Strategies for Successful Research Posters

Sharable extracts from the workshop for “Presenting Yourself and Your Research,” UTSC

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Adapted from a GPS workshop by Sarah Forbes and Adon Irani
Overview

- Components of a poster presentation
- Purposes and benefits
- Traits and parts of effective posters
- Poster-planning activity
WHAT ARE THE COMPONENTS OF A POSTER PRESENTATION?

WHAT ARE PURPOSES AND BENEFITS OF PRESENTING A RESEARCH POSTER?

- To get feedback and criticism
- To share knowledge and ideas with others within your field
- To share knowledge and ideas with others outside your field
- To network and develop collaborative projects with others outside your institution
- To develop visibility in your field nationally/globally

This (largest) part of today’s session will engage you in learning about and evaluating a number of posters.

We’ll ask you to consider different strategies to decide what makes a poster successful.

Before offering ideas—our own and those gleaned from research—we hope everyone will share responses to our first two examples (next slides).
Antipsychotic Utilization Ratios: Differences among Age, Sex, and Payer Combinations

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4.0 RESULTS

4.1 Study Population

![Chart showing study population demographics]

4.2 Demographics by Payer Type

![Pie chart showing demographics by payer type]

4.3 Antipsychotic Utilizers per 1,000 Eligible Subjects

![Graph showing utilization rates by payer type]

4.4 Antipsychotic Initiators per 1,000 Eligible Subjects

![Graph showing initiation rates by payer type]

5.0 CONCLUSIONS

- Overall, utilization (5.0 per 1,000) and initiation (1.6 per 1,000) ratios were within the prevalence and incidence rates for schizophrenia or other psychotic conditions.
- Gender ratios were not significantly different between males and females, but there were significant differences when comparing payer types.
- Ratios were significantly higher for Medicaid recipients compared to all other payer types.
- Initiating 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.
Example 2

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

4.0 RESULTS

4.1 Primary Care Physicians

- 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.

<table>
<thead>
<tr>
<th>Depression Diagnosis</th>
<th>No Depression Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.3%</td>
<td>31.7%</td>
</tr>
</tbody>
</table>

4.2 Psychiatrists

- 22.9%
- 77.1%

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?
Let’s get everyone’s input on this question:

- Which poster was more effective to you, and what were some reasons why?
What should a poster include? Here’s one view:

• “Pick just one important aspect of the study to highlight”

• “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.”

Tip 1: Pitch your research to your audience

• Who are they? Usually you’ll need to anticipate a range of research areas and interests
• How can you catch the interest of people who may give you
  • 30 seconds to get them to pause?
  • 1 minute to pitch your core message?
• How can your title, layout and figures engage and hold your audience’s interest, in a busy poster session?
• Titles (1 or 2 lines) need to be clear and captivating (readable at 6-10 feet)

• Printed text needs to be placed in columns of relatively short lines

• The poster should tell a story: “Write so your audience can understand why your work is of interest to them, providing them with a clear take-home message that they can grasp in the few minutes they will spend at your poster.”*

Tip 2: Limit the number of words.

• “Once you’ve created your content, read it again to see how many words you can cut, says [Nando] Boero [marine biologist, Università del Salento].”

• “Pretend you’re writing a telegram, and paying for every word, he suggests.”*

• Colin Purrington, a biologist whose online guide to poster design is often cited, recommends a limit of around 800 words.

*From Zielinska, “Poster Perfect”; see final slide for this source and for Purrington.
Tip 3: Carefully consider layout and font.

• Landscape or portrait orientation?

• Type of colours (background and other) to use and avoid

• Font size: “85pt for the title, 36-44 for the headers, and 24-34 for the body text”*

• Sans serif for titles/headings, serif for text

• Why high resolution images matter

[Image of vector and raster circles]

Image from: http://www.deviantart.com/browse/all/?section=&global=1&q=vector+vs+raster&offset=0

• Why font sizes should vary

Title
100 point bold

Authors
36 point bold

Sub-titles
54 point bold

main text
32 point

references
28 point

Font sizes for posters shown at http://www.tc.umn.edu/~schne006/tutorials/poster_design/design_01.htm
Tip 4: Plan and label your visuals with great care.

• Perhaps more than your striking title, your poster’s visual elements will attract and engage your audience

• Questions to consider:
  • Where is text needed?
  • Where can a chart or other type of figure work instead?
Presenting complex data using text:

“Between 1970 and 2000, the structure of families changed in two ways. In 1970, 85 percent of families had two parents, but in 1980 that number declined to 77 percent, then to 73 percent in 1990, and to 68 percent in 2000. The number of one-parent families rose, particularly families headed by a mother. In 1980 that number rose to 18 percent, in 1990 to 22 percent, and to 23 percent in 2000. There were some marginal changes among single fathers (headed 1 percent of the families in 1970, 2 percent in 1980, 3 percent in 1990, and 4 percent in 2000). Families headed by no adult remained stable at 3-4 percent.”

• This is the same information presented as a table:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Parents</td>
<td>85</td>
<td>77</td>
<td>73</td>
<td>68</td>
</tr>
<tr>
<td>Mother</td>
<td>11</td>
<td>18</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Father</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>No adult</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

The importance of charts or figures:

• Scholarly guides to research poster design all stress the value of various types of charts and figures

• The effective posters we’ve discussed today illustrate different possible approaches

• All clearly label their graphics but also follow the advice Jane Miller quotes:

  “let your figures do the talking”*

We’ve seen that effective poster presentations

- are highly interactive
- captivate the audience’s interest in the researcher’s core question and findings
- use a clear, bold title and engaging, well-labeled visuals to draw readers in
- tell a research story that is understood and valued by people with various research backgrounds and interests
STARTING A POSTER PLAN

• Here’s your chance to reflect on and apply the ideas we’ve discussed

• Using the handout we’ve provided, think about a current research interest or project you could develop as a poster

• Follow the suggested steps, and then we’ll reconvene to debrief and discuss any final questions
REFERENCES
(not shown in previous slides)

Slide 3 image (and a recommended brief guide):

Many more tips beyond those in slides 16-24 are presented in Colin Purrington’s online guide to poster design and presentations: