

Quality and Safety Academy

Data 101

UCHealth – University of Colorado Hospital

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Objectives

1. National Quality Programs and Public Reporting
2. What is your data relationship?
3. What makes data credible?
4. Telling stories with data
5. Issues using data
6. Where to start
7. Data Sources – Benefits and Barriers
8. Data Governance

How Safe is Your Hospital?

Search By City/State

aurora

CO

Search

1 Recent Searches

Hospital Matches

21 hospitals matching aurora, CO

List

Map

Sort by Distance



UCHealth University of Colorado Hospital

12605 E. 16th Avenue
Aurora, CO 80045

[View the full Score](#)

This Hospital's Grade



Medical Center of Aurora

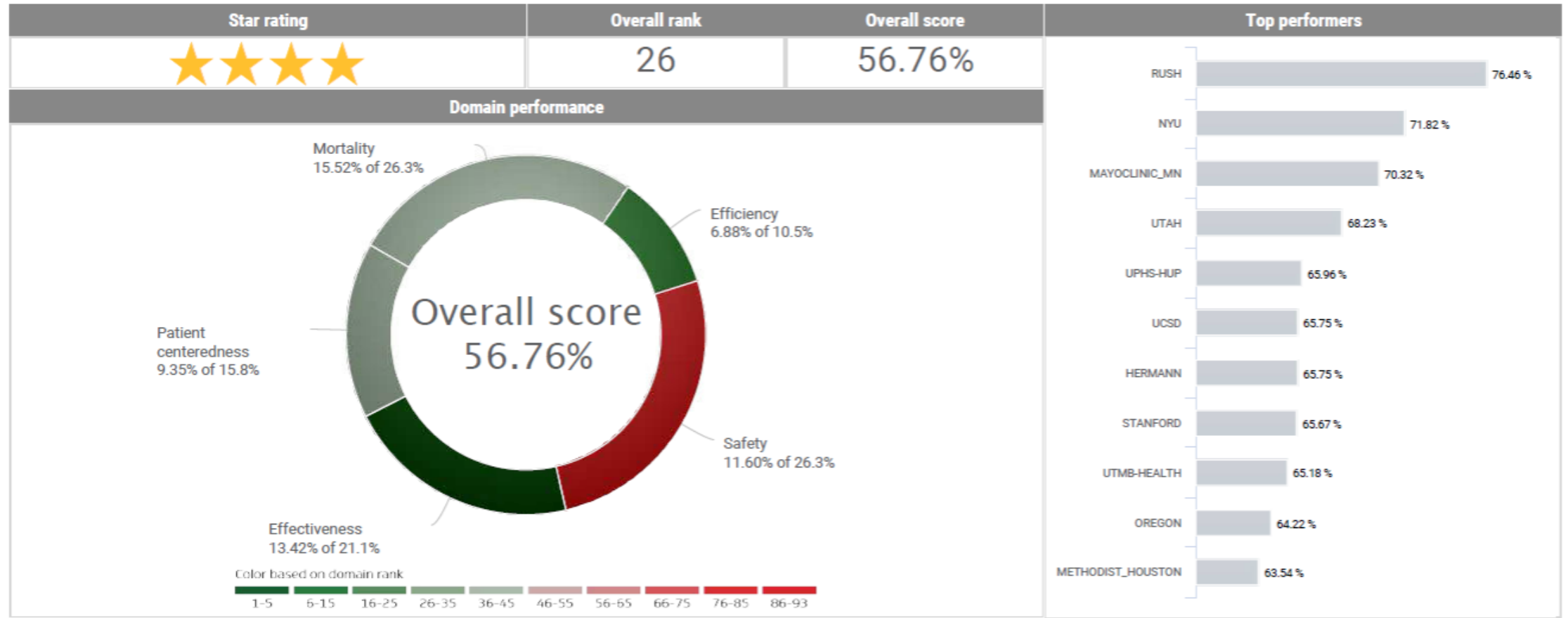
1501 S. Potomac Street
Aurora, CO 80012-5499

[View the full Score](#)

This Hospital's Grade



2019 Comprehensive Academic Medical Center Quality and Accountability University of Colorado Hospital Performance Scorecard



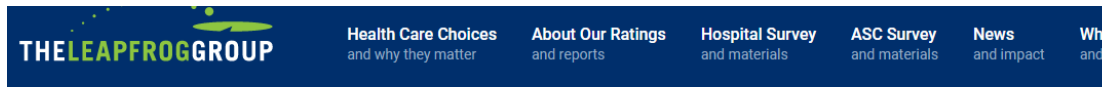
Public Reporting



National Healthcare Safety Network (NHSN)

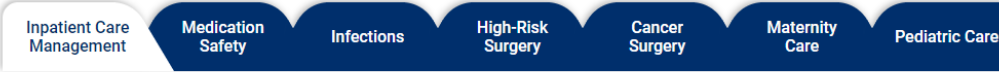
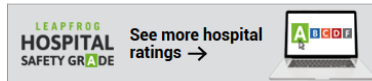


- ### 2019-20 Honor Roll Rankings
- #1 Mayo Clinic
Rochester, MN
 - #2 Massachusetts General Hospital
Boston, MA
 - #3 Johns Hopkins Hospital
Baltimore, MD



Hospital Ratings

You searched for: Aurora, CO 80045, USA within 50 miles. Start a new search or look up a hospital's Leapfrog Hospital Safety Grade. Learn how to use this information.



To provide the safest, highest-quality care, hospitals must staff their units with appropriate expertise and have effective policies in place to manage and reduce errors. The biggest impact on patient outcomes comes from a deliberate and hospital-wide commitment to these practices.



HOSPITALS ADVOCACY EDUCATION



Colorado Hospital Report Card

Select up to 3 hospitals to compare:	Steps to Avoid Harm	Never Events Management	Appropriate Use of Antibiotics in Hospitals	Specially Trained Doctors Care for ICU Patients
<input checked="" type="checkbox"/> Compare Selected Sort	Sort	Sort	Sort	Sort
<input type="checkbox"/> Boulder Community Foothills Hospital Boulder, Colorado MORE DETAILS				
<input type="checkbox"/> Centura Health Castle Rock Adventist Hospital Castle Rock, Colorado MORE DETAILS				

National Quality Programs

CMS Value-Based Purchasing

Infections

30 Day Mortality measures (AMI, HF, PN and COPD)

THA/TKA Complications

Patient Satisfaction

Medicare Spending per Beneficiary

CMS Star Ratings

Mortality

Core measures

Readmissions

Excess Days - AMI, HF and PN

Patient Satisfaction

Leapfrog Safety Grade

Infections

Patient Satisfaction

Patient Safety Indicators/HACs

Process Measures Safety/CPOE/ICU Staffing

CMS Hospital Acquired Condition Program

Infections

Patient Safety Indicators – PSI 90

Vizient Q&A Hospital Ranking

Infections

Adverse Drug Events – Lab measures

Patient Satisfaction

Readmissions/ Excess days

THA/TKA Complications

Patient Safety Indicators

Mortality

CMS Hospital Readmission Reduction Program

30 Day Readmission
Stroke
AMI
COPD
HF
Pneumonia
CABG
THA/TKA

Colorado HQIP Medicaid Program

Maternal Health and Perinatal
Breastfeeding, C-sections, depression screening, maternal emergencies, episiotomy, racial disparities

