

Powerful Posters

How To Plan, Write, and Design an Effective Poster

What are Posters?

Posters are display boards on which scientists show data and describe experiments for recently completed research or research in progress but not yet published. They represent a visual, clear, concise, appealing form of communication. Some medical posters describe new programs or projects instead of research findings; these are usually not presented at a scientific meeting.

Why Are Posters Used?

Scientific meeting attendance and participation have increased; there is not enough time for all the 10- to 15-minute oral presentations desired. Posters have moved from the hallways to inside the convention halls.

What are the Differences between a Poster and a Manuscript?

In order to prepare and write a poster, you need to know the following:

Poster	Manuscript
Text supports figures	Figures support text
Heavy on figures, graphs, images	Limited number of figures and graphs
Author decides layout	Journal decides layout
Lists, bulleted text, “mind maps”	Sentences and paragraphs
Effective use of white space and layout	Text-based
Not a publication of record; not exhaustive; do not need statistical analyses and references; few or no references	A publication of record; need detailed statistical analyses and references

What are the Differences between a Poster and an Oral Presentation?

In order to prepare and write a poster, you need to think about how the viewer/audience is affected:

Poster	Oral Presentation
Viewers can concentrate on parts they're most interested in	Everyone has to look at same slides
Viewers can determine time to spend studying material	You determine how long the audience views slides
Viewers may have diverse interests	More experienced scientists may not attend
Viewers can interact individually with presenter	Little interaction with audience
Viewers walking around	Audience seated

Both types of communication may take place in a noisy, crowded, and distraction environment. As your poster will be one of many, so may your presentation be one in a series of many on one day.

Oral presentations are good for describing one or a few main points and results, while a poster is good for more complex experimental results and ideas. Posters usually require greater expertise and money to produce than do PowerPoint slides.

Planning a Poster

The process starts with a well-written abstract due 6–12 months in advance, with notice of acceptance as an oral presentation or poster 3–6 months before meeting. Reviewers look for the following characteristics:

- Timely and useful information (passes the “so what?” test)
- Appropriate study design and methods
- Specific results and conclusions

Content

Content is the most important consideration for what to include, but layout (visual presentation) can add or detract from the clarity of poster. Have clearly defined sections with headings.

Title: should be brief, informative, interesting, attention-getting, inviting; may be in form of question; should allude to the importance of the issue.

Overview: not an extensive Introduction but a clear statement of the problem and the study objective, like needed with an abstract. Use bullet points for lists.

Methods: Illustrations and graphic elements should dominate, for example, flow charts, conceptual models, decision trees.

Results: Often the most important section (best placed in center of poster). Put graphics of your most important results, complete with titles or figure legends that tell the importance of the information.

Conclusions: Put in place of emphasis, such as top left of poster. Be sure they match objectives. Include an impact statement and comments about future work.

Writing Style

For text, use short, simple statements with key words first (e.g., “Bronchoconstriction in asthmatic patients is caused by SO₂ in low concentrations,” rather than “Low concentrations of SO₂ cause bronchoconstriction in asthmatic patients.”) Fewer words that mean a lot—this is similar to a meeting abstract.

Put a subheading at the start of every paragraph. Limit the length of paragraphs to 5–7 lines of text. Use bullet points whenever possible.

Typefaces

- Sans serif, boldface title, headings (**HEADING**) and subheadings (**Subheading**)
- Serif body text (Times New Roman)

Alignment

- Use left alignment (justified left margins and ragged right margins)

Color

- Varies; muted backgrounds best

Text Size

- Text characters ¼ inch to 1 inch; title characters 1 inch to 3 inches
- One recommendation is to make subtitle characters 2 times the size of text characters and the main title characters 4–6 times the size of text characters using <10 words on <2 lines.

Layout

- Consider poster purpose, audience, and setting
- Allow for balance and good use of white space (provides rest for the eye and visually organizes elements). Less white space between two elements or the same color background makes them look related.
- Use visual grammar and logical arrangement; organize the way people read: left to right and top to bottom
- Divide elements into 3 or 4 columns
- Highlight the important parts by size position, and color; most important information belongs at eye level
- Use numbers, arrows, or bullets to create a visual path for viewer to follow
Explore alternative arrangements with thumbnail sketches to find the most effective layout

Templates Available

- www.posterpresentations.com
- Search internet “scientific poster templates”

The Poster Session Itself

- Use colleagues for a dress rehearsal before the meeting, similar to oral presentation practice
- Don’t talk only to your friends at the session—the idea is to network and share ideas with others
- Smile and greet people, shake hands, get their buy-in (e.g., “Can I give you a 1-minute overview of our poster?”)
- Develop a 1-minute, 3-minute, and 5-minute overview of your poster
- Bring business cards and/or handouts of the poster with your contact information

Week-by-Week Task List for Preparing Your Poster (8 weeks)

Week 1

- Read instructions and identify the exact poster specifications. If you do not have this information call or write to find out.
 - Size of space (usually 4' high 6' long)
 - Basic material of the display area (wall, corkboard or feltboard).
 - When presenter is required to be present.
 - Length of poster session
 - Time for set-up and break-down of poster.
- Clarify what points are to be made with the poster.
- Identify your goal for people viewing your display.
- Identify 4 to 6 master points.
- Decide how data can best be displayed (charts, graphs, tables).
- Develop a mock-up of the poster space.
- Get a layout sheet (brown wrapping paper, shelf paper, etc) the size of your assigned space.
- Hang it where you are going to be working on your project and leave it hanging.
- Identify people you know who have done poster sessions.

Week 2

- Review the abstract you submitted.
- Decide the type of information you want to include based on the type of poster exhibit you plan (research, intervention, education).
- Work on your headline.
- Have it tell your most important point at a glance.
- Make it short, active, and lively.
- Look for people who can help you
- Local hospital or university public relations, medical illustrations, communications, community affairs departments.
- Secretaries, artists, or work-processing specialists who do freelance work.
- Local art school or college with journalism or graphics classes.
- "Copying and Duplicating Services" in the telephone book.
- Public information department of an organization you work with (eg. American Cancer Society).

Week 3

- Plan all illustrative and text materials on your mock-up space.
- Plan space for title and author(s) names.
- Develop headings for each section.
- Write text and develop photographs, tables, or graphs for each section.
- Experiment with different shapes, colors, and arrangements.

- Outline accompanying handout materials that can provide information not on the poster to give away to interested viewers.

Week 4

- Outline accompanying handout materials that can provide information not on the poster to give away to interested viewers.
- Get some critical advice from people whose opinions you trust.
- Ask one or two people to review the poster and make suggestions.
- Edit your poster incorporating suggestions from your reviewers.

Week 5

- Review your poster critically and rewrite if necessary.
- Check all numbers in charts, photographs, and text.
- Reread the guidelines to make sure you are following them.
- Decide how you will transport your poster.

Week 6

- Produce your final copy.
- Give materials to production people.
- Divide responsibilities among authors.
- Review all final copy and make any corrections necessary.

Week 7

- Imagine what the poster session will be like.
- Think about where you want to stand, have handout materials, etc.
- Anticipate questions that might be posed and plan answers.
- Visualize yourself greeting viewers and explaining your display.
- Prepare your dummy sketch or photograph to use as a guide for setting up your poster when you get to the meeting.

Week 8

- Make final touches to poster display and handout materials.
- Carefully pack poster in a sturdy tube or plastic poster carrying case.
- Pack plenty of business cards, handouts, pen, and notebook.