The Whys, Wherefores, and How-To's of Consumer Reporting

# **Best Practices for Presenting Quality Data**

Jeanne McGee, PhD McGee & Evers Consulting, Inc. Vancouver, Washington



Keys to success in presenting quality data

- A user-centered approach
  - (what works well for you may not be what your audience wants and needs)
- **Testing** with members of the intended audience



## **Goals for data displays**

- Attract users' attention
- Hold their attention
- Make them feel respected and understood
- Help them *understand* the information
- Help them **use** the information

Source: adapted from McGee, Jeanne, Toolkit for making written material clear and effective



What makes a data display "user centered"?

- Approachable and appealing at first glance not a wall of words or numbers
- Plain language
- No surprises or confusion or undue effort





- Includes context and guidance that is geared to interests and needs of the audience
- The right amount of information at the right level of detail -- for that audience
- With web, the option to narrow what is shown



### What makes a data display "user centered"?

- The information itself is simple enough for people to understand
- The display is intuitive and self-explanatory
- Appropriate comparisons and patterns of results stand out clearly



What makes a data display "user centered"?

- Special care to foster equitable comparisons
  - Careful labeling that explains reasons for missing data
  - Plain language explanations of risk adjustment



## Results from a CAHPS II research study on data displays

- "Improving quality information in a consumer-driven era: Showing differences is crucial to informed consumer choice"
- A lab study led by Kristin Carman, PhD, the American Institutes for Research (AIR), done in collaboration with AIR CAHPS II team members Jeanne McGee, PhD (McGee & Evers Consulting, Inc.) and Judith Hibbard, DrPH (University of Oregon)



Lab study findings – what is helpful in data displays?

- These features help consumers understand and use the quality information:
  - Showing results in <u>rank</u> order (rather than alphabetically)
  - Using **symbols** (rather than numbers)
  - Including a <u>summary display</u>
  - Showing <u>fewer</u> topics (e.g., showing 5 topics rather than 9 topics)



- A fictional quality report that uses data from a survey of patients to compare family physicians
- 10 versions of the report each using a different combination of the 4 display features that were tested:
  - symbols v. numbers
  - rank or alpha order
  - Summary display v. no summary display
  - Number of topics (5 v. 9)











#### Chart #1 = most evaluable version

(has  $\underline{all 4}$  of the features that make a data display easier to understand and use)

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

#### Finding a good family doctor just got easier.

When you want to find a good doctor, you ask your friends and family for advice, but why stop there—use the chart on this page, ioo. The information in this chart makes it quick and easy to compare local doctors on things that matter a lot. And this information comes from a source you can trust—people like you, who are patients of the doctors listed on the chart.

#### What do the scores mean?



scored about the same as the average score for all doctors on the chart



#### Where do these scores come from?

These scores are based on results from a patient survey of 2,400 people in the local community. The survey asked these people to tell about their recent experiences at the doctor's office. As you can see in the chart, the survey asked about things that matter a lot to patients. These include how well the doctor gives help or advice on the phone, provides good follow-up care, and gives explanations that are easy to understand.

The survey and this chart were done by the Community Health Care Quality Partnership. The Quality Partnership is a non-profit group that works to improve health care in the local community.

#### How can you use this chart?

You can use this chart to help choose a good doctor, or to see how well your current doctor is doing compared to other doctors in the area. Use the scores to compare doctors on things that are important to you.

Remember, this chart gives you information about the doctors that comes from people who received care from these doctors during the past year. The chart may include some good doctors that your family and friends haven't heard about. So, to find a doctor you're happy with, use this chart together with the advice you get from friends and family.

#### Do you want more information?

If you have any questions, or if you would like more information about the survey or this report, please call us at the Quality Partnership at 213-4433.



