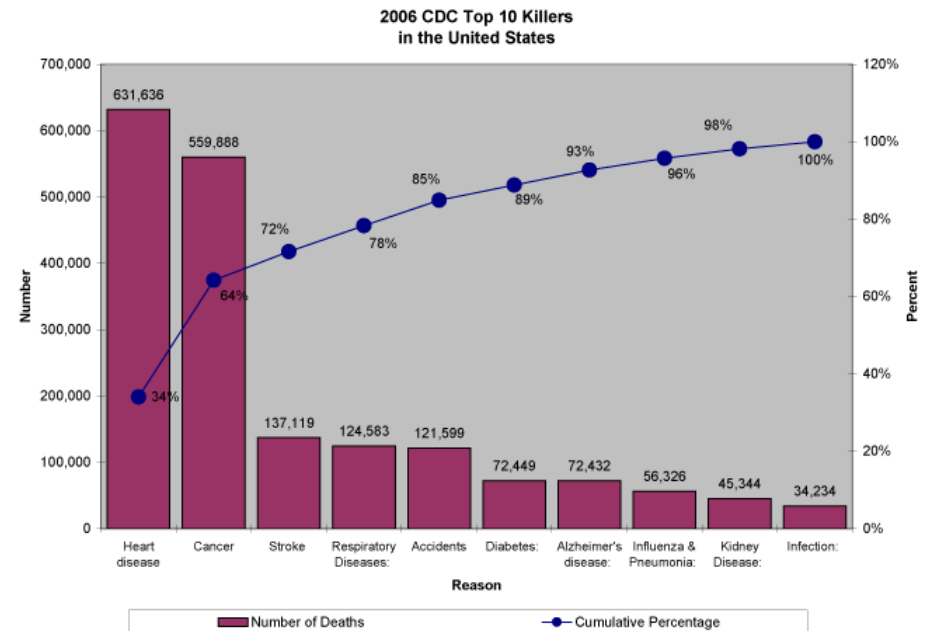


PARETO CHARTS

Peak Continuous Education

WHAT IS A PARETO CHART?

