Topics

• Conducting data analysis
• Displaying your data: charts, graphs and tables
Data Analysis

- View the data you have collected
- Consider and look at it from different perspectives
- Consider which tools to use
Stratification

- Enables you to look at:
  - Time of day
  - Day of week
  - Site of care
  - Care providers
  - Procedures
  - Patient characteristics

When to Stratify

When you suspect that whatever you are measuring may differ based on some characteristic of the data

- Wait times differing by age
- Types of admissions vary by zip code
- Adherence to standard practice protocols differ by day of the week or time of day
Describing Your Data

- Mean: average of all numbers
- Median: middle value (50% of data is above and 50% is below the median)
- Mode: value that occurs most frequently
- Range: difference between highest and lowest value (Max-Min=Range)

Displaying Your Data: Graphs, Charts, and Tables
Displaying Data: Graphs, Charts, and Tables

- Choose how you will display data with the end in mind
- Decide whether to summarize or display all collected data
- Forms of data (number, percent, precision)
- Determine the audience
- Method that best tells your story or is most appropriate for your type of data

Graphs, Charts, and Tables

**Graphs & Charts**

- Show comparisons between variables
- Show patterns, trends or relationships
- Convey complex data relationships in a quick manner

**Tables**

- Organize large amounts of data
- Show specific quantitative values
Graphs, Charts and Tables cont.

Parts of a Whole
• Pie Chart

Comparison & Trend
• Bar Chart
• Line Graph
• Run Chart
• Data Tables

Relationship
• Scatter

Distribution
• Histogram
• Scatter Plot

Different Displays of the Same Data
Tables

Histograms

- Location, spread and distribution
- Display continuous data
- Columns present data in a category format
Bar Charts

- Data displayed in categories
- Comparisons can be made across categories
- Displays distribution with a set of data

Line Graphs

- Analyze trends, patterns, and exceptions over time
- Can display multiple sets of data
- Trends can be used for predictions
Pie Charts

- Helpful in comparing parts or portions to a 'whole'
- Only use when you have a limited number of parts to compare (about 8 is the maximum - fewer is better)
- Not helpful for comparison when any part is under 5%

Scatter Plots

- Each dot represents a pair of measures
- Test for possible cause and effect
- Does not prove cause & effect relationship
Using Data Summary

- Tell the “visual” story
- Use only as much data as needed
- Keep it simple

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