1 This is an observed rate of 38 infections per 2,220 catheter-days, or 171 infections per 10,000 catheter-days. # infections compared to expected Confidence in data This is compared to an expected infection rate of around 38 per 10,000 catheter-days. The estimate for the number of infections is not exact. This means that Hospital 1 has  $\bullet$   $\circ$   $\circ$ Details Hospital 1 between 2.6x to 6.6x more than the expected number of infections for this hospital. Based on this range, Hospital 1 has: • 0 0 0 0 Details Hospital 2 • • • • many more observed infections than expected. The size of this range is large, indicating • o o low confidence in the data. How to read this table Close How to read this table: # infections compared to expected Confidence in data Detailed data for Hospital 1 O O O Much fewer observed infections than expected High confidence Somewhat fewer observed infections than expected Moderate confidence Observed infections ● ● ○ ○ Observed infections no different than expected O Low confidence This hospital had 38 observed infection(s) during 2,220 days when patients had catheters (called "catheter-days"). ● ● ● ○ Somewhat more observed infections than expected This is a rate of 171 observed infections per 10,000 catheter-days. Much more observed infections than expected Expected infections v9 [30f4d59f] This hospital was expected to have between 26 and 67 infections per Catheter-Associated Urinary Tract Infections (CAUTI) q1 10,000 catheter-days. The hospital actually had 171 infections per 10,000 catheter-days. This is Confidence in data # infections compared to expected between 2.6x to 6.6x more than the expected number of infections for this • 0 0 Show detailed data Hospital 1 hospital. 0000 Hospital 2 Show detailed data Summary Based on comparing the observed infections to the range of expected Show how to read this table infections for Hospital 1, this hospital has • • • • many more observed infections than expected. The range of expected infections is relatively large, indicating • o o low How to read this table: confidence in the data. # infections compared to expected Confidence in data O O O Much fewer observed infections than expected High confidence Close ● ○ ○ ○ ○ Somewhat fewer observed infections than expected Moderate confidence ● ● ○ ○ Observed infections no different than expected O C Low confidence Somewhat more observed infections than expected Hospital 1: detailed data for CAUTI Much more observed infections than expected Observed infections This hospital had 8 observed infection(s) during 7,404 days when patients had catheters (called "catheter-Final [bab28c6b] days"). Catheter-Associated Urinary Tract Infections (CAUTI) q1 This is a rate of 11 observed infections per 10,000 catheter-days. # infections compared to expected Confidence in data **Expected infections** This hospital was expected to have between 11 and 46 infections per 10,000 catheter-days. Show detailed data  $\bullet$   $\bullet$   $\circ$   $\circ$   $\circ$ High Hospital 1 The hospital actually had 11 infections per 10,000 catheter-days. This is between 4.2x fewer and the same as the expected number of infections for this hospital. Hospital 2 • • O O Show detailed data High Summary Show how to read this table Based on comparing the observed infection rate (11 infections per 10,000 catheter-days) to the range of the expected infection rate (11 to 46 infections per 10,000 catheter-days) for Hospital 1, this hospital has • • ° ° o somewhat fewer observed infections than expected. How to read this table: The range of expected infections from 11 to 46 per 10,000 catheter-days is relatively small in size, indicating high confidence in the data. # infections compared to expected Confidence in data Much fewer observed infections than expected High High confidence Close Somewhat fewer observed infections than expected Medium Moderate confidence Observed infections no different than expected Low confidence Low

Somewhat more observed infections than expected

Much more observed infections than expected