



*Principles of Research Writing & Design
Educational Series*

Writing a Scientific Manuscript (Part 1)

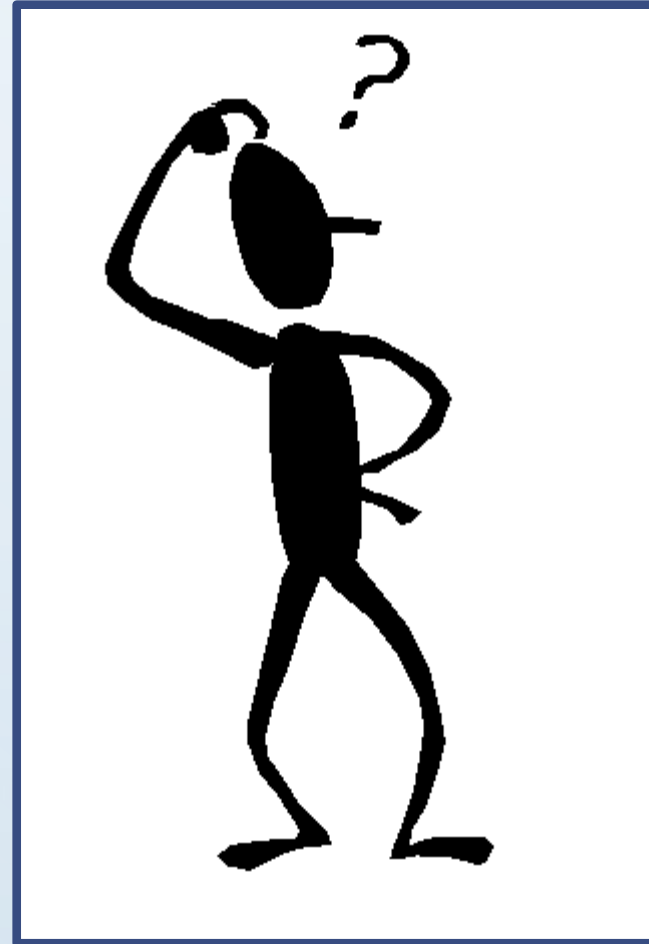
Jeannine Skinner, PhD
Senior Research Associate
Meharry-Vanderbilt Alliance
26 June 2015

Session Outline

- **Good writing hygiene**
- **First steps**
- **Manuscript sections & strategic writing**
- **Submitting the manuscript**
- Revising and resubmitting manuscripts
- Rejected manuscripts
- General tips
- Supplemental Resources

Why publish?

- Contribute to science
- You have something important to say
- Affect policy & change
- Expectations in your profession



Good writing Hygiene

- The more you write the easier it gets
- Protect your writing time
- Take steps to make yourself accountable
- Binge writing is rarely successful...write regularly



First Steps



First Steps

- What are you writing about?
 - What data do you have access to?
 - What is important in your field?
- Manuscript ideas can be leveraged from other study's (limitation sections, future directions/next step sections)
- Respond to journal call for papers

First Steps

- Have a target journal(s) in mind
 - Review thoroughly author instructions
- Obtain template articles from journal (subject matter template and statistical methods template*)
- Outline a draft of the paper
 - Work on the easiest sections first- more rewarding
 - Methods→ Results
- Draft authorship list*

First steps- co-authorship

- Different groups have different “cultures” around authorship
 - 1st author- heavy lifting
 - 2nd author-analytical contributor (if not first author)
 - Last (senior)- typically the person whose grant funded data acquisition and/or the person who provided mentorship to the first author
 - Other authorship positions typically defined by the amount of effort invested
 - **Initiate this conversation with your mentor/ coauthors**
- Journals provide a general description of author contribution guidelines

Co-authorship table template

Author	Name	Name	Name
Conception & design			
Acquisition of data			
Analysis & interpretation of data			
Drafting the manuscript			
Critical revision of the manuscript for important intellectual content			
Statistical analysis			
Obtaining funding			
Administrative, technical, or material support			
Supervision			

First Steps- The paper skeleton

- 1- Draft a “working title” for your manuscript
- 2- Using the comment’s feature of MS Word- enter key journal information in the margins
 - Type of articles (original research, brief report, meta-analysis, systematic review, case study etc.)
 - Abstract word limit (structured/ unstructured)
 - Font, margin parameters, word limit
 - Major section guidelines
 - Referencing style
- 3- Create a 2nd MS word document labeled “TBD content”

paper skeleton example
&
skeleton + outline example

Manuscript Sections & Strategic Writing



Major Sections

- Title page
- Abstract (structured vs. unstructured)
- Introduction/Literature Review
- Methods
- Results
- Discussion
- Tables & Figures
- References

