Writing An Effective Abstract For Research & QI

Rana Ismail, PhD, MSc, CPHQ

Director of Research

Editor, *Spartan Medical Research Journal (SMRJ)*

Graduate Medical Education Alliance
MICHIGAN STATE UNIVERSITY

AGENDA

Part I-

- The importance & purpose of an abstract
- The elements of an abstract- D-I-S-S-E-C-T-E-D
- Editing tips for writing scientific abstracts
- Abstract rejection and authorship issues

Part II-

- Helpful tips for writing a quality improvement (QI) project abstract

An Abstract is Like…

https://www.nbc.com/sites/nbcblog/files/styles/scale_862/public/2023/10/transplant-213-dr-jed-bishop-2.jpg

https://storage.googleapis.com/kms-au.appspot.com/sites/calrossy-careers/assets/66c9ceea-230b-46ac-aeec-fcaba42ecf3c/elevator-pitch-picture-.gif

Purpose of a Scientific Abstract

Meet scholarly requirement & submit abstract to conferences

Appetizer before reading an entire article or checking a poster/oral presentation

Summarizes key points or findings & quick way to retrieve info and bridge knowledge gaps

Time-saving way to quickly explore pertinent research aligned with your project & evaluate quality

Basic Content of an Abstract

Introduction — Why?

Problem, gap, significance, purpose/objectives

Materials & Methods — How?

Study design, setting, participants

Results — What?

Outcomes/endpoints or measures

Discussion — So What? What's Next?

Conclusion, applications, implications

It's not too complicated!

Research & QI Abstract Organization

1. Title
2. Authors, Institution
3. Introduction
4. Methods
5. Results
6. Discussion / Conclusions
7. References, Acknowledgements (Optional)

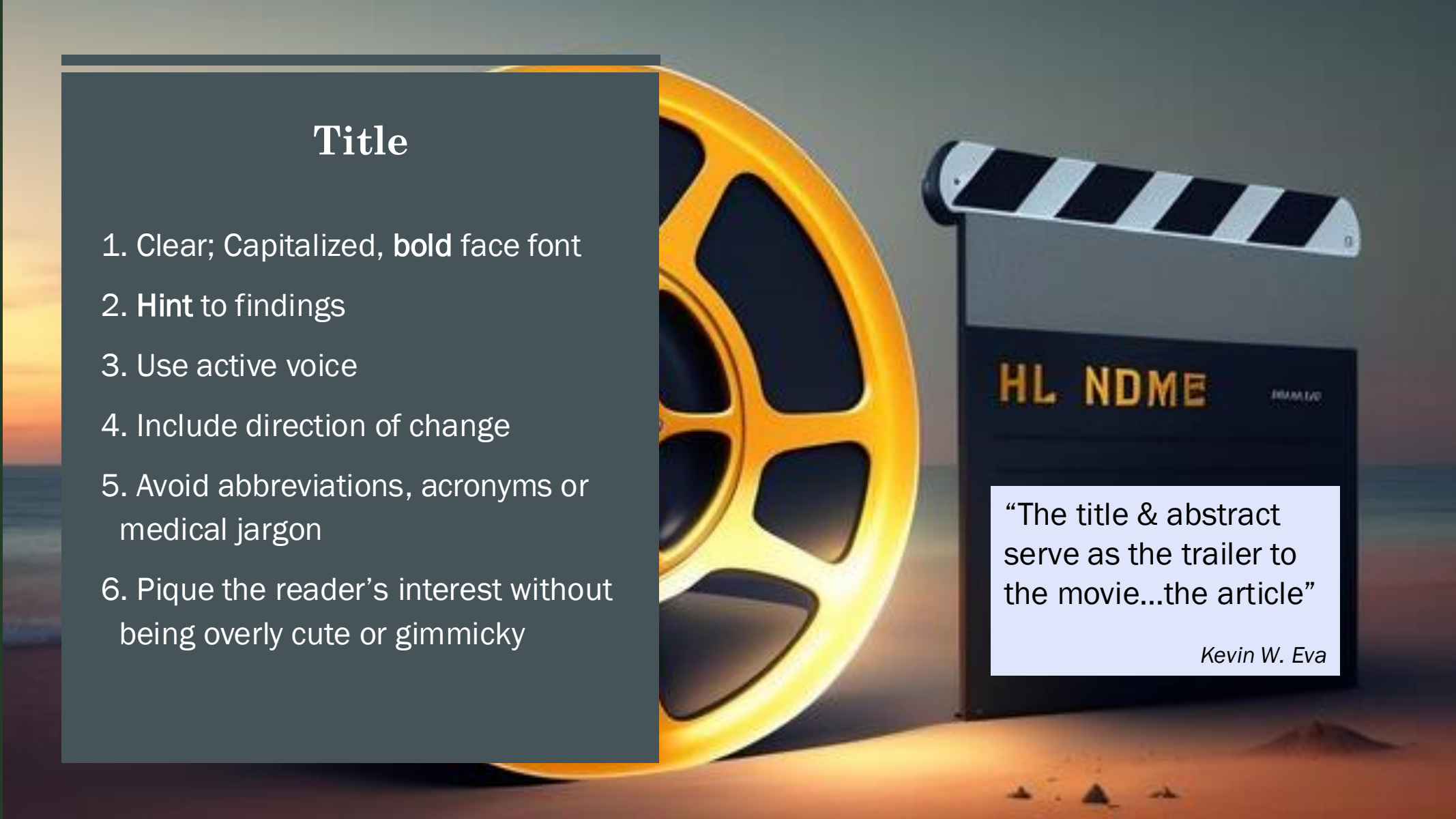
IMRAD

IMRAD format	Eight-heading format
1. Introduction	1. Objective: the exact question(s) addressed by the article
2. Methods	2. Design: the basic design of the study 3. Setting: the location and level of clinical care 4. Patients or participants: the manner of selection and number of patients or participations who entered and completed the study 5. Interventions: the exact treatment or intervention, if any 6. Main outcome measurement: the primary study outcome measure as planned before data collection began
3. Results	7. Results: the key findings
4. Discussion	8. Conclusions: key conclusions including direct clinical application

Nakayama, T., Hirai, N., Yamazaki, S., & Naito, M. (2005). Adoption of structured abstracts by general medical journals and format for a structured abstract. *Journal of the Medical Library Association : JMLA, 93 2*, 237-42 .

Title

1. Clear; Capitalized, **bold** face font
2. **Hint** to findings
3. Use active voice
4. Include direction of change
5. Avoid abbreviations, acronyms or medical jargon
6. Pique the reader's interest without being overly cute or gimmicky

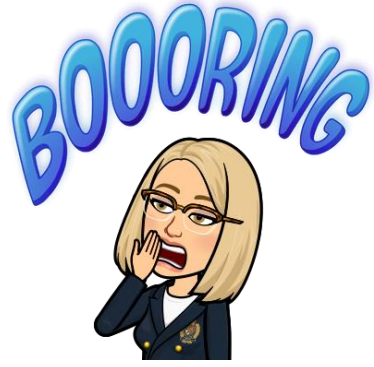


"The title & abstract serve as the trailer to the movie…the article"

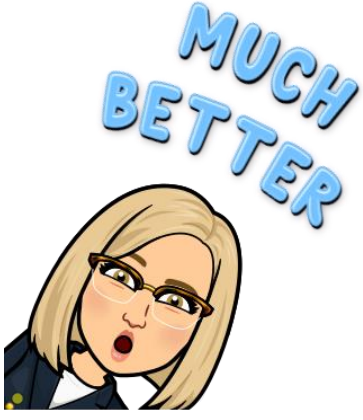
Kevin W. Eva

Titles- From Blah to Better

The TITLE is your first selling point!



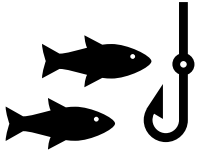
- A Case of Addison's Disease



- Cardiac tamponade preceding adrenal insufficiency—an unusual presentation of Addison's Disease

