

# Creating Effective Poster Presentations: The Editor's Role

## Devora Mitrany

Poster presentations are ubiquitous at scientific conferences these days, but information on how to create effective and aesthetically pleasing posters is scarce, and much of it is outdated. A discerning editor's touch can make all the difference. Manuscript editors may even be asked to assist colleagues by creating a poster from an abstract, because that's how the poster process begins.

Generally, a scientific organization that is planning a poster exhibition at a conference will issue a "call for abstracts" several months in advance. The requested abstracts may be proposals for podium presentations, posters, or both; sometimes, the organization will ask authors to specify which format they prefer. When the deadline passes, a committee will review the submitted abstracts and notify the authors whose abstracts were accepted.

Scientific posters—even complex ones—are relatively easy to create with widespread software programs, including Microsoft PowerPoint. Doing it *well* may be another question entirely, as anyone who has attended a conference can attest. A good poster is a seamless combination of science and art; an attractive layout can contribute immeasurably to communicating the science. Let's look at some of the basics.

**1. Think as a Web editor.** When it comes to editing poster text, you need to think more as a Web editor than as a journal or manuscript editor. Studies have shown that people *scan* rather than *read* Web pages, and the same is true of a person standing in front of a poster in a bustling exhibit hall. Short, bulleted phrases that highlight

the salient points and graphics that illustrate the results can be grasped easily; it is unlikely that people will stand in front of a poster and read every word. Keep that in mind throughout poster development.

**2. A poster is not a manuscript.** Sounds obvious, doesn't it? But the most common mistake made by authors of badly made posters is trying to communicate too much. Tell authors that they must pick *just one* important aspect of the study to highlight at the meeting. If two points are truly arresting, they should submit a second abstract. Figure 1 exemplifies a poster whose authors did not follow that dictum. The unfortunate result is a work that, because it tries to communicate too much, succeeds in communicating almost nothing.

**3. Get involved early.** If you are a manuscript editor, you may be accustomed to getting involved in a project toward the end of the timeline, after the authors' first or even final draft has been crafted. When working with posters, though, it is essential to join the team early, ideally when the abstract is being written. That may be the only chance you have to influence this all-important aspect of poster creation. Once the abstract is accepted, it will be difficult or impossible to limit the scope of the subject matter.

**4. Help the authors pick a highly focused topic.** Preliminary research results are often presented in a poster before publication, but it is important to highlight just one aspect of the study results. Figure 2 is an example of a poster with one focused point to make, although the study undoubtedly examined other variables. Other topics good for poster presentation include investigative techniques, experimental procedures, and scientific processes that can be presented graphically. No matter what the topic,

words need to be kept to a minimum; the heart of the poster is its graphics.

**5. The key to a good poster is a great abstract.** Help the authors concentrate on producing a good abstract. As noted above, it's critically important that you, as an editor, be involved at this stage to make sure that the abstract focuses on one narrow topic that can be well presented in a graphic poster format. I once had to work on a terrible poster with 16 line graphs in the results section. All the problems could have been avoided if only I had been involved before the abstract was submitted.

**6. Don't reprint the abstract on the poster.** The poster itself should embody every point in the abstract, and you, the editor, can ensure that. If a reader needs the abstract to make sense of the poster, you haven't finished editing; the poster still needs work. Include the abstract on the poster *only* when it is stipulated by the conference guidelines.

**7. Stick with structured abstracts.** Even if the poster guidelines do not require a structured abstract, you can impose some structure. An abstract that is divided into clearly delineated sections will make poster creation much easier. Even more important, a well-structured poster makes the subject matter flow clearly and logically for the reader. I recommend a modified structure. Instead of IMRAD (introduction, methods, results, and discussion), try [B]OMRAC: an optional background section, a brief objective, methods, results (the heart of the presentation), and conclusions.

**8. Skip the background if you can.** Include a brief background section only if it's absolutely necessary; if it is, use it merely to place the poster topic in

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## Poster presentations continued

### 1.0 BACKGROUND

Burden-of-illness assessments require incidence and prevalence assumptions. For psychotic disorders, there are few large-scale incidence and prevalence assessments providing rates for age, gender, or socioeconomic subpopulations. Because outpatient treatment of psychotic conditions is increasing, overall incidence and prevalence may be estimated from outpatient pharmaceutical records.

### 2.0 OBJECTIVE

This study estimates incidence and prevalence of antipsychotic utilization among age, gender, and payer combinations using outpatient pharmaceutical records.