Title page

- Concise
- Some titles report the findings
- Author affiliation – be consistent
- Corresponding author information
- Funding source*

Abstract

- Generally 150-250 words
- Structured vs. Unstructured
- Take home message
- Abstract Elements
 - Objective
 - Design
 - Setting*
 - Participants
 - Measurements
 - Results
 - Conclusion

Introduction/Literature Review

- The longer the literature review, the more theory included (generally)
- Public health and medical journals tend to have shorter introductions than social science journals
- Key questions that should be answered in this section
 - Why is the study important?
 - How does it add to existing knowledge?
- **Statement of purpose should be clearly stated**
- *Consider your literature review a marketing tool*

Medical & Social Science Journals

	Word count max	# Tables/ Figures	# of References
Medical Journals			
New England J of Medicine	2,700	5	40
J of the American Medical Association	3,000	5	-
Annals of Neurology	3,000	8	50
Social Science Journals			
Aging & Mental Health	5,000	-	-
Ethnicity & Health	7,000	-	≈30
J of Gerontology B: Psychological & Social Sciences	5,000	-	-

Methods

- Sample/Participants: when collected, response rate, etc.
- Measures: instruments, survey items
- Procedure: what did you do/study flow
- Statistical methods and software
- Generally it is okay if this section is written similarly across papers leveraging the same data set
- **Great place to start writing in concert with the results section**

Results

- Refer to describe sample and describe significant findings
 - “Table 1 shows participants in the two groups did not significantly differ in demographic makeup.”
- Focus on primary finding (related to study aims)
- Take note of journal style, some include p-values in text others do not
- Too many numbers can interfere with readability
- Do not discuss finding in this section

Discussion

- Summarize main findings, no statistics in this section
- Bridge key findings to prior relevant work
- Emphasize ways in which the current study enhances prior work
- Acknowledge limitations and emphasize strengths
- Do not end discussion section with limitations
- Don't overreach/ overinterpret results- alternative explanations?
- Restate major point of paper, implications/ future directions

Tables & Figures

Tables

- Should be informative
- Should stand alone
- Prepare dummy tables (and figures) to circulate to coauthors for feedback
- Consult journal templates

Figures

- Illustrates an important aspect of the analyses in a way that is a good use of space
- Captions for figures should be clear and thorough
- Should stand alone
- Consult journal templates

References

- Journal templates should inform density of references
- Cite peer-reviewed journal articles
- Cite/reference strategically – pick the best/ most important references
- Include references from the target journal (if possible)
- Break out references so they coincide with a specific point
 - “Underlying pathological mechanisms implicated in the relation between poor glucose regulation and cognitive impairment include cerebral microvascular and macrovascular damage [6], and increased AD neuropathology [7].”
 - “Underlying pathological mechanisms implicated in the relation between poor glucose regulation and cognitive impairment include cerebral microvascular and macrovascular damage and increased AD neuropathology [6,7].”

Manuscript Writing Resources

How to Write the Methods Section of a Research Paper

Richard H Kallet MSc RRT FAARC

How to Write an Effective Discussion

Dean R Hess PhD RRT FAARC

39 Sentences Toward Your First Draft of A Scientific Article

Complete these 39 sentence stems and you'll have a good first draft of your scientific article.

(These were written with epidemiological research in mind. Some adaptation is needed for other types of research.)

Submitting the Manuscript



Manuscript Submission

- Prepare a short letter to the editor, “sell” your manuscript
- Have potential reviewers in mind
- Do not send articles to multiple journals at the same time
- Have co-author contact information readily available
- Organize submission files (separate files for abstract, manuscript body, tables, and figures)

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SINCE 1999

December 17, 2014

James Fain, PhD, RN, BC-ADM, FAAN
Editor-in-Chief, *The Diabetes Educator*
Dean and Professor, Graduate School of Nursing
University of Massachusetts Medical School
55 Lake Avenue North, S1-880
Worcester, MA 01655

Dear Dr. Fain:

I am pleased to submit an original research report entitled, "**Assessing the effectiveness of pharmacist-directed medication therapy management in improving diabetes outcomes in patients with poorly controlled diabetes,**" for your review and consideration in the *Diabetes Educator*. This paper examines associations between pharmacist-directed medication therapy management, medication adherence, and type 2 diabetes-related health outcomes in a community clinic sample. We believe our findings advancing the existing literature on behavioral interventions for improving health outcomes in underserved communities.

I have full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. This work has not been concurrently submitted to any other periodical for publication. The manuscript has been read and approved by all authors, who have taken due care to ensure the integrity of the work. No authors claim any relationships that might present perceived or real conflicts of interest or financial associations in connection with this manuscript. Each author participated in writing the manuscript, and has seen and approved the submitted version.