Patient Safety
cDiff, CLABSI, PE/DVT, sepsis education, antibiotic stewardship, Culture of Patient Safety Survey

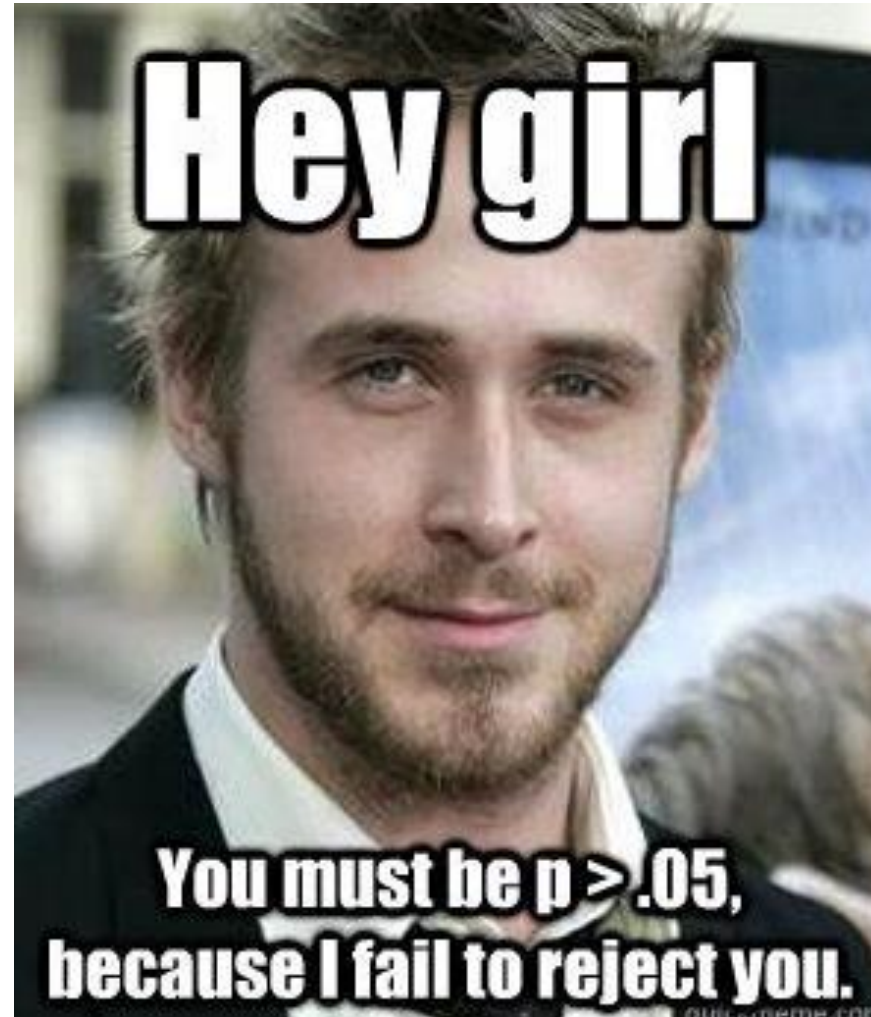
Patient Satisfaction

US News and World Report

Conditions

Specialties

What is your relationship with data?









IF I SAY "FIRST OF ALL"

**RUN AWAY BECAUSE
I HAVE PREPARED
RESEARCH, DATA, CHARTS
AND WILL DESTROY YOU.**

@REBEL_CIRCUS

What makes data credible?

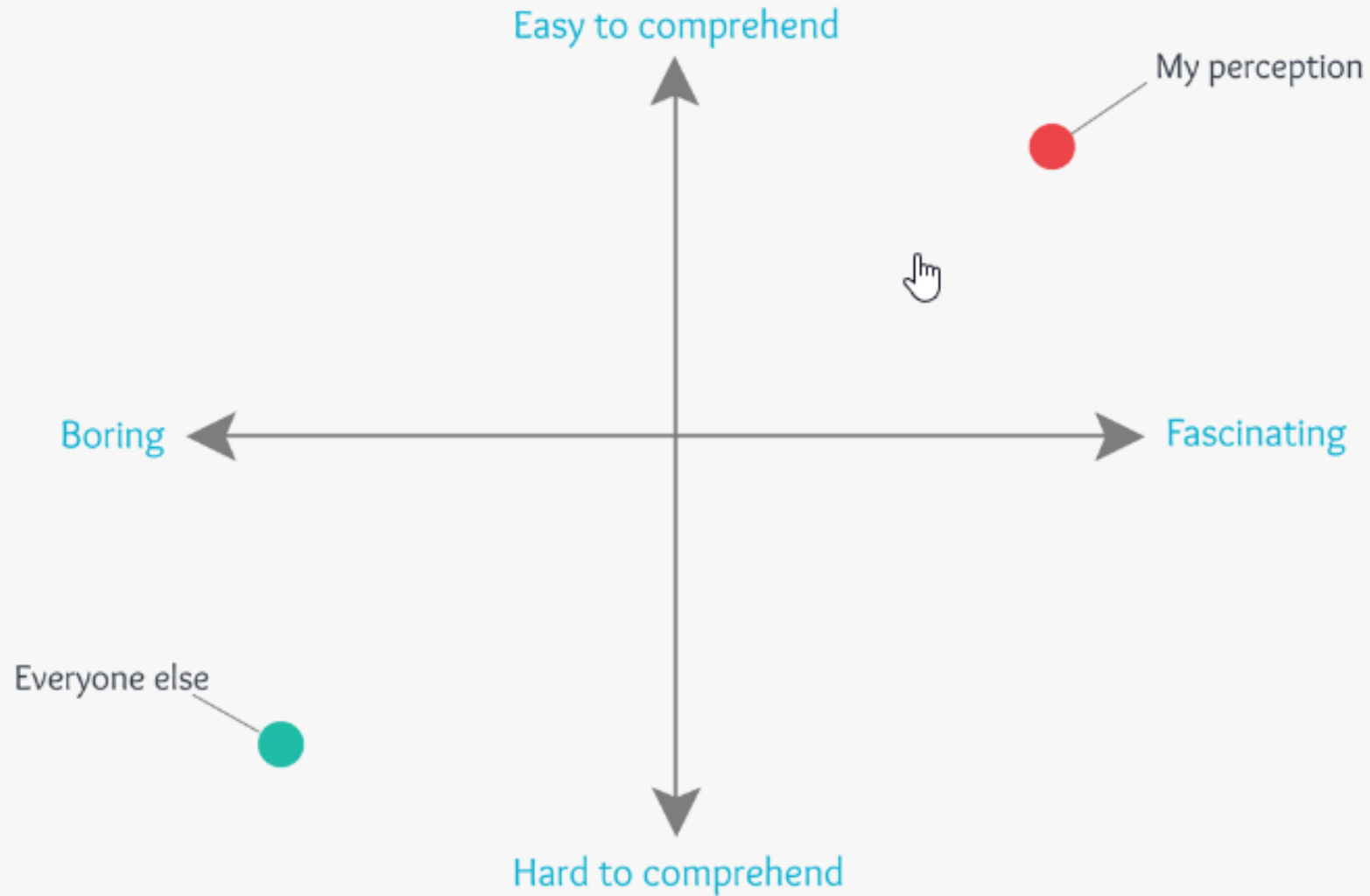
Timeliness 	Reconciliation 
Accuracy 	Presentation 
Relevancy 	Content 

