How to Communicate & Display Your Study

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Outline

❑ Introduction: An *effective* poster…

❑ Planning: *Before* you start…

❑ Poster content

❑ Poster layout and format

❑ Revising

❑ Poster presentation

❑ Related topic: Abstracts

References

- www.training.nih.gov/careers/careercenter/publish.html
  - Research Training Opportunities at the National Institute of Health
    - "Publishing and Presenting" section; "Creating Posters and Slides" sub-section
  - Several links:
    - Creating Effective Poster Presentations, Hess & Leigel (NC State University)
    - Advice for Constructing Scientific Posters, Purrington (Swarthmore University)
    - Creating a Poster Using MS PowerPoint, University of Washington School of Public Health and Community Medicine
    - Introduction: Poster Sessions, Writing@CSU (Colorado State University)
    - How to Make a Great Poster, Mandoli (University of Washington)
    - Scientific Posters, Medical Illustration Unit (MIU; University of New South Wales)
- Referenced paper:
  - Block, S. 1996. The Dos and DON'Ts of poster presentation. *Biophysical Journal* 71: 3527-3529.

Introduction:
An *effective* poster…

- Is …
  - readable,
  - legible,
  - well organized (ordered), and
  - focused (succinct).
- Is designed to …
  - attract attention,
  - provide a brief overview of your work,
  - give you something useful to point to as you discuss your work with a viewer,
  - initiate discussion, and
  - stand alone when you're not there to provide an explanation.
- Is *not* created overnight.
  - Requires time, planning, art, science, and attention to detail.

Planning:
B*efore* you start…

- Who's my audience?
  - Your field of specialization?
  - Fields closely related to yours?
  - Unrelated fields?
- What are the size requirements?
  - Portrait/Landscape
- What's my budget?
  - Type of poster and printing options
- What software program?
  - Recommend: Microsoft PowerPoint
  - Software and/or file types are supported by printer?
- Where is the poster session being held?
  - Transport problem – affects type of poster
- How much time do I have?
  - Deadlines?

Poster content:
Overview

- Must explain
  1. the scientific problem in mind (what's the question?),
  2. *its significance (why should we care?),*
  3. how your particular study addressed the problem (what was your strategy?),
  4. the study performed (what did you actually do?),
  5. the results obtained (what did you actually find?),
  6. the conclusions (what do you think it all means?), and, optionally,
  7. caveats (and reservations) and/or
  8. future prospects (where do you go from here?).
- Problem with posters:
  - Limited amount of space
  - Viewers will spend 3-5 minutes (tops!) at your poster
  - Usually a mixed audience
- Recommended solution: *FOCUS! - pick and choose*

Poster content:
Focus!

- What information sums up your work or is most important for your viewers to know?
  - Stay focused on your main message and *keep it simple!*
  - Make your message accessible to a diverse audience
    - Provide context – explain the big picture and why the problem is important
    - Interpret your findings so that viewers in all categories can understand how your work helps solve this problem
- How can you best depict this information?
  - Balance between text and graphics
    - Typically, the less text the more visually appealing
    - Use bullets, lists, short sentences, short paragraphs, and/or tables
    - Any graphic should speak for itself, but is not always useful
    - *Organize* chunks of text and graphics into clear *sections* labeled with clear *headings*
      - Helps move viewers through your poster

Poster content:
Sections to include

- Title
  - Including author(s) and affiliation
- Introduction
  - Background, context, and relevance – "So what?"
- Objective(s)/Specific aim(s)
  - E.g., "to determine …" or "to describe …"
- Methods
  - Study design and population, main outcome(s) and measures collected, statistical analysis (sample size justification)
- Results
  - Largest section
  - Describe sample participants/subjects
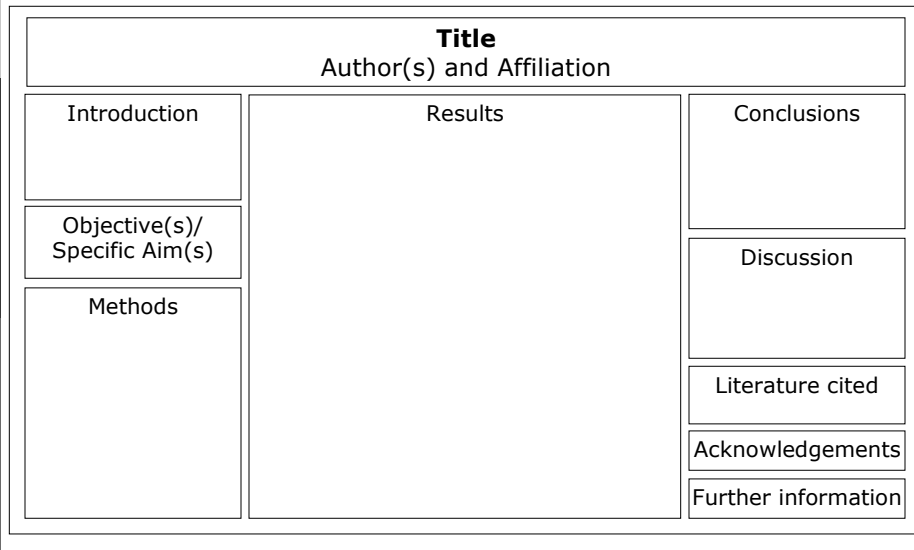 - Presentation of data that addresses the objective(s)

