Tips on Making Quality Reports
User-Centered

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From the Agency for Healthcare Research and Quality, welcome to a podcast from TalkingQuality, a Web site about communicating comparative information on health care quality to consumers. I'm Lise Rybowski from The Severyn Group and I manage the TalkingQuality project.

Today I'm here with Jeanne McGee from McGee and Evers Consulting. Jeanne is a sociologist with expertise in health literacy, the measurement and reporting of health care quality, and the development and testing of written material and data displays that are easy for people to understand and use. In addition to various other projects, she's been involved in the development and testing of several high-profile quality reports, including ones for the Centers for Medicare & Medicaid Services, the CAHPS program, and most recently, the Aligning Forces for Quality site in Oregon.

I invited Jeanne to join us today to talk about a comprehensive guide she developed for the Centers for Medicare & Medicaid Services on plain language writing, graphic design, and language translation. Her guide, called the *Toolkit for Making Written Material Clear and Effective*, is available for free online at www.c-m-s.gov/writtenmaterialstoolkit [www.cms.gov/writtenmaterialstoolkit].

Jeanne, thanks so much for being here today. I think all of us who work on quality reports struggle to describe and present that information in a way that's easily understandable. Over the years, you and I have talked a lot about the need for reports to be user-centered. So let's start by talking about what it means to be user-centered and why it's so important.

Jeanne McGee

Well, user-centered means that everything about your quality report is oriented toward the users, their needs, their perspectives. So it means that they know the purpose, they find the report relevant, they can understand it, they can use it. And so to make all of this happen, all of the decisions that you make have to be based on the users and that requires knowledge of them -- of what they're interested in, what they already know in terms of background knowledge that they would bring to your report, what their needs [are], and what they would find personally useful and relevant.

And basically, the idea of being user-centered is at the core of making a quality report effective because if it doesn't work for the users then you really have not accomplished your goal.

Lise Rybowski
Now in a recent TalkingQuality Webinar about the audiences for quality reports, we touched on this issue on the challenges [of] focusing design and content decisions on your users in some way. It is clearly very hard to do. Why do you think it's so hard to do?

Jeanne McGee
I think that everybody starts with good intentions, but it's actually very easy to lose track of the user's perspective. And it's also easy to make unrealistic assumptions about your users. And that's understandable because there are so many big differences between the people who develop a report -- by that, I mean the people who make the decisions about the content, the writers, the Web designers and so forth -- and the audience that they're actually trying to reach.

And just to go over a few of these, you -- those who develop the report -- already know the purpose in what you're trying to accomplish, but a user comes to it totally fresh and they have to figure that out. You're the experts on quality reporting, you've been doing for years and years, have discussed many of the nuances at great length, but it's a topic that is likely to be brand new to a number of the people who come to the site.

You're very heavily invested in what you're producing. You wouldn't go to all this effort if you didn't think that the quality report was going to be useful and valuable to people. But in the end, it's those people who decide whether it's useful or valuable and they will make their own judgments about it.

Another thing that is a huge barrier is that by the time you finish developing a report, you know the whole site inside and outside, forwards and backwards. You know everything; if you click and go down to get more information, you know what people are going to find. And so it's very easy to lose track of the problems that a user can have in figuring out how the information is organized, because users come to a site, and pretty much guaranteed, they will skip around. They will not go in the order in which you were hoping or thinking that they might.

Another big difference between developers and users is in literacy skills and navigation experience with Web sites. Presumably you're trying to reach an audience that has a broad range of literacy skills and experience with using Web sites. You don't want that to be a barrier and so that's a really big difference that can affect how the writing is done and explanations are handled.

And finally, you expect users to interpret the information the way that you're intending. But realistically, when people have trouble figuring things out, they seek meaning of their own and then they make different interpretations.

So the result of all these big differences between developers and users is that sometimes a Web site turns out to be too difficult, unappealing, or otherwise unsuccessful. And maybe at the beginning, you don't explain much about what the Web site is for, you figure people will understand. You use measures or terms that they don't understand, and I was going to use measures as an example of that. To a consumer, "measure" means something that you might use a ruler with, that you're actually measuring, but the use of measures in quality performance reporting is a very odd term to most users and they will not understand it if you use it and expect them to.

Unrealistic assumptions about navigation skills -- I know that there are many Web designers who think that everybody knows what the PDF symbol means. But I can tell you from sitting, watching people during usability testing that not everybody does. And I've seen people not know that there was a video and think it was just a picture because the symbol didn't work for them.

