

Infographics and Visual Abstracts

Shreya P. Trivedi, MD (@ShreyaTrivediMD)
Alvin Chin, MD (@aylc1989)

Andrew Ibrahim, MD, MS (@AndrewMIbrahim)
Amy Ou, MD

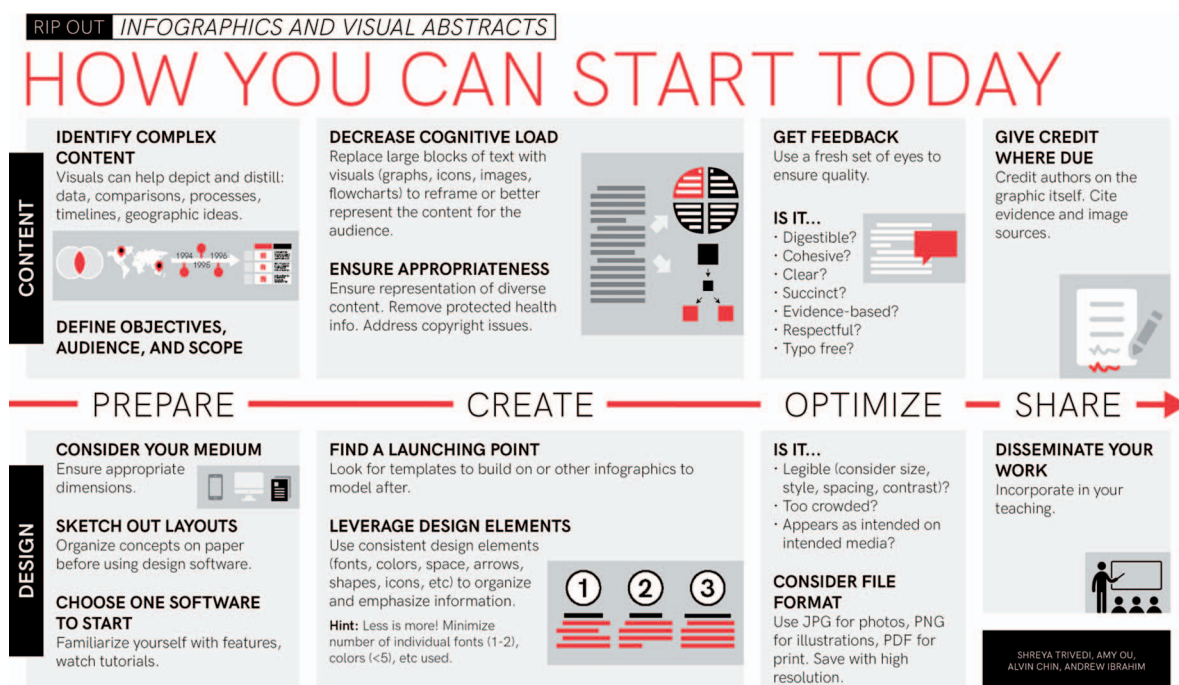
The Challenge

Medical educators teach and disseminate information to learners who are often in time-pressured clinical learning environments that can limit their ability to process and understand information. Heightening this challenge is the ongoing need for learners to access, identify, and apply relevant information from a high volume of new or existing literature. Creating and using digestible visual summaries of high-yield takeaways can overcome some of these challenges. However, most educators are unaware of strategies and tools for creating and disseminating concise, high-quality visual summaries.