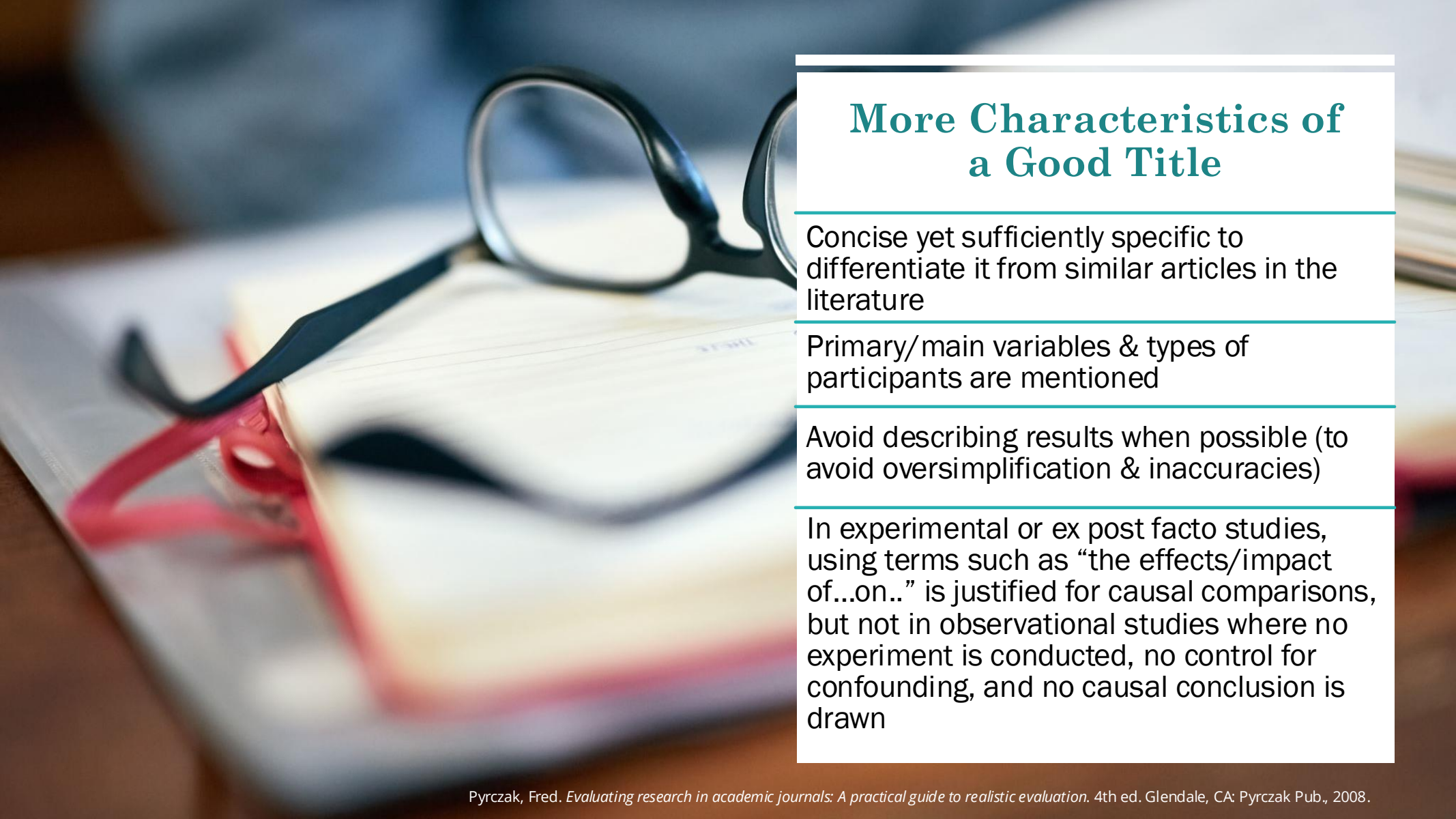
Avoid or limit acronyms in Title

Titles with Questions Grab the Reader's Attention



Does Giving Premature Infants Vitamin D Drops Shorten Their NICU Time?

Elevated Troponin-I — "Nonspecific" Marker of Myocardial Damage?



More Characteristics of a Good Title

- Concise yet sufficiently specific to differentiate it from similar articles in the literature
- Primary/main variables & types of participants are mentioned
- Avoid describing results when possible (to avoid oversimplification & inaccuracies)
- In experimental or ex post facto studies, using terms such as “the effects/impact of…on..” is justified for causal comparisons, but not in observational studies where no experiment is conducted, no control for confounding, and no causal conclusion is drawn

Pyrczak, Fred. *Evaluating research in academic journals: A practical guide to realistic evaluation.* 4th ed. Glendale, CA: Pyrczak Pub., 2008.

Examples of Titles

Review > Nutrients. 2022 Feb 25;14(5):981. doi: 10.3390/nu14050981.

Intermittent Fasting: Potential Bridge of Obesity and Diabetes to Health?

Bo-Ying Zang [1], Li-Xia He [2], Ling Xue [1]

Affiliations + expand

PMID: 35267959 PMCID: PMC8912812 DOI: 10.3390/nu14050981

Free PMC article

The NEW ENGLAND JOURNAL of MEDICINE

RSPECTIVE
porting Climate, Health, and
ity under the Farm Bill

NEJM GROUP PODCASTS
DISCOVER NOW

ORIGINAL ARTICLE
Convalescent Plasma for Covid-19–Induced ARDS in Mechanically Ventilated Patient…

EDITORIAL
A Step Forward in Solvir
Amyloidosis

PAIM ▸ Archive ▸ 2023, Vol. 133, No. 4

POLISH ARCHIVES OF Internal Medicine

REVIEW ARTICLES

COVID-19 and its long-term sequelae: what do we know in 2023?

Article contents

Current epidemiology of COVID-19
Definition of long-COVID
Prevalence and predictors of long-COVID
Impact of SARS-CoV-2 variants
Impact of COVID-19 vaccination

Giuseppe Lippi[1]*, Fabian Sanchis-Gomar[2]*, Brandon M. Henry[3]

DOI: 10.20452/pamw.16402
Published online: January 09, 2023

PLOS ONE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Impact of the COVID-19 pandemic on medical education: Medical students' knowledge, attitudes, and practices regarding electronic learning

Ahmed Alsoufi, Ali Alsuyihili, Ahmed Msherghi, Ahmed Elhadi, Hana Atiyah, Aimen Ashini, Arwa Ashwieb, Mohamed Ghula, Hayat Ben Hasan, Salsabil Abudabuos, Hind Alameen, Taqwa Abokhdhir, Mohamed Anaiba, […],Muhammed Elhadi

ORIGINAL ARTICLE

The Effect of Advances in Lung-Cancer Treatment on Population Mortality

Nadia Howlader, Ph.D., Goncalo Forjaz, D.V.M., Meghan I. Mooradian, M.D., Rafael Meza, Ph.D
d Eric

This Issue Views 107,149 | Citations 307 | Altmetric 1014

Download PDF | More | Cite This | Permissions

Original Investigation FREE

January 22, 2019

Association of Aspirin Use for Primary Prevention With Cardiovascular Events and Bleeding Events

A Systematic Review and Meta-analysis

Sean L. Zheng, BM, BCh, MA, MRCP[1,2,3]; Alistair J. Roddick, BSc[3]

Author Affiliations | Article Information

Circulation

AHA Journals | Journal Information | All Issues | Subjects | Features | Resources & E

Home > Circulation > Vol. 146, No. 10 > Risk of Myocarditis After Sequential Doses of COVID-19 Vaccine and SARS-CoV-2 Infection by Age and Sex

FREE ACCESS
RESEARCH ARTICLE

PDF/EPUB

Risk of Myocarditis After Sequential Doses of COVID-19 Vaccine and SARS-CoV-2 Infection by Age and Sex

Martina Patone, Xue W. Mei, Lahiru Handunnetthi, Sharon Dixon, Francesco Zaccardi, Manu Shankar-Hari, Peter Watkinson, Kamlesh Khunti, Anthony Harnden, Carol A.C. Coupland, Keith M. Channon, Nicholas L. Mills, Aziz Sheikh and Julia Hippisley-Cox

Originally published 22 Aug 2022 | https://doi.org/10.1161/CIRCULATIONAHA.122.059970 | Circulation. 2022;146:743–754

Introduction/Background/Objectives

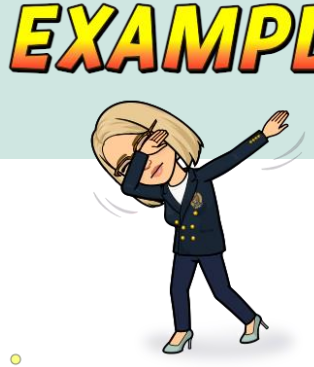
Gap; Significance; Relevance

Aim, Objective or Hypothesis

* Use mainly present tense. 1-3 sentences

Example- Introduction

Despite a 90% vaccine efficacy, the COVID-19 vaccination rate among patients with chronic conditions 65 years and older attending the clinic is too low, which puts them at high risk for mortality and morbidity and calls for immediate action. This project seeks to improve the vaccination rate by 30% to prevent potential clinical complications and death associated with COVID-19 infection.



Methods

Be Succinct

Briefly describe general design

Describe methods in chronological order (recipe)

Easy to replicate study

IRB? Regulatory approvals

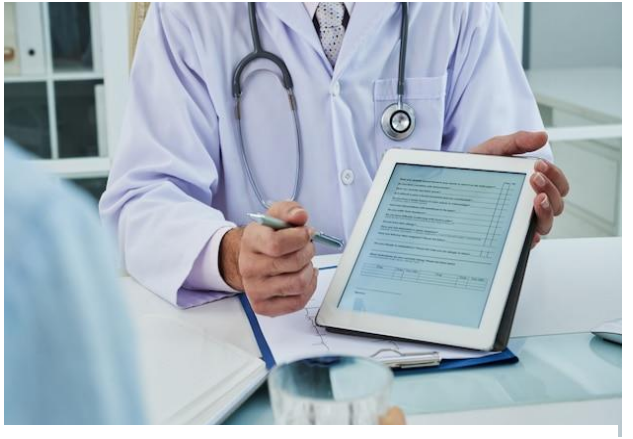
Include setting, participants, sample size, use of controls, inclusion criteria, endpoints, data analysis plan

Define acronyms. Italicize *organism names* & Latin terminology such as *E. coli*, *in vivo*, *in utero*, etc.

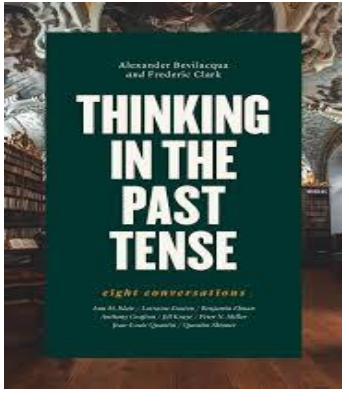
Methods

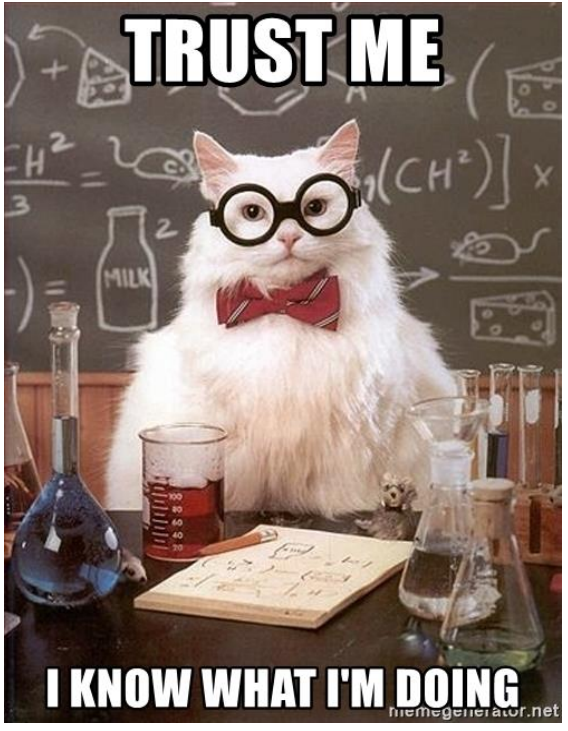
Indicate any trademarked devices, drugs or reagents, generic names for drugs & companies; software.