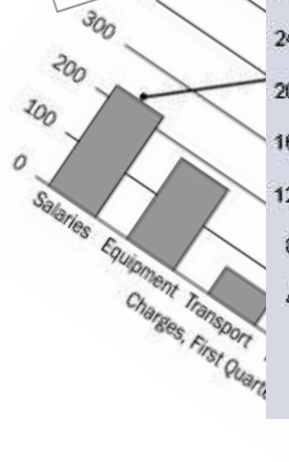
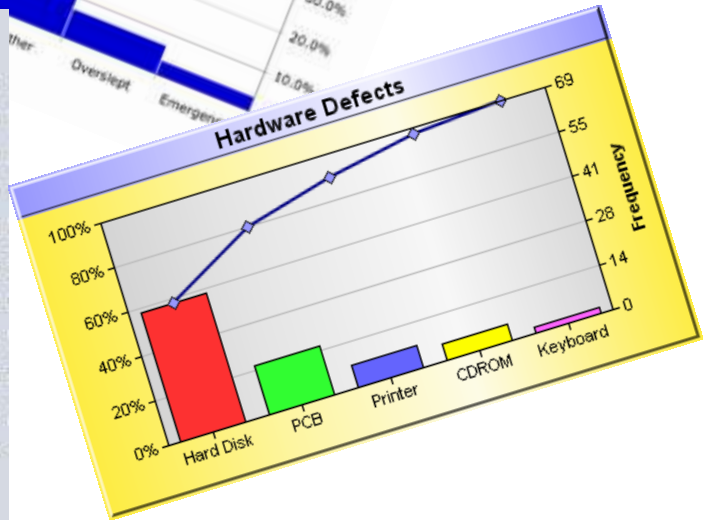
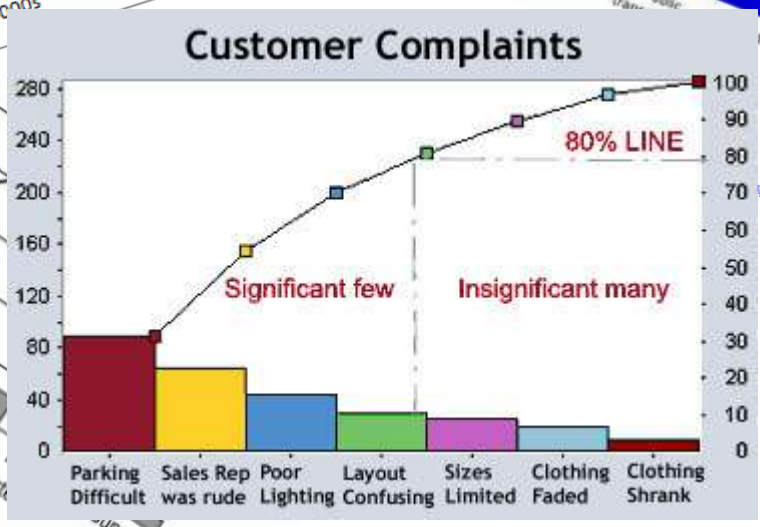
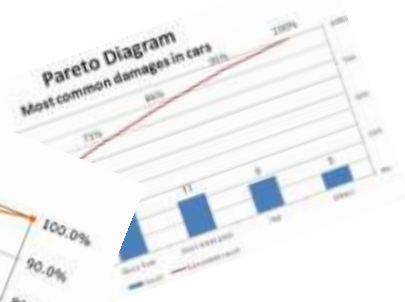
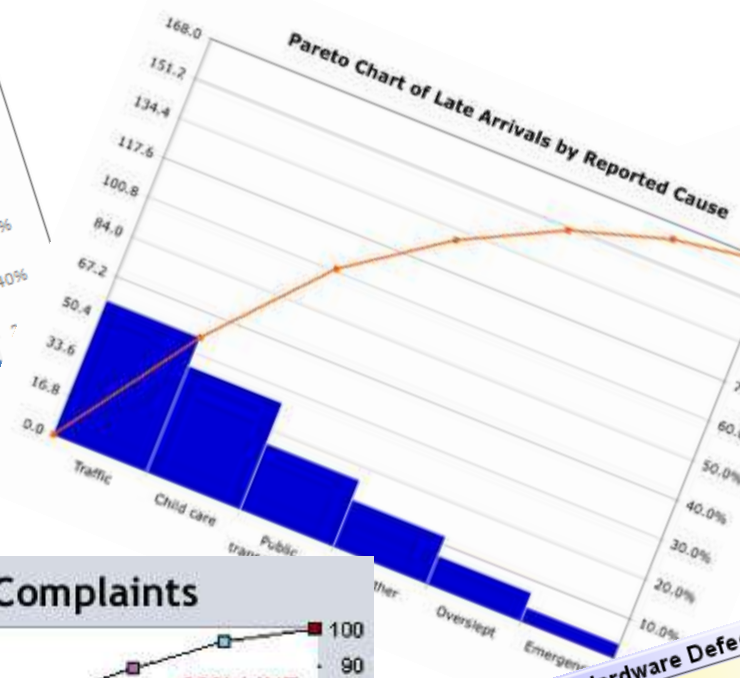
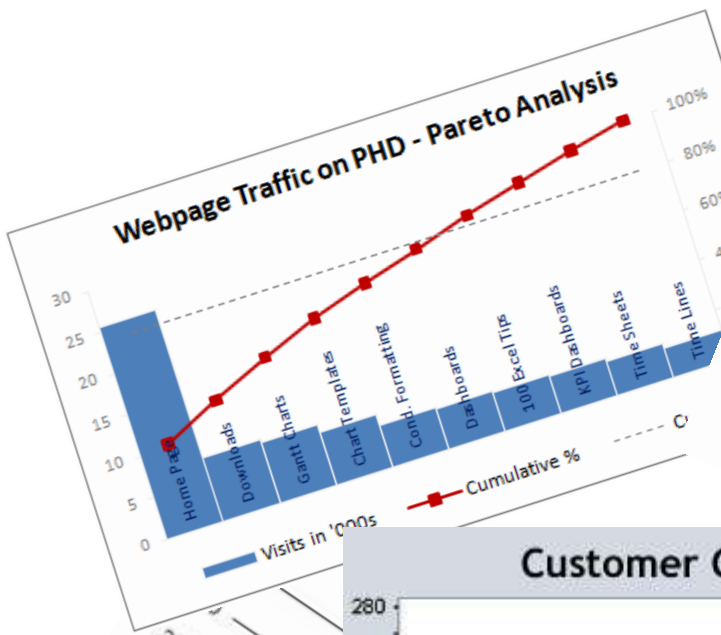
- Not Japanese
 - Named for Vilfredo Pareto
- Based on unequal distribution
 - Find the vital few
 - Graphically shows the 80/20 rule
 - Small number of causes account for most of the problems / outcomes
- It combines a simple bar chart with a line graph
- It's a tool to visually rank causes or problems
- 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

SOME SAMPLES



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

- Sum the number of occurrences

The screenshot shows a Microsoft Excel spreadsheet titled "CCAP Intake Pareto - DEMO.xlsx". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H
1	Reason for Denial	Count						
2	Missing information	185						
3	No eligible activity	36						
4	Already receiving CCAP	33						
5	Other	33						
6	Over income	21						
7	No eligible child(ren) and care not needed)	10						
8	Totals	318						
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

The formula bar shows the formula $=SUM(B2:B7)$ for cell B8. The status bar at the bottom indicates "Ready" and "100%".