Please contact me if you have any questions or need further information. Thank you for your consideration.

Sincerely,



Consuelo H. Wilkins, MD, MSCI
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Associate Professor of Medicine
Vanderbilt University School of Medicine and
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consuelo.h.wilkins@meharry-vanderbilt.org

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SINCE 1999

Hirofumi Tanaka, PhD
Editor-in-Chief
Journal of Gerontology and Geriatric Research
Associate Professor
Kinesiology and Health Education
University of Texas
San Diego, CA , USA 32108

Dear Dr. Tanaka and Editorial Team,

I am pleased to submit a research article entitled, "**Associations between markers of glucose and insulin function and cognitive function in healthy African American elders**" for your review and consideration for the *Journal of Gerontology and Geriatrics Research*. This study examined how common markers of glucoregulation, including fasting plasma glucose, fasting insulin, and hemoglobin A1C relate to cognitive function in African American elders without diabetes. Results from this study provide preliminary support for proactive glucose control in older African American elders, a group disproportionately affected by diabetes and cognitive impairment. This manuscript includes 1 table and 2 figures.

I am the corresponding author. I can be reached at jeannine.skinner@vanderbilt.edu, (p) 615-963-2834, (f) 615-320-9457. This work has not been concurrently submitted to any other periodical for publication. The manuscript has been read and approved by all authors, who have taken due care to ensure the integrity of the work. No authors claims any conflict of interests.

On behalf of the authors, thank you for your consideration.



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Please complete evaluation forms prior to leaving- Thanks!

Session Schedule

All sessions held at the MVA from 12pm-1pm

Date	Topic
June 19	Literature Reviews & Grants 101
June 26	Writing a Scientific Manuscript (Part 1)
July 10	Writing a Scientific Manuscript (Part 2)
July 17	Fundamentals of Study Design
July 24	Fundamentals of Biostatistics (Part 1)
July 31	Fundamentals of Biostatistics (Part 2)

To RSVP call (615) 963-2820 or email mva@Meharry-Vanderbilt.org



*Principles of Research Writing & Design
Educational Series*

Writing a Scientific Manuscript (Part 2)

Jeannine Skinner, PhD
Senior Research Associate
Meharry-Vanderbilt Alliance
10 July 2015

Session Outline

- Good writing hygiene
- First steps
- Manuscript sections & strategic writing
- Submitting the manuscript
- **The review process**
- **Revising and resubmitting manuscripts**
- **Rejected manuscripts**
- **General tips & supplemental resources**

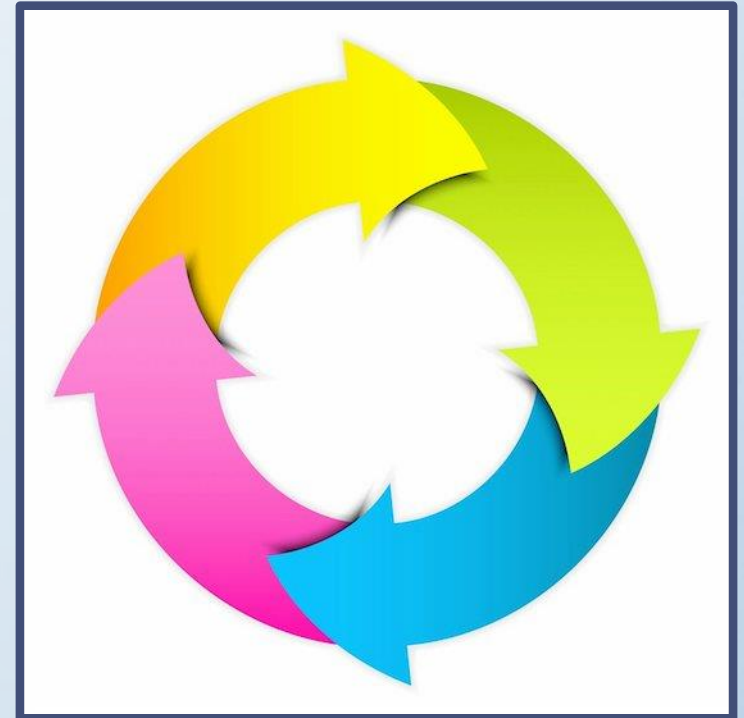
Key Players in the Peer Review Process

- Editor-in-Chief
 - Responsible for entire content of journal
- Associate Editors (Action Editor)
 - Appointed by Editor-in Chief, serve
 - Decide to reject or encourage revisions
 - Write decision letters
 - Recommend articles for publication to the editor-in-chief
 - Monitors the progress of reviews
- Ad Hoc Reviewers
 - Selected by Associate Editors
 - Review manuscripts
- Managing Editor
 - Works with editor-in-chief to coordinate the review process
- Editorial Board Members
 - Selected by editor-in-chief to provide expertise on a range of topics
 - Frequently serve as reviewers
 - May function as “editor”*