More (9) topics No summary Numbors

Alphabetical

#### Ratings from a survey of patients on how well the doctor scored on:

	Summary Longer bars = better overall score compared to other doctors on this chart	giving help or advice on the phone	being thorough and skillful In examining patients	peoviding good follow-up care	giving explanations that are easy to understand	spending enough time with patients
Dr. D. Mallin 5220 Lemay Road		better	better	better	better	everage
Dr. S. Egan 192 Hadley Street		average	better	better	average .	better
Dr. Y. Latimer 166 Cass Avenue		below	better	better	better	better
Dr. B. Layco 1004 Dutty Seven		Pritage	average	average.	average	better
Dr. E. Melnick 2043 Brinker Road		average	average	average	better	average.
Dr. K. Williams 1804 Taylor Street		better	peraps	below	average	better
Dr. T. Vosti Io1 Emerson Avenue		below	better	annage	better	average
Dr. L. Durso 1306 Kennedy Street		average .	better	auraga	below	better
Dr. R. Connelly 56 Fullerton Street		iverage	averäge	annaga	average	average
Dr. G. Hutchinson 1114 Reductivent		below	average.	average	average	better
Dr. J. Aplin 125 Sheridan Avenue		below	entipe	enrage	average	better
Dr. H. Tomley 86 Watson Road	-	better	avtrage	better	below	below
Dr. C. Pearson 858 Maple Street		below	below	better	better	average
Dr. P. Brem 445 Clandon Avenue	-	below	evenue	average	below	better
Dr. A. Greer H25 Wendelin Road		better	average	below	below	Average
Dr. V. Rema 16 Bayford Road		better	below	average	average	below
Dr. M. Hensley 202 Hampton Avenue	_	better	below	average.	enerage	below
Dr. F. Stecker 097 RidgeRoad		below	Thelow	average	averlage	below
Dr. W. Neiman 3 Alarenda Street		better	below	below	below	below
Dr. N. Felix 197 Cleytor Band		below	below	annage	below	below







#### Chart #10 = least evaluable version

(has <u>none</u> of the 4 features that make a data display easier to understand and use)

Fewer (5) topics	More (9) topics
Summary	No summary
Symbols	Numbers
Rank order	<b>Alphabetical</b>

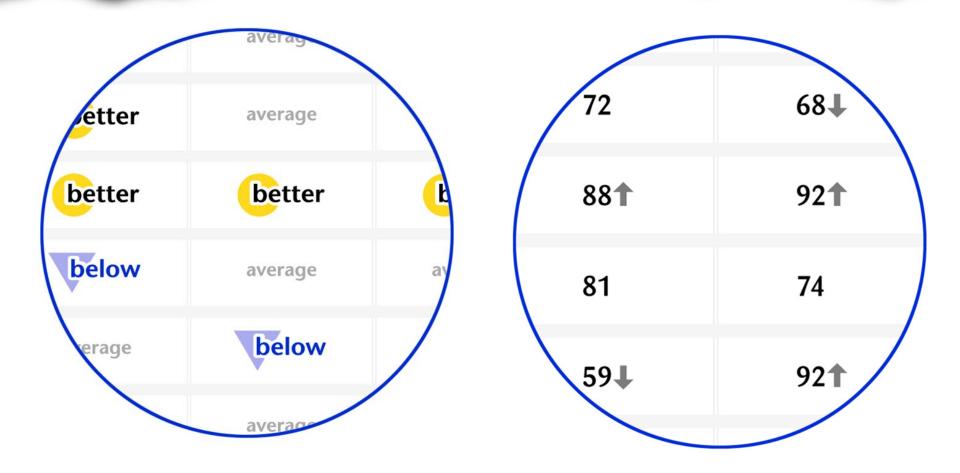
		Ratings from a survey of patients on how well the doctor scored on:							
	giving help or advice on the phone	being informed and up-to-date on how to treat medical conditions	being thorough and skillful in examining patients	providing good follow-up care	giving patients encouragement and practical advice on staying healthy	giving explanations that are easy to understand	listening carefully to patients	spending enough time with patients	treating patients wit courtesy and respect
Dr. J. Aplin 225 Sheridan Avenue	674	41	82	77	78	85	82	<del>9</del> 0†	89
Dr. P. Brem 5445 Grandon Avenue	68.1	24‡	95	70	694	74 \$	94†	95†	97章
Dr. R. Connelly 556 Fullerton Street	79	48	85	67	80	84	94†	82	83
Dr. L. Durso 2206 Kennedy Street	80	62†	991	72	684	724	96†	897	79
Dr. S. Egan 192 Hadiey Storet	72	65†	971	881	92†	58	88	89†	951
Dr. N. Felix 197 Clayton Road	66.8	254	758	81	74	71.8	684	65‡	80
Dr. A. Greer H425 Wendelin Road	951	45	86	594	92†	70.8	664	86	674
Dr. M. Hensley 1202 Hampton Avenue	901	274	76.5	77	654	86	80	664	77
Dr. G. Hutchinson 3314 Nebs Street	61.5	55†	85	73	624	82	90	95Ť	94 🕆
Dr. Y. Latimer 166 Cass Avenue	69 8	45	991	91†	95†	951	93†	\$81	94 1
Dr. B. Layco 1004 Duffy Street	84	59†	83	82	82	83	97 Ť	911	981
Dr. D. Mallin 5220 temay Road	921	60†	981	96†	86	961	94†	79	951
Dr. E. Melnick 2043 Brinker Road	85	28‡	94	82	93†	981	95†	73	951
Dr.W. Neiman 83 Alameda Street	931	27+	70.1	614	89	654	70.1	61↓	91
Dr.C. Pearson 1858 Maple Street	59.8	38	72.8	92 t	85	951	79	86	718
Dr.V. Rema 516 Bayford Road	92 7	254	70.5	80	931	92	75	604	72.‡
Dr.F. Stecker 2097 Ridge Road	60.8	43	68.1	79	714	89	84	674	704
Dr. H. Tomley 786 Watson Road	911	35	91	86†	94†	694	68-1	674	82
Dr. T. Vosti 101 Emerson Avenue	66-8	51†	981	78	88	971	684	73	961
Dr. K. Williams 3804 Taylor Street	961	33	92	63.4	97Ť	79	98†	971	85