What Is Known

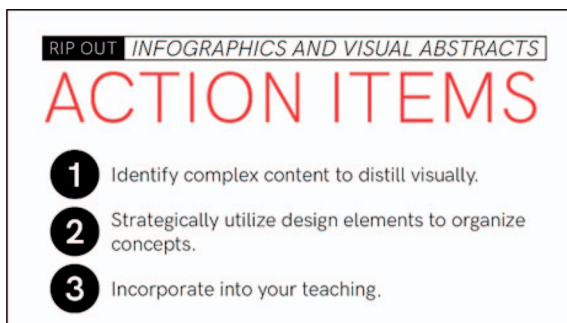
Infographics provide a visual representation of information, and visual abstracts are a subset of info-

graphics used to synopsise key findings from an article. Through intentional use of design elements and visual-spatial reorganization of content, readers can process complex information more easily. Visual representations are time-efficient and designed to engage the reader's visual processing capacity and decrease cognitive workload. In fact, studies have found that visual abstracts result in equivalent or increased knowledge transfer and retention when added to text.^{1,2} The use of infographics and visual abstracts on social media platforms is associated with higher engagement and Altmetric scores than the dissemination of medical literature citations alone.³ In a randomized controlled trial the use of a visual abstract resulted in articles being read nearly 3 times as often.⁴



What You Can Do LONG TERM

1. **Create a repository of design materials.** Find and save infographics, layouts, and visual strategies to use for your next infographic(s). Look outside of medicine for a broader array of visual design ideas in other fields. Find and save resources for commercial-free fonts, stock images, icons, and color palettes. Across your work, use consistent design elements (eg, color schemes or layouts) or a logo to create a visual identity or “brand” for your teaching.
2. **Learn the advanced features of your design software or branch out into new software.** Explore beyond the basics of your chosen software (for example, Microsoft PowerPoint can be leveraged to create animations, complex diagrams, etc). Watch tutorials on advanced functions that can take your design skills to the next level. Easy-to-use software applications have different features that can make your creative process more efficient or elevate your design (eg, Canva, Venngage, Piktochart, Easel.ly, Visme). Alternatively, delve into advanced software such as Adobe Illustrator.
3. **Collaborate with others.** Input from diverse team members can enhance your graphic by providing a varied lens on content and/or visual design. Additionally, they can share the workload and help achieve timely completion.
4. **Incorporate infographics and visual abstracts into multiple aspects of your teaching.** Use visuals in other venues where learning may be enhanced with infographics or visual abstracts (eg, clinical teaching, journal club) and/or with different audiences (eg, faculty, interprofessional team). Consider sequencing as well: Would infographics be best used to prime learners prior to or after the teaching session, or used within the teaching session? Think creatively about how to use visuals in teaching (eg, after a small group teaching session, ask learners to elaborate their takeaways by sketching out their own draft infographics).
5. **Expand use for program branding internally and externally.** Use infographics for your recruitment website and share on social media. Create visual abstracts to highlight a recent publication or your program’s scholarship.



References and Resources for Further Reading

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2. Hughes AJ, McQuail P, Keogh P, Synnott K. Infographics improve comprehension and recall at the orthopaedic journal club [published online ahead of print November 16, 2020]. *J Surg Educ*. doi:10.1016/j.jsurg.2020.10.012
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4. Ibrahim AM, Lillemoe KD, Klingensmith ME, Dimick JB. Visual abstracts to disseminate research on social media: a prospective, case-control crossover study. *Ann Surg*. 2017;266(6):e46–e48. doi:10.1097/SLA.0000000000002277



Shreya P. Trivedi, MD, is Co-Director, Innovations in Media & Education Delivery (iMED) Initiative, Beth Israel Deaconess Medical Center, and Instructor, Harvard Medical School; **Alvin Chin, MD**, is an Emergency Medicine Resident and Director of Design for CanadiEM, McMaster University, Hamilton, Ontario, Canada; **Andrew Ibrahim, MD, MS**, is Assistant Professor, Department of Surgery, Architecture, and Urban Planning, University of Michigan, and Senior Principal and Chief Medical Officer, HOK; and **Amy Ou, MD**, is Assistant Professor, University of California San Francisco, and Hospitalist and Chief Outreach Director of Core Internal Medicine, San Francisco General Hospital.

Corresponding author: Shreya P. Trivedi, MD, Beth Israel Deaconess Medical Center, strived1@bidmc.harvard.edu, Twitter @ShreyaTrivediMD