HOW TO WRITE A STRONG NURSING-BASED ABSTRACT FOR SCIENTIFIC CONFERENCES

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Goals of Today's Webinar

1. Describe procedures for writing a scientific abstract for presentation at a national scientific meeting

2. Present 'tips' for writing successful abstracts

3. Provide examples of strong abstracts

Before You Begin to Write

Background Work

- **Review the Call for Abstracts guidelines**
  - *What is the purpose of the meeting?*
  - *Who is the audience?*
  - *What is the format, including word limit?*
  - *How is the abstract submitted?*
  - *Only data-based studies?*
  - *Only completed studies?*

Background Work

- **Consider the 'fit' between the Call and your study**

- **Peer Review Process – find the evaluation criteria from the organization**
    - **reviewers will use the criteria and you want your abstract to be competitive**

Plan Ahead

- **It takes time to write – Plan ahead and start early**
  - often need more analyses and input from others

- **Experience helps - Work with a mentor or colleague**

- **Review examples of other abstracts**
  - American Journal of Critical Care
  - Circulation, and available online
  - Journal of Cardiac Failure
  - Progress in CV Nursing and Heart & Lung

Writing Tips

Strive for perfection and precision

1. Carefully proofread for spelling and grammatical errors and 'typos'

2. Limit use of abbreviations – too many are very distracting

3. Follow guidelines for word limits, margins, and font size

Writing A Scientific Abstract

Parts of the Abstract

1. **Title**
2. **Background**
3. **Objectives/Purposes/Aims**
4. **Method**
5. **Results**
6. **Conclusions**

The exact headings may vary according to the organization's guidelines

Structured Abstracts

- **We recommend using structured abstracts**
- **These use the main headings to separate parts of the abstract**
- **This method**
  - Makes the abstract easier to read
  - Clearly identifies parts of the study

The Title

- *Make it descriptive*

- *Make it important*

- *Make it compelling*

The Title - Examples

- *Quality of life among stroke survivors*

  OR

- *Depression and functional status predict quality of life in stroke*

  OR

- *Do depression and functional status predict quality of life in stroke survivors?*

Examples

- **What Happens When Heart Failure Patients Don't Know What They Don't Know?**

- **Depressive Symptoms, Poor Nutritional Intake and Event-free Survival in Patients with Heart Failure: A Deadly Chain of Events**

- **Increased Body Mass Index is Protective Against Low Bone Mineral Density in Patients with Heart Failure**

- **Comorbid Anxiety and Depression: The Dynamic Duo of Death**

Background

- **Usually limited to 1 sentence so make it specific**

- **Use a problem statement approach**

  Despite the fact that ____ strokes/MIs occur annually,

  - *Little is known about …*
  - *Information is lacking about…*

Background - Examples

1. Little is known about the relationship between *variable 1* and *variable 2* in [sample].

2. HTN contributes to mortality in patients after stroke, but interventions to improve antihypertensive medication adherence in these patients are lacking

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Examples

- Adherence to prescribed medications produces better outcomes in patients with heart failure (HF). Clinicians most commonly depend on patient self-report to assess adherence, but the consequences of inaccurate self-assessment of adherence are unknown.

Objectives/Purposes

- **Limit to 1 or 2 sentences; these can be directly from a study**

- **Flow directly from the problem statement that you identified in the background**

- **Critical element because**
  - *it tells the reviewer exactly what to expect in the rest of the abstract*
  - *reviewer makes judgment about the importance of the topic based on this part*

Objectives/Purposes - Examples

Background: Little is known about the relationship between variable 1 and variable 2 in [sample].