Ratings from a survey of patients on how well the doctor scored on:



Symbols v. numbers

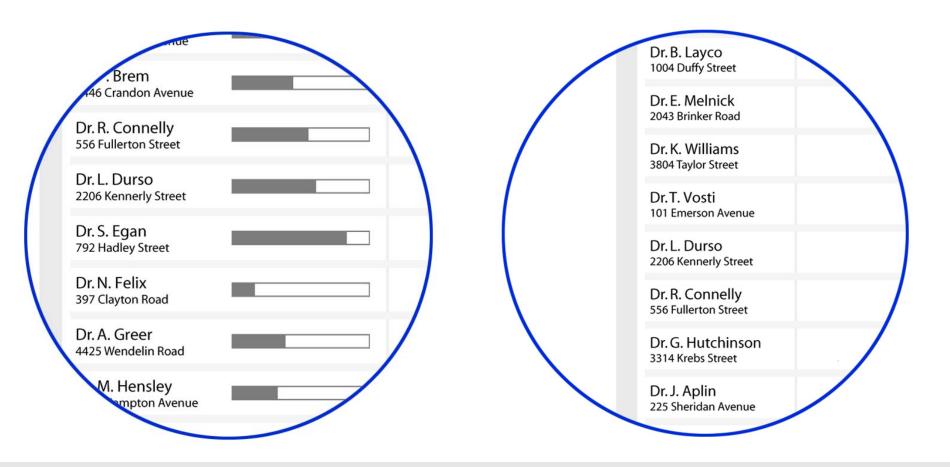
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Summary display v. no summary display





## Rank order v. alphabetical order





# Legends -- symbols v. numbers

#### What do the scores mean?



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

	average	average	average		
iter	better	average	below	ben	
better	better	better	better	average	
below	below	average	average	below	$\mathbf{A}$
average	average	below	better	below	be
below	below	average	below	average	aver
better	average	average	below	average	aver
average	better	better	better	better	bet
better	average	average	average	average	bet
better	better	better	average	better	bet
below	average	average	better	better	be
below	below	below	average	below	7
average	below	better	average	better	
below	below	average	better	average	
	below	average	below		

PATIENT EXPERIENCE & PATIENT SAFETY CULTURE

USER GROUP MEETING

11th CAHPS® & 1st SOPS



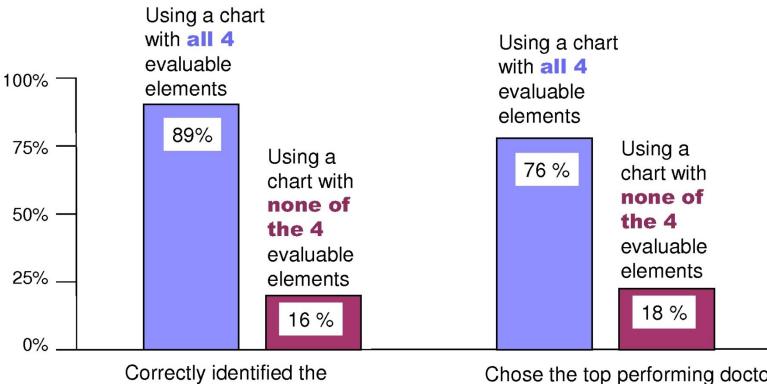
# Legends -- symbols v. numbers

			67	80	Ø	
		991	72	68↓	72↓	
What da	the second mana?	97↑	88†	92↑	88	88
what do	the scores mean?	75↓	81	74	71↓	684
	scored above (better than)	86	59↓	92†	70↓	66↓
T	the average score for all doctors on the chart	76↓	77	65↓	86	80
		85	73	62↓	82	90 95
NO allow	scored about the same as the average	99†	91†	95↑	95↑	93† 88
	score for all doctors on the chart	83	82	82	83	97 <b>†</b> 91
		981	96†	86	96↑	941 7
+	scored <b>below (worse than)</b> the average score for all doctors on the chart	94	82	93↑	98↑	95†
		70↓	61↓	89	65↓	704
		72↓	921	85	95↑	79
		70↓	80	93†	92	75
			79	71↓	89	
			-	94*		



