How to Make a Poster

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Associate Director, MSA
Anatomy of a Poster

General Guidelines
"The MSA is the best educational program ever."
Criterion for Judging

- Significance
  - Question asked
  - Background Literature review
- Methodology
- Results
- Conclusions/Limitations
- Clarity
- Disclosure
Significance

Why did you do the study?
What is the specific question you are asking?
What does it add to what we know?
"The MSA is the best educational program ever."
Significance

- Background literature review is used to show:
  - The topic is important
  - This project is creative and new versus retread of something old

- Main question/hypothesis is clearly stated
Methodology
How did you go about answering your question?
"The MSA is the best educational program ever."
Methodology

- Clearly state your methods
- Depending on methodology, may include:
  - Sample design
  - Literature search strategy
  - Statistical Analysis
  - Selection of design/composition
Results

What did you find out?
"The MSA is the best educational program ever."
Results

- Present data highlights
  - Best to use charts/graphs/photos rather than a lot of text, if applicable
  - Text boxes for quotes, if applicable
- Do include summary information or key findings
- Do NOT include every little piece of data gathered
Conclusions

What do the results mean? How do they compare to what we already know? What are the implications?
"The MSA is the best educational program ever."
Conclusions

- Summary of main findings
- Conclusions
  - What do the results tell you?
- Implications
  - In the context of what we already know, what does this mean?
- Discuss limitations
- Future Directions
Clarity

Is the poster appealing?
Quality visuals, consistent formatting, major concepts highlighted, reader-friendly fonts
INTRODUCTION

BACKGROUND:
- Accurate sexual history-taking and documentation can help prevent the transmission of infectious diseases.
- Previous studies indicate low rates of sexual history documentation among Internal Medicine (IM) residents.
- To assess the patient, resident and visit factors that contribute to whether any component of a sexual history was documented at healthcare maintenance visits.

STUDY SETTING:
- Two outpatient continuity clinics at the University of Colorado over a 7-month period.

CHART REVIEW:
- Healthcare maintenance visit notes of RV-2 and RV-3 IM residents examined for any documentation of sexual history, patient demographic and health factors, and visit factors.
- Resident factors obtained from residency program.

STATISTICAL ANALYSIS:
- Relationships between sexual history documentation and resident, patient and visit factors were assessed using chi-square test of independence or Fisher's exact test.
- Multivariable logistic regression analysis was conducted to determine significant and independent factors associated with sexual history noted on the chart.

RESULTS:

- Factors that Influence Sexual History-Taking Practices of Internal Medicine Residents
- D.F. Smith, R.S. Doe, S.R. Doe, I.A. Doe
- Division of General Internal Medicine, Department of Medicine, University of Colorado Denver School of Medicine; University of Colorado HHS Primary Care Research Fellowship

<table>
<thead>
<tr>
<th>Chart with Documented Sexual History by Patient Age</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Group</td>
<td></td>
</tr>
<tr>
<td>Charts with Documented Sexual History by Patient Age</td>
<td></td>
</tr>
</tbody>
</table>

- Age group: 20-29, 30-39, 40-49, 50-59, 60-69, 70+

DISCUSSION

- Younger patient age and symptoms were significant factors predictive of documentation of sexual history.
- The academic setting may underestimate actual history-taking practices.
- Small sample size for specific medical conditions.

CONCLUSIONS:
- Future educational intervention on sexual history-taking should focus on patients and visit types often neglected by residents.
- The necessity of a sexual history in symptomatic patients and any patient with a concern of a sexually transmitted infection needs to be emphasized.

REFERENCE:
Sample “Clean” Posters
Proposal to Study the Effects of Woody and Herbaceous Vegetation on Streambank Erosion

Tess Wynn, Virginia Tech

Justification for Study

Streambank erosion can be a large source of sediment, as much as 80% of the total watershed sediment yield [1, 2]. Sediment is the primary pollutant of rivers [3, 4].

Streambank erosion also causes
• Increased flooding
• Increased need for dredging
• Undermining of in-stream structures
• Degradation of reservoirs

Objectives of Proposed Research

Compare the effects of woody and herbaceous vegetation on
• Stream hydraulics at bankfull discharge
• Soil moisture and temperature regimes
• Soil strength

Methods

(1) Perform monitoring at two field locations on a stream near Blacksburg, Virginia. Locations will have sections with herbaceous and wooded riparian buffers.
(2) Continuously monitor the following:
• Air temperature and precipitation
• Stream stage
• Soil moisture and temperature
(3) Sample the following:
• Suspended sediment (weekly)
• Bank material (texture, friction angle, root area ratios)
(4) During two storms with 1-2 year return periods, measure the following:
• Stream velocity and discharge
• Sediment concentration
• Bedload

Background: Grass Versus Trees

Research has shown that streams are significantly narrower with grass buffers than with forested buffers [5, 6]. The photos below support this finding.