IBM SPSS 26



Mention briefly interventions & tools. Survey instruments.





Convince readers that they can trust your methods.

Methods- Example1

ARTICLES

Eradication Efficacy of Modified Dual Therapy Compared with Bismuth-Containing Quadruple Therapy as a First-Line Treatment of *Helicobacter pylori*

Yang, Jing MD[1]; Zhang, Yi MD[1]; Fan, Ling MD[1]; Zhu, Yang-Jie MD[1]; Wang, Ting-Yi MD[1]; Wang, Xing-Wei MD[1]; Chen, Dong-Feng MD, PhD[1]; Lan, Chun-Hui MD, PhD[1]

Author Information

The American Journal of Gastroenterology: March 2019 - Volume 114 - Issue 3 - p 437-445
doi: 10.14309/ajg.0000000000000132

METHODS:

A total of 232 *H. pylori*-infected, treatment-naive patients were enrolled in this open-label, randomized controlled clinical trial. Patients were randomly allocated into two groups: the 14-day modified dual therapy group and the bismuth-containing quadruple therapy group. Eradication rates, drug-related adverse events, patient compliance, and drug costs were compared between both groups.

Methods- Example 2

Randomized Controlled Trial › Clin Infect Dis. 2019 Sep 13;69(7):1091-1098.
doi: 10.1093/cid/ciy1054.

Seven Versus 14 Days of Antibiotic Therapy for Uncomplicated Gram-negative Bacteremia: A Noninferiority Randomized Controlled Trial

Dafna Yahav [1 2], Erica Franceschini [3], Fidi Koppel [4], Adi Turjeman [2 5], Tanya Babich [2 5],

Background: Gram-negative bacteremia is a major cause of morbidity and mortality in hospitalized patients. Data to guide the duration of antibiotic therapy are limited.

Methods: This was a randomized, multicenter, open-label, noninferiority trial. Inpatients with gram-negative bacteremia, who were afebrile and hemodynamically stable for at least 48 hours, were randomized to receive 7 days (intervention) or 14 days (control) of covering antibiotic therapy. Patients with uncontrolled focus of infection were excluded. The primary outcome at 90 days was a composite of all-cause mortality; relapse, suppurative, or distant complications; and readmission or extended hospitalization (>14 days). The noninferiority margin was set at 10%.

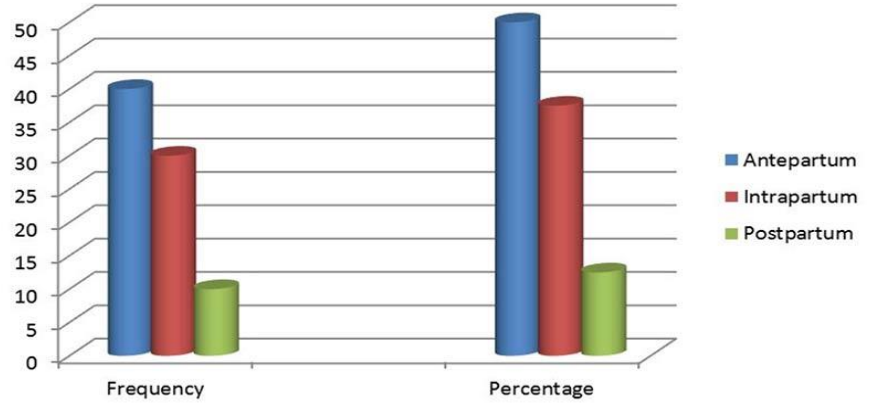
Results-I

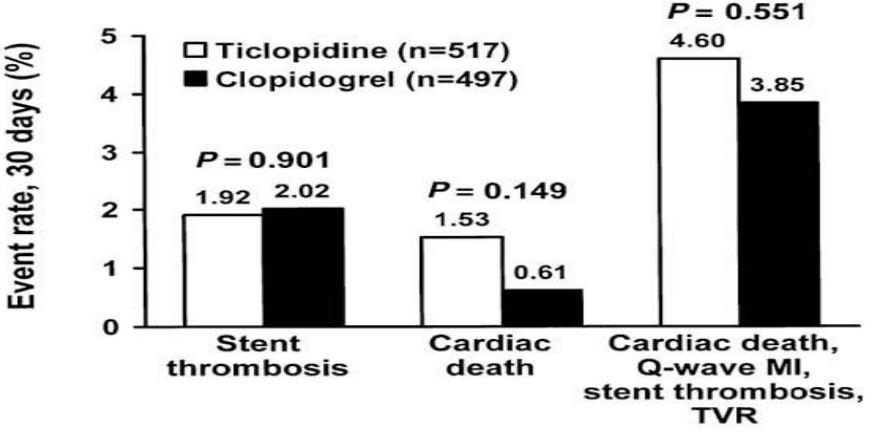
Mainly **narrative for abstracts;** use graphs or tables if allowed but use them for manuscripts.

Label axes and legends of all tables & graphs

Tables and graphs should be self-interpretable & appealing

Figure 2: Distribution of types of eclampsia among the eclamptic patients





https://trialsjournal.biomedcentral.com/articles/10.1186/cvm-1-2-083

Results-II

Present key results in chronological order, consistent with study design/methods

Include statistics with significant or non-significant P (95% CI; P values)

e.g., risk of bleeding was increased by 38% among X users versus Y users (OR, 1.38; 95% CI, 1.20-1.57, $p < 0.001$).

Include appropriate units for any numerical data

e.g., patient had hypoalbuminemia <3gm/dL & leukocytosis > 15,000 cells/mm^3

Conclusions/Summary

1. Revisit study objectives
2. Provide a “bottom-line” sentence that summarizes all data related to hypothesis or aim or to the “big picture” (optional)
3. Address any limitations or shortcomings (design or data)
4. Indicate whether further work is needed

References (Optional)

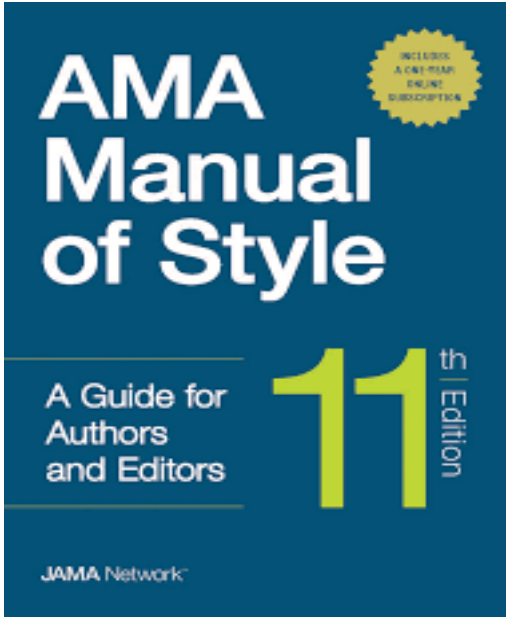
For abstracts: No references are needed; unless indicated in “Instructions for Authors”

Styles in Medicine: AMA, NLM, Vancouver, Chicago

EndNote™

zotero

MENDELEY



Acknowledgments (Optional)

ACKNOWLEDGE:

Collaborators, pathologists, research associates, statisticians, and others who helped

Company for providing study drugs, reagents or devices, or proprietary materials

Sponsor for funding or grant support

Instructions For Authors- IFAs

- Abstracts for manuscripts, conferences or scientific meetings: read instructions & restrictions on # authors, font size, word count, etc.
- **STRICTLY** adhere to guidelines or risk outright rejection.
- Technical specifications in **"Call for Abstracts"** or in **"Instructions for Authors"** on journals' websites or professional conferences.

Let's Go Over Some Fun Stuff…Like…

Editing!