### 3.0 METHODS

#### 3.1 Data Source

- US computerized prescription claims database
- More than 300 million prescriptions per year for 56 million plan members
- Retail and mail-service pharmacy

#### 3.2 Study Design

- Retrospective, longitudinal—July 1995–June 1997
- N = 4,628,528 eligible subjects
- 1-year post period to identify utilizers
- 1-year prior period to identify initiators

#### 3.3 Study Definitions

- **Eligible Subjects**—Those continuously eligible for PCS drug coverage during the 2-year study period
- **Utilizers**—Eligible subjects with an antipsychotic prescription between July 1996 and June 1997
- **Initiators**—Utilizers without a prescription between July 1995 and June 1996
- **Payer Type**—Medicaid managed care, non-Medicaid managed care, indemnity, or “self-insured”
- **Novel Antipsychotics**—clozapine, olanzapine, risperidone
- **Conventional Antipsychotics**—chlorpromazine, chlorprothixene, fluphenazine, haloperidol, loxapine, mesoridazine, molindone, perphenazine, pimozide, promazine, thioridazine, thiothixene, trifluoperazine, trifluoperazine

#### 3.4 Statistical Methods

- Calculated ratios compared *utilizers* and *initiators* to *eligible subjects* for age, gender, and payer types
- Chi-square tests assessed differences between those receiving and not receiving antipsychotic agents.

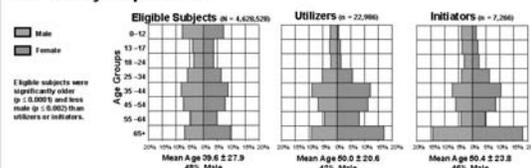
## Antipsychotic Utilization Ratios: Differences among Age, Sex, and Payer Combinations

Primary Author, PhD;<sup>1</sup> Secondary Author, PharmD; Third Author, MS; Fourth Author, MBA; Fifth Author, RN

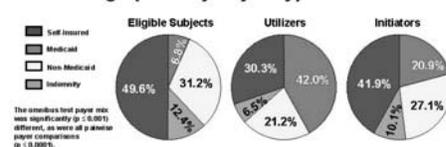
<sup>1</sup>Corresponding Author: Company Name, 1234 Company Street Address, City, State Zip Code  
Phone: (444)555-6666 Fax: (444) 555-6667 email: primary.author@companyname.com

### 4.0 RESULTS

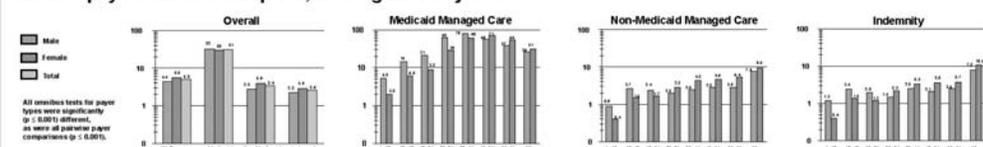
#### 4.1 Study Population



#### 4.2 Demographics by Payer Type



#### 4.3 Antipsychotic Utilizers per 1,000 Eligible Subjects



#### 4.4 Antipsychotic Initiators per 1,000 Eligible Subjects



### 5.0 CONCLUSIONS

- Overall utilizer (5.0 per 1,000) and initiator (1.6 per 1,000) ratios were within the prevalence and incidence rates for schizophrenia or other psychotic conditions.
- Overall ratios were significantly ( $p < 0.002$ ) lower (by 1.1 per 1,000 utilizers) for males. Differences were not consistent—higher for younger males and lower for older males than for similarly aged females.
- Ratios were significantly ( $p < 0.001$ ) higher (by 10 times) for Medicaid recipients.
- Integrating these ratios into a burden-of-illness analysis should consider the proportions of non-psychotic disorders, patients treated for psychotic conditions without medication, and patients treated solely on an inpatient basis.

Figure 1. This poster breaks most of the rules of good poster design.

context. For biomedical posters, avoid recounting the incidence and prevalence of the disease. (See point 1: a poster is not a manuscript!) Other scientific disciplines may have similar referential materials that are not essential to understanding the work at hand; for example, a physics poster might not tie the research into the existing literature unless such a tie-in is crucial to the study. Instead, use a succinct research objective that doesn't even have to be a full sentence, for example, "To determine the adherence to therapy of patients treated with antidepressant medications". If you must include a background section, limit it to two or three points of essential information that help the audience understand the poster topic.

9. **Keep the methods succinct.** Edit the text in the methods section by using short

bullet points to describe how data were gathered, the research protocol, and the statistical methods used for analysis. A flow chart may be helpful in this section.

10. **Limit the amount of text in the results section.** Encourage the authors to display results graphically and eliminate text altogether except for explanatory titles and notes. Try to use graphs and charts instead of tables. Will the meeting-goer really stand there for 10 minutes squinting at a table, trying to understand the relationships between the data points? Not likely. The idea is to make the reader's job easier.