References


Acknowledgments:

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THE DILEMMA OF DISCLOSURE: PATIENT PERSPECTIVES ON GAY/LESBIAN PROVIDERS

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¹University of Colorado at Denver and Health Sciences Center, Department of Medicine, Division of General Internal Medicine
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Background
- Discrimination towards gay and lesbian (gay/lesbian) patients by healthcare providers has been well documented.
- No study has determined if patient behavior would change when seeing an "out" gay/lesbian provider or how patient characteristics affect these perspectives.

Methods
- Cross-sectional, mailed, anonymous, self-administered survey using a random national sample providing self-report of preferences and changes in behavior based on provider gender and sexual orientation.

Statistical Analysis
- Dependent variables were dichotomized based on clinical relevance (strongly disagree, somewhat disagree, neutral vs. somewhat agree, strongly agree).
- Chi-square tests for preliminary analysis. Independent variables associated with dependent variables at a level of p < 0.20 were entered into a forward logistic regression.
- Repeated measures analysis was conducted using the Generalized Estimating Equations method including a test for the provider gender by sexual orientation interaction in the stratified analysis.

Percent "somewhat/strongly agree" to following survey items

<table>
<thead>
<tr>
<th>Item</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important my healthcare provider is same gender as me</td>
<td>111 (22.5)</td>
</tr>
<tr>
<td>Important my healthcare provider is same sexual orientation as me</td>
<td>172 (34.5)</td>
</tr>
<tr>
<td>My healthcare provider's gender is important to me</td>
<td>172 (34.5)</td>
</tr>
<tr>
<td>My healthcare provider's sexual orientation is important to me</td>
<td>172 (34.5)</td>
</tr>
<tr>
<td>Providers should tell patients about their sexual orientation</td>
<td>78 (15.4)</td>
</tr>
<tr>
<td>Patients should be informed if their provider is gay/lesbian</td>
<td>124 (25.1)</td>
</tr>
<tr>
<td>The sexual orientation of my healthcare provider is private</td>
<td>342 (69.7)</td>
</tr>
<tr>
<td>More comfortable discussing issues related to personal relationships with provider of same sexual orientation</td>
<td>214 (43.0)</td>
</tr>
<tr>
<td>More comfortable discussing issues related to sexual functioning with provider of same sexual orientation</td>
<td>251 (52.5)</td>
</tr>
<tr>
<td>If I found out my healthcare provider were gay/lesbian, I would change providers</td>
<td>146 (30.4)</td>
</tr>
<tr>
<td>If a clinic employed openly gay/lesbian healthcare providers, I would change to a different practice</td>
<td>176 (35.4)</td>
</tr>
<tr>
<td>Prefer chaperone for all genital exams</td>
<td>184 (37.3)</td>
</tr>
<tr>
<td>Prefer chaperone if provider heterosexual male</td>
<td>191 (38.7)</td>
</tr>
<tr>
<td>Prefer chaperone if provider gay male</td>
<td>261 (51.2)</td>
</tr>
<tr>
<td>Prefer chaperone if provider heterosexual female</td>
<td>191 (38.7)</td>
</tr>
<tr>
<td>Prefer chaperone if provider lesbian</td>
<td>220 (45.0)</td>
</tr>
</tbody>
</table>

Demographics | Value
---|---
Mean age (SD) Y | 59.4 (15.8)
Male | 227 (59.3)
Heterosexual | 472 (66.5)
Race
White/Caucasian | 427 (67.7)
Non-Hispanic | 471 (65.5)
Education
High school or less | 111 (22.6)
Some college | 156 (23.7)
College graduate | 117 (22.6)
Post-graduate | 133 (20.0)
Catholic/Christian | 369 (52.1)
Affiliated with military (active, retired, reserve, spouse/partner) | 57 (11.7)

*% (n) unless otherwise noted; N = 383 respondents

Results
- Response rate = 32% (202/645)
- One-third of respondents would change providers if they found out their provider was gay/lesbian.
- One-third of respondents would change practices if they found out an openly gay/lesbian provider was employed by the practice.
- Predictors of chaperone preference:
  - Male gender
  - Less education
  - More attendance at religious service
  - Predicts of chaperone preference:
    - Less likely to prefer chaperone
      - Heterosexual provider
    - Male respondent
    - More likely to prefer chaperone
      - Catholic/Christian religion
      - Region (Mid-Atlantic, South)
      - No prior gay/lesbian provider
    - Female respondents are more likely to prefer chaperone with male providers.
    - Male respondents are more likely to prefer chaperone with gay/lesbian providers.