Ways to Shorten Abstracts- I

- *1. Use active voice*

Patients were saved by the treatment

→ Treatment saved patients

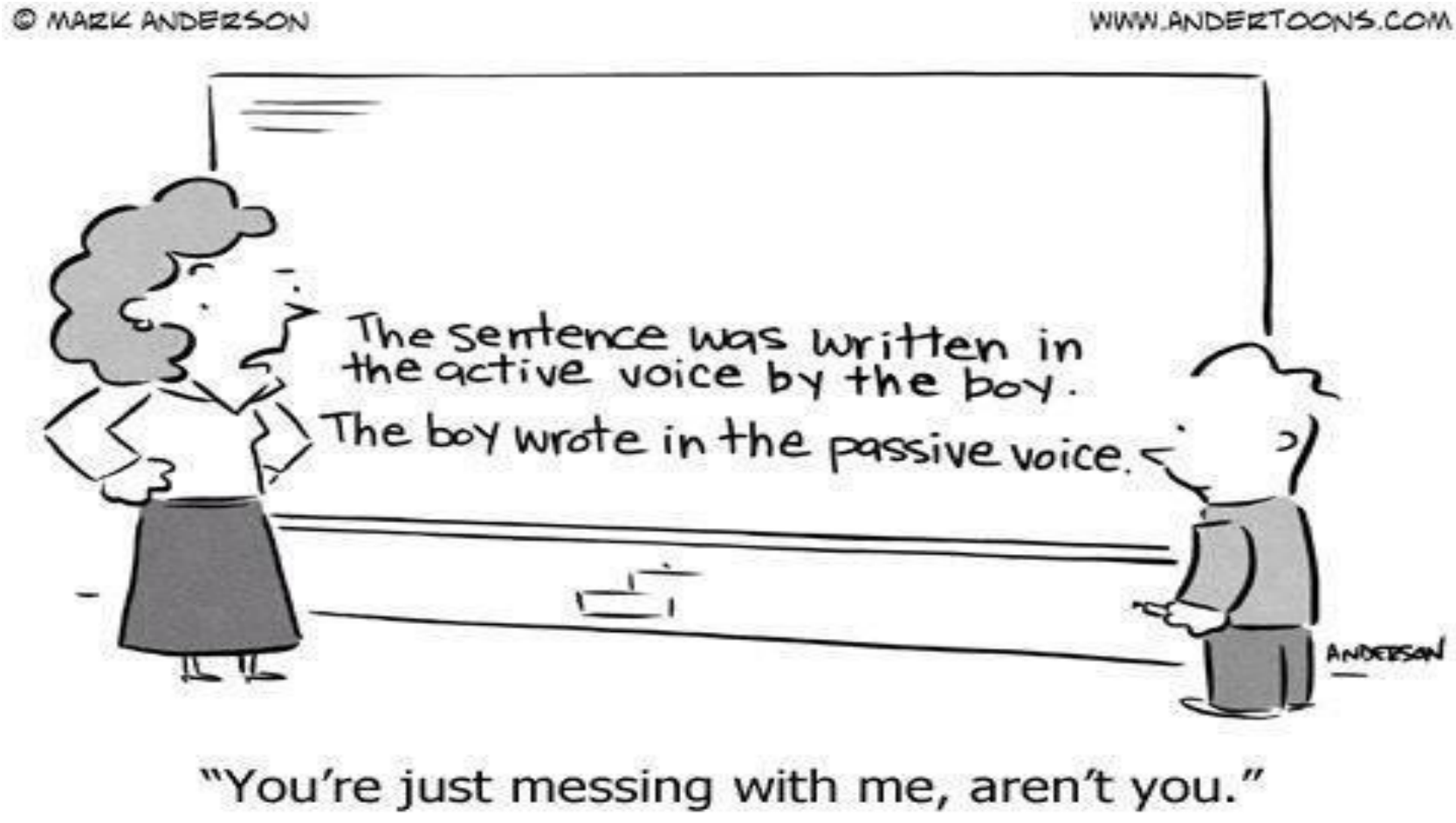
Enzyme levels were lowered…

→ Enzyme levels dropped

A CT scan was ordered by the consultant

→ The consultant ordered a CT scan

Be Active and Write the Way You TALK!



More Examples- Passive Into Active

P: Educational intervention was offered to patients to quit vaping.
A: We offered an educational intervention to patients to quit vaping.

P: The patient will be evaluated by the cardiology team for recommendation of therapy.
A: The cardiology team will evaluate the patient for therapy recommendation.

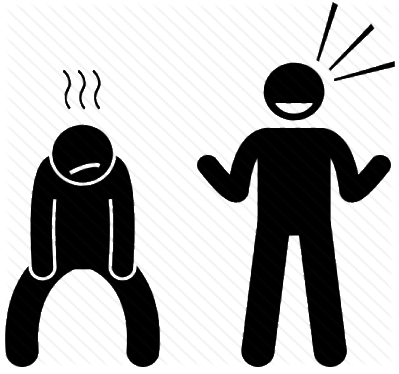
P: A strong correlation was found between vaping and lung cancer in young adults.
A: Vaping strongly correlated with lung cancer in young adults.

In Case of Cause & Effect…

Passive

- Mucosal mast cells in the nasal epithelium **are activated by** antigens that diffuse across the mucosa after being inhaled.

19 Words



Put the cause before the effect!

Active

- Inhaled antigens that diffuse across the mucosa activate mucosal mast cells in the nasal epithelium.

15 Words

Using Active Voice… But Passive is Sometimes Inevitable!

Passive voice is good for Methods section

Not important to know who carried the tasks or analysis

Active voice improves readability

Active voice reduces ambiguity

- who did what
- cause & effect
- be direct & specific

Is it OK to Use Personal Pronouns “I” or “We” in an Abstract or Manuscript?

Yes…unless otherwise specified in conference or manuscript guidelines !

Ways to Shorten Abstracts- II

2. Declutter

Don't use "empty" constructions or prepositions

- In order to determine: To determine
- In spite of the fact: Even though
- There were 87 patients enrolled in:

  87 patients enrolled in…
- In the month of May: in May
- With the exception of: Except

3. Choose stronger, shorter words:

- In addition to Also
- Not later than By
- It was found We (or they) found

Ways to Shorten Abstracts- IV

5. Compare groups in parallel

- Patients who received therapy had a median life expectancy of 7.0 years, compared to 2.3 years for those who did not receive therapy. (23 words)

Median life expectancy was 7.0 years for treated patients and 2.3 years for untreated patients. (15 words)

6. Put units for lab results- in abstract with word limit, no spacing

- e.g., creatinine of 2.79mg/dL

Ways to Shorten Abstracts- V

7. Start with "Of" or "Among" when reporting proportions

- 84 subjects were enrolled in the study and 58 completed it. (11 words)

  ➡ Among 84 subjects enrolled, 58 completed it. (7 words)

8. Use more descriptive verbs

- Pfizer **reports that approximately** only 20% of the young people aged 18-30 got vaccinated before the Delta wave.

  estimates

- The CDC estimates the number of vaccinated people will double by the end of the year.

  projects

More on Verbs

Verbs drive sentences

9. *Don't turn verbs into nouns:*

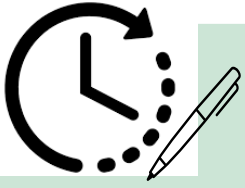
In stroke, recognition of early signs and symptoms results in saving brain cells and preventing nerve damage. (17 words)

It is better is to turn the noun into verbs:

✓ In stroke, recognizing early signs and symptoms saves brain cells and prevents nerve damage. (14 words- clearer)

Tips on Writing Good Abstracts- I

Use **bold** face fonts to highlight **headings**



Ensure sufficient time to compose abstract-at least 5 or 6 hours

Adhere to abstract guidelines, format requirements, & deadlines

Use **12pt font** or greater to facilitate reading

Tips on Writing Good Abstracts II

Avoid large blocks of uninterrupted text (use paragraphs, indentions, spaces, bold font headings)

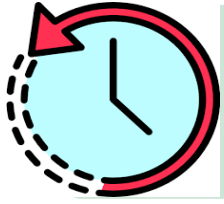
Be clear, concise, and brief

Define abbreviations when they first appear within the text.

e.g., Lipopolysaccharide (LPS)

Tips on Writing Good Abstracts III

"I" & "we", third person ("the authors") are ok; limit passive voice



Describe **methods & results in the past tense**

Discuss **conclusions in the present tense**

Get feedback from reviewers evaluating your abstract

Tips on Writing Good Abstracts IV

Each section is unified, coherent, concise and able to function independently

Avoid using unnecessary adverbs, adjectives

Consequently | Therefore | In addition
As a result | Similarly | Besides
Thus | However | Furthermore

Provide logical connections or transitions between the sentences and info

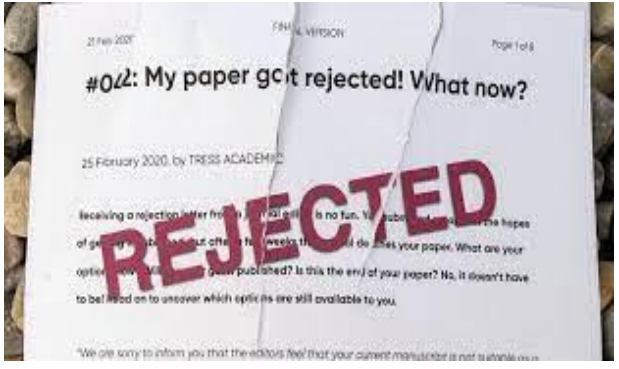
Tips on Writing Good Abstracts V

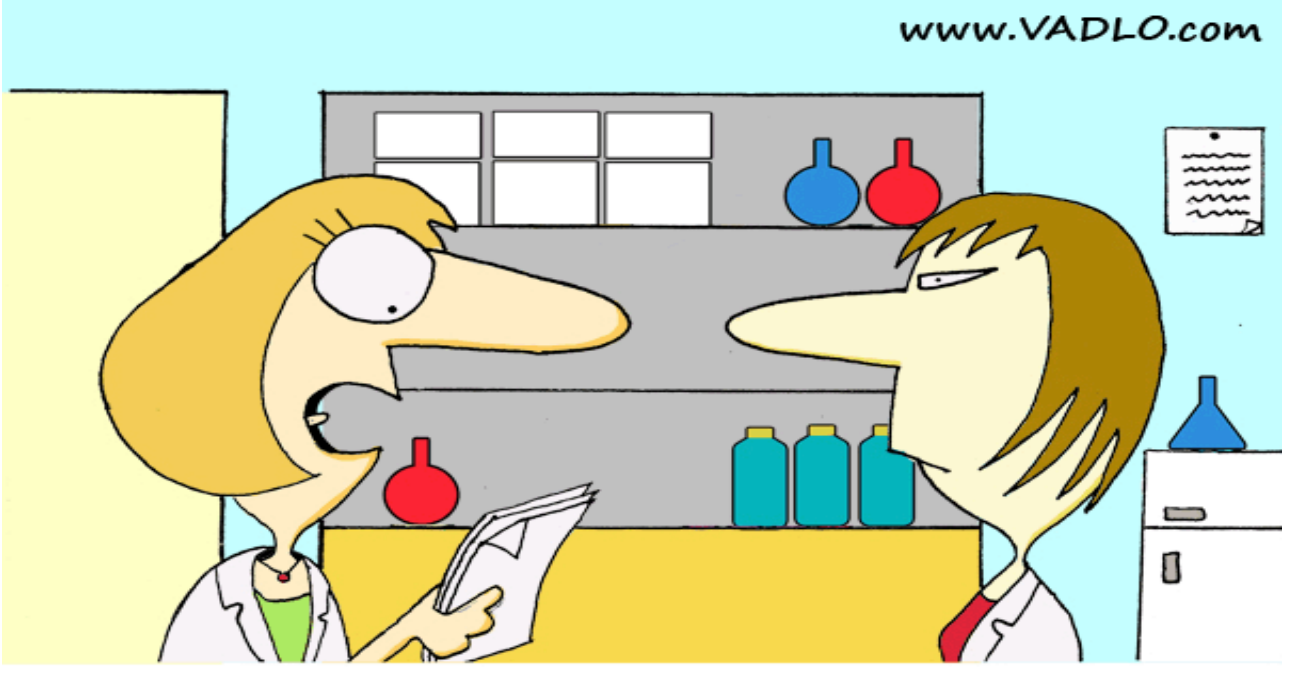
Fully understandable as a stand-alone work

Does not offer extra info beyond the scope of the study/project

Understandable to wide audience- less jargon

Submission Rejection?