CREATING A PARETO CHART

- Calculate percentages and cumulative percentages

CCAP Intake Pareto - DEMO.xlsx - Microsoft Excel

Reason for Denial	Count	Percent of Total	Cummulative Percentage
Missing information	185	58%	58%
No eligible activity	36	11%	69%
Already receiving CCAP	33	10%	80%
Other	33	10%	90%
Over income	21	7%	97%
No eligible child(ren) and care not needed)	10	3%	100%
Totals	318	100%	

CREATING A PARETO CHART

- Add a Horizontal Line Value

CCAP Intake Pareto - DEMO.xlsx - Microsoft Excel

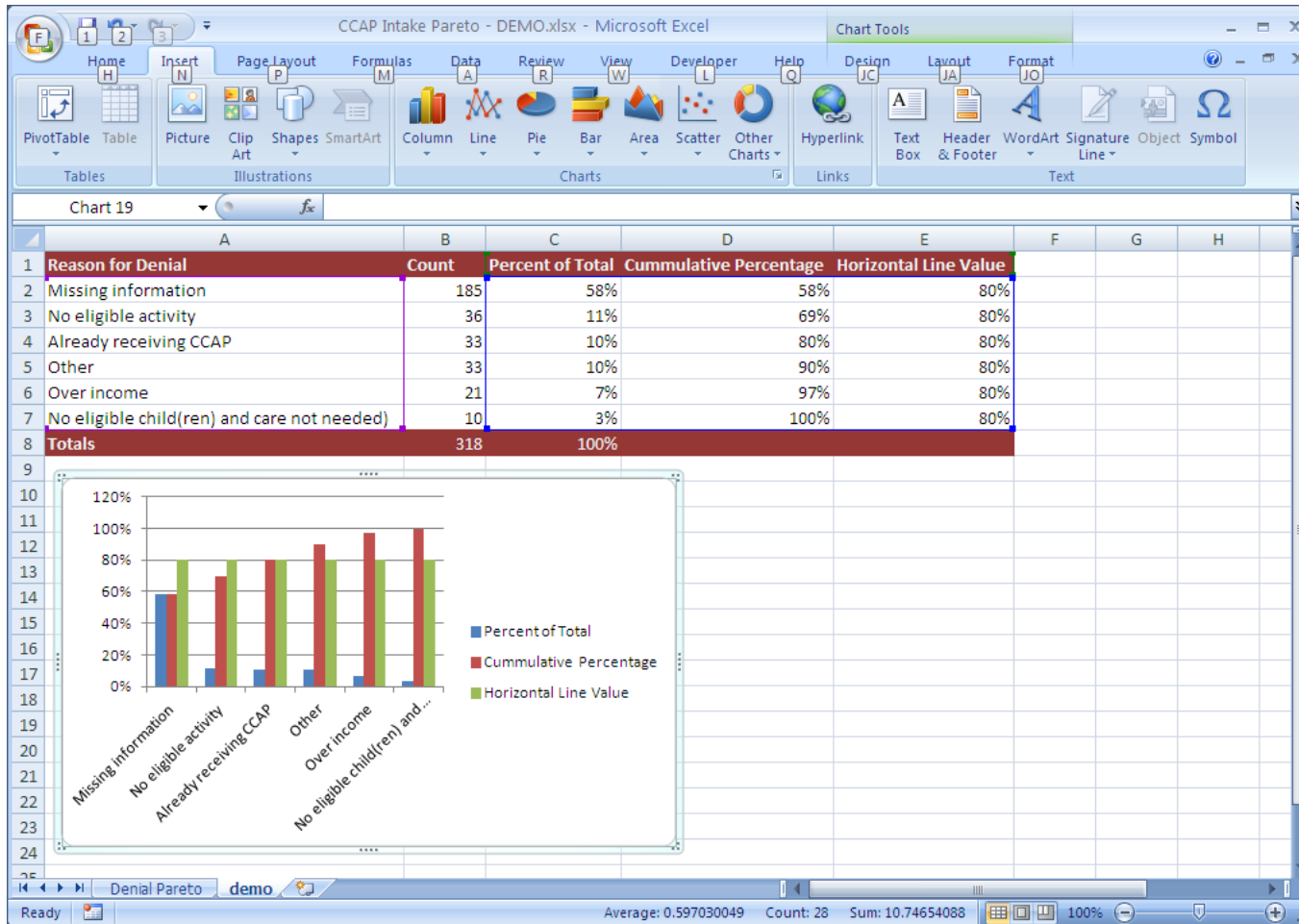
Horizontal Line Value

	A	B	C	D	E	F	G	H
