

# **How to Write an Abstract**

2022 STD Prevention Conference Scientific Program Committee

# What Is a Scientific Abstract?

- A condensed version or summary of your research study
- A means of conveying what was done and why, what was found, and the implications

# Abstracts Should Be...

- Complete — cover the major parts of the project, study, or analysis
- Concise — contain no excess wordiness or unnecessary information
- Clear — readable, well organized, and not too jargon-laden
- Cohesive — flow smoothly between the parts

# Why Writing a Strong Abstract Is Important

- Helps the conference organizer decide if your project/study/analysis fits the conference criteria
- Helps the conference audience decide whether to attend your presentation

# The Title

- The title should clearly describe what your abstract is about, but also be interesting enough to encourage readers to want to learn more
- Often, your title helps conference attendees decide if they want to attend your talk or visit your poster

# Background Section

- Should explain why your abstract is important or novel
- Provide the context or explanation for doing the study – not the whole history but the current situation
  - What is already known about the subject?
  - What is not known, and hence what you intend to examine?
- Should state the aim of the study
  - What are you hoping to find out or what is your hypothesis?
- 1-3 sentences

# Example: Title & Background

## Weak Example

**Title:** Sexual risk among MSM

**Background:** Research will be presented on MSM to determine if behaviors changed recently while syphilis increased among MSM.

## Why?

- Obscure title
- No information about what is already known, or not known
- No information provided on previous studies, settings, or location

# Example: Title & Background

## Strong Example

**Title:** Sexual risk among men who have sex with men (MSM) in a national probability sample: Prevalence of risky behaviors and temporal trends, UK 2012

**Background:** Research in the UK has found that samples from community venues and clinics overestimated sexual risk among all MSM compared to population-based samples. There is little data on sexual risk among MSM in the US from population-based surveys and no data on temporal trends in sexual risk. We examined nationally representative data on MSM to determine if behaviors changed recently while syphilis increased among MSM.



# Methods Section

- Should explain what you did
- Specific population studied
  - Include sampling frames and response rates when appropriate
  - How many people were approached, how many participated?
- Quantitative or qualitative methods
  - Specific statistical analyses conducted
  - Measures and outcomes explored
- Time from and duration of the study
- 3-8 sentences

# Example: Methods

## Weak Example

**Methods:** An intervention was delivered and evaluated. One intervention component sought to improve students' awareness and utilization of condom availability programs (CAPs) in schools by working with key school personnel, particularly nurses, to more effectively implement district CAP policies. Six intervention and six control high schools participated in the study. Analyses included survey data from high school males.

## Why?

- No sample size included
- No description of the statistical analyses used
- No date or time frame included
- No geographic location listed

# Example: Methods

## Strong Example

**Methods:** A multi-level intervention was delivered and evaluated across five years (2006-2011) in a large public school district in Los Angeles, California. One intervention component sought to improve students' awareness and utilization of condom availability programs (CAPs) in schools by working with key school personnel, particularly nurses, to more effectively implement district CAP policies. Six intervention and six control high schools participated in the study. A total of 15,936 students were eligible for the study. Final analyses included survey data from 13,733 high school males across five years (T1 – T5). A mixed model logistic regression analysis was used to test for an intervention effect on males' reports of services sought from the school nurse. Random effects on the student level were included to control for repeated measures on the same student.

# Results Section

- The *Results* section should explain what you found
- Describe your main findings with data
  - The intervention group was more likely than the control to use condoms – **LESS GOOD**
  - The intervention group was more likely than the control to use condoms ( $p < 0.01$ ) - **BETTER**
  - The intervention group was more likely than the control to use condoms (45% vs. 30%,  $p < 0.01$ ) - **BEST**
- Concisely describe how your results pertain to your study aim or hypothesis
- Statements such as “to be completed” or “to be presented” are not acceptable
- Remember to report non-significant differences too
- Usually the longest section, 3-8 sentences

# Example: Methods & Results from Qualitative Abstract

## Weak Example

**Methods:** In-depth interviews were conducted with episodic substance-using men. Themes and patterns were identified among transcribed interview recordings. Multiple coders were used to identify themes and patterns and inter-coder reliability was assessed.

**Results:** Participants were ethnically diverse and reported UAI with concurrent binge drinking. Analysis of in-depth interviews specifically with those engaging in UAI and binge drinking, revealed that men 1) face challenges navigating community normative drinking expectations, such as peer pressure to drink and “hook up” with sexual partners, 2) believe that binge drinking and episodic substance use enhance experiences of disinhibition, euphoria, and spontaneous sexual behavior, and 3) express a desire for intimacy and ability to trust anonymous partners, relying on partner-focused responsibility (an assumption that partners will disclose if HIV-positive or use a condom to protect the participant).