Telling stories with data





My Charts And Graphs Are:



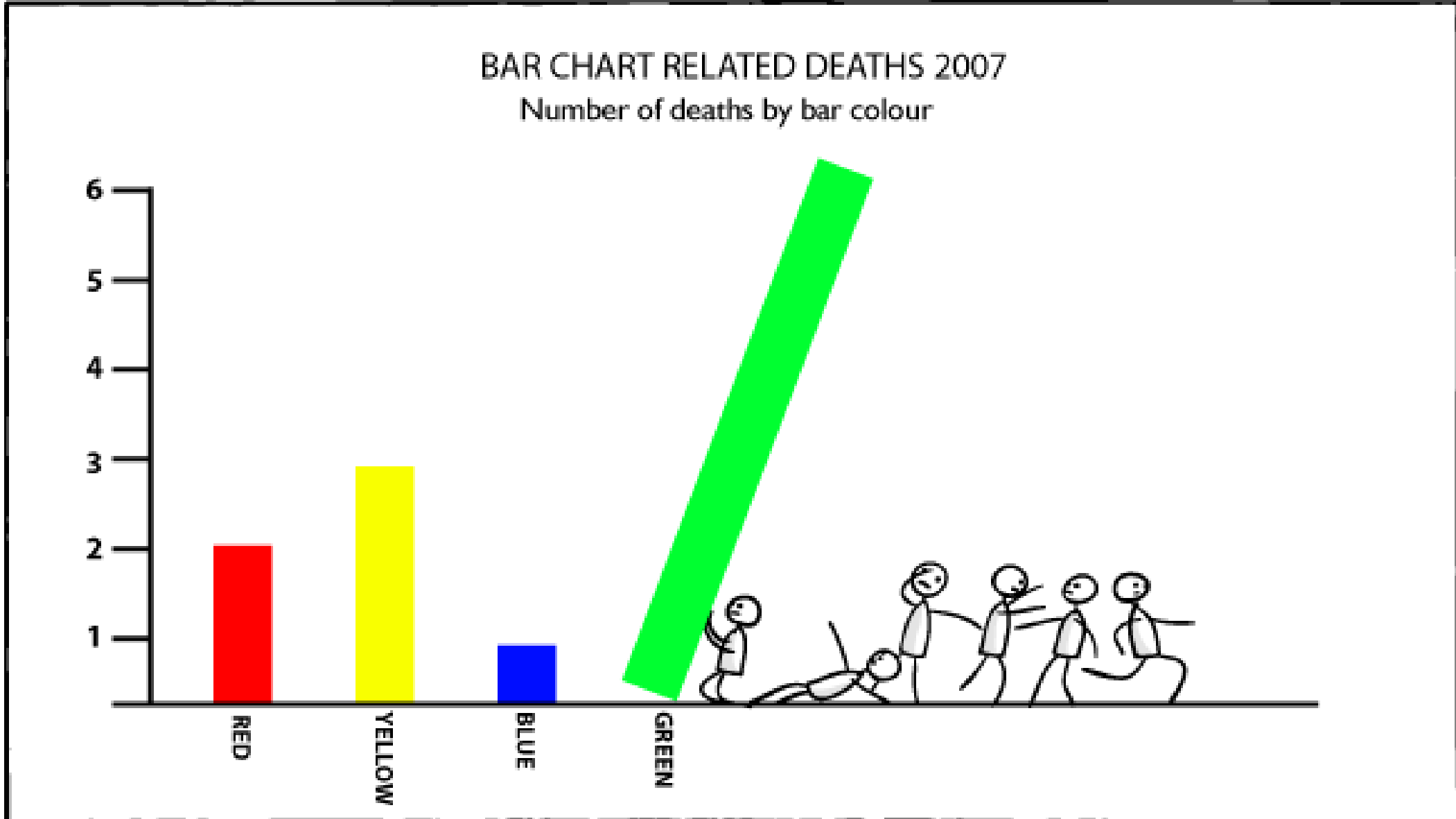
Data – Pitfalls



- Unclear on what question you are trying to answer
- Graphs/charts can't stand on their own (without you there explaining it)
 - Should be no more complex than the data which they portray
- Common Issues
 - No title/key/legend, lack of clear axis labeling
 - Truncation of an axis so it ends or starts in a misleading place
 - Numbers not adding up correctly, especially in pie-charts
 - Poor use of a graph type
 - Cherry-picking data