And I've also seen situations where Web designers are working with very large monitors so they can see an entire page at a time and they don't realize where it cuts off for users and people don't even scroll and get to the bottom of the page. So lots of things can go wrong and that's why I think it's so hard to stay user-centered. You get wrapped up in your own view of the content and the navigation and you lose sight of how it's going to seem to somebody who comes who doesn't have all of the knowledge and experience that you do.

Lise Rybowski

Well it sure does sound daunting given all those challenges you described. What suggestions do you give people for making the reports more understandable and relevant for potential users?

Jeanne McGee

Well I think that once you realize all the differences, all the ways in which you differ from your intended audience, you can just do your best to stay aware of them and to remind each other of them. There's a book that I really like about Web design by Steve Krug; it's spelled K-r-u-g. It's called *Don't Make Me Think* and that's kind of the philosophy. You want to try to get to a Web site that in its content and navigation, people can go through it because it's so intuitive and they don't have to think. If they stop and think, then things can go wrong.

So what you want to do is orient toward the subset of your users who are less attentive, the ones who skip around a lot, less knowledgeable, the ones who have very limited background knowledge about whatever the content is of your site, and those who are less experienced at Web navigation. So if you have a mindset that is "let's find all the barriers that are keeping people from understanding and using this information that we're giving," I think that goes a long way. So you want to find and remove the barriers.

And one of the ways to do it is be very self-conscious about writing in plain language. This is difficult because plain language for a quality report means that the language is immediately understandable to the intended audience. And that can be extremely different from the kind of language that people are used to using everyday with their colleagues. So the team that works together on a Web site has their own version of plain language for them, but it's not the same as the plain language for the intended audience.

Now the toolkit that you mentioned at the beginning of this podcast -- there's very detailed advice in the toolkit about how to write and design in plain language. It's full of guidelines and each guideline is explained so that you can actually understand how to apply it to your own content. And I would just give a few little practical tips about some of the advice that's in the toolkit.

One of the things is to write in a conversational style that uses vocabulary that's familiar to the people who are going to be coming to your site. And the way that I do that is to think, well, you write a sentence and you say: Does this sound like something one of our users might say? And if it doesn't,

then you work on it a bit more. Another thing to be friendly to people is to embed the definitions of terms where they actually need them. Don't send anybody to look anything up. You will lose them. And get rid of all the acronyms and jargon that you possibly can, because it's not very friendly to make people learn new terms just to be able to use your Web site.

You want to write as simply as possible, but without distorting the meaning or sacrificing any of the meaning. An example of this would be if you're reporting on diabetes and you're talking about the dilated eye exam, dilated is not a word that people would use in their everyday speech so you can't use that. But if you simplify it to eye exam, I can tell you from Web usability testing that I've done that people will think that it's to check on whether they need glasses or contact lenses or a change in their prescription. What they don't understand is that it's a very important test for people with diabetes to check for blood vessel damage in their eyes. So if you explain just a little bit more then you end up being able to help people understand why it would be there and interesting and important to know. It's very easy to dismiss otherwise and lots of people with diabetes are not understanding why it is that they need that type of eye exam. They don't actually know what's being done.

Another challenge especially for a Web site is that you need to choose your words carefully and be succinct. And a very good resource for this is a book by Ginny Redish, R-e-d-i-s-h, and it's called *Letting Go of the Words*, great title and a great resource. It tells how to do plain language on a Web site.

Lise Rybowski

What about readability formulas, Jean? Can those be helpful?

Jeanne McGee

I would just be very cautious about using readability formulas. Those are the types of formulas that you use [that] they come out with a score for text that is expressed as a grade level, like a grade level in school. So people will sometimes say, "oh I have to write this at the seventh grade level or the sixth grade level."

I have an entire part of the toolkit that is full of caveats about using those formulas because I think that people generally don't understand what they're actually measuring and they also have the potential to do harm. So just very briefly, the formulas are based on measuring the length of sentences and the length of words as a proxy for difficulty. And the problem is that they're not measuring words that are familiar to people, they're just using how long the word is. And there're some very long words that are familiar to people, like "organization" is an example. "Usually" is another example. Anything with three syllables or more is scored as difficult, but that really doesn't hold up in real life very well.

The other thing is that the sentence structure isn't addressed at all, so you can actually have a very long sentence that's very easy to understand. I can say "I went to the grocery store and I bought bananas and eggs and apples and broccoli" and I can go on and on and no one would have difficulty understanding that sentence. Whereas I could write a very short sentence that would be impenetrable to many audiences. So the thing to know about readability formulas is that in order to make text score lower, like get a lower reading grade level, you end up having to substitute simpler shorter words and shorten the sentences.