## Why?

- Number of interviews missing
- Descriptive summary of sample excluded
- No mention of analytic approach

# Example: Methods & Results from Qualitative Abstract

## Strong Example

**Methods:** In-depth interviews were conducted with 20 episodic substance-using HIV-negative MSM in San Francisco. Using NVivo qualitative software, an inductive content analysis approach was used to identify themes and patterns (such as pathways for risk behavior) among transcribed interview recordings. Multiple coders were used to identify themes and patterns and inter-coder reliability was assessed.

**Results:** Participants were ethnically diverse (65% non-white) and 85% (n=17) reported UAI with concurrent binge drinking during the past 3 months. Analysis of in-depth interviews specifically with those engaging in UAI and binge drinking, revealed that men 1) face challenges navigating community normative drinking expectations, such as peer pressure to drink and “hook up” with sexual partners, 2) believe that binge drinking and episodic substance use enhance experiences of disinhibition, euphoria, and spontaneous sexual behavior, and 3) express a desire for intimacy and ability to trust anonymous partners, relying on partner-focused responsibility (an assumption that partners will disclose if HIV-positive or use a condom to protect the participant).

# Example: Results from Quantitative Abstract

## Weak Example

**Results:** A small percentage of men reported a male partner in both study years. Mean number of lifetime male partners did not differ across time or by race. Of men who ever had a male partner, 41.3% had a male partner in the past year in 2006-08 similar to 46.5% in 2002. Over half of MSM had multiple partners in 2006-08 similar to 2002. Condom use did not differ across time. In 2002, 21.9% of MSM also had a female partner in the past year compared to only 11.2% in 2006-08. Among these MSM, condom use at last sex with a male or female partner significantly decreased ( $p<.01$ ).

## Why?

- Percentages and n's not included
- P-values missing
- Vague language without reference to data when available.

# Example: Results from Quantitative Abstract

## Strong Example

**Results:** In 2006-08, 5.2% of men reported having a male partner in their lifetime (n=357); this estimate did not differ from 2002 (6.0%, n=375, p=.23). Mean number of lifetime male partners did not differ across time (p=.51) or by race (p=.81). Of men who ever had a male partner, 41.3% had a male partner in the past year in 2006-08 similar to 46.5% in 2002 (p=.38). Over half of MSM had multiple partners in 2006-08 similar to 2002 (p=.22). Condom use did not differ across time. In 2002, 21.9% of MSM also had a female partner in the past year compared to only 11.2% in 2006-08 (p=.04). Among these MSM, condom use at last sex with a male or female partner significantly decreased to 22.3% in 2006-08 compared to 54.8% in 2002 (p<.01).



# Conclusions Section

- The *Conclusions* section should explain your main findings and why they are important
- Describe the primary take-home message(s)
- Conclusions should be reasonable and supported by the findings
- Concluding statements such as “the results will be discussed” are NOT acceptable
- 2-3 sentences

# Examples: Strong Results & Conclusions

**Results:** Between 2006 and 2011, 4,255 partners were elicited from syphilis cases and 3,607 partners from HIV cases. Of these partners, 645 from syphilis index cases and 691 from HIV index cases only had internet contact information. Overall, 47.1% and 46.6% of the syphilis and HIV internet partners, respectively, were successfully contacted and resulted in more contact information being gathered. Of the syphilis internet partners with updated contact information, 129 (42.4%) were either presumptively treated or brought to treatment and represented an increase of 7.2% in successful partner service outcomes. Among the HIV internet contacts, 55 (17.1%) were tested for HIV; a 7.9% increase in successful partner outcomes.

**Conclusions:** By developing and maintaining IPS infrastructure in San Francisco, a substantially larger proportion of partners were able to be contacted by Disease Intervention Specialists (DIS) and successful outcomes of partner services increased for both syphilis and HIV.

# Examples: Strong Results & Conclusions

**Results:** In the intervention as compared to the control condition, statistically significant increases were seen for sexually active girls in a number of areas: ever receiving birth control from a doctor or nurse (T2-T5; AOR = 2.10, CI = 1.07 – 4.14), seeing a doctor or nurse for STD testing or treatment in the past year (T1-T5; AOR = 2.15, CI = 1.17 – 3.94), and ever receiving a pregnancy test (T1-T5; AOR = 2.68, CI = 1.30 – 5.52, T2-T5; AOR = 2.17, CI = 1.05 – 4.48, T3-T5; AOR = 2.10, CI = 1.04 – 4.24). For intervention as compared to control, sexually active boys were more likely to report ever receiving birth control from a doctor or nurse (T2-T4; AOR = 2.73, CI = 1.33 – 5.58).

**Conclusions:** The Project Connect Health Systems Intervention was successful in linking sexually active adolescents to sexual and reproductive health care. Results were particularly striking for girls. As opposed to attempting to change provider behavior, this approach capitalizes on existing, adolescent-focused expertise in the local provider community. It is a low-cost, sustainable strategy for effectively linking adolescents to much needed care.