Objective: *To examine the relationship between variable 1 and variable 2 in persons with [condition].*

Objectives/Purposes - Examples

Background: HTN contributes to mortality in patients after stroke, but interventions to improve antihypertensive medication adherence in these patients are lacking

Objective: *To test a nurse-based computerized intervention designed to improve adherence to antihypertensive medications and improve survival among stroke survivors*

Objectives/Purposes - Examples

Objective: *To test a nurse-based computerized intervention designed to improve adherence to antihypertensive medications and improve survival among stroke survivors*

Intervention = nurse-based, computerized

Outcomes (dependent variables) = adherence and survival

Sample = stroke survivors

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Pressler et al. Abstract AHA 2008 Example

- **Title:** Cognitive Function is Poorer in Heart Failure
- **Background:** Heart failure (HF) patients have been found to have cognitive deficits but studies have been limited by small samples and lack of comparison groups.
- **Objective:** To determine the types, frequency, and severity of cognitive deficits among patients (pts) with chronic HF compared to age- and education-matched healthy (HC) participants and participants with major medical conditions but not HF (MC).

Moser et al. Abstract AHA 2009 Example

- **Title:** What Happens When Heart Failure Patients Don't Know What They Don't Know

- **Background:** Adherence to prescribed medications produces better outcomes in patients with heart failure (HF). Clinicians most commonly depend on patient self-report to assess adherence, but the consequences of inaccurate self-assessment of adherence are unknown.

- **Objective:** To determine the impact on event-free survival of the concordance of HF patients' self-assessment of their medication adherence with objectively measured medication adherence.

Methods

Succinctly tells the study:

- Design
- Procedure
- Sample
- Measurement
- Operational definitions
- Grouping, if relevant
- Statistical analysis, if not in results

Methods (Cont.)

- **Critical component because**
  - *it tells the reviewer what to expect in the results section*

  - *it gives us information about the quality and strength of the study*

Methods - Example

♦ In this comparative study, face-to-face interviews were completed by 414 participants (249 HF pts, 63 HC, 102 MC) to assess function in cognitive domains of language, working memory, memory (verbal learning total and delayed recall), psychomotor speed, and executive function. Characteristics of HF pts were: mean age 62.9 yrs; 63% men; mean education 12.9 yrs; mean LVEF 28%; NYHA I-15%; II-34%; III-39%; IV-12%). HC and MC groups were matched on education and premorbid intellect, but HC were younger than HF and MC groups. Comparisons among the 3 groups were made using ANCOVA adjusting for intellect, age, and education. Family members of all participants were interviewed separately to validate cognitive deficits.

Methods - Example

- Medication adherence was assessed objectively for 3 months using the Medication Event Monitoring System (MEMS) in 135 (mean age 61±11years; 30% female; 59% New York Heart Association [NYHA] class III/IV) HF patients. Patients were considered adherent if they took ≥ 89% of the prescribed doses during the MEMS monitoring period. Patients' assessment of their adherence was obtained using the Medical Outcomes Study Specific Adherence Scale. Patients were placed in 1 of 4 groups based on the concordance of their self-reported adherence with actual adherence behaviors: 1) realistic non-adherers (accurately assessed their non-adherence); 2) over-confident non-adherers (thought they were more adherent than they were); 3) realistic adherer s (accurately assessed their adherence); and 4) under-confident adherers (were adherent, thought their adherence was lower than it was).

What Makes a Great Results Section?

- Data are essential
- Data are presented that directly address the purpose
- Detail needed to assess the specific aim
- Never say "will be discussed"
    - Succinct summary of exact details
- Avoid burying reader in minutiae

Results

- **Using Cox proportional Hazard modeling and controlling for age, gender, NYHA class, medication therapy, and depression, patient concordance group predicted event-free survival (p = 0.005; Figure). The worst event-free survival was evident in over-confident non-adherers who had 3.4 (95% confidence intervals 1.6 – 7.3) times greater risk for earlier events than realistic adherers (p = 0.002).**

Results

Mean UNa (24-hour urinary sodium excretion) was 190 ± 96 mmol. There were no differences in event-free survival between patients divided at either 131 mmol (p = .17) or 174 mmol (p = .35) UNa cut points. When stratified by NYHA class, event-free survival in NYHA I/II was similar regardless of UNa cut point (p =.37 and .86, respectively). In contrast, patients in NYHA III/IV with UNa less than 131 mmol had significantly longer event-free survival than those with UNa above 131 mmol (p= .02). Event-free survival, however, was equally poor when NYHA III/IV patients were compared using the174 mmol UNa cut point (p =.46).

