

**If It's for the Public, Let the Public Review It: Lay Summaries Should Be Evaluated by
Non-Expert Panels**

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In an era where public trust in science is more important than ever, clarity in communication is crucial because it determines whether research can guide decisions, shape policies, and improve lives. However, most scientific research is still written, reviewed, and published without meaningful input from the very people it serves. Our randomized controlled trial, *Assessing the Quality, Engagement, and Comprehension of Two Lay Summaries*, demonstrated that the quality of a lay summary significantly affects how well non-expert readers understand and engage with research. I argue that lay summaries should be reviewed by non-expert public panels such as students, patients, or community members. This change is supported by our study's findings. It addresses a major flaw in the current peer review system, where accessibility is rarely evaluated, and it has the potential to strengthen the relationship between science and society by making communication more inclusive. In this paper, I will argue how our study proves the power of clear lay summaries, explain why expert-only review is insufficient and propose a realistic alternative, and explore how public review would improve trust, accessibility, and the ability to stimulate interest in science.

Our randomized controlled study called *Assessing the Quality, Engagement, and Comprehension of Two Lay Summaries*, examined how the quality of a lay summary influences public understanding of scientific research (Patel et al., 2025). We recruited 169 participants for the intervention group and 163 participants for the control group, each assigned to read either a high-quality or low-quality lay summary describing a fictional study on Hepatitis C treatment. While the content was identical, the summaries differed in structure, clarity, and accessibility. After reading, participants completed a survey measuring comprehension and engagement. The results were striking. The intervention group, which read the high-quality summary, had significantly higher comprehension scores. For instance, 126 participants in this group answered

a comprehension question correctly, compared to just 35 in the control group. Additionally, ratings for understanding the study's purpose, methods, and findings were notably higher in the intervention group. These results demonstrate that even small improvements in summary quality can dramatically impact comprehension and engagement, highlighting the importance of accessible science communication. However, the participants' desire to learn more did not differ significantly between groups. This suggests that even well-written summaries may not be enough to spark lasting curiosity or deeper interest in the topic. I argue that lay summaries should be reviewed by non-expert panels before they are published to ensure they are truly clear, engaging, and effective. This step is crucial to the scientific world because public understanding and participation determine whether research leads to trust, action, and meaningful change.

Although clear communication is essential, lay summaries are still primarily written and reviewed by scientists. Most researchers are not trained to write for the public. Their education focuses on technical accuracy rather than accessibility. A study revealed that 57% of U.S. researchers reported a desire for more communication training (Kirkwood, 2022). This gap in training leads to challenges in making research accessible to the general public. Even with training, scientists are too familiar with the material to evaluate it from a public perspective. If lay summaries are meant for the general public, those audiences should help review them. Therefore, lay summaries should be reviewed by panels of non-expert readers before publication. These panels can include students, patients, and members of the public. Involving these readers ensures summaries are tested for clarity. Research shows that non-expert feedback improves understanding and engagement (Santesso et al., 2015). The Cochrane Consumer Network already uses this technique in medical research, and it has since helped improve general accessibility (Cochrane, n.d.). Moreover, funding for this process is feasible. Government grants and research

funds should support these non-expert review panels. This will help bridge the communication gap and ensure that lay summaries are both accurate and accessible. For instance, the European Commission has allocated funds to projects aimed at preventing misinformation and disinformation (European Commission, 2023). This recognizes the importance of accurate public information. By involving non-experts and investing in such initiatives, we can reduce the spread of false information and enhance the public's understanding of scientific research. Without their input, research risks being ignored or misunderstood.

Involving non-expert panels in the review of lay summaries could revolutionize how science is communicated in the future. This change would not only make scientific information more accessible, but also rebuild trust between scientists and the public. Research has shown that when non-experts are involved in evaluating scientific content, the clarity of the message improves (Santesso et al., 2015). For instance, public involvement in reviewing public health communications has led to clearer, more effective messaging, which reached a wider audience (Russell et al., 2020). By incorporating public feedback, scientists demonstrate that they value clarity and are committed to making their work understandable. Public review also helps reduce misinformation. When patients and general readers reviewed medical summaries, their feedback helped clarify confusing language, improving the accuracy of the content (Goldstein & Krukowski, 2023). This process not only improves comprehension but also increases the likelihood that people will share and trust the information. When science is reviewed by those it's meant to serve, it becomes more impactful and can help future generations.

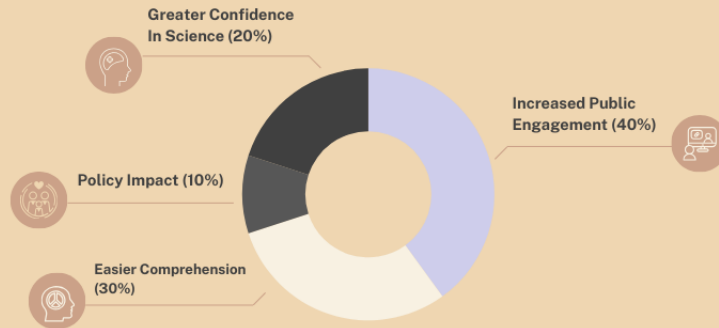
The need for lay summaries to be reviewed by non-expert panels before publication is clear. Our study shows that the quality of a summary directly impacts public understanding, and involving non-experts ensures that research is accessible to all. By including students, patients,

and community members in the review process, we move beyond expert assumptions and create summaries that resonate with the wider public. This step is crucial for rebuilding trust in science and empowering communities to engage with research. It is not just about simplifying science. It is about making sure science serves society. The approach I have outlined, which includes public review panels and funding through research grants, ensures that science communication is both effective and meaningful.

Public Power in Science Communication

Data 1

This chart illustrates the key impacts of public involvement in science communication:



(Swords et al., 2023)

Data 2

57%



of U.S. researchers seek more communication training.

(Kirkwood, 2022)

Data 3

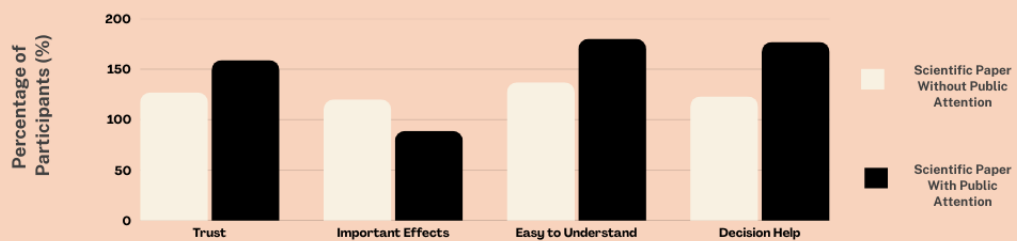
Clear research understanding spreads accurate information globally



Data 4

(Swords et al., 2023)

Comparison of Scientific Paper with and without Public Attention



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