# Examples: full abstracts in $\leq 300$ words

## Strong Quantitative Abstract

### Prevalence of *Chlamydia trachomatis* —United States, 2007–2010

**BACKGROUND:** Chlamydia is the most commonly reported infection in the United States with over 1.4 million cases reported in 2011. As chlamydia is usually asymptomatic and can lead to adverse reproductive outcomes, routine screening is recommended for sexually-active young women. However, it is likely that many infections are not identified and case reports underestimate true morbidity.

**METHODS:** We estimated prevalence of chlamydial infection by sex, age, race, and self-reported sexual activity (measured through audio computer-assisted self-interview) with corresponding 95% confidence intervals (CI) using data from the most current National Health and Nutrition Examination Surveys (2007-2010); data from the 2011–2012 survey will be added if available before the conference. Estimates were weighted to be nationally representative and to account for oversampling and nonresponse. We estimated the number of infections in the population by multiplying census estimates by weighted prevalence estimates.

**RESULTS:** Among the 5,610 participants aged 14–39 years tested for chlamydial infection, 1.7% (95% CI: 1.3%, 2.0%) were infected, suggesting that there are 1.8 million prevalent infections nationally (range: 1.4–2.1 million). Among the 48% of female adolescents (aged 14–19 years) who reported being sexually-active, prevalence was 7.7% (95% CI: 4.7%, 10.8%). Prevalence among sexually-active, non-Hispanic black female adolescents (17.5% (95% CI: 11.0%, 24.0%)) was higher than prevalence among sexually-active, non-Hispanic white female adolescents (4.9% (95% CI: 0.4%, 9.4%)).

**CONCLUSIONS:** Based on findings from a nationally-representative survey, we document a large burden of prevalent chlamydial infections suggesting that many infections are not diagnosed and reported. High prevalence among sexually-active young women suggests that routine screening is warranted and substantial racial disparities highlight the need for targeted interventions.

# Examples: full abstracts in ≤300 words

## Strong Qualitative Abstract

### **What Do Gay Men Say About Syphilis? Perceptions of Community Members and Health Care Providers Regarding Syphilis Increases in Portland, Oregon**

**BACKGROUND:** Syphilis cases increased nearly ten-fold from 2008-2013 among residents of Multnomah County, Oregon; the majority (94.2%, as of 2013) were among men who have sex with men (MSM). These increases persist despite intensified public health efforts.

**METHODS:** During a one-week rapid ethnographic assessment, trained interviewers conducted semi-structured qualitative interviews with community members, health care providers, and persons representing agencies and businesses serving MSM. Informants discussed community awareness of syphilis, perceived reasons underlying syphilis increases, and recommendations for improving prevention efforts. Providers discussed syphilis screening, diagnosis, and treatment practices. Data were analyzed using NVivo10.

**RESULTS:** Fifty-four interviews were conducted: 19 with MSM, 52.6% (10/19) were HIV positive and 36.8% (7/19) were treated for syphilis in the previous two years; 13 with HIV and primary care providers (PCPs), and 22 with agency and business representatives. Syphilis increases were attributed to lack of awareness and knowledge of syphilis symptoms, sequelae, and transmission routes. Several men experienced treatment delays due to misdiagnoses by PCPs, or difficulty obtaining bicillin. Syphilis is considered “treatable,” by many MSM and not a major concern while emphasis on condom use has declined, and serosorting by HIV status is common. Portland’s gay “community” is undergoing change and fragmentation with shifts in the way men socialize. Informants said that social media sites contribute to syphilis by facilitating connections among persons participating in high-risk sexual activities; methamphetamine is considered a contributing factor.

**CONCLUSIONS:** Despite public health efforts, MSM in Portland still need basic information about syphilis. Primary care providers may benefit from training focused on syphilis diagnosis and treatment. More emphasis on primary STD prevention is warranted, but traditional outreach approaches may no longer be effective. Multi-channel syphilis awareness campaigns targeted towards multiple MSM sub-groups should be considered; more research is needed to determine effective strategies for reaching younger men.

# STD Conference Abstract Requirements

- 300 word limit
- Format
  - Background
  - Methods
  - Results
  - Conclusions
- Do NOT include:
  - Grant acknowledgements
  - Literature references
  - Copyright or trademark symbols

# Additional Tips & Resources

- Read the abstract submission instructions
- Don't wait until the last day to prepare
- Have someone with experience review your abstract
- Write in active voice: “We examined...We tested...We found...”
- Double check for spelling errors and typos
- Meet the word count limitation
- Only use acronyms after you have defined them

# References & Additional Resources

- Andrade, C. How to write a good abstract for a scientific paper or a conference presentation. *Indian J Psychiatry*. 2011 Apr-Jun:53(2);172-175.
- Pierson, D. How to Write an Abstract That Will Be Accepted for Presentation at a National Meeting. *Respiratory Care*. 2004 Oct:49(10);1206-1212.
- Vrijhoef HJM, Steuten LMG. How to write an abstract. *EDN Autumn*. 2007:4(3);124-127.