Using Figures and Tables to Add Impact

Advantages

- Make a powerful visual statement
- Easy to interpret without lots of reading
- Catch reviewers' attention

## Disadvantage

- Take up lots of space
- If not properly set-up and adequately labeled, are incomprehensible
- Irritate reviewers

Results augmented with figure

- A total of 44 pts (1.3%) were underweight, 1071 (32%) normal weight, 1376 (41.1%) overweight and 854 (25.5%) obese. There were 105 deaths. Controlling for sociodemographic, clinical and risk factor variables, BMI was an independent predictor of mortality (p = 0.001, Figure, cumulative hazard). Underweight and normal weight pts had 3.6 and 2.1 times higher risk of death than overweight or obese CHD pts.
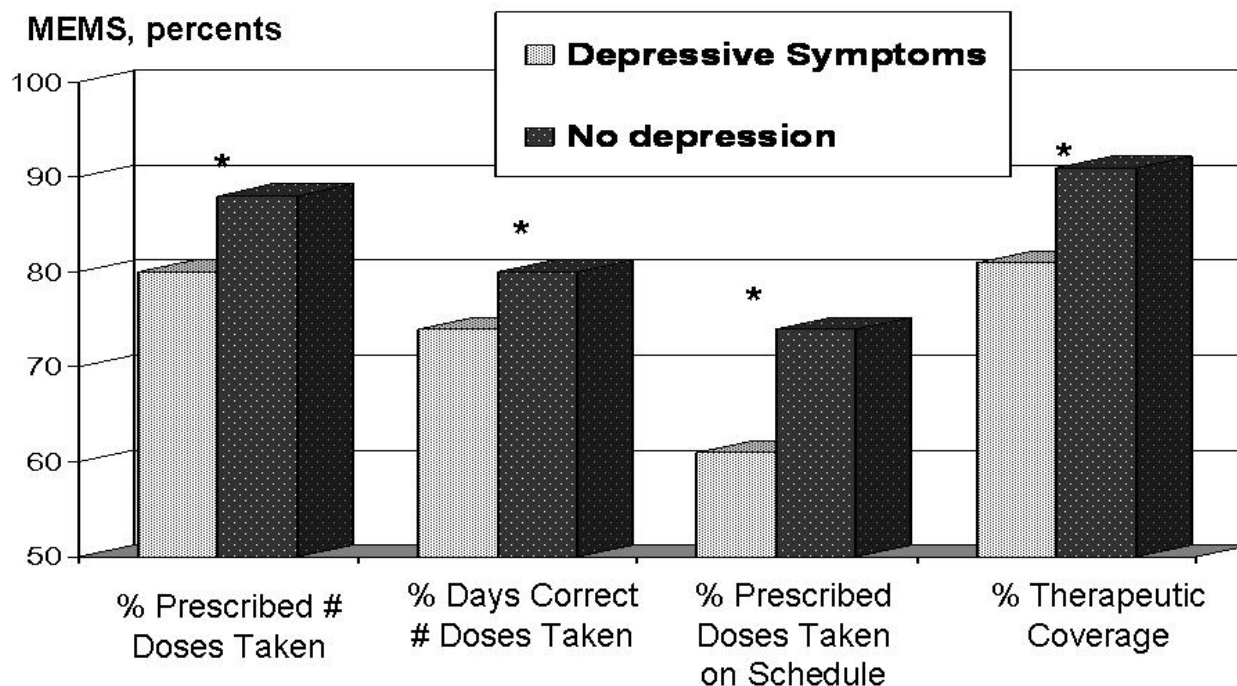
Figure: Hazard Curve
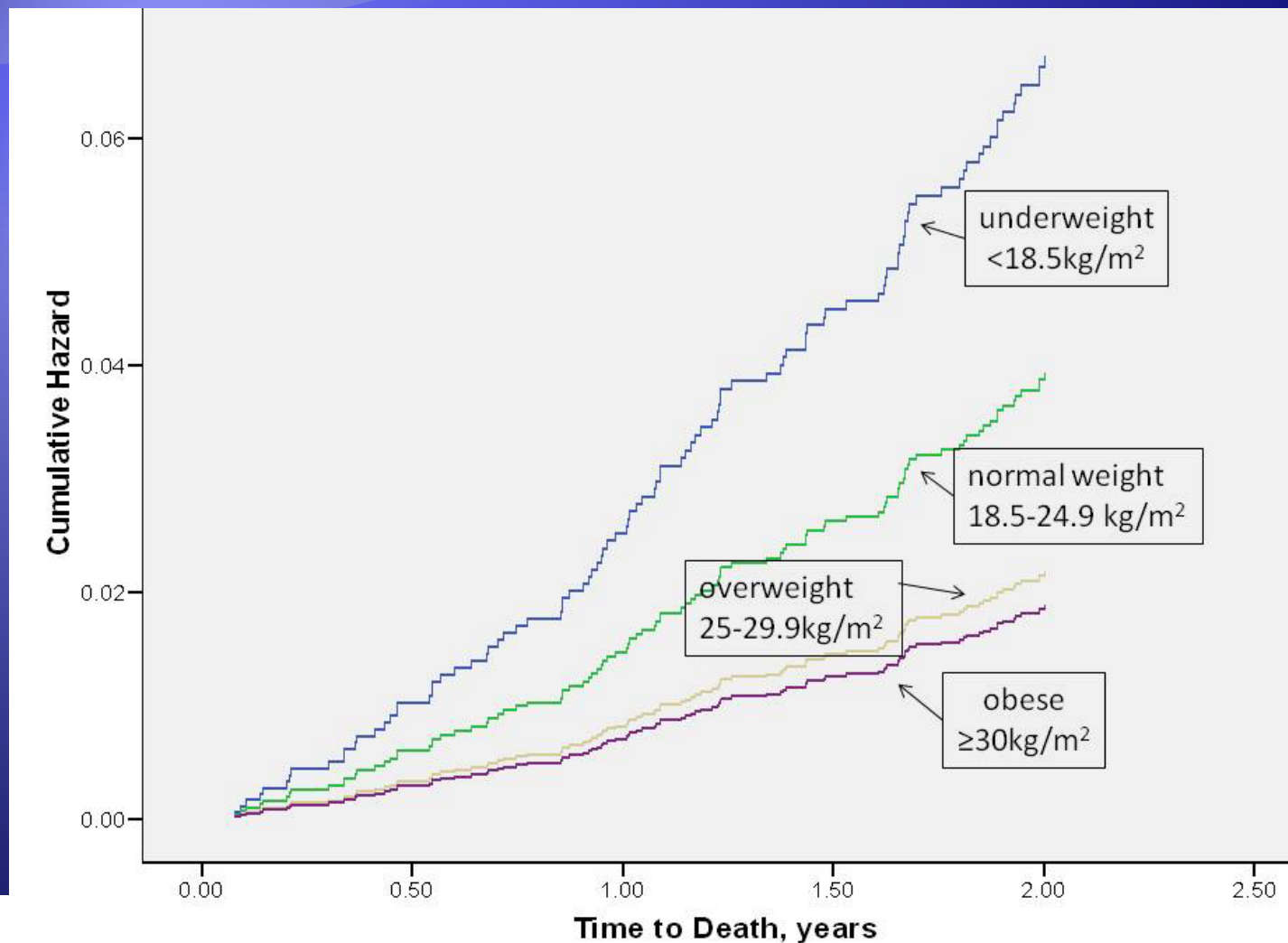
Results

Presence of depressive symptoms independently predicted rehospitalization/mortality (OR 1.2, p = .003). Patients with depressive symptoms were less adherent than non-depressed patients to medication-taking behavior (figure), and to activity, smoking, alcohol intake, medication taking, daily weighing and symptom monitoring (each p<0.05) assessed by MOS. There was no association between depression and dietary sodium adherence (MOS or UNA). Mediation analysis indicated nonadherence mediated the relationship between depression and rehospitalization/mortality