"Editor says the manuscript would serve some purpose if it were written on toilet paper."

Leading Reasons Why Abstracts are Rejected

- Incomplete or did not conform to guidelines
- Significant flaws in study design
- Poorly powered; inappropriate statistics
- Lack of regulatory compliance (IRB)
- Study was incomplete (e.g., no data)
- Poorly written
- Study not appropriate for intended audience
- Abstract submitted past submission deadline

Authors & Ethics

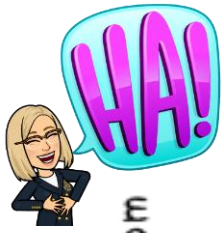
Primary author contributes the greatest amount of work & intellectual effort

Primary author -listed first in bold (abstract format)

Max # of authors may be defined by the journal or society

All authors on the abstract are responsible for content and veracity of the work

THE AUTHOR LIST: GIVING CREDIT WHERE CREDIT IS DUE



The first author
Senior grad student on the project. Made the figures.

The third author
First year student who actually did the experiments, performed the analysis and wrote the whole paper. Thinks being third author is "fair".

The second-to-last author
Ambitious assistant professor or post-doc who instigated the paper.

Michaels, C., Lee, E. F., Sap, P. S., Nichols, S. T., Oliveira, L., Smith, B. S.

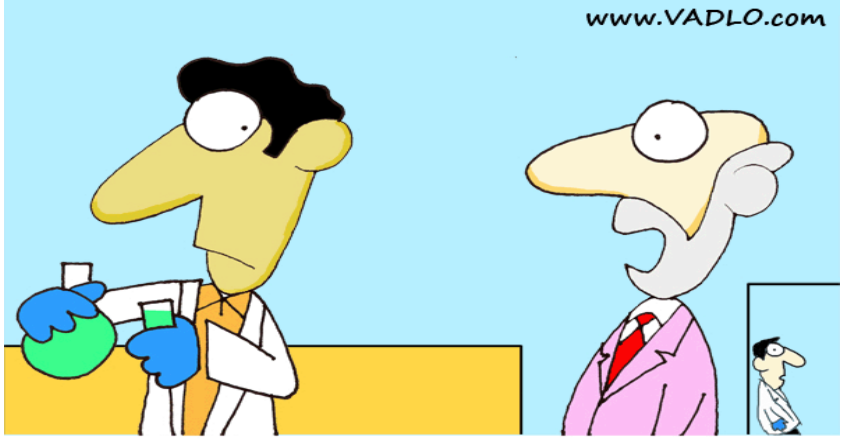
The second author
Grad student in the lab that has nothing to do with this project, but was included because he/she hung around the group meetings (usually for the food).

The middle authors
Author names nobody really reads. Reserved for undergrads and technical staff.

The last author
The head honcho. Hasn't even read the paper but, hey, he got the funding, and his famous name will get the paper accepted.

JORGE CHAM © 2005

www.phdcomics.com



"No, it's my wife's turn to be the first author on **your** paper."

Authors and Ethics Cont'd

Only individuals with substantive contribution to the work should appear as authors

Ghost authorships are not appropriate- authors who meet authorship criteria, but they are **not listed**

Gift or guest authorship = abuse

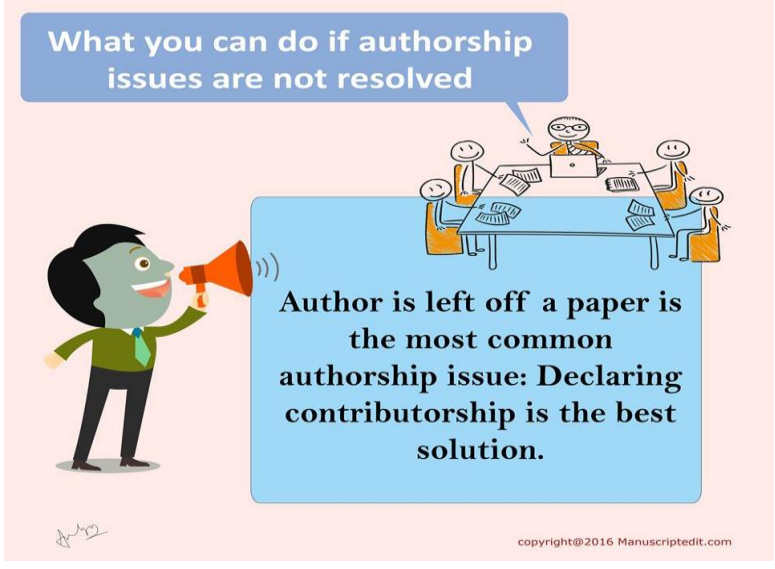
Beware of "cut & paste" plagiarism

Decide in advance authorship & the order of names

Authorship Issues

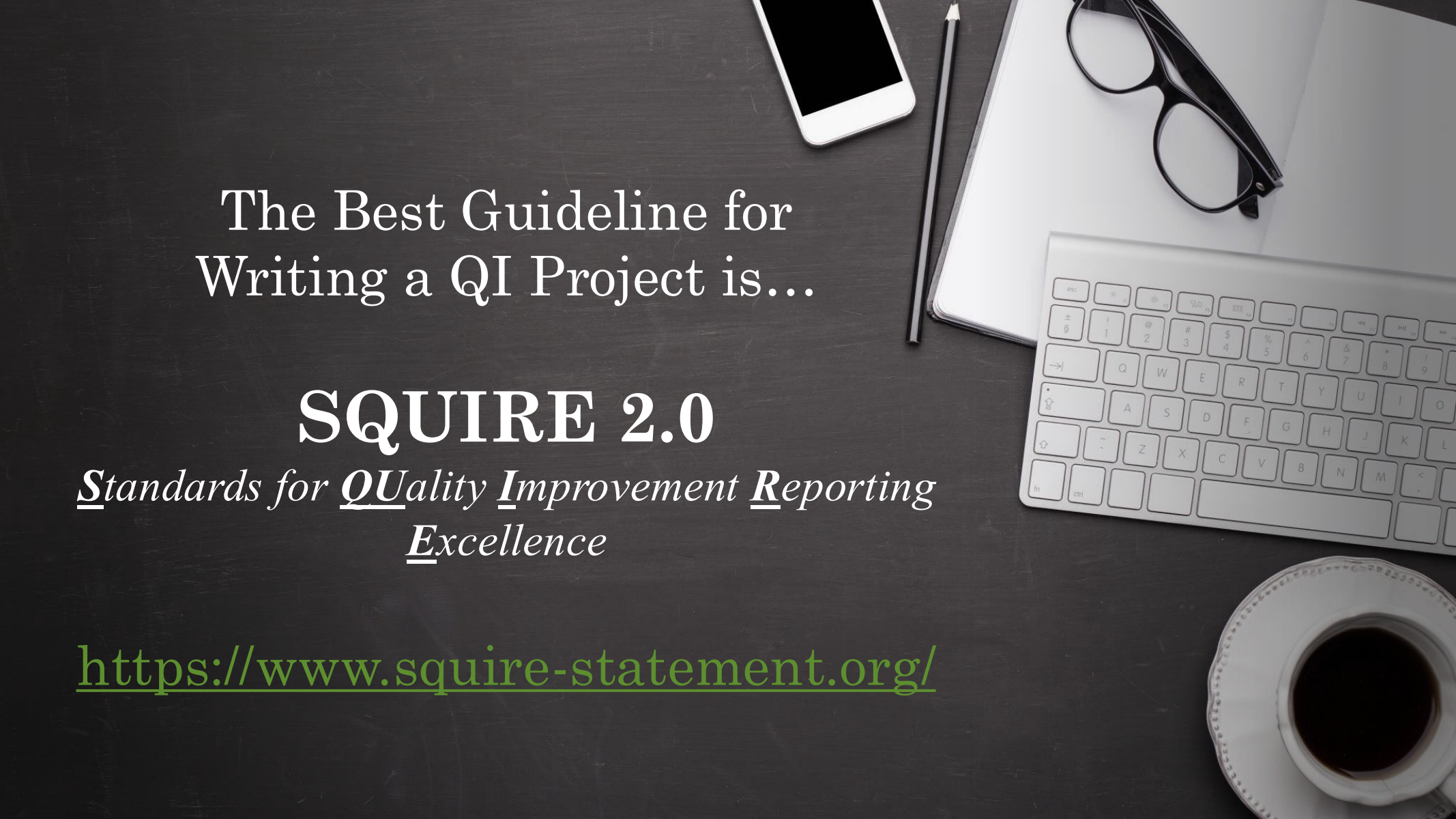
Each author should take responsibility for a specific part of the work.

European Association of Science Editors



Hello....
You made it here to Part II:

Helpful Tips for Writing a Quality Improvement Project Abstract!



