

## Writing an Abstract and Preparing a Scientific Poster or Presentation

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Adapted from a talk developed by  
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## What's an Abstract?



- A brief comprehensive written summary of a research project
- Submitted to international or national professional meetings
  - American Society for Microbiology (ASM)
  - Infectious Disease Society of America (IDSA)
  - Society for Healthcare Epidemiology of America (SHEA)

## Why Should I Write an Abstract?



- You should attend at least one meeting a year
  - Listen to presentations; read posters
  - Network
    - Research collaborations
    - Future job opportunities
- Gives you purpose and visibility at the meeting
- Part of your academic advancement
  - C.V.
  - National Reputation

## Writing: A Good Abstract



- Should have a single objective
  - On one of the meeting's key topics if possible
- Should be logically organized
- Use clear and concise language
- Focus on why your research is Interesting, Novel and/or Relevant (FINER)
  - Make people want to attend your podium or poster session

## 2001 SHEA Session Titles



- Methicillin-Resistant *S. aureus*
- Influenza
- Nosocomial Infections in Pediatrics
- Outbreaks
- Vancomycin Resistant Enterococci
- Cost, Staffing and Adverse Events
- Surgical Site Infections

## Outline of Abstract



- Title
- Authors (Institutional affiliation)
  
- Background/Objective
- Methods
- Results
- Conclusion

## Writing: Choosing a Title

- Clearly relate to the purpose of the session
- Reflect the study design, major variables and population in the study
- Be short
  - Most conferences have a length in characters
  - check the society website or conference brochure
- Do not begin with "A" or "The"

## Writing: Title Examples

- Surveillance Cultures to Control an MRSA Outbreak in a NICU
- Outbreak of Hemodialysis Vascular Access Site Infections Related to Malfunctioning Cuffed Tunnel Catheters
- Cluster of Intra-Operative Deaths in a Liver Transplant Center Associated with the Use of Solvent/Detergent Plasma, California 2000
- Hand Contamination Before and After Different Hand Hygiene Techniques

## Example of Abstract Title

- Methicillin-Resistant Staphylococcus aureus (MRSA) – An Emerging Pathogen in the Community
- T KHOIE, S SHURLAND, OC STINE, JJ JOHNSON, D JERRARD, J FLANAGAN AND M ROGHMANN
- VA Maryland Health Care System and University of Maryland, Baltimore MD

## Authorship Issues

- You should be the presenter\* and first author (and do the vast majority of the work)
- Include all faculty, fellows, residents, students who contributed to the project
- Co-authors must approve the abstract
- Good communication appreciated
  - Give deadlines, e-mail disposition with citation for CV (if accepted)

## Writing: Background / Objective

- Must contain the overall purpose of your project or research problem
- Include a very brief description of previous research in the area
- State how your project adds to what is already known

## Example of Abstract Background

- **Background:** MRSA, traditionally associated with inpatient (or hospital acquired) infections, is now an emerging community pathogen. Our emergency room (ER) physicians have noticed an increase in patients with outpatient MRSA infections. Our objectives were (1) to determine the local incidence of outpatient MRSA infections and (2) to describe patients with these infections and their isolates.

## Writing: Methods

- The research design
  - Observational, cohort, case-control, randomized trial
  - Study setting: community, hospital, ambulatory
  - Study population: Eligibility criteria
- List dates when study was completed
- Sample and data collection methods
- Describe outcome measures and statistical methods used to compare groups in your study

## Example of Abstract Methods

- **Methods:** Patients with outpatient MRSA infections were obtained from a list of outpatient visits in which patients had MRSA isolated from a culture for the first time. Denominator data for all outpatient encounters and those for skin and soft tissue infections (SSTI) by ICD-9 code were obtained from administrative records. All other variables were obtained from chart review.

## Writing: Results

- Give the number of patients in your study
  - $n = 400$  is better than  $n = 40$
- Emphasize the important or interesting results
- Include statistical comparisons in this section to tell the readers if your findings are statistically “significant”

## Example of Abstract Results I

- **Results:** The incidence of new MRSA infections in our emergency department has increased significantly from 1.1 per 1000 ER encounters in FY01 to 4.0 per 1000 ER encounters in FY04 ( $p < 0.01$ , Chi-square). In addition, the incidence of SSTI diagnosed in the ER has significantly increased from 26 per 1000 ER encounters in FY01 to 54 per 1000 ER encounters in FY04 ( $p < 0.01$ , Chi-square).

