Writing Scientific Abstracts

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Chair, APIC Research Committee

Objectives

- **After today's presentation, you'll be able to…**
  - Describe what an abstract is and the major components of an abstract
  - Identify resources to assist you with an abstract submission
  - Describe why it is important to publish the work you've done
  - Submit an abstract for an APIC Annual Conference (NOTE: the 2015 Annual Conference will be in Nashville, TN from June 27-29, 2015.)

Why Should I Know How to Write Abstracts?

- **Learning the abstract-writing process will help you:**
  - Present complex information in a clear, concise manner
  - Read abstracts more effectively
  - Conduct research
  - Write abstracts about your own work

What's an Abstract?

- **Self-contained, short overview that describes a larger work**
- **Generally contains four major sections:**
  - Background
  - Methods
  - Results
  - Conclusion

Title

- **Concise title describing the content of the abstract**

- **Example:** “Exclusion from SIR Analysis: Are Low Volume Hospitals Getting a Pass?”

Background

- **Brief background, study objectives, hypothesis tested, problem addressed**
- **General format:**
  - **Describe importance of the field**
  - **Define and indicate the problem**
  - **Outline the research question and objective**
- **Written in present tense**

Background Example

In 2012, the Centers for Medicare and Medicaid Services (CMS) made it mandatory for all hospitals participating in the Inpatient Prospective Payment System (IPPS) to report surgical site infections (SSI) associated with qualifying abdominal hysterectomy (HYST) and colon procedures (COLO) to the National Healthcare Safety Network (NHSN). These data are then made available to the public on Medicare's Hospital Compare website. However, if a hospital does not perform enough procedures for the reporting period to calculate a valid standardized infection ratio (SIR), it is excluded from reporting. The objective of this study was to propose an alternate way to report a SIR for these low volume hospitals.

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Methods

- **Describe study design – include setting, sample, sample size, subjects, intervention, type of statistical analysis**
- **General format:**
  - Indicate study design, subjects, time-frame
  - Outline study variables
  - Define statistical analysis
- **Written in past tense**

Methods Example

Facilities with low COLO and HYST volumes in 2012 and 2013 were included in this analysis. Low volume was defined as having at least one calendar year where the expected number of SSI for at least one of the surgery categories was less than 1, not allowing for a valid SIR to be calculated. COLO and HYST SIR were calculated using the “SIR - In-plan Complex AR SSI data by procedure” report in NHSN.

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Results

- Summarize essential results with appropriate statistical analysis
- Every method outlined should have a result, and they should be listed in the same order
- Use a table, chart, or graph to enhance presentation of results
- Written in past tense

Results Example

Two years of data were analyzed for each of the 3 low volume COLO hospitals and 6 low volume HYST hospitals. A valid SIR was calculated for all 3 of the 6 (50%) HYST, and 3 of the 3 (100%) COLO hospitals. See Table 1.

Table 1: SSI SIR 2012, 2013, and Combined							
Low Volume HYST Hospitals							
	2012		**2013**		**2012 & 2013**		
	Observed SSI	**Expected SSI**	**Observed SSI**	**Expected SSI**	**Observed SSI**	**Expected SSI**	**SIR**
Hospital 1	1	0.943	0	0.423	1	1.366	0.73
Hospital 2	0	0.192	0	0.166	0	0.358	Exp SSI <1
Hospital 3	0	0.302	0	0.212	0	0.514	Exp SSI <1
Hospital 4	0	0.781	0	0.799	0	1.580	0.00
Hospital 5	0	0.211	0	0.060	0	0.271	Exp SSI <1
Hospital 6	1	0.565	0	0.465	1	1.030	0.97
Low Volume COLO Hospitals							
	2012		**2013**		**2012 & 2013**		
	Observed SSI	**Expected SSI**	**Observed SSI**	**Expected SSI**	**Observed SSI**	**Expected SSI**	**SIR**
Hospital 1	1	1.012	2	0.990	3	2.002	1.50
Hospital 2	0	0.923	2	1.754	2	2.677	0.75
Hospital 3	1	0.423	1	0.676	2	1.099	1.82

Conclusion

- **Interpret study finding and summarize implications**
- **Ensure all conclusions are supported by the results**
- **General format:**
  - Answer to the research question
  - Implications of the results
- **Written in present tense**

Conclusion Example

Combining multiple years of data enables appropriate SIR calculation for some low volume hospitals, allowing for inclusion of these facilities in public reporting. However, for very low volume facilities, other alternative methods to evaluate performance are needed.

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Tips for Abstract Submission Success

- **Abstracts must be submitted in English**
  - Grammar and spelling are important
  - Written in complete sentences in a narrative format
- **Do not use brand, trade, author or institution names**
- **Spell out acronyms – even common ones**
- **Be sure to comply with instructions**
  - Space limits: 300 words (not including spaces, excluding title); a single chart, table, or graph

Some Common Mistakes

- 1st person anecdotes
- Not enough information included
- Only raw data presented
- Ugly tables, figures, or graphs
- Ambiguous conclusion statements
- Spelling and grammar mistakes
- Failure to follow submission instructions

Checklist for Success

Abstract Checklist

You must follow the submission rules or your abstract will be rejected.

- ☐ Proofread the abstract for typographical and grammatical errors.
- ☐ Abstract is written in complete sentences and not bulleted lists.
- ☐ All acronyms and/or abbreviations are spelled out or defined at first use.
- ☐ Only one chart/graph/table is included if needed at all.
- ☐ All conclusions are supported by the results.
- ☐ All conflicts of interest are disclosed as appropriate.
- ☐ Abstract has only been submitted in one subject category. Do not submit multiple abstracts on overlapping facets of the same project unless each abstract has important, novel information and clearly stands on its own. Repetitive abstracts will be rejected.
- ☐ Abstracts does not include any identifiable information (facility, name, etc.) **<Any abstract containing this information will be rejected as APIC requires a blinded review>**
- ☐ Abstracts does not contain any brand names or other commercial influence **<Any abstract containing this information will not be considered for acceptance>**
- ☐ Submissions from industry should maintain the same scientific rigor as other submissions, and should **not** contain any promotional material.
- ☐ Abstract has not or will not be presented at a national or international meeting such as IDSA, SHEA, ASTMH, ICAAC, ASM, CROI, or ECCMID before June 27, 2015 . Abstracts that have been previously presented, but include updated information with significant new implications may be considered.
- ☐ Abstract has not or will not be published in any other copyrighted journal or abstract book before June 27, 2015
- ☐ Data presented are based on complete data and not left open to future data collection

Resources

- Local mentor
- APIC Webpage
- APIC Mentor Program
- APIC 2015 Call for Abstracts

Questions?

- **Email us!**
  - Include “Abstract Writing” in the email Subject line

- education@apic.org