The Best Guideline for Writing a QI Project is…

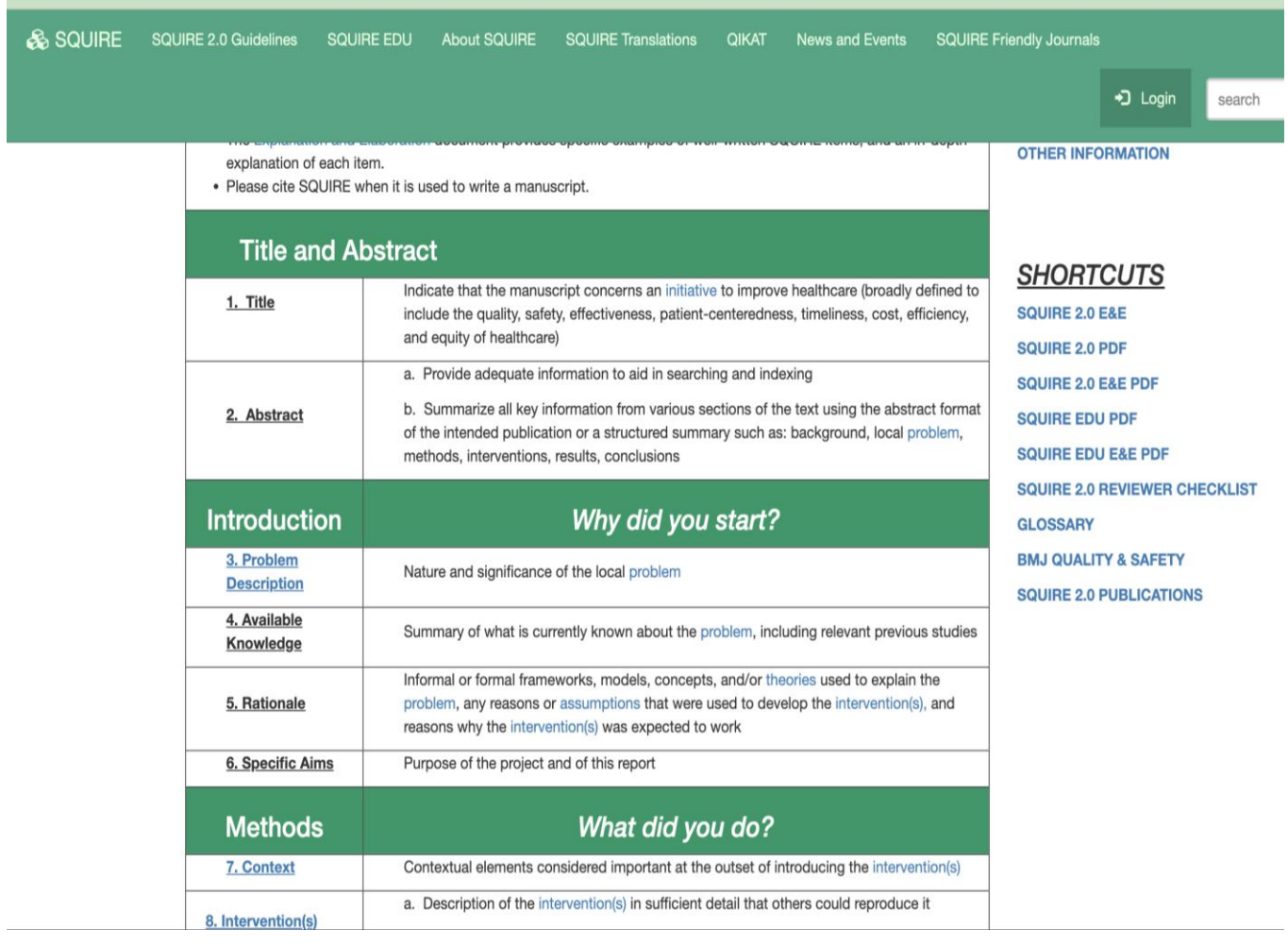
SQUIRE 2.0

***S**tandards for **QU**ality **I**mprovement **R**eporting **E**xcellence*

https://www.squire-statement.org/

SQUIRE 2.0 Guidelines for Abstract and Manuscript

- https://www.squire-statement.org/index.cfm?fuseaction=Page.ViewPage&pageId=504#ee_abstract



SQUIRE | SQUIRE 2.0 Guidelines | SQUIRE EDU | About SQUIRE | SQUIRE Translations | QIKAT | News and Events | SQUIRE Friendly Journals

Login | search

explanation of each item.

- Please cite SQUIRE when it is used to write a manuscript.

Title and Abstract	
1. Title	Indicate that the manuscript concerns an initiative to improve healthcare (broadly defined to include the quality, safety, effectiveness, patient-centeredness, timeliness, cost, efficiency, and equity of healthcare)
2. Abstract	a. Provide adequate information to aid in searching and indexing b. Summarize all key information from various sections of the text using the abstract format of the intended publication or a structured summary such as: background, local problem, methods, interventions, results, conclusions
Introduction	***Why did you start?***
3. Problem Description	Nature and significance of the local problem
4. Available Knowledge	Summary of what is currently known about the problem, including relevant previous studies
5. Rationale	Informal or formal frameworks, models, concepts, and/or theories used to explain the problem, any reasons or assumptions that were used to develop the intervention(s), and reasons why the intervention(s) was expected to work
6. Specific Aims	Purpose of the project and of this report
Methods	***What did you do?***
7. Context	Contextual elements considered important at the outset of introducing the intervention(s)
8. Intervention(s)	a. Description of the intervention(s) in sufficient detail that others could reproduce it

OTHER INFORMATION

SHORTCUTS

SQUIRE 2.0 E&E

SQUIRE 2.0 PDF

SQUIRE 2.0 E&E PDF

SQUIRE EDU PDF

SQUIRE EDU E&E PDF

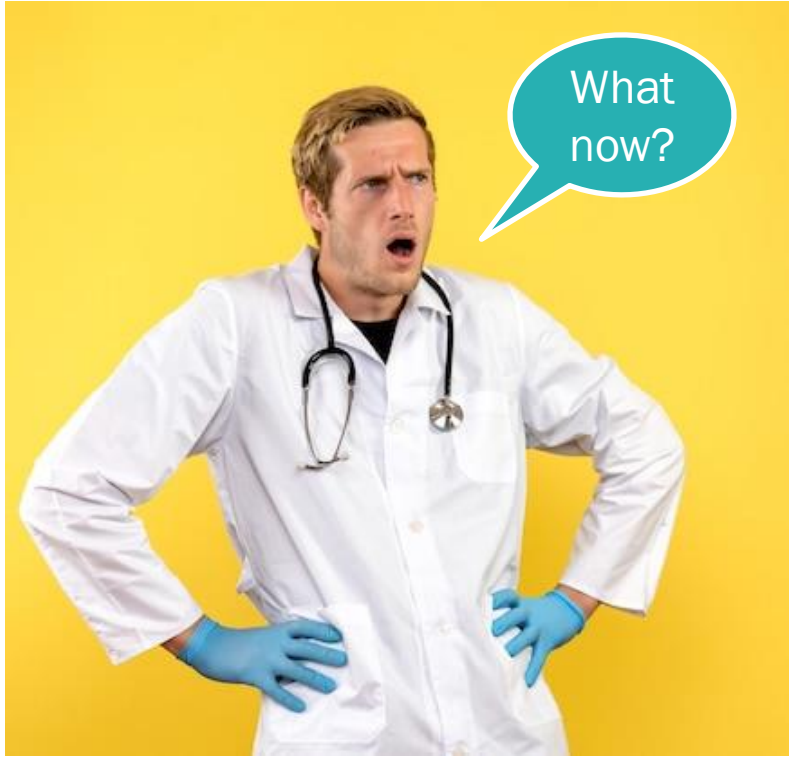
SQUIRE 2.0 REVIEWER CHECKLIST

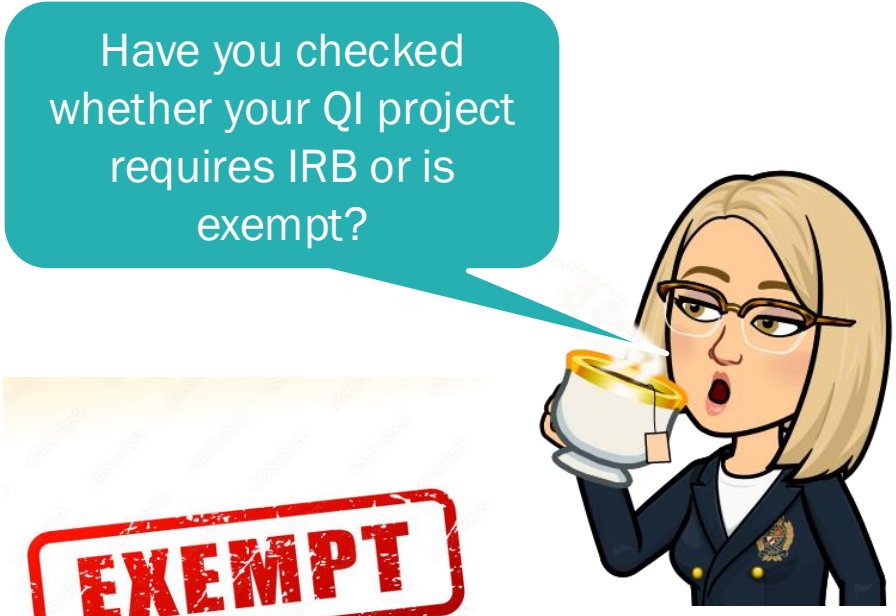
GLOSSARY

BMJ QUALITY & SAFETY

SQUIRE 2.0 PUBLICATIONS

Before Thinking About Writing Your QI Project….





Self-Certification Form

Determining Whether Your Proposed Activity is Quality Improvement (QI)

INSTRUCTIONS: Complete the following section to help you determine if your proposed activity falls in the realm of QI.

