WHAT IS A PARETO CHART?

- Not Japanese
  - Named for Vilfredo Pareto
- Based on unequal distribution
  - Find the vital few
  - Graphically shows the 80/20 rule
  - Small number of causes account for most of the problems / outcomes
- It combines a simple bar chart with a line graph
- It’s a tool to visually rank causes or problems
- It’s one of the seven basic tools of quality control
- It’s a problem solving tool to help you decide where to focus your efforts
WHEN TO USE A PARETO CHART

• When you want to break a big effort into smaller pieces and identify major contributors

• When you want to focus and prioritize your efforts

• When there are multiple problems or reasons and you want to focus on the most significant

• When analyzing the frequency of causes or reasons

• When data can be categorized and you can determine the number of incidents in each category

• When you want to communicate
HOW TO CREATE A PARETO CHART

• Collect your data

• Analyze and categorize your data

• Add your data to Excel

• Sort your data in descending order

• Determine percentages

• Graph your data

• Polish your graph

• Communicate your findings
REAL LIFE EXAMPLE

Why are we denying Child Care Assistance Program (CCAP) applications?
CREATING A PARETO CHART

- In Excel, sort your data in descending order.
CREATING A PARETO CHART

• Sum the number of occurrences
Creating a Pareto Chart

- Calculate percentages and cumulative percentages
CREATING A PARETO CHART

- Add a Horizontal Line Value

<table>
<thead>
<tr>
<th>Reason for Denial</th>
<th>Count</th>
<th>Percent of Total</th>
<th>Cumulative Percentage</th>
<th>Horizontal Line Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing Information</td>
<td>185</td>
<td>58%</td>
<td>58%</td>
<td>80%</td>
</tr>
<tr>
<td>No eligible activity</td>
<td>36</td>
<td>11%</td>
<td>69%</td>
<td>80%</td>
</tr>
<tr>
<td>Already receiving CCAP</td>
<td>33</td>
<td>10%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Other</td>
<td>33</td>
<td>10%</td>
<td>90%</td>
<td>80%</td>
</tr>
<tr>
<td>Over Income</td>
<td>21</td>
<td>7%</td>
<td>97%</td>
<td>80%</td>
</tr>
<tr>
<td>No eligible child(ren) and care not needed</td>
<td>10</td>
<td>3%</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>318</strong></td>
<td><strong>100%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CREATING A PARETO CHART

- Select the data to create the chart – Reason for Denial, Percent of Total, Cumulative Percentage, and Horizontal Line Value and Insert a Column Chart
CREATING A PARETO CHART

• The result won’t look like a Pareto Chart! That’s okay.
CREATING A PARETO CHART

• Right click one of the bars to Change Series Chart Type for the Horizontal Line Value and the Cumulative Percentage to Line Graph
CREATING A PARETO CHART

• Now it looks like a Pareto Chart.
IN CONCLUSION

• Working smarter is good – working smarter on the right things is better

• Determining the 20% of things that are really important can help show where to concentrate improvement efforts

• The 80/20 rule can apply to nearly every aspect of both your work and personal lives