Figure: Bar Chart

Association Between Depression and Medication Adherence

MEMS, percents

Legend: Depressive Symptoms; No depression

X-axis categories: % Prescribed # Doses Taken; % Days Correct # Doses Taken; % Prescribed Doses Taken on Schedule; % Therapeutic Coverage

*p <.05

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Results

Persistent anxiety was associated with shorter time to adverse outcome (Figure, p=.001). In Cox regression, persistent anxiety remained an independent predictor of adverse outcome after controlling for age, gender, previous AMI, diabetes, smoking, group assignment, education, income, body mass index, sedentary life-style and marital status (odds ratio 1.3 [1.04-1.6], p=.02).

Survival Curves Comparing Persistently Anxious Versus All Others
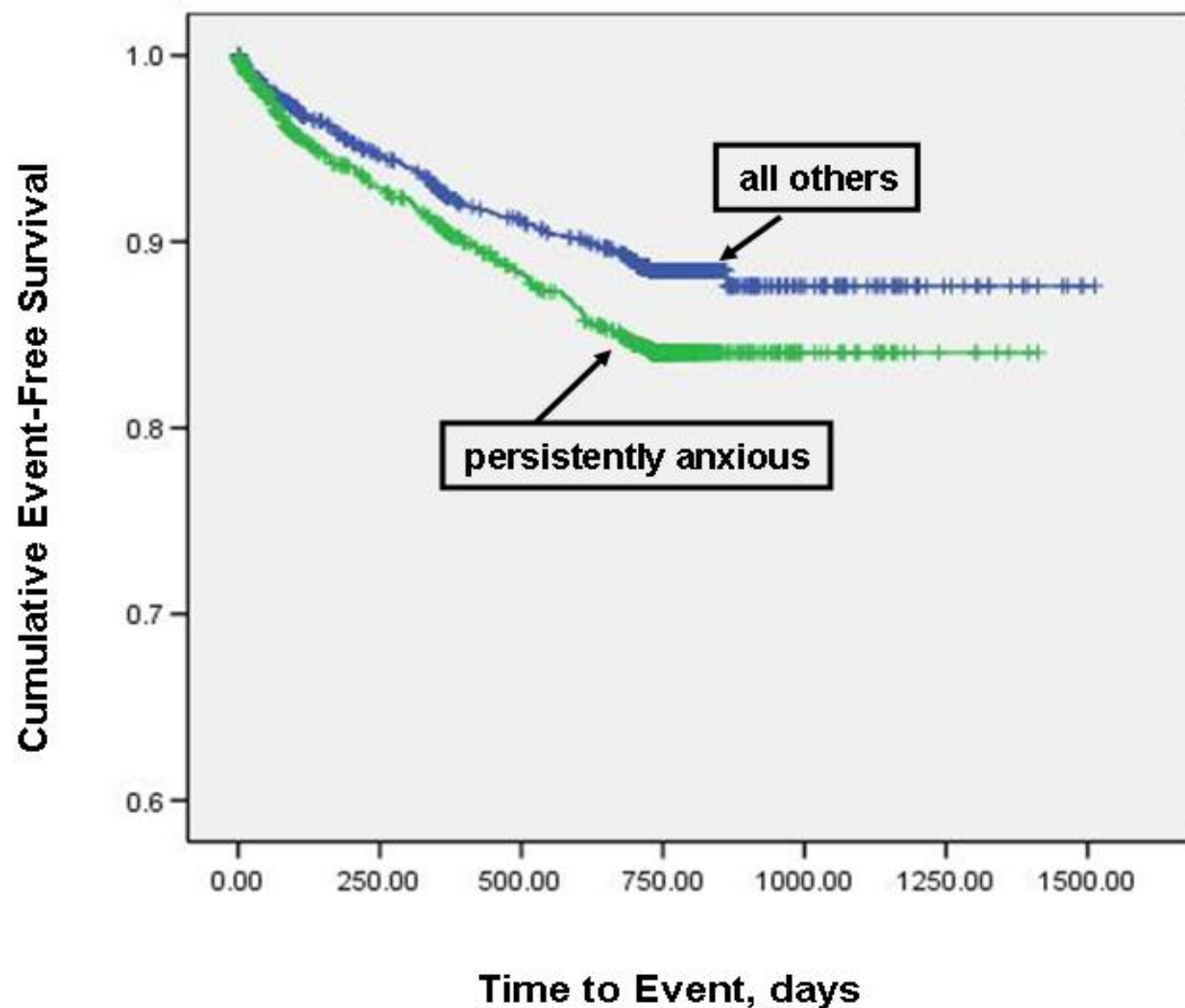
What Makes a Great Conclusion?