# **Biggest impact:**

combining all four evaluable elements



3 top performing doctors and the 3 lowest performing doctors Chose the top performing doctor



### This chart (#1) has all 4 evaluable elements

		Ratir	ngs from a survey o	of patients on how w	ell the doctor sco	red on:
	Summary Longer bars = better overall score compared to other doctors on this chart	giving help or advice on the phone	being thorough and skillful in examining patients	providing good follow-up care	giving explanations that are easy to understand	spending enough time with patients
Dr. D. Mallin 5220 Lemay Road	_	better	better	better	better	average
Dr. S. Egan 792 Hadley Street		average	better	better	average	better
Dr. Y. Latimer 166 Cass Avenue		below	better	better	better	better
Dr. B. Layco 1004 Duffy Street		average	average	average	average	better
Dr. E. Melnick 2043 Brinker Road		average	average	average	better	average
Dr. K. Williams 1804 Taylor Street		better	average	below	average	better
Dr. T. Vosti 101 Emerson Avenue		below	better	average	better	average
Dr. L. Durso 1206 Kennerly Street		average	better	average	below	better
Dr. R. Connelly 156 Fullerton Street	_	average	average	average	average	average
Dr. G. Hutchinson 314 Krebs Street	_	below	average	average	average	better
Dr. J. Aplin 125 Sheridan Avenue		below	average	average	average	better
Dr. H. Tomley 86 Watson Road		better	average	better	below	below
Dr. C. Pearson 858 Maple Street		below	below	better	better	average
Dr. P. Brem 446 Crandon Avenue		below	average	average	below	better
Dr. A. Greer 425 Wendelin Road		better	average	below	below	average
Dr. V. Rema 16 Bayford Road		better	below	average	average	below
Dr. M. Hensley 202 Hampton Avenue		better	below	average	average	below
Dr. F. Stecker 097 Ridge Road		below	below	average	average	below
Dr.W. Neiman 13 Alameda Street		better	below	below	below	below
Dr. N. Felix 97 Clayton Road		below	below	average	below	below

#### This chart (#10) has *none of the 4* evaluable elements

Ratings from a survey of patients on how well the doctor scored on:

	giving help or advice on the phone	being informed and up-to-date on how to treat medical conditions	being thorough and skillful in examining patients	providing good follow-up care	giving patients encouragement and practical advice on staying healthy	giving explanations that are easy to understand	listening carefully to patients	spending enough time with patients	treating patients with courtesy and respect
Dr. J. Aplin 225 Sheridan Avenue	67↓	41	82	77	78	85	82	901	89
Dr. P. Brem 5446 Crandon Avenue	684	244	95	70	694	74↓	94†	95†	97†
Dr. R. Connelly 556 Fullerton Street	79	48	85	67	80	84	94†	82	83
Dr. L. Durso 2206 Kennerly Street	80	62†	99†	72	684	72.‡	96†	89†	79
Dr. S. Egan 792 Hadley Street	72	65†	97†	881	92†	88	88	89†	95†
Dr. N. Felix 397 Clayton Road	664	25∔	75↓	81	74	71↓	68.↓	654	80
Dr. A. Greer 4425 Wendelin Road	95†	45	86	59↓	92†	70↓	66↓	86	67↓
Dr. M. Hensley 1202 Hampton Avenue	901	27‡	76↓	77	654	86	80	66‡	77
Dr. G. Hutchinson 3314 Krebs Street	61↓	55†	85	73	62↓	82	90	95†	94↑
Dr. Y. Latimer 166 Cass Avenue	694	45	991	91†	95†	95†	93†	88†	94†
Dr. B. Layco 1004 Duffy Street	84	59 <b>†</b>	83	82	82	83	97†	91†	98†
Dr. D. Mallin 5220 Lemay Road	92†	60↑	98†	96†	86	96†	94†	79	95†
Dr. E. Melnick 2043 Brinker Road	88	284	94	82	931	98†	95†	73	95†
Dr.W. Neiman 83 Alameda Street	93†	27‡	70↓	61↓	89	654	70.↓	61↓	91
Dr. C. Pearson 1858 Maple Street	594	38	72↓	921	85	95†	79	86	71↓
Dr.V. Rema 516 Bayford Road	921	25.	70↓	80	93†	92	75	60‡	72↓
Dr. F. Stecker 2097 Ridge Road	60‡	43	68↓	79	71↓	89	84	67‡	70↓
Dr. H. Tomley 786 Watson Road	91†	35	91	86†	94†	69↓	684	67‡	82
Dr.T. Vosti 101 Emerson Avenue	66‡	51†	981	78	88	97†	68↓	73	96†
Dr. K. Williams 3804 Taylor Street	96↑	33	92	63↓	97↑	79	98†	97†	85