Limitations
- 32% response rate, may reflect response bias.
- Sample more male and educated than 2000 US Census data.
- Response to hypothetical situation may not reflect actual behavior.

Implications
- Gay/lesbian providers and their practices may be adversely impacted if patients became aware of the provider's sexual orientation.
- Chaperone preferences may change based on provider gender and sexual orientation.
- Clinics may need to develop protocols to adjust to chaperone preference.

Figure 1a: Effect of hypothetical provider sexual orientation by gender on chaperone preference for female respondents

Figure 1b: Effect of hypothetical provider sexual orientation by gender on chaperone preference for male respondents
Sex after 50?
Factors that Influence Sexual History-Taking Practices of Internal Medicine Residents
D.F. Loeb; R.S. Lee; S.R. Cali; I.A. Binswanger; E.M. Aagaard

1Division of General Internal Medicine, Department of Medicine, University of Colorado Denver School of Medicine; 2University of Colorado HRSA Primary Care Research Fellowship

INTRODUCTION

BACKGROUND
- Accurate sexual history is necessary for appropriate sexually transmitted infection (STI) screening and counseling on safer sex, family planning, and sexual dysfunction
- Previous studies indicate low rates of sexual history documentation among Internal Medicine (IM) residents

AIM
- To assess the patient, resident and visit factors that contributed to whether any component of a sexual history was documented at healthcare maintenance visits

METHODS

STUDY SETTING
- Two outpatient continuity clinics at the University of Colorado over a 7-month period

CHART REVIEW
- Healthcare maintenance visits of FGY-2 and FGY-3 IM residents examined for any documentation of sexual history, patient demographic and health factors, and visit factors
- Resident factors obtained from residency program

STATISTICAL ANALYSIS
- Relationships between sexual history documentation and resident, patient and visit factors were assessed (Table 1)
- Either chi-square test of independence or Fischer’s exact test was used for analysis of categorical data
- Independent samples t-test was used for continuous variables
- Analyses with p < 0.15 on univariate analysis were included in separate multivariate analyses for patient and visit factors
- Generalized Estimating Equations (GEE) for repeated measures were used to account for the repeated measures among residents

RESULTS

- 360 charts reviewed
- Mean of 14.8 charts (range 8-29) per resident
- Documentation more likely with younger patient age; presence of genitourinary or abdominal symptoms; and female residents
- Documentation of sexual history less likely with absence of documentation of marital status and resident in hospitalist training track
- Patient concern for STI was not predictive of documentation of sexual history

DISCUSSION

KEY FINDINGS
- Younger patient age and symptoms were patient factors predictive of documentation of sexual history

LIMITATIONS
- One Academic training site with 2 clinic sites
- Chart review may underestimate actual sexual history-taking practices
- Small sample size for specific medical conditions

CONCLUSIONS
- Future educational intervention on sexual history-taking should focus on patients and visit types often neglected by residents, specifically older, asymptomatic adults
- The necessity of a sexual history in symptomatic patients and any patient with a concern of a sexually transmitted infection needs to be emphasized

REFERENCE
Disclosures

Does the presenter provide a disclosure statement for funding support and/or conflicts of interest?
Disclosures

- Dr. Y has research sponsored by Pfizer, Merck, GlaxoSmithKline and is on the speaker’s bureau of Takeda, Abbott, AstraZeneca, and Genzyme.

- Dr. X has no conflicts of interest.

- This may be on a separate piece of paper attached to poster board.
General Tips

- Use bullets instead of long sentences or paragraphs
- Keep it clean and simple
- Aim for 40 point font in final printout
  - Should be easily readable from 4 feet away
  - Acknowledgements, Disclosures, and References may be smaller font (or on a separate piece of paper)
- **NOTE:** IF you elect to have your poster printed, make sure everything lines up
  - Small errors are magnified when translated from PowerPoint slide into a 36 by 48 inch poster
Available on MSA Website:

- Poster Assessment Rubrics
- Capstone Poster Instructions
- Sample Posters
- PowerPoint poster templates
Questions? Need help?
Contact your MSA Associate Director