Improving quality information in a consumer-driven era: Showing differences is crucial to informed consumer choice

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American Institutes for Research

Outline

- Purpose
- Hypotheses
- Methods and design
- Examples of data displays
- Findings
- Implications
Purpose of study

- Identify and systematically test features of data displays for quality reports that help consumers:
  - Notice differences in quality more readily
  - Interpret differences more accurately
  - Use quality information more easily
- Identify subgroups of consumers who respond differently than others to features of data display
- Help sponsors and developers of reports understand the impact and tradeoffs of including design features that highlight performance differences

Study Hypotheses

- When presenting quality data, four key design elements would improve consumers’ accurate evaluations of the data:
  - Using symbols rather than numbers
  - Providing a summary display
  - Presenting in order of performance
  - Presenting fewer, rather than more, topics
Methods and Design

- Laboratory experiment
- Tested conditions that were more and less evaluable
- Design to test the main effects and interaction effects of various design elements

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Conducted two different analyses

- Analysis 1:
  - How various design elements affected participant understanding and use of data
- Analysis 2:
  - Derive profiles of sub groups of participants based on their predisposition to seek information and how much they value different types of information about physicians AND
  - How various design elements affected sub group participants’ understanding and use of data

Examples of data displays
CAHPS User Group Meeting: Ambulatory Care Surveys

Kristin Carman

# 1

Summary: No summary
Symbols: Numbers
Rank order: Alphabetical

Comparing local family doctors from the patient's point of view

Finding a good family doctor just got easier.
Thank you for making these improvements! We are proud of how well we are doing and want to continue doing better. Your feedback helps us improve services and provides useful information for other patients. If you have any comments or suggestions, please provide them in the space below.

What do the scores mean?
Scores are based on patient responses. A score of 1 indicates the lowest level of care, while a score of 5 indicates the highest level of care.

Where do these scores come from?
Scores are derived from surveys of patients who have visited the doctor's office in the past 12 months. Patients are asked to rate their experiences on a scale of 1 to 5, with 1 being the lowest level of satisfaction and 5 being the highest level of satisfaction.

Do you have more information?
If you have any questions or concerns, please feel free to contact the doctor's office at the number provided.

# 5

Summary: No summary
Symbols: Numbers
Rank order: Alphabetical

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More evaluable

**Summary**  
**Symbols**
**Rank order**

- Better average
- Better average
- Below average
- Below average

Less evaluable

**No summary**  
**Numbers**  
**Alpha order**

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More evaluable

Includes a summary bar graph

Less evaluable

No summary bar graph
More evaluable

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Doctors are ordered by performance

Less evaluable

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Doctors are listed in alphabetical order

What did we learn?
What do the scores mean?

- **Better** scored above (better than) the average score for all doctors on the chart.
- **Average** scored about the same as the average score for all doctors on the chart.
- **Below** scored below (worse than) the average score for all doctors on the chart.
Big impact:
Symbols are more evaluable than numbers

Using a chart when symbols are the only consistent support

Correctly identified the 3 top performing doctors and the 3 lowest performing doctors

Using a chart with symbols
80%
63%

Using a chart with numbers
55%
34%

Chose the top performing doctor

Using a chart with symbols

More evaluable

Summary Symbols Rank order

Doctors are ordered by performance

Less evaluable

No summary Numbers Alpha. order

Doctors are listed in alphabetical order
Big impact:

**Ordering by performance** is better than by alpha

Using a chart when performance order is the only consistent support

- Correctly identified the 3 top performing doctors and the 3 lowest performing doctors

Using a chart with alpha order

- Chose the top performing doctor

This chart has **all 4** evaluable elements

This chart has **none of the 4** evaluable elements
Biggest impact: combining all four evaluable elements

- Correctly identified the 3 top performing doctors and the 3 lowest performing doctors

Using a chart with all 4 evaluable elements:

- Using a chart with all 4 evaluable elements: 89%
- Using a chart with none of the 4 evaluable elements: 16%

Chose the top performing doctor

Using a chart with all 4 evaluable elements: 76%
Using a chart with none of the 4 evaluable elements: 18%

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Best = combine all four:

But what if you can't (or don't want to) combine all four? The elements are substitutable, to some degree:

2nd best:

Rank order Symbols

3rd best:

Rank order

4th best:

Symbols

5th best:

Summary bar

- or -

fewer topics

5 not 9
Non-seekers:

Non-doctor seekers 10%

Non-seekers 5%

Seekers:

Enough's enough seekers 33%

Health care seekers 12%

Overall seekers 39%

Same basic pattern, different intensity

More imp than anything else
Extremely imp
Very imp
Moderately imp
Somewhat imp
Not imp at all

Super valuers
High valuers
Moderate valuers

Informed & up-to-date
Skillful
Respect
Time spent
Follow-up care
Advice
Help on phone

Listens
Explain
Stay healthy
Help on phone

More imp than anything else
Extremely imp
Very imp
Moderately imp
Somewhat imp
Not imp at all
Evaluability helps everyone

- Non-seekers don’t seriously attend to even the most evaluable information….
  - However, they choose higher performing doctors in more evaluable formats
- As evaluability declines, choices become increasingly random, regardless of participants’ intent or predisposition to seek the best doctor
- Even the most highly predisposed-to-seek-information Overall Seekers and the most highly educated Enough’s Enough Seekers were defeated by the formats that were least evaluable
- No downside – evaluable formats help users pick and choose what’s important to them personally

Implications

- Comparative quality reports that do not incorporate evaluable elements are not effectively conveying the meaning of the data
- For consumers, poorly displayed information can create a false sense of informed choice or result in random choices
- Evaluable elements are needed to help consumers make choices that reflect their true values and preferences
- Target your information seekers -- by targeting the needs of the seekers, you aid the non-seekers
Implications (cont’d)

- In a consumer-driven era, when informed decisions are increasingly important, using information wisely is a crucial skill
  - If you don’t incorporate evaluable elements, you can’t expect consumers to either use or value the information you give them
- Resources are available to guide you in creating more evaluable reports
- One last note – a symbol by any other name...

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