1	Reason for Denial	Count	Percent of Total	Cummulative Percentage	Horizontal Line Value			
2	Missing information	185	58%	58%	80%			
3	No eligible activity	36	11%	69%	80%			
4	Already receiving CCAP	33	10%	80%	80%			
5	Other	33	10%	90%	80%			
6	Over income	21	7%	97%	80%			
7	No eligible child(ren) and care not needed)	10	3%	100%	80%			
8	Totals	318	100%					
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
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23								
24								

Ready | Denial Pareto | demo | 100%

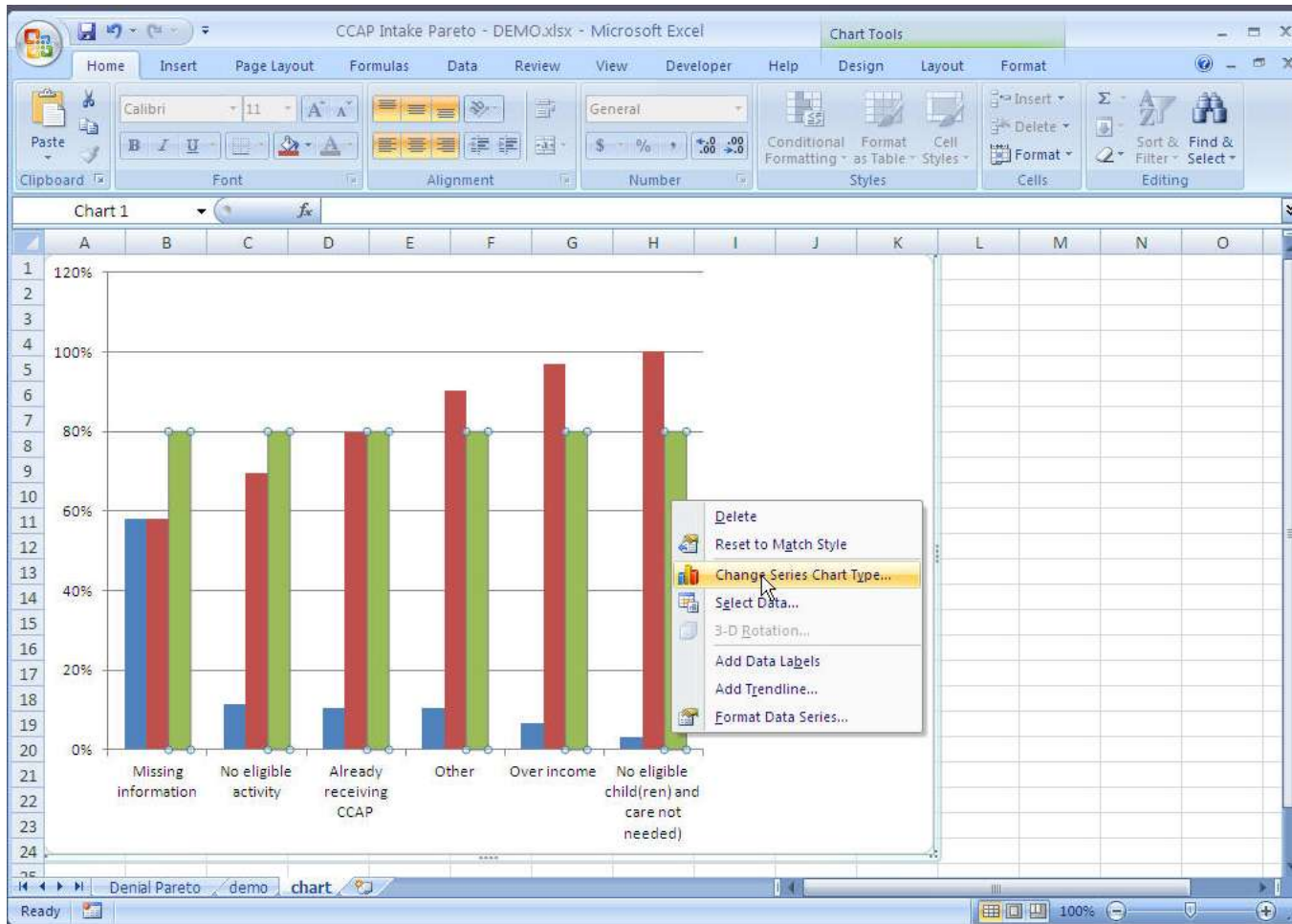
CREATING A PARETO CHART

- The result won't look like a Pareto Chart! That's okay.