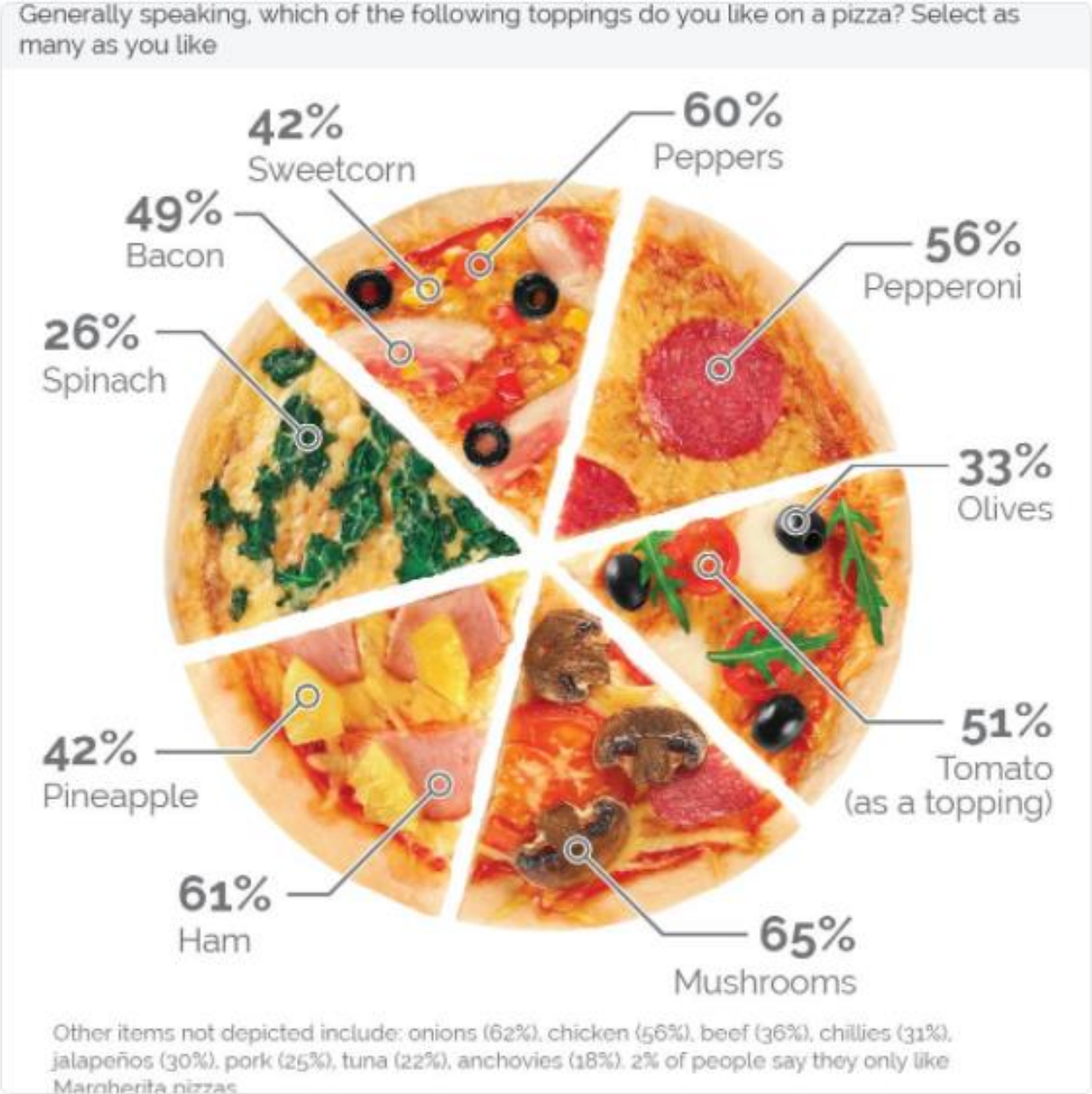
Types of Graphs

- Pie Charts
- Bar charts
- Line charts
- Control charts



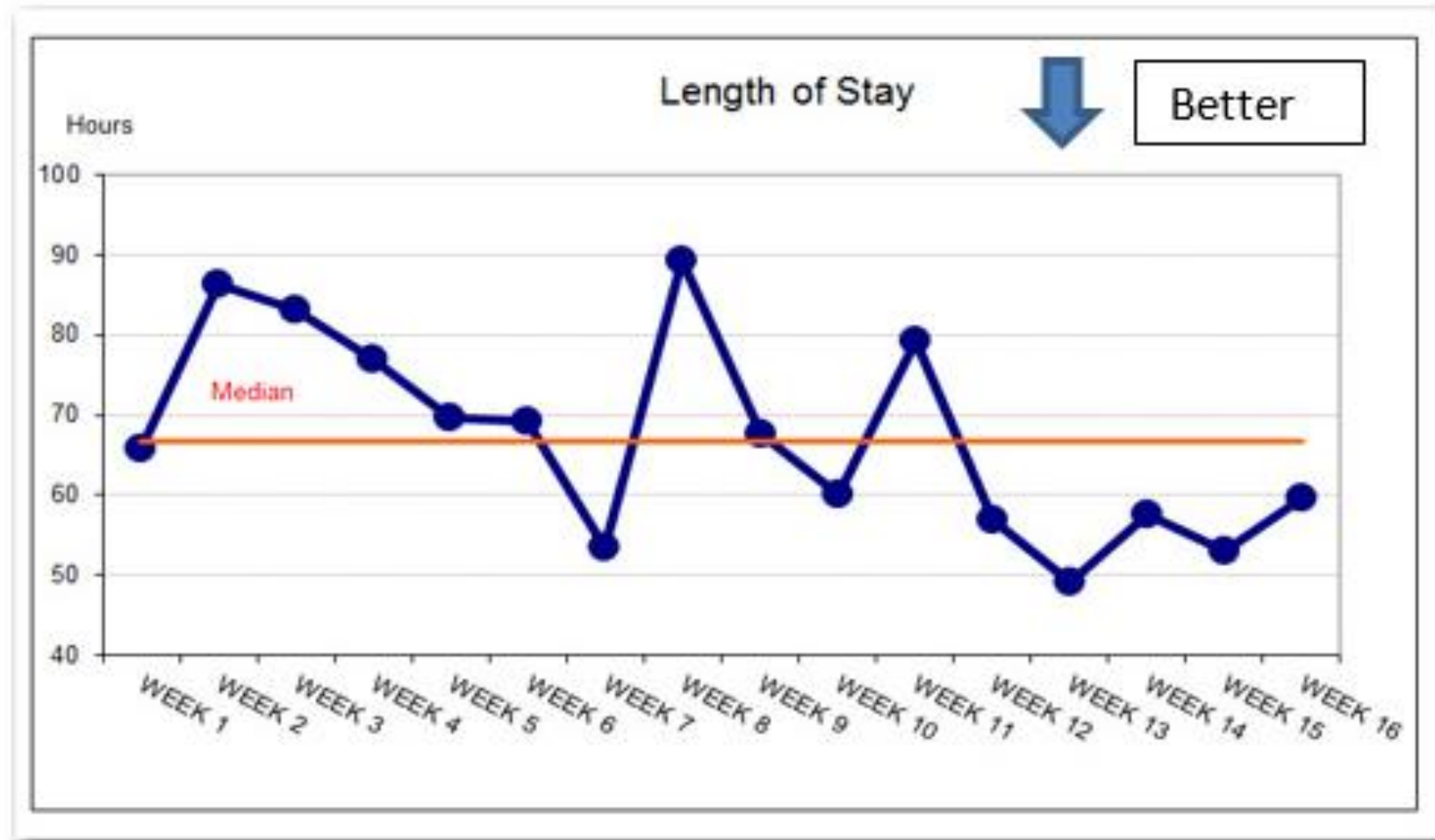
Graphs – Pie Charts

- Pie charts are used to show parts of a whole
- Needs to add up to 100%
- Slice of each piece needs to be relative to percentage
- Avoid using 3-D imagery or tilt
- Keep it clean and consistent – compare just a few categories. Use “Other” to group smaller categories.



Line Charts

- Line chart reveal trends are change over time. Can be used to show relationships. Avoid comparing more than 5-7 lines.
- Control charts monitor a process variable over time. To look for special cause variation or process improvement.