	QI Certification Statements	YES	NO
1	Your activity's primary objective is to produce an improvement in safety or care that will be sustained over time at the local institution or within a particular program at the local institution. ***NOTE:*** *If the intended outcome is simply to report on what happened at the local institution/program, it does not indicate research design or intent as it may not be generalizable outside of the local institution.*		
2	Your activity does **NOT** use a fixed protocol for the duration of the proposed work. ***NOTE:*** *If frequent adjustments are needed, your answer should be "YES."*		
3	Your activity does **NOT** involve an intervention that may pose risks greater than those presented by routine clinical care.		
4	There will be minimal delays in implementing changes from results.		
5	All individuals involved in key project roles have on-going commitment to the improvement of the local care situation.		
6	Your activity is **NOT** funded by an outside organization with commercial interest in the use of the results. ***NOTE:*** *The purpose of this statement is to determine if the project has received funding to be conducted as a research study.*		
7	Your activity is **NOT** part of a multi-center project that involves non-NYUL Health sites. ***NOTE:*** *If it is being conducted in a multi-site context with a common protocol across sites, then the results may be generalizable and thus constitute research.*		

Understanding Your Results
If all of your responses to the below statements are positive (i.e., checked off **YES**), then your proposed activity constitutes QI that does not require IRB review or oversight. If you answered in any other combination, your proposed activity may be research that involves human subjects. You must submit an application to the IRB before starting your project. Visit the IRB's website or call for further instructions at 212-263-4110. If the results of this form indicate the project is not research involving human subjects, consistent with the NYU SoM IRB policy and federal regulations governing human subject research, IRB review is not required.

Interested in Publishing your QI Project?

1- Consult IRB & fill in a self-certification form to determine if your project is a QI & does not require IRB; another name for the form could be "Determination of Human Subject Research."

2- Get IRB exempt # for publication.

CLINICAL QUALITY IMPROVEMENT CHECKLIST		
Date:		
Division:		
Project Leader:		
Instructions: Answer **YES** or **NO** to each of the following statements about QI projects.	**YES**	**NO**
The aim(s) of the project is to improve the process or delivery of care with established /accepted quality standards, or to implement change according to mandates of the hospital's Clinical Quality Improvement programs. There is no intention of using the data for research purposes.	☐	☐
The specific aim is to improve performance on a specific service or program in the hospital and **is part of usual care.** All participants will receive standard of care.	☐	☐
The project is **NOT** designed to answer a research question or test a hypothesis and is **NOT** intended to develop or contribute to generalizable knowledge.	☐	☐
The project does **NOT** follow a research design (e.g., hypothesis testing or group comparison (randomization, control groups, prospective comparison groups, cross-sectional, case-control)). The project does **NOT** follow a protocol that over-rides clinical decision-making.	☐	☐
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	☐	☐
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	☐	☐
The project is conducted by staff where the project will take place, and involves staff who are working at, or patients who are seen at the Partners institution.	☐	☐
The project has **NO** funding from federal agencies or research-focused organizations, and is not receiving funding for implementation research (see External Funding on pg 1).	☐	☐
The clinical practice unit (hospital, clinic, division, or care group) agrees that this is a QI project that will be implemented to improve the process or delivery of care (i.e., not a personal research project that is dependent upon the voluntary participation of your colleagues, students and/or patients).	☐	☐
If there is an intent to, or possibility of publishing your work, you and your Department/QI Oversight group are comfortable with the following statement in your methods section: *"This project was undertaken as a Quality Improvement Initiative at X hospital or clinic, and as such was not formally supervised by the Institutional Review Board per their policies."* **	☐	☐
ANSWER KEY: If the answer to **ALL** of these questions is **YES**, the activity can be considered a Clinical Quality Improvement/Measurement activity that does not meet the definition of research. **IRB review is not required. Keep a dated copy of this checklist in your files.** If the answer to **ANY** of these questions is **NO**, the project must be submitted to the IRB for review.		

If projects meet **ALL of the criteria on this list and an editor or publication has concerns about, or disagrees with this statement, the IRB is willing to write in support of your submission, clarifying the IRB policy/approach (contact Elizabeth L. Hohmann MD, Director and Chair, Partners Human Research Committee).

A Checklist to Evaluate Whether the Project is a QI and Does Not Need IRB Review

The checklist below can be utilized to help determine whether your proposed activity is **Clinical Quality Improvement/Measurement** that does not need IRB review, or **Quality Improvement Research** which does require IRB review. Consider consulting the IRB on challenging projects, for example those involving international sites, vulnerable populations, sensitive content, medical errors, or monetary incentives that are not hospital-wide. If necessary, review this checklist with the appropriate Department Chairperson or Administrative Supervisor where your project will be conducted.

PHRC Guidance: Review of Quality Measurement Initiatives
OHRP Quality Improvement Activities FAQs

All set…get ready…write!

Follow these

QI Abstract Writing Tips

QI Project - Background

Explain importance of the project

Ground reader about magnitude of problem

Mention national or state benchmarks or best practice guidelines for an outcome measure

Include current implications & overarching goal

(e.g., better clinical outcomes, better process, less waste, cutting costs, better patient satisfaction).

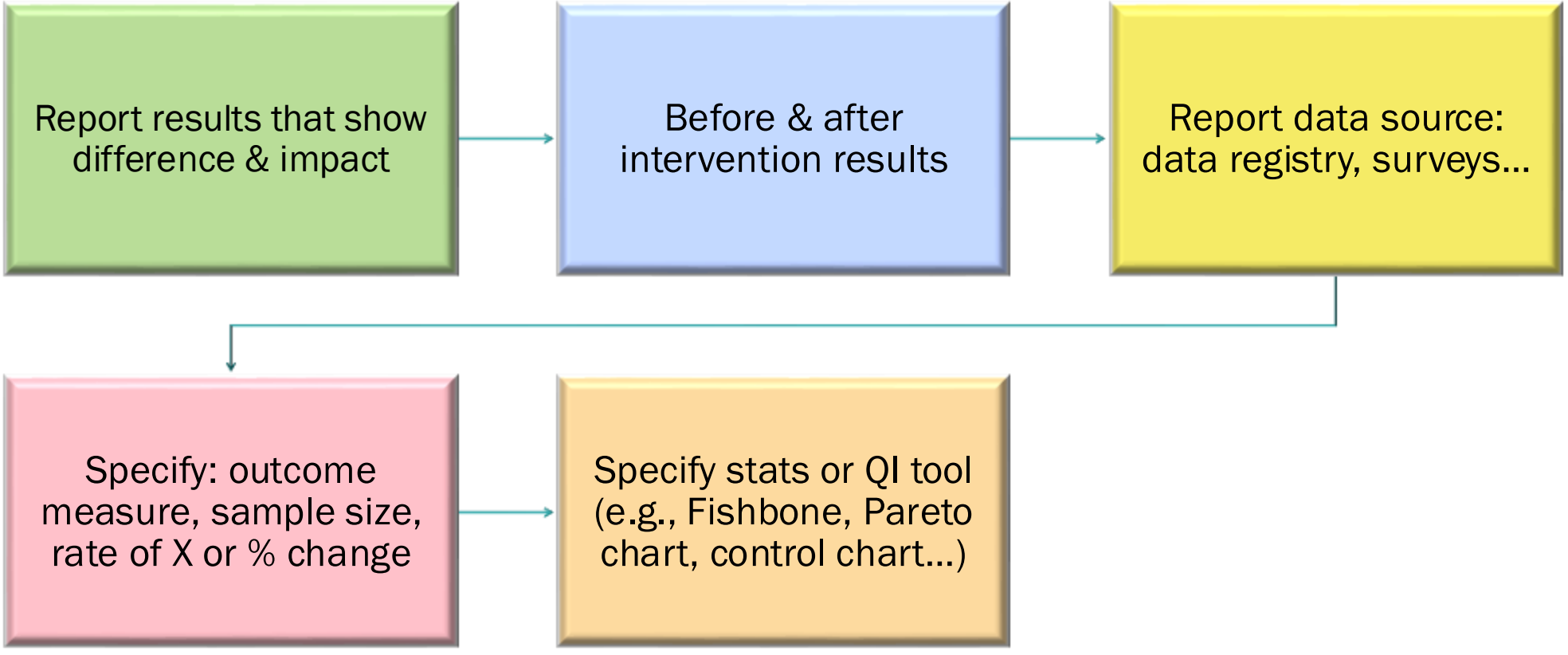
QI Project- Aim

- **Objectives:** The project objectives must be clear, precise, and concise
- The SMART aim statement.

QI Project- Methods

- **QI Approach:** PDSA, Clinical Practice Improvement, Root Cause Analysis, Model for Improvement, Lean, Six Sigma…etc.?
- Provide a roadmap to your work; others can replicate it
- Discuss QI tools or techniques
- Discuss PLAN (PDSA) in detail
- Root Cause Analysis (RCA)? Mention it here & under “results”

QI Project- Results

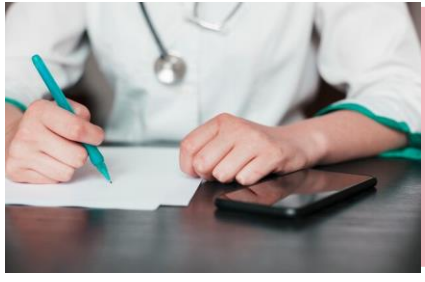


QI Project- Conclusion

- Are implications clearly described? Aligned to results?
- Discuss lessons learned
- Relate conclusion to aim statement & summarize what you have done so far
- Display strengths & solutions provided
- Mention limitations & next steps

Last Tips on Writing a QI Project Abstract

Read abstracts from other QI projects from the literature or conferences to familiarize yourself with the write-up



Write a full raw, unfiltered draft, then edit

Let others read your draft (preferably someone outside the project) and get their feedback.