- For consumers, poorly displayed information can create a false sense of informed choice or result in random choices
- Evaluable elements can help consumers make choices that reflect their true values and preferences



- Using all 4 elements is the most helpful
- But, if you *can't* (or don't want to) combine all four, the elements are *substitutable*, to some degree:
  - Rank order + symbols (2<sup>nd</sup> best)
  - Rank order (3<sup>rd</sup>)
  - Symbols (4<sup>th</sup>)
  - Summary bar - or - fewer topics (5<sup>th</sup>)



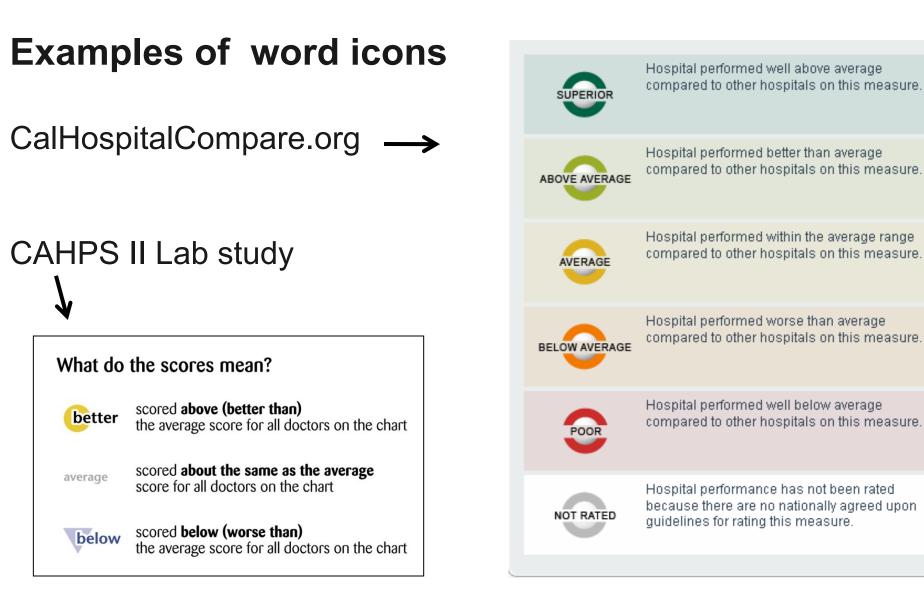
## Tips for using symbols

- Choose your symbols carefully
  - Don't assume people will read the legend
  - Ideally, use symbols that are self-explanatory (e.g., word icons)
  - At a minimum, use symbols that are hard to misinterpret in terms of best and worst (e.g., stars)
  - Avoid symbols that are ambiguous or potentially confusing (such as using a minus sign or using circles that are empty or half filled or filled in)



- Use *high contrast* for ease of reading and to help the pattern pop out
  - For effective contrast, use a combination of differences in design elements (e.g., color, shape, words)
  - Use color in a consistent and meaningful way
  - If there is a neutral or middle category or a "no rating" category, format it in ways that make it fade into the background



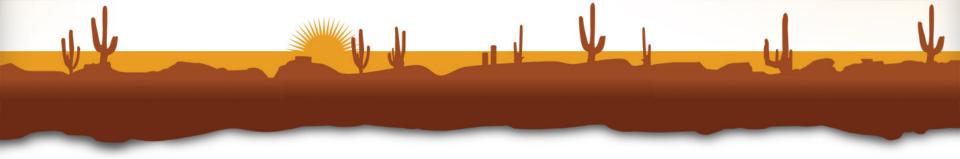




# Tips for using symbols, continued

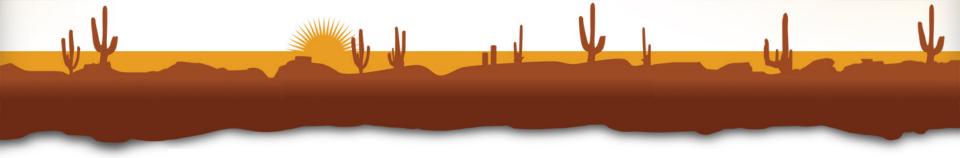
- Put your legend and other crucial reference material in a prominent place
- Always use left alignment for symbols such as stars
- Consider using very soft and subtle bands of shading to help people track across a page
- Keep tweaking until your display works well





