2019-12-02

Writing an abstract

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Writing an abstract

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USAID PEER/Liberia Workshop

Objectives

By the end of this talk, the participant should be in position to:

- Define an abstract
- Know the components of an abstract
- Understand the steps for writing an abstract
- Know the different formats of an abstract
- Know the different sections of an abstract and what they contain

Abstract

- Brief summary or synopsis of the full manuscript
  - Found at the beginning of the manuscript right after the title
  - Usually followed by a list of author selected key words
- Stand alone
- Unbiased and honest
- Should not be misleading
- Original and not plagiarized
- No abbreviations

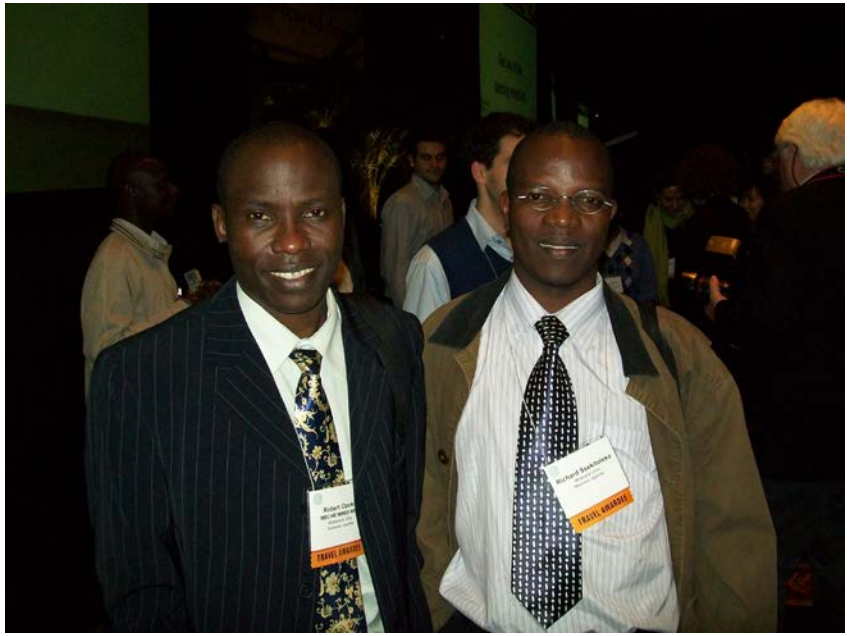
Why a good abstract?

- With the title help form the initial impression of the article
  - For editors to decide whether to process the paper further
  - For reviewers to get initial impression to help decide if they will review article
  - Readers initially see the title and abstract and these help them decide if to read the whole article

- Key component of applying for funding

- Helps one land an oral or poster presentation at a conference.

- May be the basis for winning awards to conferences



Components of an abstract

- Includes different sections
  - Background
  - Purpose
  - Methods
  - Results
  - Conclusion
- List of selected key words at the end
- Another approach is to answer questions;
  - Why was the study done?
  - How was the study conducted?
  - What were the findings?
  - What do the findings mean?

Steps for writing an abstract

- Usually written after completion of the manuscript
- Decide on the journal of choice and then consult for abstract guidelines.
  - Suggested format
  - Word count or length
  - Writing font
- Review examples of a journal's published abstracts before writing your abstract

Example: Abstract guideline

JOURNAL OF CLINICAL VIROLOGY

The Official journal of the Pan American Society for Clinical Virology and The European Society for Clinical Virology

AUTHOR INFORMATION PACK

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

This is only applicable for Full length articles, Short Communications and Reviews.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Example: Abstract to the future virology journal

Published in final edited form as:
Future Virol. 2013 September ; 8(9): . doi:10.2217/fvl.13.71.

Primary prophylaxis for cryptococcal meningitis and impact or mortality in HIV: a systematic review and meta-analysis

Richard Ssekitoleko[*,1,2], **Moses R Kamya**[2], and **Arthur L Reingold**[1]

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Abstract

Aim—To determine the role of primary antifungal prophylaxis in the prevention of cryptococcal meningitis and all-cause mortality in advanced HIV infection

Materials & methods—This was a systematic review and meta-analysis of randomized trials and observational studies. Google Scholar™, PubMed and Embase databases were searched for relevant studies. Quality was assessed using different criteria, depending on study type. Publication bias was assessed and subgroup and sensitivity analyses were performed. When the results of the meta-analysis were homogeneous, the fixed-effects model was used; when the results of the meta-analysis were heterogenous, the random effects model was used.

Results—Primary prophylaxis prevented cryptococcal meningitis but did not confer protection against overall mortality, although there was evidence of a reduction in cryptococcal-specific mortality in resource-limited settings.