- Does not simply repeat the results
- Interprets the results
- Presents implications for future research or practice
- Does not say "will be discussed"

Conclusion

- Even in pts with stable CHD, overweight and obesity predicts survival. Although the mechanisms underlying this association are unknown, physiologic or behavioral correlates of overweight may mitigate the negative consequences of CHD early in its progression.

Conclusion

The level of sodium intake of patients at NYHA Class I and II did not affect event-free survival. Patients in Class III and IV had better outcomes if sodium intake was limited to 3 g or less. These data provide support for 3 g dietary sodium restriction in patients with advanced HF.

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Conclusion

By measuring anxiety at more than one time point, these data illustrate that persistent anxiety is a strong, independent predictor of event-free survival.

Conclusion

◆ **Non-adherence is associated with worse event-free survival, but the worst outcomes are seen in those unrealistic about their non-adherence and believe (or report) themselves to be more adherent than they actually are. Depending on patient self-report of adherence may have negative consequences.**

What Reviewers Look For

- **Immediate impact**
  - **Informative title**
  - **Significant problem**
  - **Clearly written abstract**
  - **Data**
  - **Striking conclusion that builds on data**

What Reviewers Look For

- **Evaluation based on**
  - **significance and novelty of problem**
  - **clearly defined purpose**
  - **methods (design, sample size, measures, statistical methods)**
  - **results that answer the question with data**
  - **conclusion that interprets and has impact**

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Things to Remember About Reviewers

- ◆ **Their task**

Things to Remember About Reviewers

◆ **They are likely doing reviews late at night after all their other obligations**

Things to Remember About Reviewers

- **They are most likely NOT an expert in your specific area of research**
  - Don't use jargon unique to your area
  - Don't assume that everyone understands why your study is important
  - Avoid writing in a highly technical, obscure manner
  - Simple, straightforward, small words, no wasted words
  - Provide information in every word

- **Don't fall in love with your own writing**

"Read over your compositions and, when you meet a passage that you think is particularly fine, strike it out."

Samuel Johnson

Things to Remember About Reviewers

- **Given their task and their mind set**
  - **Give yourself enough time so that you can:**
    - **Follow the directions exactly**
    - **Get critical input from all authors and other colleagues**
    - **Proofread several times**
    - **Get other colleagues to proofread**
    - **Proofread again, after setting it aside for a few days**

Other Considerations

- **Conference participants read your abstract to decide whether to attend your presentation**
  - **Potential audience is huge and varied, so put your best foot forward**
- **Will be published in *Circulation* and online**

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What Now?

- **Sit back and wait**

- **If not accepted, try again!**

Summary

- Know your audience and reviewers
- Heed the call and proofread
- Get good critique, don't accept kind words
- Don't waste words, be succinct and precise

Summary

- **Internal consistency essential**
  - **Strong, informative title**
  - **Concise, but compelling background understandable by knowledgeable lay person**
  - **Purpose that follows from the background and informs the methods and results; conclusion relates back to purpose**
  - **Strong methods section**
  - **Results with informative data**
    - **Use tables and figures to make an impact when appropriate**
  - **Conclusion that interprets, doesn't just repeat the results**