* Review structure of *Annals of Behavioral Medicine*

The Manuscript Cycle

- 1- Reviewed by the managing editor
- 2-Editor-in-chief (& Associate Editor)
- 3-Paper typically assigned to an (action) Associate Editor
- 4- Action editor enlist (at least 2) reviewers and evaluates the paper
- 5- Accepted manuscripts move to production phase



Resubmission Review

- Typically goes through the same initial first steps of a new submission before they are reassigned to the original Action Editor
- Action Editor
 - Can act “executively “
- Major revisions are “typically” sent back out to at least one (original) reviewer
 - Submission may go to a new reviewer

Peer Reviewing

- Generally unpaid/volunteer work
- “Culture of service”
- “Generally” selected based on expertise, availability, prior history
- Formal “peer reviewer training” is *likely* the exception and not the rule



Peer Reviewer Role

- 1- Serve as a consultant to the Action Editor
 - Strengths/weaknesses of the manuscript
- 2- Provide feedback to authors about ways to improve the science and communication of that science

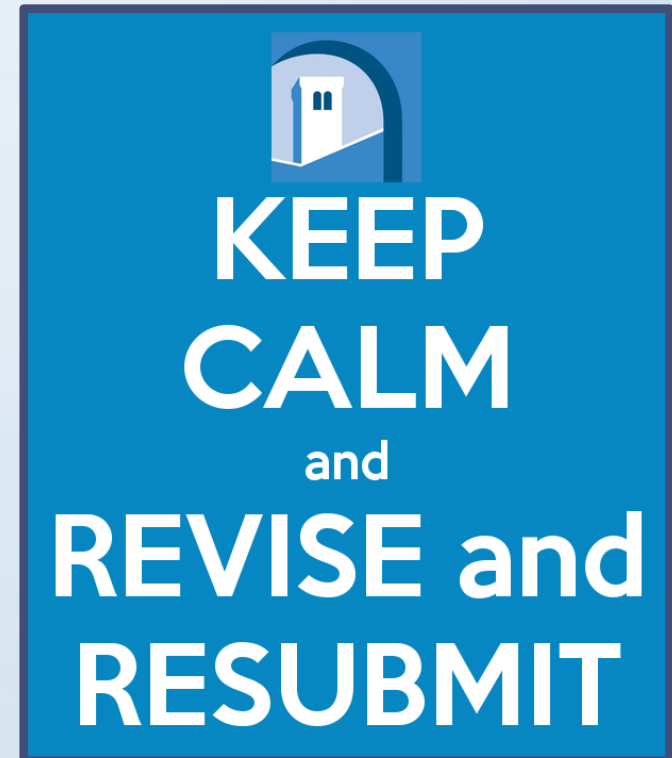


Revising & Resubmitting



Revise & Resubmit- Initial Response

- Types of responses
 - Initial /Provisional acceptance
 - Minor revisions*
 - Major revisions*
 - Rejection
- * There are no guarantees your paper will be published



Revise & Resubmit

- Read reviewers comments
- Sleep on it
- Read it again
- Re-read it again
- Consult coauthors on next steps



Revise & Resubmit

- Check journal and response letter for guidelines/instruction
- Note reviewers concerns, develop strategy to address concerns
- Don't argue ... respond to "actionable" critiques
- Resubmit your paper asap (keep momentum)
- Draft brief letter to the editor indicating the paper has been revised along the lines suggested by reviewers and is much improved

Revisions-letter format example

see MS word doc DIP_MTM response to reviewers

Revisions-table format example

DIP_MTM response to reviewers table format

Revised document example

see MS word document Skinner_revMTMDIP04.01.15

Rejected Manuscripts



Rejected Manuscripts

- Reviewers are very idiosyncratic
 - (next journal may give you totally different reviews)
- Everyone gets rejected....do not take it personally
- Maintain momentum, resubmit elsewhere
 - (Move on to your plan B, C, D journal)