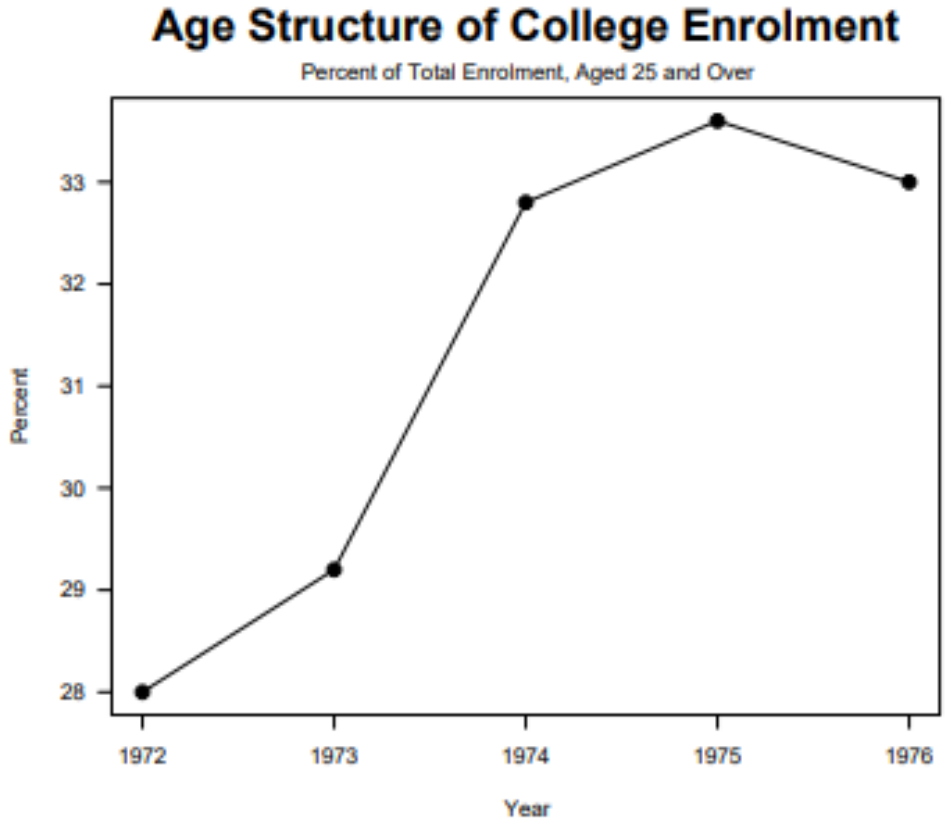
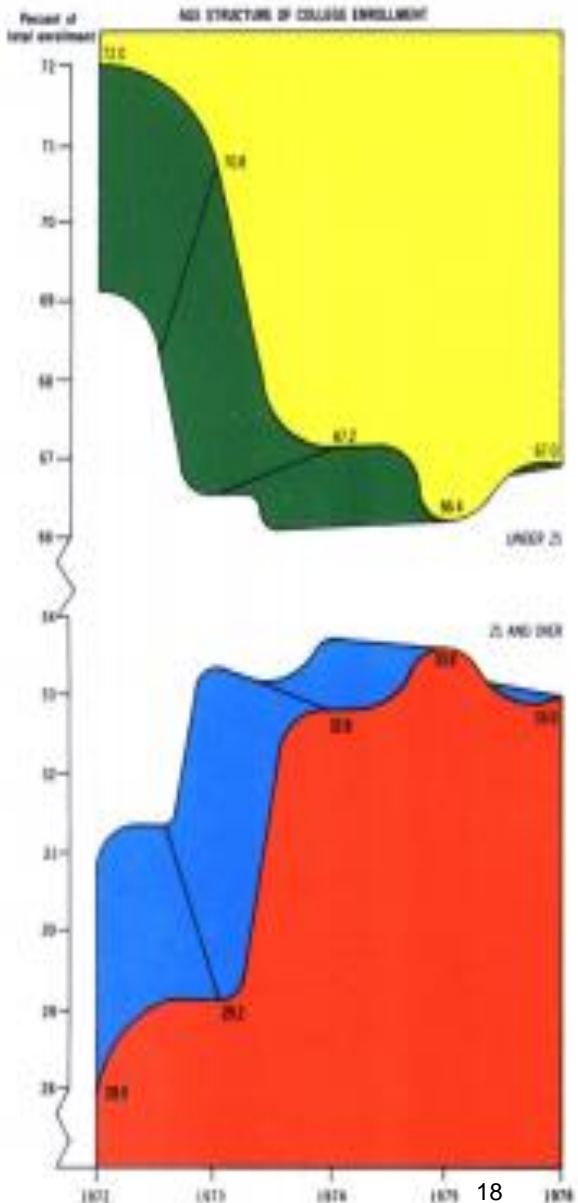


Graphs - Complexity

Age Structure of College Enrolment (1972-1976)

This graph presents five values. It uses six colours, unnecessary perspective and a split axis to do so.

American Education Magazine.