More References

- Eva KW. Titles, Abstracts and Authors. In: Hall GM, editor. How to Write a Paper. Wiley-Blackwell. 2012: p.43.
- https://scientificwritingtips.wordpress.com/the-cartoons/
- Wong, Brian M., and Gail M. Sullivan. "How to Write Up Your Quality Improvement Initiatives for Publication." Journal of Graduate Medical Education, vol. 8, no. 2, 2016, pp. 128-133. doi:10.4300/JGME-D-16-00086.1
- Ogrinc G, Mooney SE, Estrada C*, et al*
- The SQUIRE (Standards for QUality Improvement Reporting Excellence) guidelines for quality improvement reporting: explanation and elaboration
- *BMJ Quality & Safety* 2008;**17:**i13-i32. https://qualitysafety.bmj.com/content/17/Suppl_1/i13

Let's Draw a Smile…and Recap

Coustesy of: https://scientificwritingtips.wordpress.com/the-cartoons/

Fun Cartoons on Scientific Writing

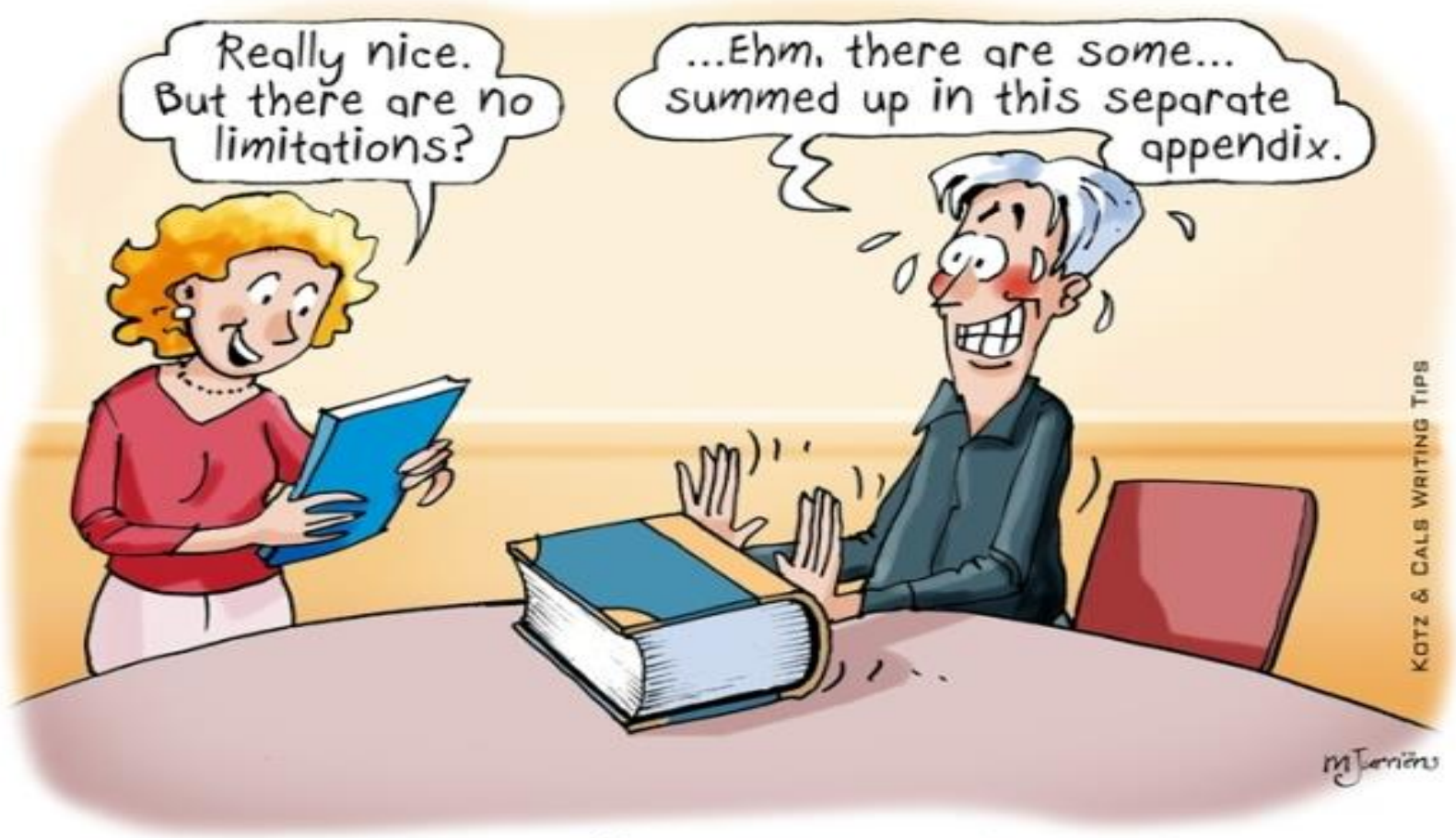
Tip 1 – How to get started: choose the optimal environment!

Tip 2 – Title and abstract: sell your paper!

Tip 3 – Introduction: work on that funnel shape!

Tip 4 – Methods: provide a cookbook with the study's ingredients!

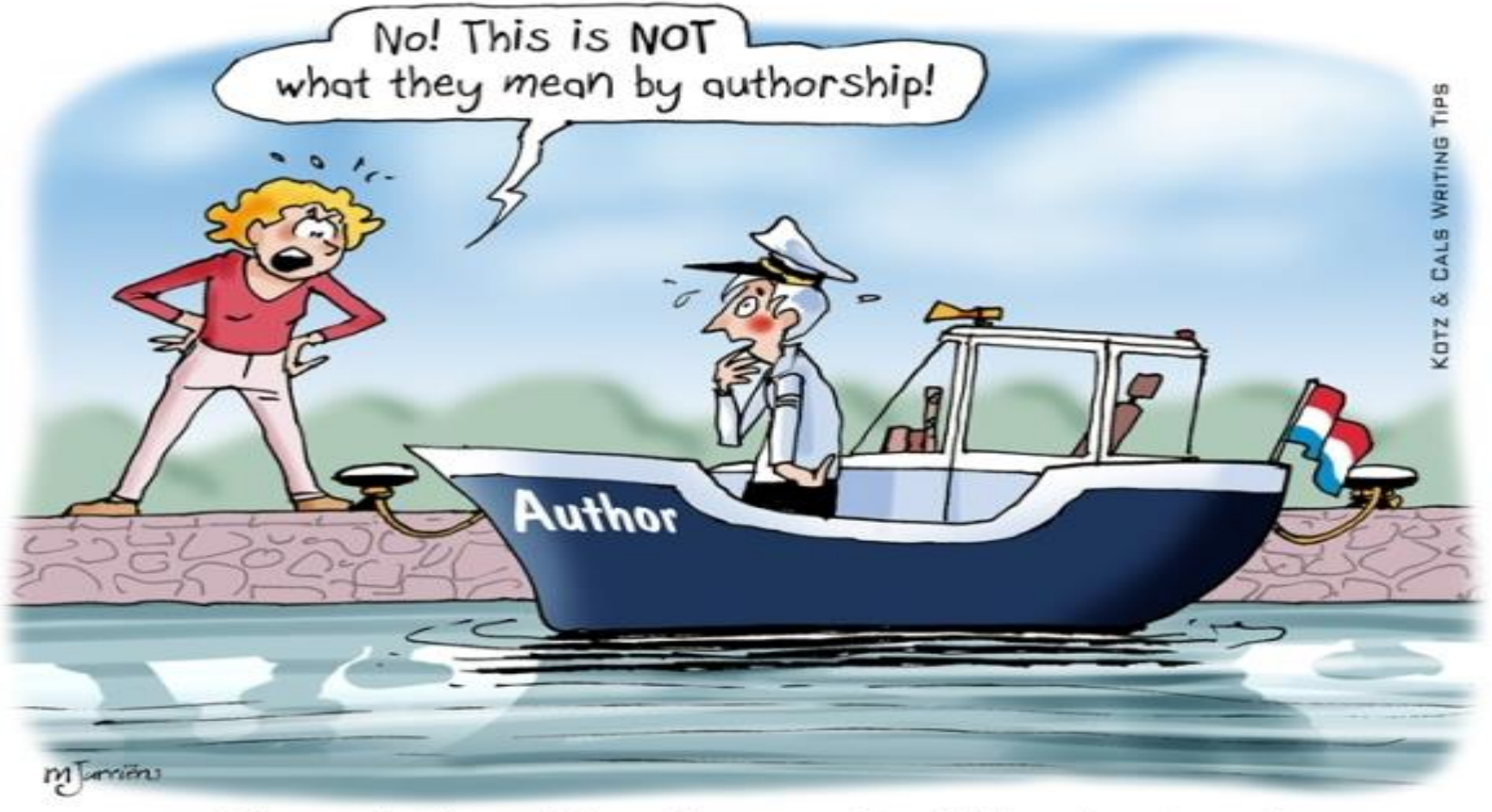
Tip 5 – Results: present findings without interpretation!



Tip 6 - Discussion: be frank in acknowledging limitations!

Tip 7 - Tables and figures: make them self-explanatory!

Tip 8 - References: always go back to the original source!



Tip 9 Authorship: discuss it within the team!

Tip 10 - Choice of journal: define a list of target journals!

Tip 11 – Submitting a paper: write a convincing cover letter!

Tip 12 – Responding to reviewers: don't get frustrated!

Things to Look for When Evaluating Abstracts

Three important elements: purpose/objective; Method; and Results

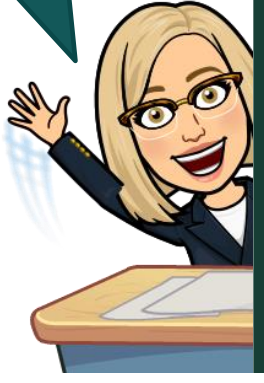
- A brief statement of the purpose of study
- Highlighted research methodology (survey, interviews, focus groups, national sample, convenience sample…)
- No need to mention a long test or questionnaire's name (unless testing reliability and validity)
- A concise summary of results highlights
- Statistical results are acceptable
- Used/tested theories should be mentioned in abstract & title
- Without specific implications, avoid mentioning general implications and future research at the end

Pyrczak, Fred. *Evaluating research in academic journals: A practical guide to realistic evaluation*. 4th ed. Glendale, CA: Pyrczak Pub., 2008.

thank you!

Spartan Medical Research Journal
Research at Michigan State University College of Osteopathic Medicine

Submit your abstract to Research Day and your manuscript to *SMRJ!*



SMRJ
SPARTAN MEDICAL RESEARCH JOURNAL

Open Access
PubMed Indexed
Peer-reviewed
https://smrj.scholasticahq.com

Currently accepting case reports

Statewide Campus System
College of Osteopathic Medicine
MICHIGAN STATE UNIVERSITY

Dr. Ismail
ismailr1@msu.edu