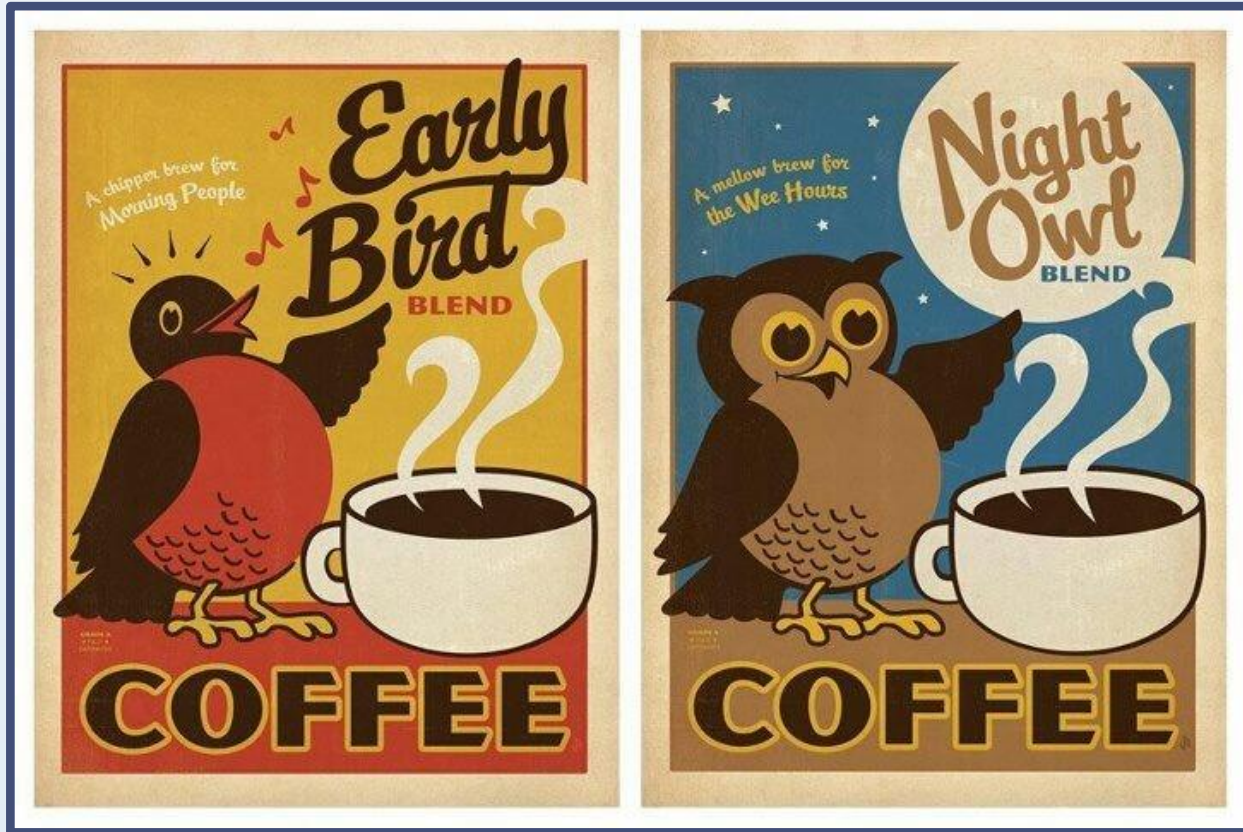
Top 10 reasons manuscripts are rejected in medical education reports

- 1-Inappropriate use of statistics
- 2-Overinterpretation of results
- 3- Inappropriate or suboptimal instrumentation
- 4-Sample too small or biased
- 5-Text difficult to follow
- 6-Insufficient problem statement
- 7- Inaccurate or inconsistent data reported
- 8-Incomplete, inaccurate, or outdated review of the literature
- 9-Insufficient data presented
- 10-Defective tables or figures

General Tips & Supplemental Resources



Writing Tips



- Write when you are at your best
- Write where you are most productive
- Avoid abbreviations unless they are necessary
- Be consistent in how you refer to specific concepts throughout your manuscript
- Exercise word economy

Word Economy

- Also known as “writing precision”
- Cutting words that add no meaning (wordiness)
- Wordiness not only increases length of your work but also makes your writing harder to understand