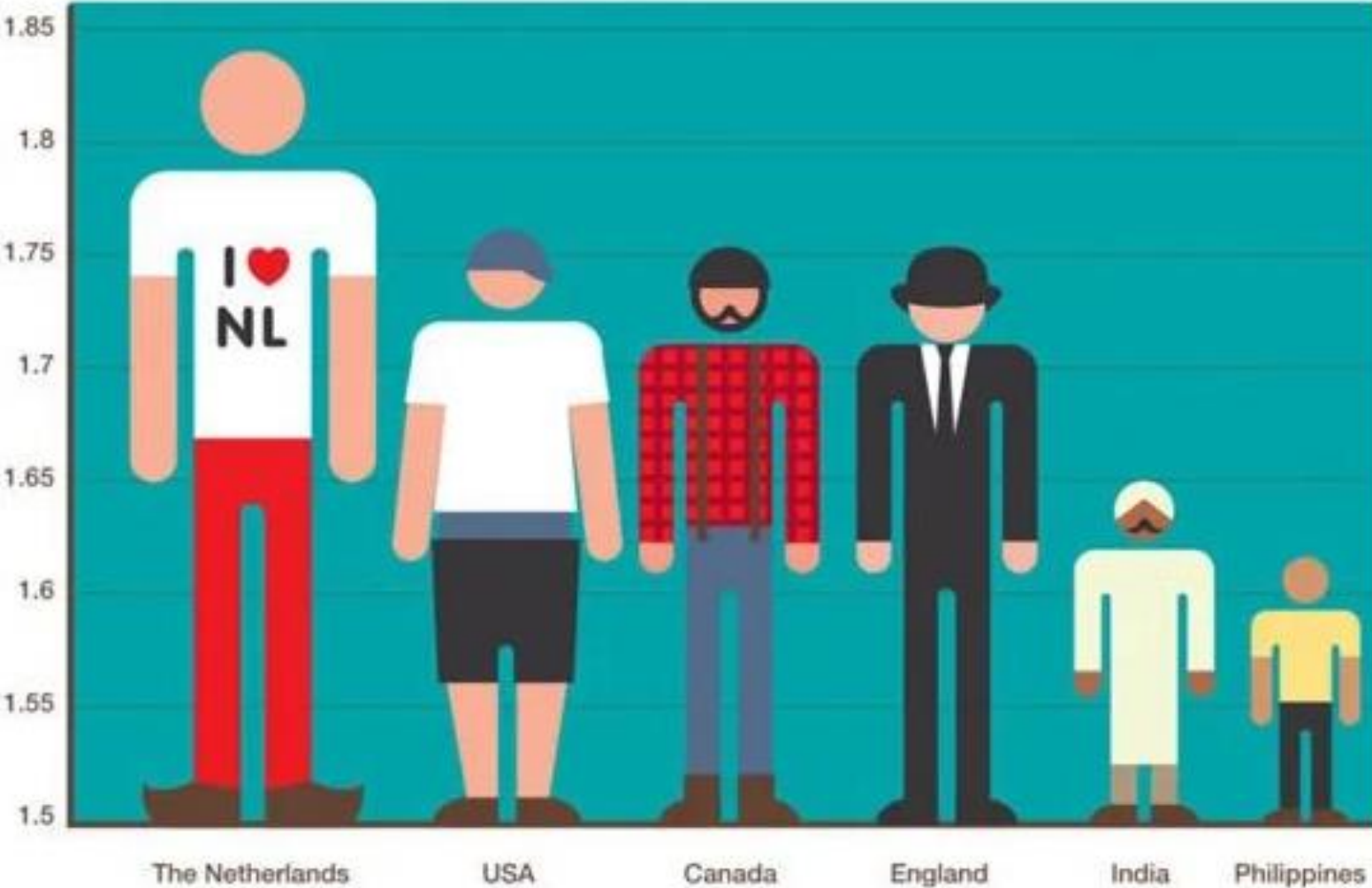


Graphs - Distortion

- Graphs should not provide a distorted view of the values they portray
- May be deliberate or accidental

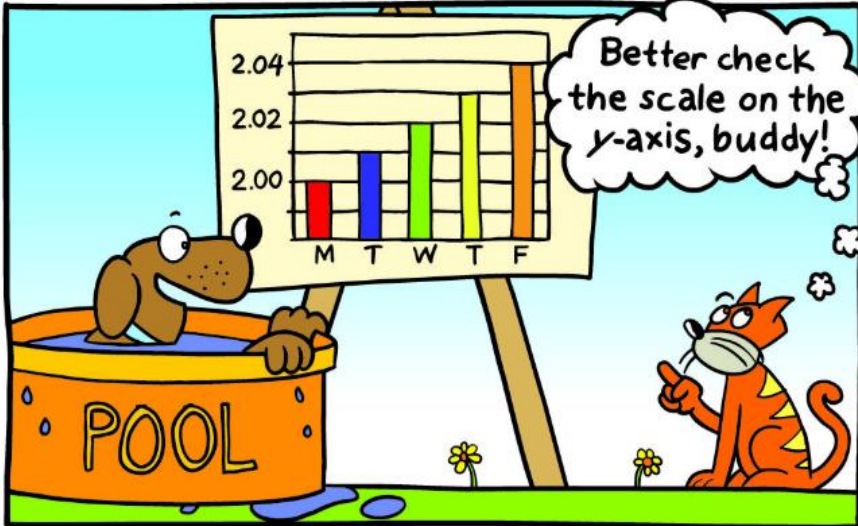
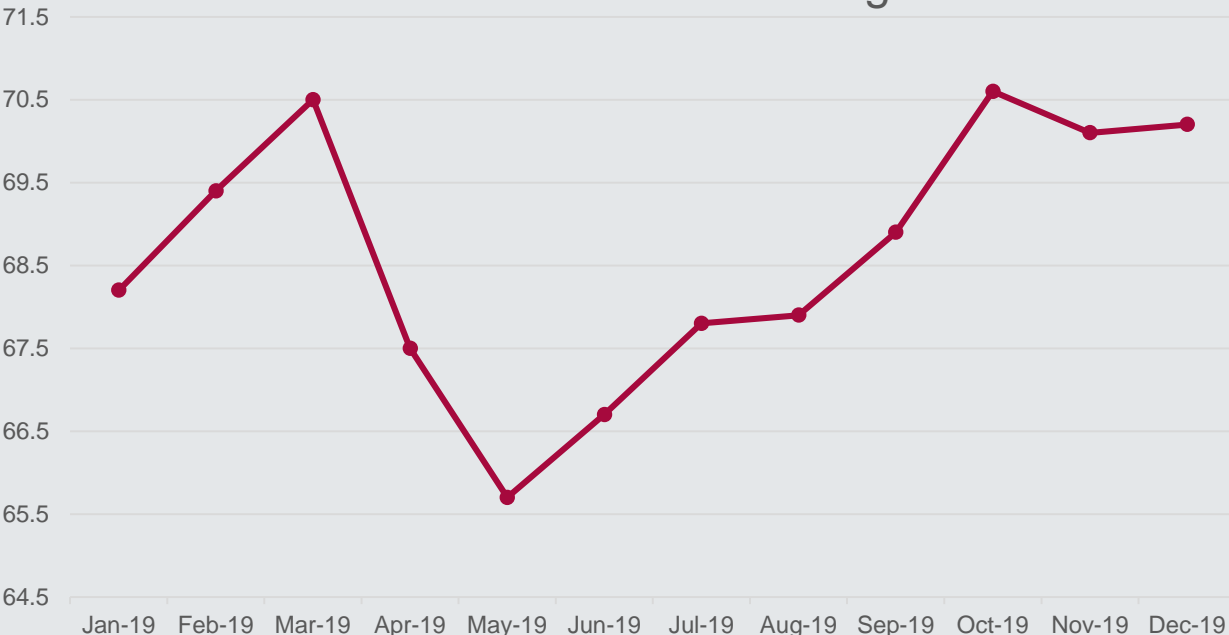
LOOKING DOWN ON THE REST OF THE WORLD

(Average male height in m)



Graphs - Distortion

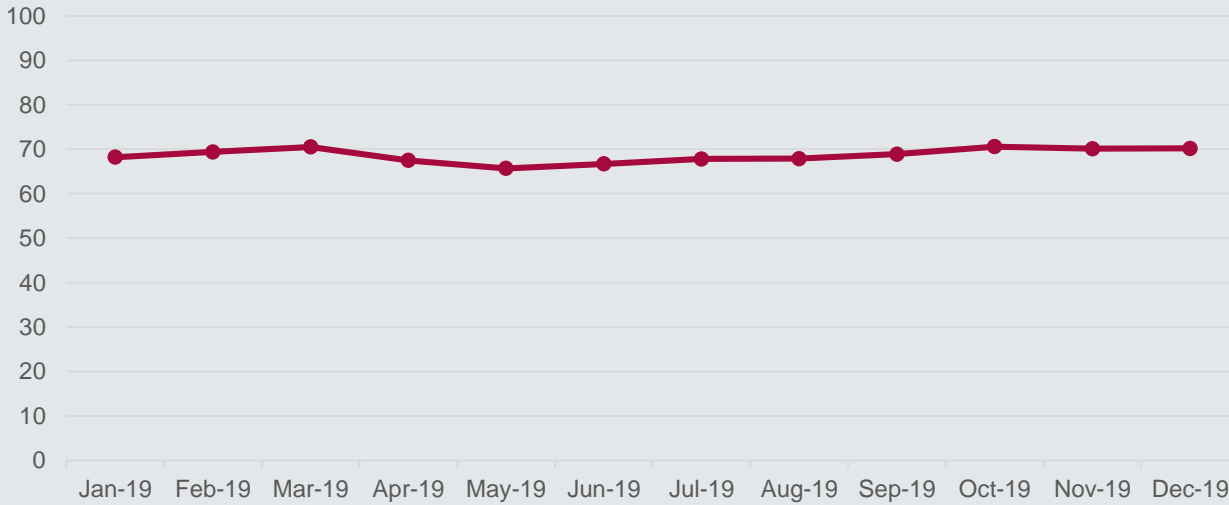
HCAHPS Overall Rating



"Wow. The number of minutes I can dog paddle is growing like crazy!"