And it's often a good idea to substitute simpler words as long as they're words that people are familiar with. But when you start chopping up your sentences, then what you end up doing is removing all the connections among sentences and you're basically making the text less cohesive and you're shifting the burden to the people who actually read the text so that it actually makes things worse. The reader has to supply all the connections that you left out in your effort to shorten your sentences.

And the final thing I would say about readability formulas is that you can actually generate random sentences of words and score that, which kind of shows you that they do not measure comprehension. And they never get beyond the sentence level so they can't tell you what people are actually taking from a text. So for the details, you can go to the toolkit.

And the last point I would make about suggestions is that feedback from users is the ultimate test of whether a Web site quality report is working well or not. And unless you get direct feedback from the users, you really won't know how well it's working.

Lise Rybowski
So when you talk about testing as a way to make quality reports more user-centered, tell me a little more about what you mean and why you think testing can play that role.

Jeanne McGee
Well, getting feedback directly from the people who are the intended audience for the Web site is the only way to know how well it's working. And it also is the best way to give you a basis for making improvements. You'll find out what people's first impressions are, if they understand what it's about. And if they don't understand, you'll get a little extra information that will help you figure out what you need to say to help them along. It's a way to improve the way that you're communicating with your users.

What I think is the most effective way to do testing and what I think of when I hear testing is to do individual interviews with people where you actually sit down with them and get their feedback and you can ask them questions. [It's] very important to how you word those questions and I'll say a little more about that in a moment. You can watch what they actually do so you can see which parts of the Web site or printed report they're paying attention to, which ones they're skipping over, what order they're going in.

You can ask them to do something called "think aloud," which is to share the thoughts that are going through their head right when they're having them so that you have a real-time access to what they're puzzled about or what they're liking or whatever just by having them make their comments aloud. And you can also test how easily they can use the information by giving them a task. For example, you can ask them to use the information in the report to pick a medical group or to choose a hospital or whatever so that you can see how they actually would interpret the information and put it together in some kind decision-making context.

The way that you do the testing -- one full part of the toolkit is devoted to how to do testing with people to get their feedback using individual interviews. And it's written for people without a research background. It's a totally non-technical step-by-step practical guide. There's one chapter, chapter

eight, that's called "Phrasing Your Questions to Get the Most Useful Feedback" and that has a lot of tips and examples of things not to say and better ways to rephrase that will help you if you end up doing your own testing. It can also help you judge whether you're getting the most from your testing sessions with users.

It's very important to have the individual interview as an opportunity for people to share with you what they're understanding from the Web site because that's the best way to check comprehension. You don't want to ask people a yes/no question like -- "Is this easy to understand or not?" -- because for one thing, people don't always understand or are not always aware if they're not understanding well. And you also want to know what messages they're taking from it so you'll know if what you're saying is getting through or not.

And I think that what you can do in these sessions is to acknowledge that it's really an artificial situation. You bring people in, you have them look at the Web site, you're looking over their shoulder talking with them and a lot of it is the way that you put them at ease and make them feel like they can say anything they want. So you want to make sure that, if they seem reluctant to criticize, you give them some good feedback about the first critical remark that they make so that they'll understand that's really the whole purpose of it.

You have to ask them to tell you what they think they would do next if they were all by themselves so that you don't have the situation where they're just trying to please you during this interview and you'll get the most out of your sessions that way.

Lise Rybowski

In TalkingQuality, we try to reinforce the idea that one of the best ways to make your report user-centered is to test it with your target audience at multiple points in the development process. But I think some people find this advice daunting, either because they're not familiar with the testing techniques that you were just talking about or because they don't have the time or the money to do it. Do you have any advice on how to make the testing seem more doable for them?

Jeanne McGee

I think that one of the things that I hear again and again from clients who've done these types of feedback interviews with the users of their report is "oh, I wish I had known how valuable this is; I would've started doing it long ago." And I think that once you have done it, you become more convinced about the value of it. You also are able to learn things and use them in all of your subsequent projects. It just builds. So I think that the most important thing is to do it and then you will realize how valuable it is. And so to get the most out of your feedback sessions, I just assume that everybody has limited funds, limited time.

You do have to make an investment of time, but I think you can do it strategically. And I'm not talking about elapsed time, like taking months and months to get the results from testing. I'm talking about getting your team members -- and by that I mean the people who make the decisions about the site, the people who do the actually writing, the Web designers, the people who do the technical part -- get everybody on board with spending some time and treating this feedback from users as one of the most important things. That's the ultimate test of how well the Web site is working.

There's something for each one of those groups to learn from interviews. And it's best if you could get observation of the interviews. You can do that in person, you can do it in professional facilities with one-way mirrors, you can have a whole group of people, that's one way, that's a higher cost way. You can do it with just a stationary camera or recording or just having one person as an observer is usually not too intrusive.