Poster content:
Sections to include, *cont'd*

- Conclusions
  - Remind the viewer of the objective(s) and results – what did you learn from *the data*?
- Discussion
  - Limitations, relevance to other published work, implications, and future directions
- Literature cited (if applicable)
- Acknowledgements
  - Thank individuals for specific contributions (do not list people's titles)
- Further information
  - Email address or a URL

- Sections to *NOT* include: Abstract (unless required)
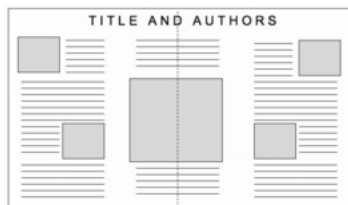
Poster layout and format:
General guidelines

- Organize your poster in columns
  - Three, four, or five depending on the poster's overall width
  - Cap the columns with a large banner containing the title, author(s) and affiliation
- Divide each column vertically into sections
  - Sections within a single column should be the same width
  - Use relevant section headings to provide clear cues to your viewers how they should "travel" through your poster elements
  - Flow should be from top left to bottom right – vertically first, from top-to-bottom, and then left-to-right
- Maintain sufficient white space (margins) between and within columns and sections
  - Don't overcrowd your poster
- Try to balance text and graphics
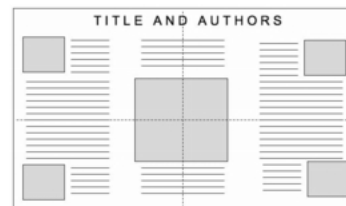
Poster layout and format: Example layout

Title		
Author(s) and Affiliation		
Introduction	Results	Conclusions
Objective(s)/ Specific Aim(s)		Discussion
Methods		Literature cited
		Acknowledgements
		Further information

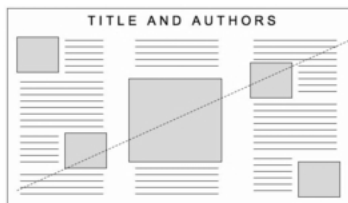# Poster layout and format: Examples of balance

- Horizontal symmetry

- Horizontal and vertical symmetry

- Diagonal symmetry

Poster layout and format: Text, colors, and graphics

- Text:
    - Use plain fonts such as Arial, Helvetica, or Times New Roman
    - Should be readable from at least 4 feet away
        - At least 24 point font in body, 36 for section headings
        - *Helpful hint:* Should be able to read all text comfortably, including text in graphics, when printed on an 8.5x11" sheet of paper
    - Be consistent – e.g., all body text should be same size and font
- Colors:
    - Use a light color background and dark color letters for contrast
    - Stick to a theme of 2 or 3 colors
    - Consider people who have problems differentiating colors
    - *Remember:* colors print differently than they appear on your computer screen
- Graphics:
    - Add a thin gray or black border to make it more visually appealing
    - Remove as much "graphic junk" as possible

Revising

- Edit ruthlessly!
    - If it doesn't provide critical support for your main message, ELIMINATE IT!
- The content should be concise and to the point
    - Simplify verbiage and reduce sentence complexity
- Consider three main areas of concern:
    - (1) Clarity – jargon, sentence length and connections, and layout
    - (2) Readability – *helpful tip:* read your poster aloud – if you stumble over any sentences, revise those
    - (3) Visual Presentation – a successful poster combines clear ideas with optimal visual cues to make understanding your ideas as easy as possible
- Have others comment on your drafts
- Try the "60-Second Poster Evaluation"

Poster presentation

- ❑ Wear a name tag, if possible
- ❑ Prepare ½-, 2-, and 5- minute presentations of your poster
- ❑ Use your poster as a visual aid – don't read it!
- ❑ Speak to your *viewers* as you explain your poster
- ❑ Point to specific parts of your poster whenever possible so that viewers are aware of your progression
- ❑ Have on hand full-color, "shrunken" versions of your poster on 8.5x11" paper
  - ▪ If you have resisted the urge to shrink your font size, the shrunken text will be legible
- ❑ *Thank* your viewers for visiting

Related topic:
Abstracts

- ❑ First opportunity to hone your message
  - ▪ Makes you pick and choose more than any other representation (poster, slide presentation, or manuscript)
- ❑ Can serve as an outline for other representations
- ❑ Similar sections to include:
  - ▪ Introduction/Rationale
  - ▪ Objective(s)
  - ▪ Methods
  - ▪ Results
  - ▪ Conclusions
- ❑ Main difference between representations is section length:
  - ▪ Abstract: sentences
  - ▪ Poster: chunks of text
  - ▪ Manuscript: paragraphs