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HCAHPS Overall Rating



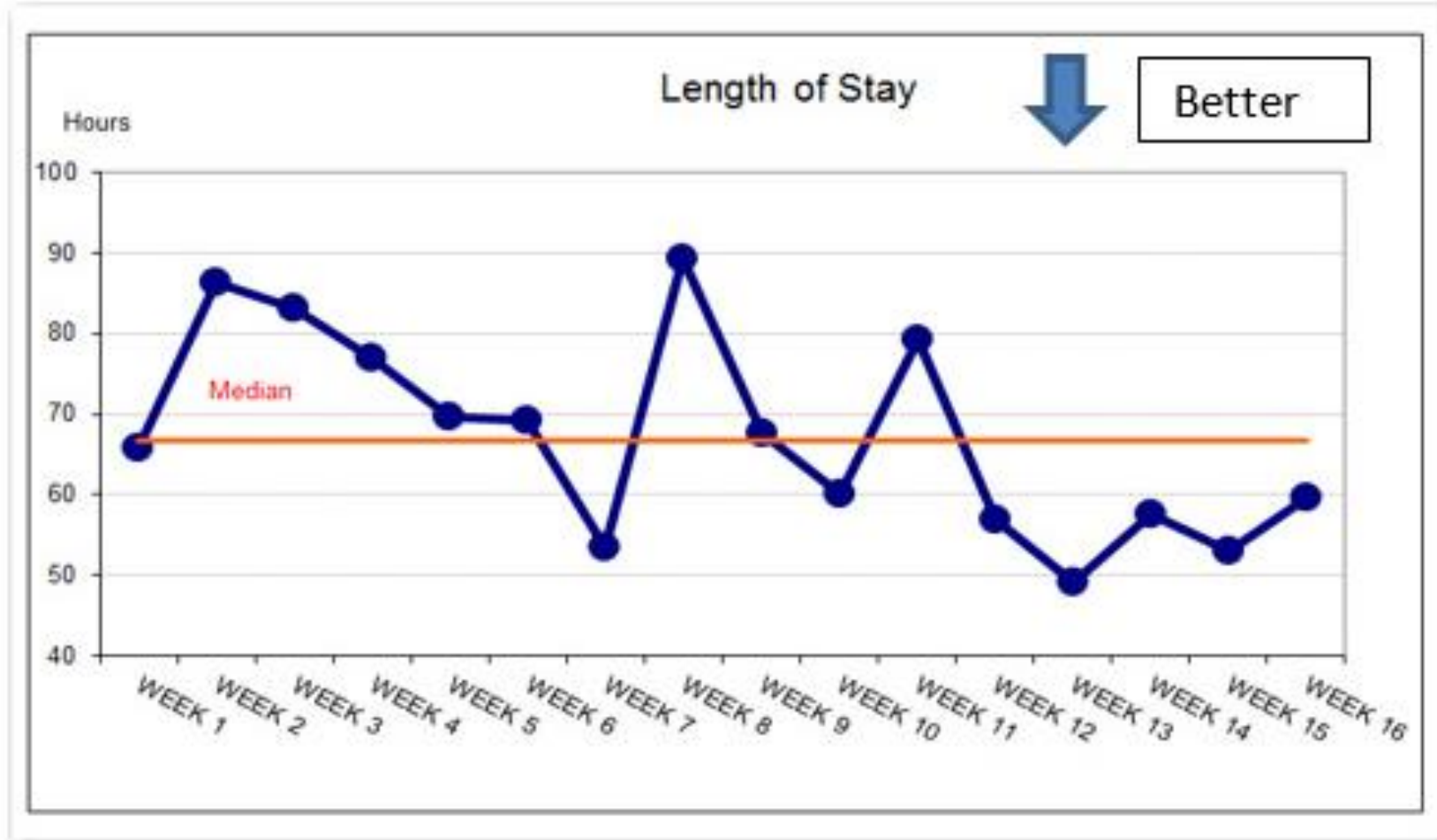
Same exact data

Graphs – Trends, Shifts



- A trend cannot be inferred from two points.
- You cannot pick convenient spots for your trend to begin and end.
- Only applicable to run charts and control charts
 - A shift is seven points in a row either above or below the centerline (median)
 - A trend is seven points in a row in an upward direction or seven points in a row in a downward direction.
 - With a trend, it doesn't matter if the centerline is crossed.

Line Charts



Almost a shift!