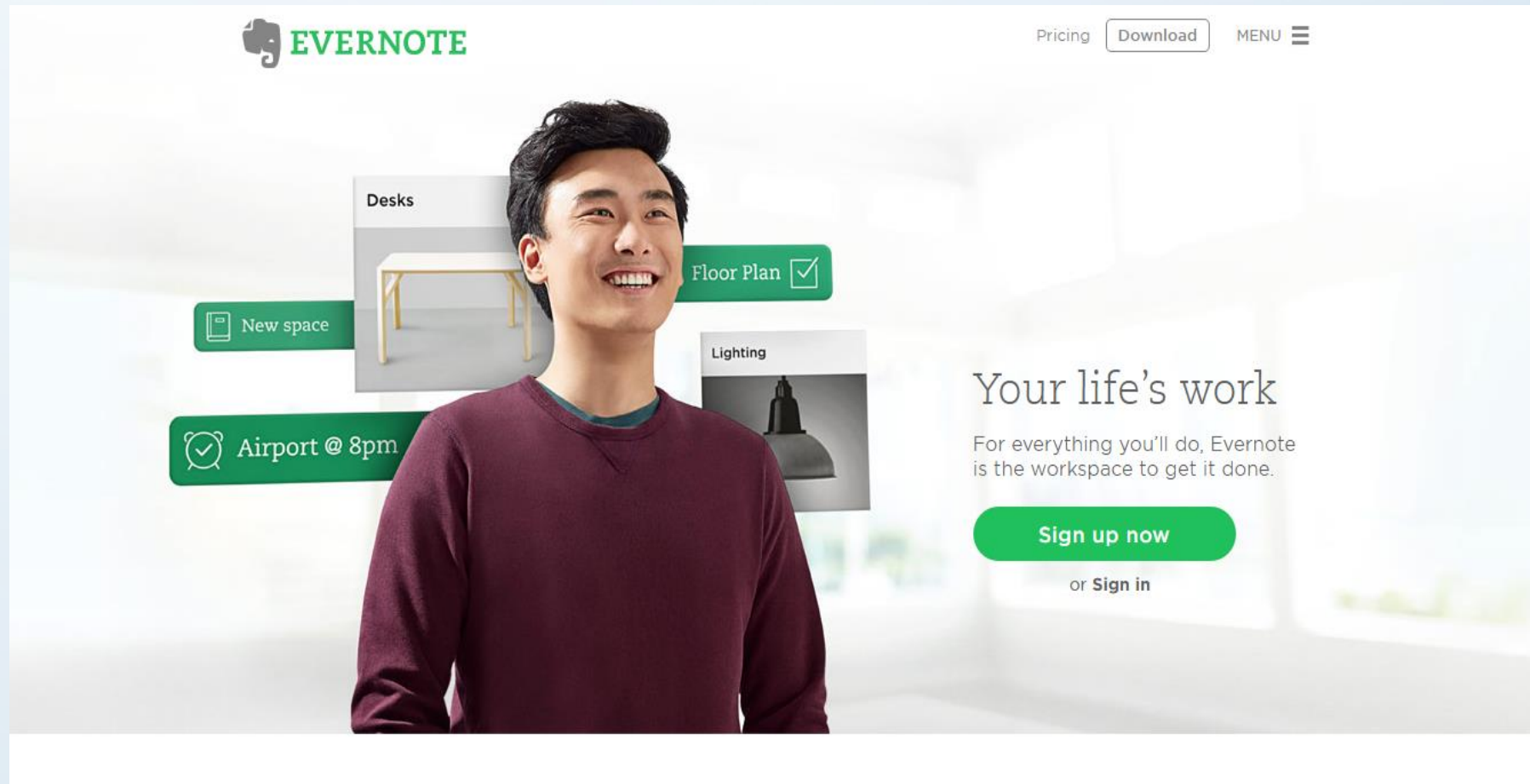


“The point is located at the corner of word economy and clarity” –AZ Writing Coach

Writing Tips

- Use short declarative sentences to improve clarity of writing
- Book chapters, policy papers, singled authored manuscripts **
- Have a peer draft your abstract (will help inform the clarity of your writing)
- Identify writing mentors (i.e. individuals who are productive)
 - Co-review manuscripts with mentors who serve as reviewers
- Leverage technology to streamline tasks and improve overall time management

Leveraging Technology-Evernote



The image shows a screenshot of the Evernote website's landing page. At the top left is the Evernote logo, which consists of a stylized elephant head icon followed by the word "EVERNOTE" in green. To the right of the logo are three navigation links: "Pricing", "Download", and "MENU" with a hamburger menu icon. The main visual is a smiling man in a maroon sweater standing in a bright, modern office space. Overlaid on the scene are several floating Evernote notes. One note titled "Desks" shows a desk and has a green checkmark next to "Floor Plan". Another note titled "New space" has a calendar icon. A third note titled "Airport @ 8pm" has a clock icon. A fourth note titled "Lighting" shows a lamp. To the right of the man, the text "Your life's work" is displayed in a large, dark font. Below it, a smaller line of text reads "For everything you'll do, Evernote is the workspace to get it done." At the bottom right, there is a prominent green button with the text "Sign up now" and a smaller link below it that says "or Sign in".

EVERNOTE

Pricing Download MENU

Desks

New space

Airport @ 8pm

Lighting

Floor Plan ✓

Your life's work

For everything you'll do, Evernote is the workspace to get it done.