Conclusion—Primary antifungal prophylaxis should be recommended in patients with advanced HIV infection in resource-limited settings with a high incidence of cryptococcal meningitis.

Keywords

advanced HIV infection; all-cause mortality; cryptococcal meningitis; fluconazole; itraconazole; prevention of cryptococcal meningitis; primary antifungal prophylaxis; resource-limited settings

Formats of an abstract

- May be;
  - Structured
    - Information organized into sections
    - Sections identified by bolded headings
  - Unstructured
    - Headings stated as part of sentences
    - No bold headings

- Typical length of abstracts
  - Journals give limit to length usually 250 words
  - Some electronic data bases may truncate abstracts beyond certain length

Example: Structured abstract

Asiimwe *et al. Critical Care* (2015) 19:86
DOI 10.1186/s13054-015-0826-8

CRITICAL CARE

RESEARCH Open Access

A simple prognostic index based on admission vital signs data among patients with sepsis in a resource-limited setting

Stephen B Asiimwe[1,3*], Amir Abdallah[1,2] and Richard Ssekitoleko[4]

Abstract

Introduction: In sub-Saharan Africa, vital signs are a feasible option for monitoring critically ill patients. We assessed how admission vital signs data predict in-hospital mortality among patients with sepsis. In particular, we assessed whether vital signs data can be incorporated into a prognostic index with reduced segmentation in the values of included variables.

Methods: Subjects were patients with sepsis hospitalized in Uganda, who participated in two cohort studies. Using restricted cubic splines of admission vital signs data, we predicted probability of in-hospital death in the development cohort and used this information to construct a simple prognostic index. We assessed the performance of the index in a validation cohort and compared its performance to that of the Modified Early Warning Score (MEWS).

Results: We included 317 patients (167 in the development cohort and 150 in the validation cohort). Based on how vital signs predicted mortality, we created a prognostic index giving a score of 1 for: respiratory rates ≥30 cycles/minute; pulse rates ≥100 beats/minute; mean arterial pressures ≥110/<70 mmHg; temperatures ≥38.6/<35.6°C; and presence of altered mental state defined as Glasgow coma score ≤14; 0 for all other values. The proposed index (maximum score = 5) predicted mortality comparably to MEWS. Patients scoring ≥3 on the index were 3.4-fold (95% confidence interval (CI) 1.6 to 7.3, $P = 0.001$) and 2.3-fold (95% CI 1.1 to 4.7, $P = 0.031$) as likely to die in hospital as those scoring 0 to 2 in the development and validation cohorts respectively; those scoring ≥5 on MEWS were 2.5-fold (95% CI 1.2 to 5.3, $P = 0.017$) and 1.8-fold (95% CI 0.74 to 4.2, $P = 0.204$) as likely to die as those scoring 0 to 4 in the development and validation cohorts respectively.

Conclusion: Among patients with sepsis, a prognostic index incorporating admission vital signs data with reduced segmentation in the values of included variables adequately predicted mortality. Such an index may be more easily implemented when triaging acutely-ill patients. Future studies using a similar approach may develop indexes that can be used to monitor treatment among acutely-ill patients, especially in resource-limited settings.

Example: Unstructured abstract

Am. J. Trop. Med. Hyg., 85(4), 2011, pp. 697–702
doi:10.4269/ajtmh.2011.10-0692

Aggregate Evaluable Organ Dysfunction Predicts In-Hospital Mortality from Sepsis in Uganda

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Abstract. We evaluated the association between severity of sepsis and in-hospital mortality in 150 patients with non-surgical sepsis at a regional referral hospital in Uganda. In-hospital mortality occurred in 5 of 52 (9.6%) patients with sepsis, 24 of 71 (33.8%) patients with severe sepsis, and 16 of 27 (59.3%) patients with septic shock. In the multivariate analysis, the identification of severe sepsis (adjusted hazard ratio [AHR] = 2.9, 95% confidence interval [CI] = 1.0–8.2, $P = 0.04$), septic shock (AHR = 5.7, 95% CI = 1.6–20.3, $P = 0.007$), and dysfunction of three or more organs (AHR = 2.9, 95% CI = 1.1–7.3, $P = 0.03$) increased the risk of in-hospital mortality. Adding aggregate organ dysfunction to the multivariate equation that included the sepsis category statistically significantly improved the model, but the opposite did not. Predictors of mortality were easily measurable and could be used to risk stratify critically ill patients in resource-constrained settings.