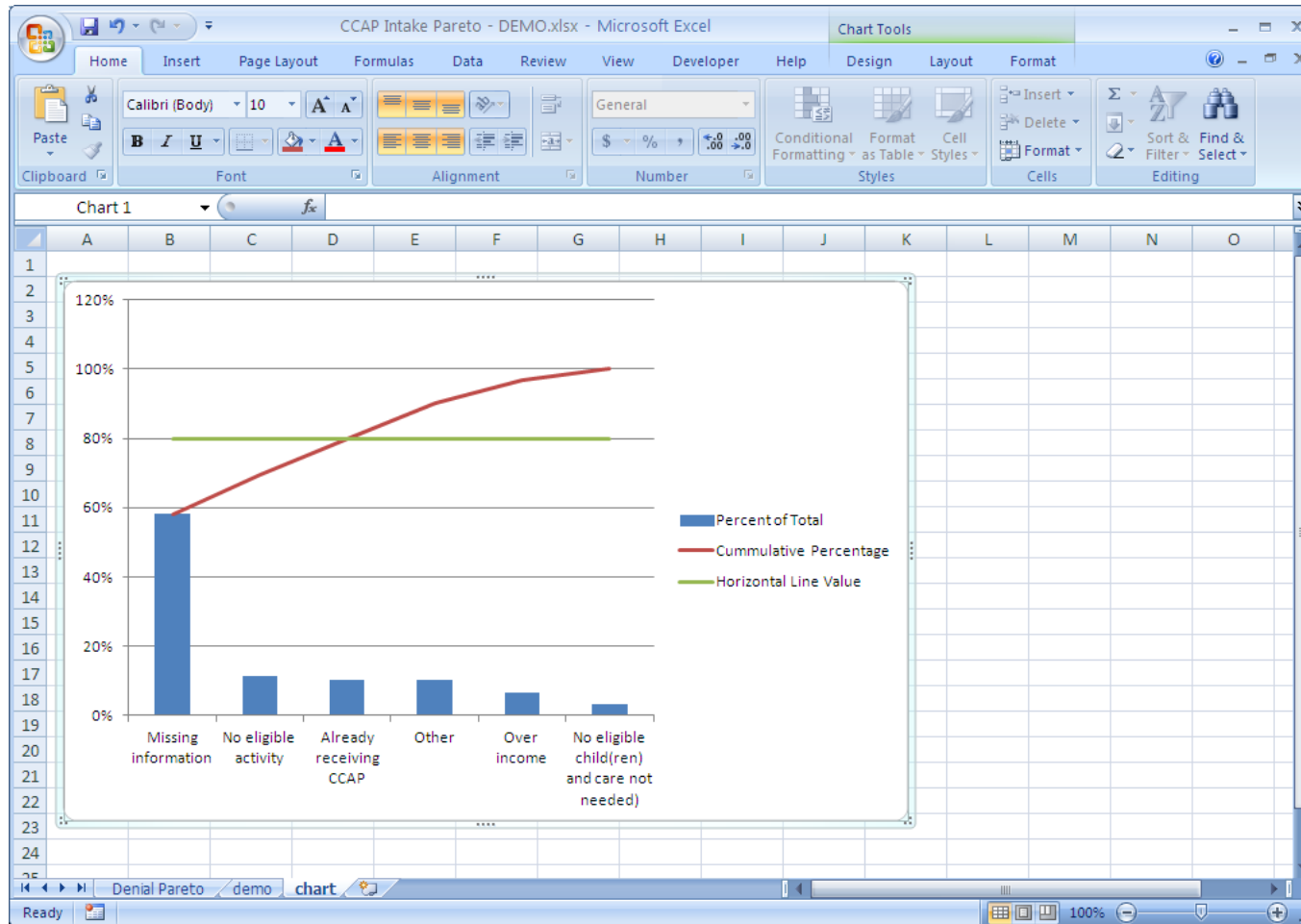
CREATING A PARETO CHART

- 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