11. **Follow the rules of good graphic display.** Eschew the "chartjunk" so eloquently described—and denounced—by Edward Tufte.<sup>1</sup> Make sure the graphs and

charts in the poster are accurate and do not misrepresent the data by using expanded or compressed axes, misleading axis scales, or inappropriate types of charts and graphs. The poster content should flow logically from one section to the next.

12. **Learn to love white space.** If the authors are trying to cram every last detail into an overcrowded layout, use your editing skills to whittle down the text. You may even be able to persuade them to omit unnecessary details. Help the authors identify the text that is truly essential. An uncrowded poster isn't empty; it's elegant! And it's easier for the audience to understand at a glance. Figure 2 uses white space to good effect.

13. **Check and double-check.** When it comes to proofreading, the more the

**1.0 BACKGROUND**

Most managed care organizations (MCOs)—regardless of organizational structure—are *unable or unwilling* to design and conduct quality improvement studies independently. Common reasons are:

- 1) Lack of an in-house research division
- 2) Lack of knowledge on how to conduct meaningful studies
- 3) Quality improvement studies are not a priority for many MCOs

Accreditation programs such as the National Committee for Quality Assurance (NCQA) heavily weigh the demonstration of quality improvement. As a result, it is advantageous for MCOs to partner with more experienced research organizations, such as those found in many large pharmaceutical companies.

Although MCOs and their partners have different business priorities, their research interests, particularly outcomes assessments, may be similar. Identifying and exploiting these similarities may create a win-win situation. This research is an example of such a partnership.

**2.0 OBJECTIVES**

A national MCO sought to compare the antidepressant prescribing patterns of primary care physicians (PCPs) and psychiatrists.

**3.0 METHODS**

**3.1 Data Source**

- Cross-sectional retrospective analyses using databases from the MCO and its behavioral health subsidiary:
  - Prescription
  - Medical
  - Eligibility

**3.2 Study Design**

- Retrospective, longitudinal and cross-sectional
- Study period January 1, 1995 through May 31, 1996
- Study population
  - Adult patients 18 years and older
  - Received at least one antidepressant prescription

**Using Prescription Claims to Identify Quality Improvement Opportunities**

Primary Author, PhD;<sup>1</sup> Secondary Author, PhD; Third Author, Fourth Author, MD; Fifth Author, PhD

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**4.0 RESULTS**

**4.1 Primary Care Physicians**

Diagnosis	Percentage
No Depression Diagnosis	68.3%
Depression Diagnosis	31.7%

**4.2 Psychiatrists**

Diagnosis	Percentage
No Depression Diagnosis	22.9%
Depression Diagnosis	77.1%

- Overall, 77% of antidepressant Rx's were written by PCPs.
- Most patients of PCPs were *not* diagnosed with depression.
- Most patients of psychiatrists were diagnosed with depression.

Legend:   
 No Depression Diagnosis  
 Depression Diagnosis

**5.0 CONCLUSIONS**

For the MCO, as in most practice environments:

- 58% of antidepressant patients did not have a primary or secondary diagnosis of depression
- 34% of patients treated with antidepressants had a recorded depression diagnosis

Collectively, the findings raise a major issue: Could the failure to capture diagnoses be related to social bias, stigma, or prejudices perceived by patients and/or providers, leading prescribers to "soft code" or not code the diagnosis at all?

**Figure 2. This poster is focused, making one easily grasped point.**

merrier. Ask "naïve readers" who aren't familiar with the subject whether they can understand the content. And don't ignore the obvious. Check everything, from the largest title to the smallest footnote and everything in between. Make sure numbering sequences are sequential; check the data points in the graphics. What you want to avoid is one of those forehead-slapping moments when you hang the poster and notice a blooper in your 6-foot-long title.

**14. Add in extra time for Murphy.** I have worked on poster deadlines so tight that we had to use dummy graphics during poster development and then slip the correct results in at the last minute. Of course, that was when Murphy's Law kicked in: The

analysis job aborted after running 12 hours and had to be restarted the next day. It's too easy to make mistakes when you're in a hurry. And if the worst happens, and you miss the deadline, rush charges for poster production will double or triple the cost.

**15. Have fun!** Editing a poster, or creating one from an abstract, can be challenging, but it also offers a welcome change from routine editorial tasks. It can be exciting to work directly with scientists and researchers as the results of a study emerge. As a valued team member with highly developed editing and communication skills, you can make sure a poster message is communicated clearly, effectively, and unambiguously. As the pace of scientific

discovery increases, that role is more essential than ever. 📌

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