[Sign up now](#)

or [Sign in](#)

Leveraging Technology-Pomodoro

The screenshot shows the homepage of the Pomodoro Technique website. At the top, there is a navigation menu with links for HOME, GET STARTED, BOOK, COURSES, TIMER, and BLOG. On the right side of the menu, there are social media icons for Facebook, Twitter, Google+, and RSS. Below the navigation, the main content area features the Pomodoro logo on the left, which consists of a red tomato with a green stem and a white timer face showing '25'. The text 'the Pomodoro TECHNIQUE' is written in a mix of red and black fonts. To the right of the logo, the headline reads 'DO MORE AND HAVE FUN WITH TIME MANAGEMENT'. Below this, a section titled 'WHAT IS THE POMODORO TECHNIQUE?' is visible. The main visual element is a large video player showing a graphic that says 'I [tomato timer] my time'. On the left side of the page, there is a 'NEWS >>' section with five items: 'THINGS TO DO IN YOUR 5 MINUTE BREAK', 'THIS YEAR, KEEP YOUR RESOLUTIONS!', 'POMODORO TECHNIQUE HOLIDAY SALE', 'THE POMODORO TECHNIQUE EBOOK NOW AVAILABLE!', and 'NEW FC GARAGE STORE'. Each news item has a small thumbnail image.

HOME GET STARTED BOOK COURSES TIMER BLOG

f t g+ r

the Pomodoro TECHNIQUE

DO MORE AND HAVE FUN WITH TIME MANAGEMENT

WHAT IS THE POMODORO TECHNIQUE?

NEWS >>

- THINGS TO DO IN YOUR 5 MINUTE BREAK
- THIS YEAR, KEEP YOUR RESOLUTIONS!
- POMODORO TECHNIQUE HOLIDAY SALE
- THE POMODORO TECHNIQUE EBOOK NOW AVAILABLE!
- NEW FC GARAGE STORE

I [tomato timer] my time

Writing & Time Management Tips

- Develop a writing schedule
 - Schedule a “meeting” to write- when are you at your best?
 - Inform colleagues/peers of your writing time
 - Writing retreats
- Manage email expectations
 - (Example) Please excuse my delay I check my emails 2x day from 9am-11am and 3pm-4pm”

Writing Tips

- Red means



Running Head:

Background

P1. Clinical trial are essential to scientific discovery and translating research in to clinical practice. Despite their significance, participation in clinical trials is low. A recent institute of Medicare report notes that only 40% of trials by the National Cancer Institutes' Cancer Therapy Evaluation Program meet target accrual numbers (cite). Participation in clinical trials is especially low among underrepresented minorities. Recent statistics from XX shown that African Americans comprise XX% of clinical trial participants, and Hispanic/ Latinos make up XX%. Participation in cancer clinical trials. This lack of diversity has important implications for [note at least 3 implications] [+ add statement reiterating why participation among minority groups is important]._____ is an important component for researchers to create new and reliable treatment options, and allows for advancement in the practice of medicine. Specifically, cancer clinical trials are valuable because cancer is one of the leading causes of death in the United States, and there is no known cure. [1] Cancer clinical trials give researchers the opportunities to share findings with providers and improve clinical outcomes. [1] However, there are many barriers to participation and can negatively impact the results from the data collected. Consequently, only 3% of new cancer patients participate in clinical trials. [1] There are numerous studies, past and present, which are being conducted to assess the barriers to participation and analyze effective recruitment interventions to overcome them.

P2. Minorities experience several key barriers to participation in clinical trials. These barriers include XX, XX, XX. [Elaborate on these barriers 1-2 sentences each]. [Statement of how these barriers are connected- see Ford or related conceptual model and CHW grant significance section, and citations 7-9 in the grant]. Briefly discuss if there are barriers that particularly salient to Hispanics (in other words differ between AAm and Latinos-? English

Commented [S152]: <http://www.ncbi.nlm.nih.gov/pubmed/25032387>

Commented [S153]: too much discussion of cancer in this paragraph. You can pull from this relevant points to my statements in this paragraph

Running Head:

proficiency/ acculturation- perhaps) Perhaps mention secondary/less salient issues that are also barriers.

In clinical trials, majority of the participants are middle class, married white males. [2] As a result, this presents a gap that indicates the lack of clinical research on minority groups to include African Americans and Latinos. Recruiting minorities in clinical trials has been a difficult, ongoing task for many researchers. From recent studies, there are three distinguished categories of barriers that minorities encounter: lack of awareness of clinical trials, opportunities to accept or refuse participation, and influence affiliated with patient acceptance. [3] A Harris Interactive Poll has shown that more than half of the 6,000 cancer patients that were surveyed did not consider participating in a trial because they did not realize that clinical trials participation was an option available to them. [4] Furthermore, this leads to the low participation of minorities in clinical trials, researchers need this information to prevent marginalizing minority populations and allows for a reliable study that can be disseminated.

