

# A Picture's Worth 1,000 Words: Disseminating Research Through Graphical and Visual Abstracts

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Scientific publishers continuously face the challenge of how to produce clear and accessible research for their audiences. In an ever-advancing technological world, the challenge has extended to how to distill that research into concise portions for social media and busy audiences, who increasingly search for information on mobile phones and tablets, and usually while time is of great importance. A growing answer to this problem is graphical and visual abstracts: easy-to-digest pictorial summaries of an article's key points.

Moderator Carissa Gilman gave a brief introduction to the topic by explaining that the terms *graphical abstract* and *visual abstract* are often used interchangeably because there are no universally accepted definitions for the two. However, she described their differences in that graphical abstracts typically contain one panel that gives a brief snapshot of the article, while visual abstracts contain a more detailed three-panel display of key questions, interventions, and outcomes. Both approaches have the benefit of helping researchers identify and share what is relevant to their research. Gilman also stressed that these abstracts should be seen as a preview to an article, not a substitute. The tricky part is getting a message across, especially regarding what it is for and what kind of study it is from, in limited words.

Andrew Smith then shared the successful integration of graphical abstracts into the publishing process at Cell Press (Figure 1) in a presentation titled "Graphical Abstracts: From

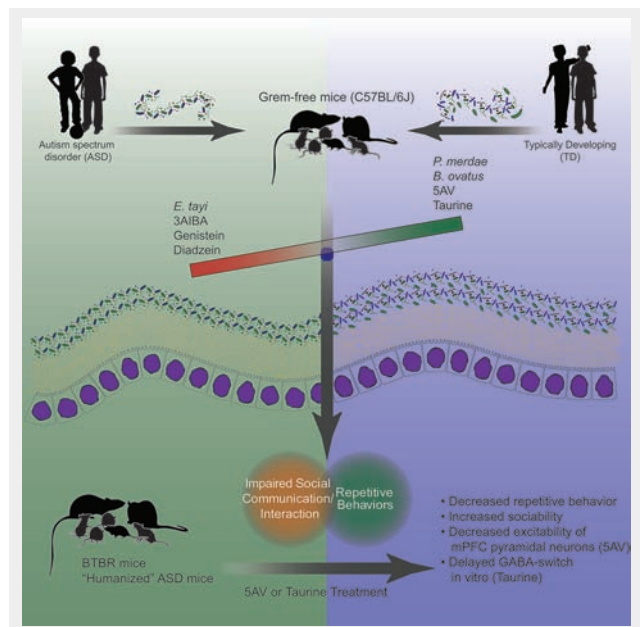


Figure 1. A 1-panel graphical abstract from Sharon et al.<sup>1</sup> *Cell*.

the Future to Today." He explained that when new online functionality for articles—including tabbed navigation, integrated multimedia, and graphical abstracts—was first introduced at Cell Press in 2010, it was revolutionary and seemed futuristic but, through years of evolution, has now become routine. As part of that evolution, Cell Press conducted a concentrated effort to help train authors on creating effective graphical abstracts, so now Cell Press uses abstracts that are produced by submitting authors. This means less work for the editors, especially after a library of design examples was established that authors can draw from.

Two years after launching graphical abstracts, Smith said that Cell Press had garnered enough experience to create guidelines for the abstracts,<sup>2</sup> including (1) have a clear beginning and end, (2) provide visual indication of the biological context and results, (3) be distinct from any

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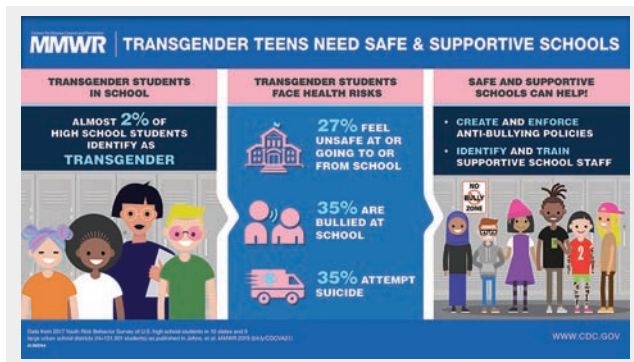


Figure 2. A 3-panel visual abstract recently published in *MMWR*.

figures or diagrams in the article, (4) emphasize new findings without including excess detail from previous literature, (5) avoid the inclusion of features that are more speculative, and (6) do not include data items of any type (all content should be in the graphical form).

The lessons learned while perfecting this process include keeping the product simple without losing its innovation and that authors will do the work of creating the graphical abstract if they know it will add value to their articles and if instructions are clear (“2 big ifs,” Smith warned, though establishing guidelines help). The reward, however, is an excellent visual, which always helps to draw in more readers, Smith said. There is additional “bang for the buck” because the visual can be scaled and reused for multiple platforms, including social media, websites, and presentations.

The second presenter, Dr Mary Dott, described the use of visual abstracts at the Centers for Disease Control and Prevention’s *Morbidity and Mortality Weekly Report (MMWR)* (Figure 2). “Because communication is changing rapidly, with new obstacles to reach audiences, publishers really have to think about creating compelling materials that will attract attention,” she said.

The best way to do this is to tell a story through the abstract in order to invoke emotion with intention and create meaningful calls to action. Paraphrasing the founder of visual abstracts, Dr Andrew Ibrahim,<sup>3</sup> Dott outlines how

to do this through the following steps: (1) focus on the user experience, (2) narrow down the key messages, (3) prototype quickly to find what works, (4) solicit feedback and study other designs, (5) prioritize key messages over completeness, and (6) balance your design creatively with thoughtful restraint and clarity of purpose.

In *MMWR*’s first attempts to publish visual abstracts, Dott said that they tried to adhere to a 1-week timeframe, in line with their publishing schedule. However, they found that it was difficult to do a quality job in that short amount of time. After a few attempts, they settled into a formula for their three-panel visual abstracts: (1) the main message on risk, (2) the report’s data trend/results, and (3) the actionable public health message. Dott also said that using fewer words, and using action words directed at a specific population, has worked best for them. *MMWR* now uses a 3-week timeline with multiple rounds of review through editors and graphics to complete its visual abstracts.

During a question-and-answer period following the presentations, audience members expressed gratitude to the presenters for sharing their experiences establishing successful production of graphical and visual abstracts. For many, it is seen as a daunting task. Gilman ended the session by emphasizing what Smith and Dott discussed: It is important to be open to taking different approaches to using visuals, particularly while establishing your process, and to find what works for your organization.

## References and Links

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