	More evaluable						Less evaluable				
	art sion	Fewer topics	Summary	Symbols	Rank order	More topics	No summary	Numbers	Alpha order		
#	1	5	+	+	+	ices Carte	1778 1955		-		
#	2	5	+	+	S <b>—</b>	-	-	-	+		
#	3	5	-	+	+	-	+	-	-		
#	4	5	(a <b>—</b> 1)	+	-	-	+	-	+		
#	5	-	+	+	+	9	-		-		
#	6	-	+	+	-	9		-	+		
#	7	-	-	+	+	9	+	-	-		
#	8	2-1	-	+	-	9	+	-	+		
#	9	-	+	-	+	9	-	+	-		
# ·	10	-	-0	-	-	9	+	+	+		



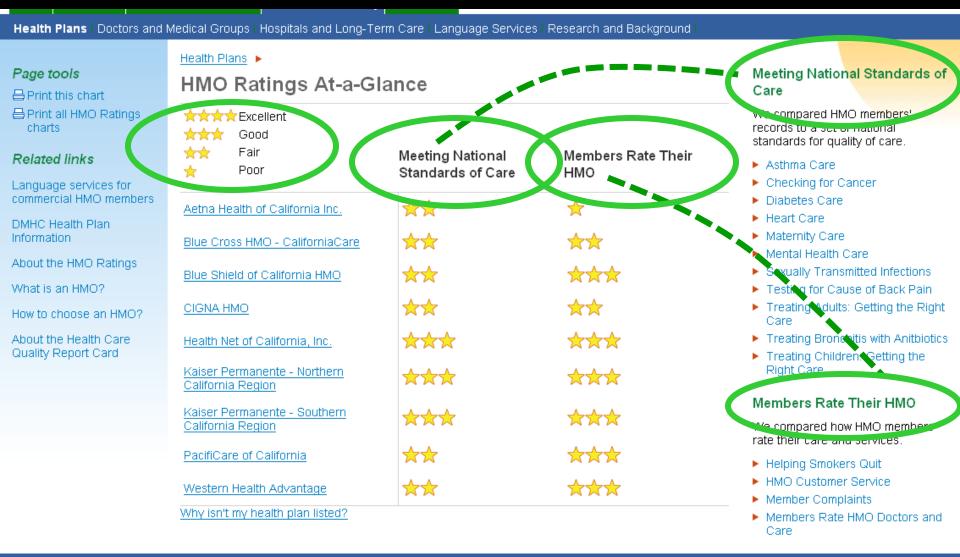


	More	evaluabl	е		Less			
Chart version	Fewer topics	Summary	Symbols	Rank order	More topics	No summary	Numbers	Alpha order
# 1	yes	yes	yes	yes	no	no	no	no
# 2	yes	yes	yes	no	no	no	no	yes
# 3	yes	no	yes	yes	no	no	no	no
# 4	yes	no	yes	no	no	yes	no	yes
# 5	no	yes	yes	yes	yes	no	no	no
# 6	no	yes	yes	no	yes	no	no	yes
# 7	no	no	yes	yes	yes	yes	no	no
# 8	no	no	yes	no	yes	yes	no	yes
# 9	no	yes	no	yes	yes	no	yes	no
# 10	no	no	no	no	yes	yes	yes	yes



More evaluable Less evaluable Chart Fewer No Alpha summary Numbers order Rank More topics Summary Symbols order version topics # 1 5 # 2 5 V # 3 5 V V # 4 V V 5 9 # 5 9 V # 6 V ~ 9 # 7 ~ V 9 V #8 9 #9 9 V # 10





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#### Opa.ca.gov (California Office of the Patient Advocate)

HMO Ratings | Meeting National Standards of Care | Diabetes Care

#### Eve Exam for Diabetes Patients

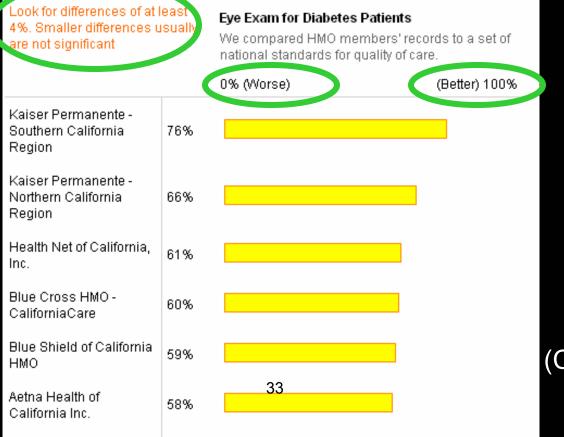
#### What Was Measured?

What percentage of HMO patients with diabetes had an eye exam to watch for disease that can lead to blindness?

These results are based on a sample of HMO patient administrative and medical records

#### Why is it important?

riigh blood ougan can cause bleeding in the blood vessels in your eyes and lead to blindness. You should have annual eye exams, as part of your diabetes care, to watch for any signs of damage to the blood vessels in your eyes.