Title

- Reflects contents of the manuscript
- Choose right name for your story
- Conveys to readers the scope, design and goal of research
- Should be free of jargon or unfamiliar acronyms

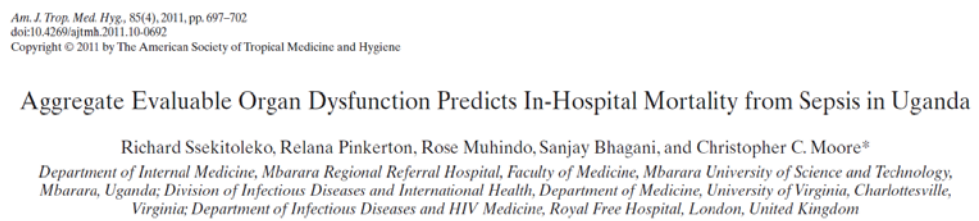
Asiimwe *et al. Critical Care* (2015) 19:86
DOI 10.1186/s13054-015-0826-8

CRITICAL CARE

RESEARCH Open Access

A simple prognostic index based on admission vital signs data among patients with sepsis in a resource-limited setting

Stephen B Asiimwe[1,3*], Amir Abdallah[1,2] and Richard Ssekitoleko[4]



Am. J. Trop. Med. Hyg., 85(4), 2011, pp. 697–702
doi:10.4269/ajtmh.2011.10-0692
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Aggregate Evaluable Organ Dysfunction Predicts In-Hospital Mortality from Sepsis in Uganda

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Background

- Introduces research problem
  - Problem: Monitoring critically ill patients in sub-Saharan Africa
- Identifies key focus of the study
  - Focus: Use of vital signs to predict in-hospital mortality in sepsis patients
- Answers the question; Why was this study done?
  - Tells you what is known
  - What gap does your study intend to address?

Introduction: In sub-Saharan Africa, vital signs are a feasible option for monitoring critically ill patients. We assessed how admission vital signs data predict in-hospital mortality among patients with sepsis. In particular, we assessed whether vital signs data can be incorporated into a prognostic index with reduced segmentation in the values of included variables.

Purpose

- Focuses specifically on research questions
  - Do admission vital signs predict mortality in sepsis?
- Hypothesis
  - Null hypothesis: No association
  - Alternative: Association
- Aims/Objectives of the study

Methods

- Identifies the nature of data analyzed
- How study was conducted
  - Quantitative study
    - Research design
    - Sample size
    - Setting
    - Variables
    - Approach to data analysis
  - Quantitative study
    - Philosophical approach
    - Participants
    - Context
    - Data collection methods
    - Approach to analysis

Methods

Methods: Subjects were patients with sepsis hospitalized in Uganda, who participated in two cohort studies. Using restricted cubic splines of admission vital signs data, we predicted probability of in-hospital death in the development cohort and used this information to construct a simple prognostic index. We assessed the performance of the index in a validation cohort and compared its performance to that of the Modified Early Warning Score (MEWS).

Results

- Answers the question: What were the results?
  - For quantitative studies
    - If statistical tests were used then report results and level of significance
    - Report results even if they were non-significant
  - For qualitative studies
    - Report themes/Categories or resultant theory
- Sets the stage for the conclusion of the study

Results: We included 317 patients (167 in the development cohort and 150 in the validation cohort). Based on how vital signs predicted mortality, we created a prognostic index giving a score of 1 for: respiratory rates ≥30 cycles/minute; pulse rates ≥100 beats/minute; mean arterial pressures ≥110/<70 mmHg; temperatures ≥38.6/<35.6°C; and presence of altered mental state defined as Glasgow coma score ≤14; 0 for all other values. The proposed index (maximum score = 5) predicted mortality comparably to MEWS. Patients scoring ≥3 on the index were 3.4-fold (95% confidence interval (CI) 1.6 to 7.3, $P = 0.001$) and 2.3-fold (95% CI 1.1 to 4.7, $P = 0.031$) as likely to die in hospital as those scoring 0 to 2 in the development and validation cohorts respectively; those scoring ≥5 on MEWS were 2.5-fold (95% CI 1.2 to 5.3, $P = 0.017$) and 1.8-fold (95% CI 0.74 to 4.2, $P = 0.204$) as likely to die as those scoring 0 to 4 in the development and validation cohorts respectively.

Conclusion

- What do the findings mean?
- Emphasize new and important aspects of the study
- All the emphasis should be supported by the results or findings

Conclusion: Among patients with sepsis, a prognostic index incorporating admission vital signs data with reduced segmentation in the values of included variables adequately predicted mortality. Such an index may be more easily implemented when triaging acutely-ill patients. Future studies using a similar approach may develop indexes that can be used to monitor treatment among acutely-ill patients, especially in resource-limited settings.

Key words

- Choose words or phrases that communicate the central concept of the study or research

- Careful selection facilitates retrieval of relevant studies
  - Key words are used for indexing
  - Key words are used for searching studies in data bases

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