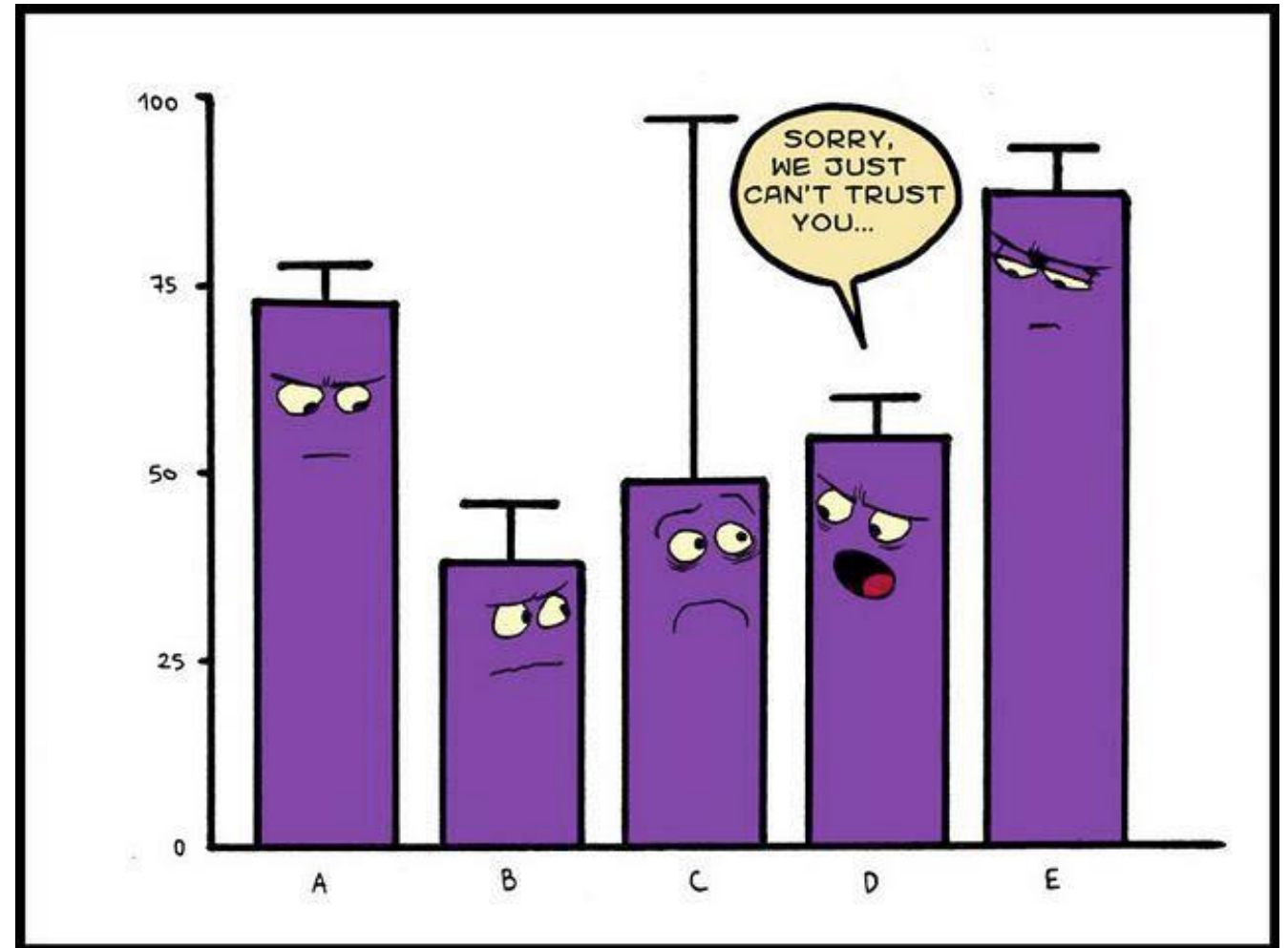
“Bad Data” - Kiss of Death

What happens when they say the data is “Bad”?

- “Let me look into your question”
- “Lets look at how the field or measure is defined”
- “Lets look at how this is being calculated”
- “Lets look at what is included or excluded from this data”

Also understand and be able to explain...

- Healthcare data is variable
- Small volume for complications but each one counts
- Not all data will be research level
- How do you get better buy-in next time?



What to do before looking for data for an improvement project

Generate your question

- What are you trying to accomplish?
- How will you know a change is an improvement?
- What changes can you make that will result in improvement?

Collect and analyze data

- Data collection and analysis lie at the heart of quality improvement.
- Your data will help you understand how well your systems work, identify potential areas for improvement, set measurable goals, and monitor the effectiveness of change.
- It's important to collect baseline data before you begin a project, commit to regular data collection, carefully analyze your results throughout the project, and make decisions based on your analysis.

Communicate your results

- How will you share your results?
- Include the entire practice team and patients when planning and implementing QI projects, and communicate your project needs, priorities, actions, and results to everyone.
- When a project is successful, celebrate and acknowledge that success!

Finding Data – Benefits and barriers

- Health Data Compass
- EPIC
- Vizient
- National Health Safety Network (NHSN) – CDC Infections
- Data registries
- Surveys
- Department/research data
- Chart reviews

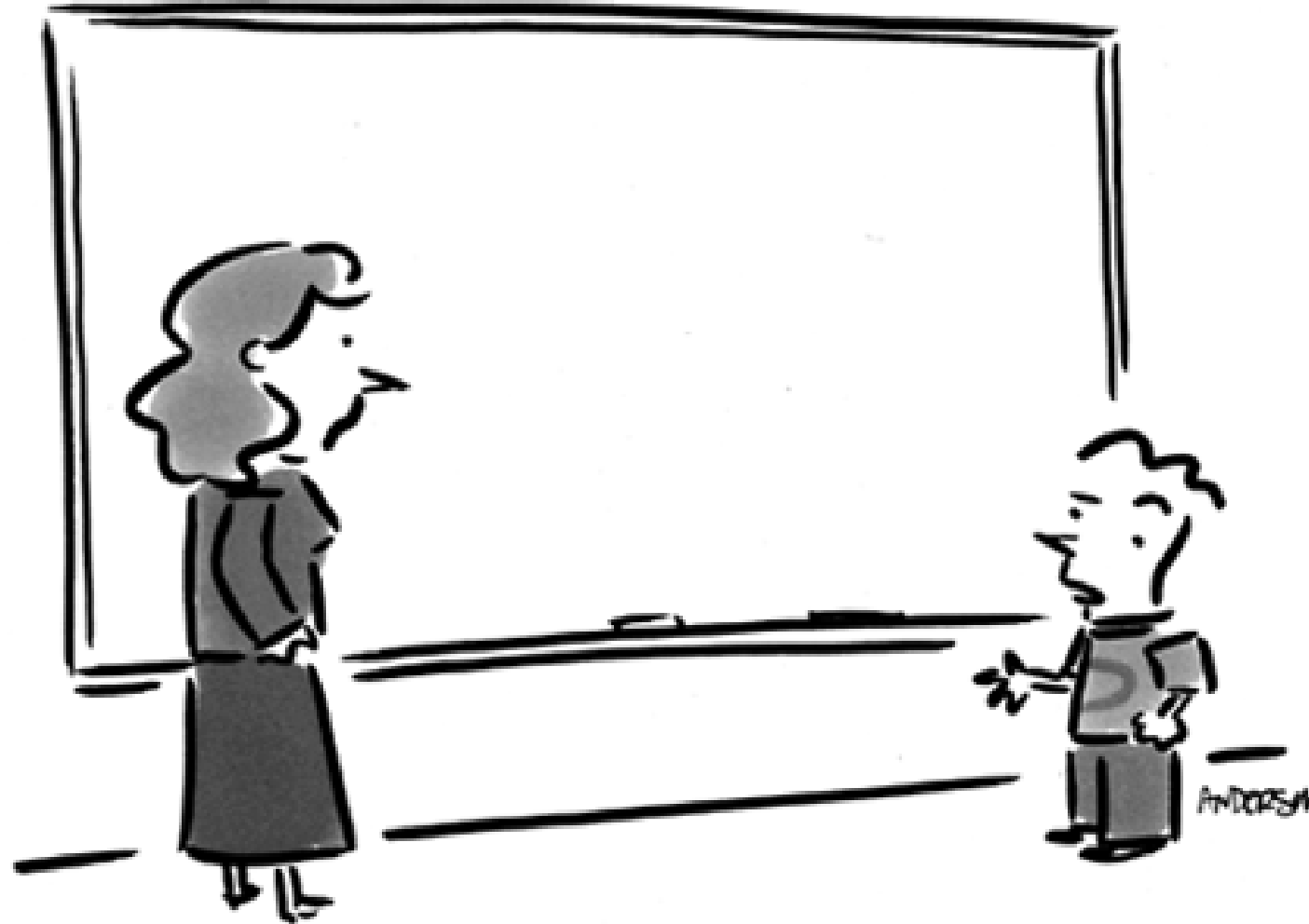
Requesting Assistance with Data – Asking the right questions

- Define measures before asking for data
- How am I planning to use this analysis?
- Who is my audience?
- Inclusions/exclusions or other parameters for this data?
- What may be limitations of this data?
- What time period do I need data from?
- When do I need this data?
- Is this a one-time or reoccurring report?

Data Governance

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"Before I write my name on the board, I'll need to know how you're planning to use that data."

uhealth