Opa.ca.gov (California Office of the Patient Advocate)



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### Rating Hospital Quality in California

	EN ESPAÑOL	HOME RESOURCES & TOOLS ABOUT US CONTACT US
Search Results		Search: Enter county, city, or Zip code GO
View Ratings by:	Your search for hospitals in <b>santa Barbara</b> for <b>Hea</b> r has found <b>2</b> results based on <b>Quality of Care</b> .	rt Attack
Heart Attack⊁	Click on a hospital name for detailed ratings. Use the tabs on the hospitals by conditions or procedures. Or narrow your search using the sear	
Heart Bypass Surgery	To see the rating scales, click on any icon or <u>About the Ratings</u> .	
Heart Failure		
Maternity	Check up to 2 hospitals to COMPARE	City
Pneumonia	SUPERIOR 🗖 Marian Medical Center	Santa Maria
Other Conditions	-	
Other Surgery	ABOVE AVERAGE 🗖 Santa Barbara Cottage Hospital	Santa Barbara
	Check up to 2 hospitals to COMPARE	
		Updated January 2008

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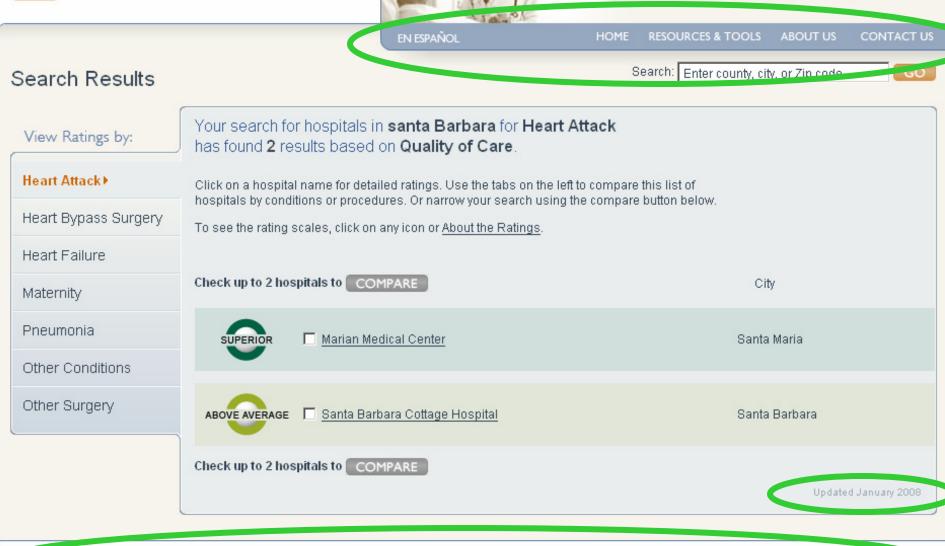
### Rating Hospital Quality in California

EN ESPAÑOL HOME RESOURCES & TOOLS ABOUT US CONTACT US Search: Enter county, city, or Zip code GO Search Results Your search for hospitals in santa Barbara for Heart Attack ew Ratings by: has found 2 results based on Quality of Care. Heart Attack 
▶ Click on a hospital name for detailed ratings. Use the tabs on the left to compare this list of hospitals by conditions or procedures. Or narrow your search using the compare button below. Heart Bypass Surgery To see the rating scales, click on any icon or About the Ratings. Heart Failure neck up to 2 hospitals to COMPARE City Maternity Pneumonia Marian Medical Center Santa Maria SUPERIOR Other Conditions Other Surgery ABOVE AVERAGE 🔲 🔲 Santa Barbara Cottage Hospital Santa Barbara Check up to 2 hospitals to COMPARE Updated January 2008

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Rating Hospital Quality in California