## Example of Abstract Results II

- 90 patients presented with outpatient MRSA infections during FY04. Chart review revealed that 52 (58%) of these patients had no prior contact with the healthcare system in the year prior to their infection and the MRSA was likely acquired in the community. 91% of outpatient MRSA infections were SSTI. Molecular typing of these isolates revealed that 77% were a single clonal type (*spa* 008). This clone was more common in the patients with no risk factors for hospital acquisition compared with patients with risk factors for hospital acquisition (90% vs. 66%,  $p = 0.02$ , Fisher's Exact test). Preliminary PFGE results of *spa* type 8 isolates show that at least two thirds are USA300.

## Writing: Conclusion

- Reiterate the most important finding(s) supported by the data in your “Results” section
- Summarize the impact of these findings to your specific field or area
  - How does this change things? What are the future implication on future studies? practice? policy?

## Example of Abstract Conclusion



- Conclusions: Outpatient MRSA infections are increasing and appear to be leading to more *S. aureus* SSTI rather than replacing MSSA infections. A single clone appears to be responsible for the majority of community acquired infections.

## Common Problems



- Abstract is too long
  - Check the meeting website of "Call for Abstracts", usually # characters with spaces
- Incomprehensible Abbreviations
- Lack of organization/structure/headings
- Inconsistent words in Title/Abstract
- Preparation was rushed, sloppy - start early!

## Other Abstract Hints



- Avoid jargon and use short sentences
- Use active and NOT passive voice
  - "the study tested" and not "it was tested by the study"
- Use past tense to describe what was done
- Use present tense to describe statistical results that are still applicable
- Be "cautious" in conclusions: "findings suggest that"

## Your Abstract is Accepted!



- If your abstract is accepted for presentation...
  - Book your hotel and flights
  - Register for the meeting
  - Get your poster presentation or oral presentation ready
    - What decides whether you get a poster or a presentation?
- Prepare ahead of time!

## Oral Presentation: Slides



- Make slides clear –
  - Big rooms: Big text, dark background, light text
  - Smaller rooms: Big text, light background, dark text
  - Maximum 6-8 lines per slide
  - Use 4-5 bullets per slide
  - Include your own tables, bar graphs if possible
  - Check spelling (by hand)
- Acknowledge others during the talk
- Never put presentation in your luggage!

## Oral Presentation: The Talk



- Find out the rules: Most meetings allow 10 minutes for slides and 5 minutes for questions
  - Spend about 1 1/2 slide per minute
    - 30 seconds for a simple slide
    - 2 minutes for a complex slide
- Rehearse with peers
  - Speak slowly and toward the microphone
  - Time your presentation
  - Practice questions

## Oral Presentation: Questions



- Be confident: After all of your work, you are an expert in the field
- Repeat the question back to the audience before answering
  - Think before answering
- Don't make up the answer
  - Say "I don't know"
  - You don't have to answer....

## Poster Presentations II



- Find out the rules:
  - Most conferences allow 4 x 8 feet
- Typically 15-20 slides
  - Make a large title for board's top
  - Use pictures, figures, tables and graphs
  - Columnar organization
  - Three foot rule

## Poster Presentations II



- Print whole poster on sheet
  - ~\$200
  - Requires tube to carry
  - Needs lead time
  - Looks very professional
- Print out each slide in color and tack to poster-board background
  - Cheap
  - Fits in a briefcase
  - Heavy
  - Takes longer to put up
  - Easy to change as needed

## Other Poster Presentation Hints



- Introduce yourself to people during your poster presentation time
  - Invite your mentor and make him/her introduce you to people
- Bring your business cards to hand out
- Bring reprints, handouts, tacks (if applicable)

## References



- Other fun advice:  
<http://www.swarthmore.edu/NatSci/cpurrrin1/osteradvice.htm>
- Publishing and Presenting Clinical Research. 2nd Edition. Warren S. Browner. (\$64)
  - Chapter
  - Chapter