Tips for communicating about your research with non-scientists

This blog post was written for the National Institute on Aging (part of the National Institutes of Health) and is also posted on their NIA Insider Blog. It offers practical guidance for scientific researchers on effectively communicating their work to lay audiences.

Have you been asked to speak to a general audience about your latest study results? Maybe you're writing a blog post or newsletter article about your work, or you've received an interview request from a member of the news media. Regardless, at some point in your career, you'll likely want to explain your research to people who are unfamiliar with your field of study, and the technical terms and acronyms that have become second nature to you could leave many non-scientists scratching their heads. How can you make the most of an opportunity to share what you've learned with a broader audience?

Using plain language to describe your work is not only important, it's also part of the NIH mission and federal law. Here are some tips for telling the public about your research and helping them understand why it matters.

Prepare your message

- **Know your audience.** Good communication starts with a solid understanding of your audience and what they care about. What do they already know about the subject? How might your work affect them?
- **Craft your take-home messages.** What main ideas do you want the audience to take away from your presentation or article? Limit yourself to a few primary messages. Introduce them near the beginning and summarize them at the end to help ensure they stick.
- **Provide extra context.** A non-scientist (or even a scientist who works in a different field) may need additional background information. Why did you propose and conduct this research? What do the results tell us that we didn't know before?
- **Tell a story.** Narratives humanize your work and can make otherwise dry facts and statistics come to life. Including a story can help people connect with your research.

Use plain language

- **Be simple and direct.** Plain language is wording that's clear, accessible, and understandable. In general, it will be easier for people to grasp your ideas if you convey them using familiar words, simple sentences, and short paragraphs.
- **Avoid jargon and acronyms.** Replace or explain technical terms. Avoid or spell out acronyms that aren't widely recognized by non-scientists.
- **Use the active voice.** Structure most of your sentences with an actor performing an action, such as, "We chose participants" vs. "Participants were chosen." The active voice creates clearer sentences and reduces ambiguity about who has done what.
- **Choose engaging verbs.** Strong, direct verbs make your sentences more straightforward and easier to follow. For example, this wordy sentence: "We provided an analysis of the data that led to the conclusion that the treatment was effective," could be rewritten as: "We analyzed the data and concluded that the treatment was effective."

Revise your draft

- **Allow time for revisions.** It can be helpful to step away from your draft for a day or two. You might notice awkward phrasing or typos when you return to it with fresh eyes. Reading your draft out loud can also help pinpoint places to improve upon it.
- **Reduce clutter.** Cut any words, phrases, or sentences that are confusing or unnecessary. Review your take-home messages and remove anything that doesn't support those main ideas.
- **Get feedback from a non-expert.** Have a friend, family member, or colleague in another field review your draft before you share it widely. Focus your revisions on areas that they find confusing or don't understand.

Making your research understandable to non-scientists can be challenging, but it's worth the effort. Effective communication not only increases the reach of your own work, but it also contributes to better public understanding and helps build trust in science. Learn more at Plain Language at NIH.

To share your own tips or if you have a question, please leave a comment below.

Comments

Submitted by Cecilia Marcondes on November 09, 2022

Although it is important to keep it simple, by favoring simple language we may reduce the accuracy of the explanations, and create confusion about the understanding of basic concepts.

Something to think about. How simple can it be without losing the meaning?

Reply
Submitted by Stephanie Morrison on November 15, 2022

In reply to Is the chosen plain language sufficiently accurate? by Cecilia Marcondes
Thanks for sharing this important point. Sometimes we describe this kind of oversimplification as “dumbing down” scientific information, and that’s not the goal of plain language writing.

There is an art to explaining concepts in familiar words without losing the details and nuance needed for accurate understanding. I’m reminded of a saying attributed to Einstein: “Everything should be made as simple as possible, but not simpler.”

Reply
Submitted by Deborah Bosley on November 10, 2022

Thank you for these recommendations for scientists to explain their research to the public. The EU has required that clinical trials results have a plain language summary. I suggest that universities and corporate research labs follow suit. An informed public means less fear of science and more knowledge about issues that affect us all.