P3. Successful recruitment of minorities in to clinical trial research studies must address barriers to participation. Studies show recruitment strategies that focus on clinical research education and engaging prospective participants may be particularly effective. [Provide a very BRIEF example or two, one should be a multimedia-video example- what were the results of these studies/their outcomes of interests]. How do these educational approaches address previously stated barriers (e.g. limited knowledge, literacy issues, etc)

In addition, to increase minority participation in clinical trials, there have been many intervention efforts that have been disseminated and evaluated for efficiency. For this study, the use of a video intervention is the approach being employed to recruit eligible, minority participants for clinical trials. Along with the barriers of lack of knowledge and awareness, the video intervention will also break down the health literacy barrier that affects the minority population. Relatively, one in five American adults have low literacy skills. [5] Individuals with

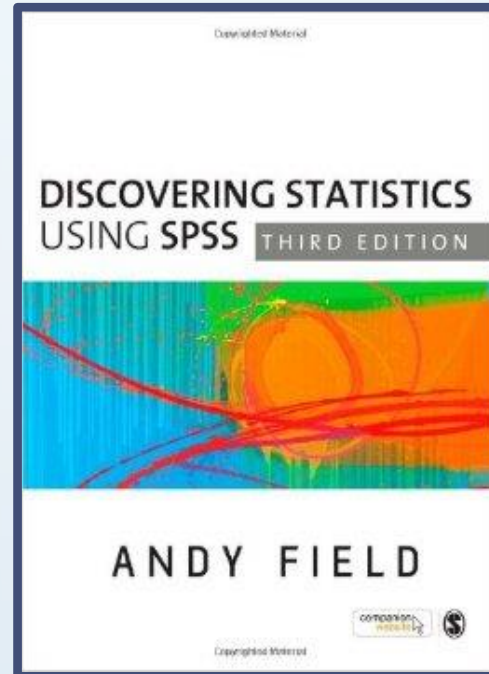
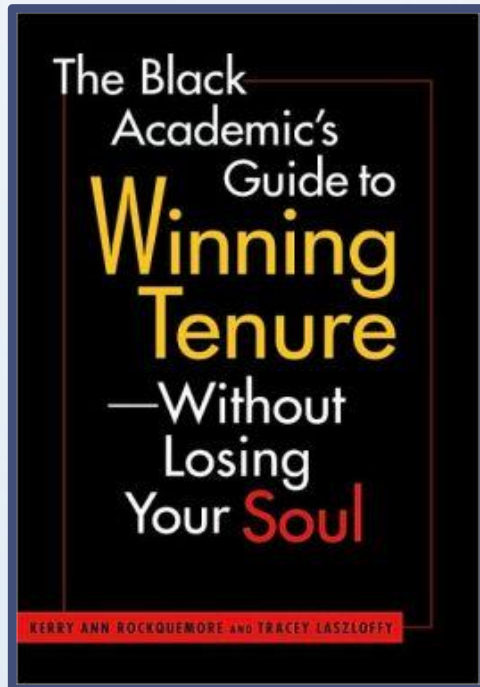
Commented [S154]: What does this mean? You need to elaborate this a bit more

Commented [S155]: Is this citation talking about cancer patients? If not then it's not relevant to the paragraph if the premise of the paragraph is barriers participating in CT for minorities

Commented [S156]: You can pull from this relevant points to my statements in section p2

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Supplemental Resources



*Publishing in Peer Review Journals
(Taylor & Perron, Univ of Michigan)*

Thoughts on publishing papers

Paul K. Crane, MD MPH

November 28, 2010 DRAFT

Publishing is a crucial aspect of academic life. Careful strategizing up front can lead to less frustration and perhaps even enjoyment.

National Center for Faculty Diversity



National Center for Faculty
Development & Diversity



BECOME A MEMBER



MEMBER RESOURCES



FACULTY SUCCESS PROGRAM



CAMPUS WORKSHOPS



STORE



Individual Membership

The NCFDD membership cuts across disciplines and our members represent a wide range of colleges and universities. We invite you to join us for 12-months of mentorship that includes our signature tools, training, and online community.

[Read more >](#)

GRADUATE STUDENTS



POST-DOCS



TENURE-TRACK



MID-CAREER



ADMINISTRATORS



COMMUNITY SEARCH

Enter search criteria...



LATEST NEWS

[more](#)

7/2/2015

Just Released: Our July Newsletter!

CALENDAR

[more](#)

7/7/2015

Navigating the Change: How

SIGN IN

Username



Please complete evaluation forms prior to leaving- Thanks!

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