One of the most important things you could do is to get people involved in directly observing because there are going to be some surprises in the testing and if people are there firsthand to observe those surprises it can be very compelling, much more so then reading something later in a report.

I think it's very valuable to spread your interviews out over a period of time so that you have time in between to discuss what you just learned from the interview and to even start talking about what the implications are for what's working and what isn't working. For example, if you have someone conducting the interviews who can then go back and confer with all the people who were observing. Or another way to do it that's more low budget is you can have individual interviewers with people and maybe one observer and you have maybe 3 or 4 different rooms where you're doing the interviews. You do interviews at 1 o' clock 'til 2 o'clock and then the whole team gets together and shares what they learn from that interview at 2 o' clock and talks about it.

This is not a common way that this is done. It requires a commitment of time on the part of the people who are the developers. But I can tell you that it's the most valuable way to get the immediate access to the subtleties and the ability to discuss the findings from the interviews. And you will get a lot more leverage out of your interviewing time if you spread them out and debrief after each one.

Consistent with that, I think that one of the things that runs up the cost and extends the timeframe for user testing of a Web report is having a formal detailed report from a consultant or from whoever does this work for you. It's very difficult to convey the visual and the navigation jumps that happen in Web site testing and to explain why it is that people went wrong on this page and got confused on that page or with this column or didn't understand that that was a link that they could click and get more information.

It's much easier if you can discuss that and point at the screen and show people things. If I do a formal written report and I do those for clients, I take a long time to do it. I have to create the screen shots, I have to annotate the screenshots, and in the end it isn't as valuable as just having a live demo where you kind of walk through, here's what happened, and then people can chime in. Well, in the interview I did, people understood this, but not that. It's just a much more collaborative way to be processing the feedback that you get. And so consistent with this idea of spreading the interviews out, debriefing in person, limiting the formal write-up -- when I say limited, you might just have a summary of the most essential changes to be made to make the site work better for people and then some other second-level changes that would be very helpful but aren't as essential.

You can do fewer interviews and do them more often. I think that's a very valuable approach to take to getting the most out of testing. You can also split your interviews into two types. To oversimplify, I call these the "turn people loose" approach versus the "march them through the Web site" approach. And when you turn people loose, you're basically saying: Okay, pretend like you were on your own looking at this site. Where would you go first? What would you do? Do what it is that you want to do -- and then you watch what they do. You watch what they pay attention to, you get them to

think aloud and give you their thoughts. Well, I'm not interested in this page so I'm going to go here, whatever. It's very valuable because that is the most realistic way about how people will use your site.

On the other hand, I think it's helpful to devote about half of your interviews to the "march them through it" approach, which is: You tell them that you want to know what they'll do if they were on their own, but you really have to get their feedback on certain parts of it so you're going to ask them to read certain things even if they wouldn't on their own. And then you get them to react to that. So you're essentially trying to figure out what kind of messages they're getting from the different pages whether they're finding it valuable, how they're using it, and so forth. And if you have the combination of those two, I think it's very powerful.

The other thing that I would say is that you have lots of choices about where you do your testing, how you recruit. And if your budget is limited, I've done things like recruit through Craigslist and have a handful of people show up for interviews that were spread out during the day. And then had clients observing those interviews live and then having the debriefing like I talked about. That's a lot cheaper and quicker than setting up a professional facility where you have them do the recruitment against your criteria and so forth.

So there are lots of choices if you have a limited budget. It can actually make you be creative and make you do some of this sort of immediate debriefing that I think is so valuable. And I have another book by Steve Krug to recommend again, that's K-r-u-g. He has great titles. This one is called *Rocket Surgery Made Easy*. You need the subtitle, which is "The Do-It-Yourself Guide to Finding and Fixing Usability Problems." As you might guess from the title, it's a very entertaining book, but it's also a very practical, helpful book and I would recommend it highly.

Lise Rybowski

Thanks, Jeanne, for this recommendation and also for your advice. I think it's excellent and encouraging for the organizations who are trying to do this. You know, we all want quality reports to be useful so I just hope our audience takes your advice on ways to pay more attention to their own audiences.

You can read Jeanne's *Toolkit for Making Written Material Clear and Effective* at www.c-m-s.gov/writtenmaterialstoolkit [www.cms.gov/writtenmaterialstoolkit]. In the "Resources" section of the TalkingQuality site, you can also find tips on writing and design that draw heavily on Jeanne's recommendations and experience. You'll find those tips and related guidance on developing health care quality reports at www.talkingquality.a-h-r-q.gov [www.talkingquality.ahrq.gov].

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