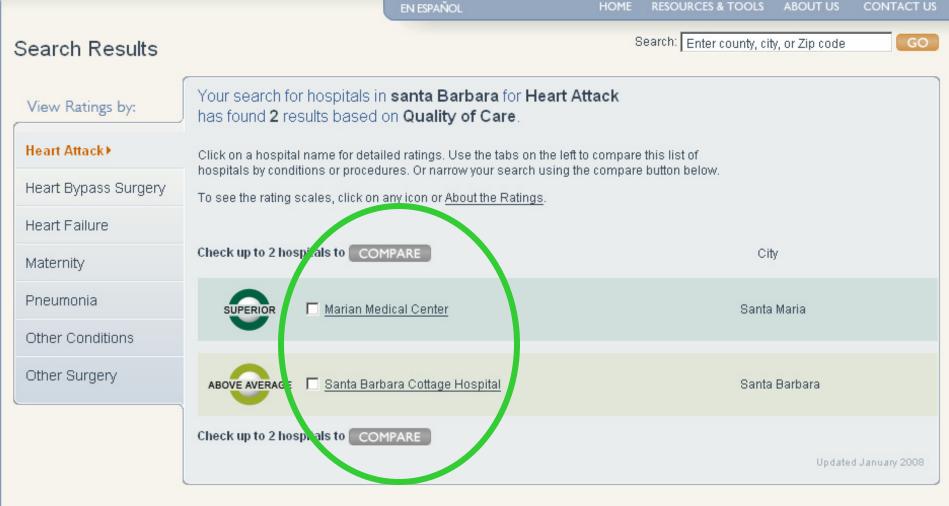


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### Rating Hospital Quality in California

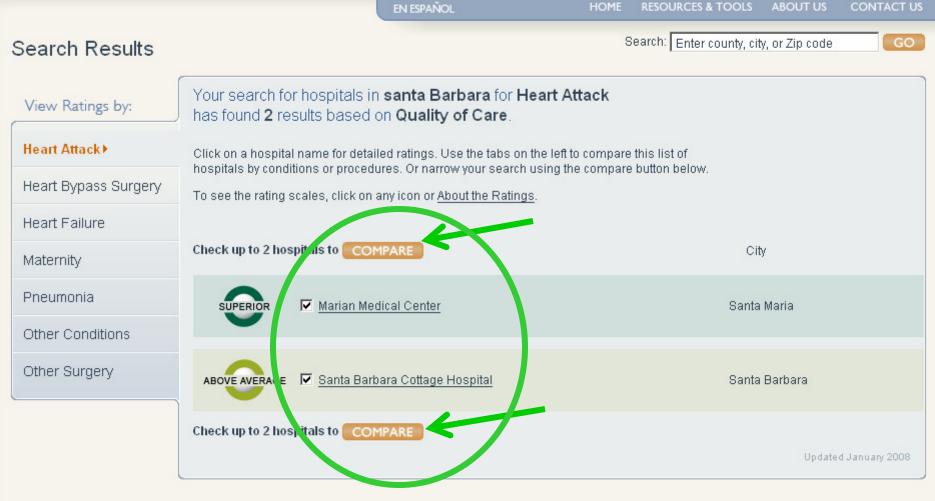


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#### Rating Hospital Quality in California



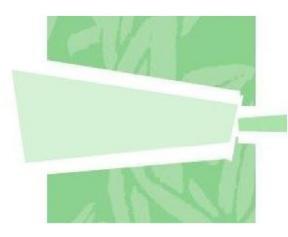
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A partnership with the University of California – San Francisco and California Hospital Assessment Reporting Taskforce (CHART) Testing data displays with consumers

- Feedback from the intended users is the ultimate test of whether the data displays are working well
- Start getting feedback at an early stage
- Test for appeal, personal salience, comprehension, navigation, usability
- Which methods are best?
- What does it cost?



### A resource -- forthcoming

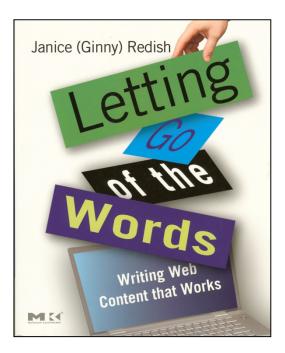


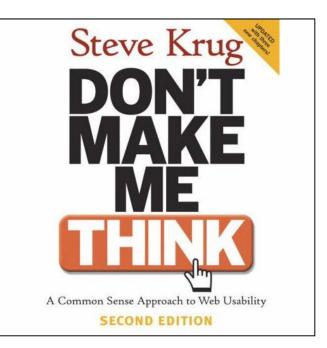
# **Toolkit** for making written material clear and effective

An 11-part web-based Toolkit written by Jeanne McGee for the Centers for Medicare and Medicaid Services. This Toolkit has detailed guidelines for writing, design, and translation. It includes a book-length practical guide on methods for testing written material with readers.



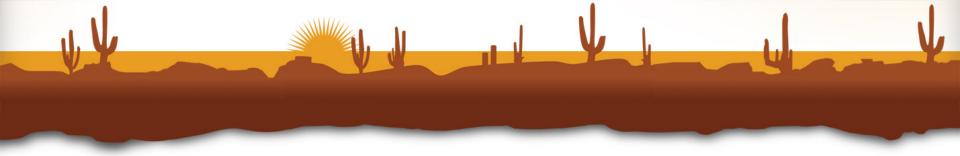
Two books that are great Web reporting resources







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- Questions?
- Comments?

