



Draft, Submit, Revise: A Manuscript Writing Series

IN-PERSON Edit Like A Reviewer Sessions

ADDED EVENT!

May 8th 1:30-3:00 PM at UW Madison **SPOTS STILL AVAILABLE**

May 22nd MCRI **SPOTS STILL AVAILABLE**

<p>THURS, 9 MAY 2024 8:30 - 10AM OR WED, 22 MAY 2024 8:30 - 10AM</p>	<p>Edit like a reviewer Gain hands on experience learning editing techniques from experts in-person.</p> <p>Locations: 9 MAY UW MADISON SMPH 1220-1222 22 MAY MARSHFIELD CLINICAL RESEARCH INSTITUTE LAWTON BUILDING, CONFERENCE ROOM A/B</p>	<p>zoom in-person</p> <p>In-person space is limited!</p>
<p>WED, 5 JUNE 2024 12-1PM</p>	<p>Navigating submissions Addressing reviewer feedback, SMPH's resources for dissemination.</p>	



The **Office of Research and Sponsored Programs** (ORSP) is a shared, centralized resource in the Marshfield Clinic Research Institute. We provide essential resources to support research and community outreach within Marshfield Clinic.

Our mission is to enrich research and health outcomes by creating a dynamic administrative environment for those engaged in medical sciences and community outreach.

Areas of support:

- Sponsored Programs (internal, federal, state, private, industry funding)
- Research Integrity, Protections/Human Subjects Research
- *Scientific Writing, Publication, and Editorial Assistance*
- Administrative oversight for MCRI program initiatives
- Research Navigation
- Clinical Medicine & Research (peer-reviewed journal)

Email: sponsored.programs@marshfieldresearch.org



Scientific Editing Services

Write

Do you have manuscripts, grants, protocols, or other materials?



Edit

We help refine content customized for your audience and purpose.



Revise

We proofread to address punctuation, spelling, and other errors.



Submit

Increase your chances of a successful outcome.



Scan for more information.

protocoldevelopment@ictr.wisc.edu



Session will be recorded. Please keep yourself on mute and videos off. Please ask questions in the chat.



Draft, Submit, Revise: A Manuscript Writing Series

Session 3: Manuscript Manufacturing

Speakers:

Whitney Sweeney, PhD: Fair approaches to authorship
Marie Fleisner, Editorial Specialist: Manuscript formatting
Nasia Safdar, PhD: Crafting a story

Please ask questions in the chat as you think of them.
Our team will compile questions to ask the speakers.



April 9, 2024

UW Institute for Clinical & Translational Research
@UW_ICTR · 1 subscriber · 14 videos
Welcome to the channel for the UW-Madison Institute for Clinical & Translational Research...
ictr.wisc.edu
Subscribe

Home Videos **Playlists** Community

Created playlists

- Clinical Trials Community of Practice
MAY 2021
12 videos
- MANUSCRIPT PLANNING
2 videos

Clinical Trials Community of Practice
Updated 3 days ago
View full playlist

Manuscript Writing Series: Spring 2024
View full playlist

Find our recordings on ICTR's new
YouTube Channel!

@UW_ICTR

Session will be recorded. Please keep yourself on mute and videos off.

Fair Approaches to Authorship

Dr. Whitney Sweeney

Scientist, ICTR Team Science Core

April 9, 2024

Authorship Policies

- Authorship of scientific papers is one of the most contentious issues in research ethics
 - Honorary authorship – named author who has not made a significant contribution
 - Ghost authorship – failure to name someone who made a significant contribution
 - Big-team Science and many multiple authors
 - Handling disputes and dissenting opinions

Collaboration Planning Intervention



International Committee of Medical Journal Editors (ICMJE)

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;
AND
- Drafting the work or revising it critically for important intellectual content;
 - AND
- Final approval of the version to be published;
AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CRITERIA FOR AUTHORSHIP – From Stephen M. Kosslyn, Harvard University

CRITERIA AND DESCRIPTION	MAX (pts or %)	Distribute max points among participating investigators/contributors						CRITERION TOTAL (pts or %)
		Person 1	Person 2	Person 3	Person 4	Person 5	Person 6	TOTAL
THE IDEA Without the idea, nothing happens; if idea grew out of a discussion, the person who primarily led and/or provided insights leading to the best way to pose the question to be answered gets most points	250 (25%)							
DESIGN Details may include: power calculations, study format, control conditions, inclusion/exclusion, randomization, data acquisition methods, techniques, etc.	100 (10%)							
IMPLEMENTATION Someone must implement the design (develop study-related materials, arrange for animals, acquire approval, etc.); typically, points in this category are split, including to the supervisor (or PI) who closely monitors and/oversees the implementation	100 (10%)							
CONDUCTING THE EXPERIMENT Per Dr. Kosslyn: "The person who tests subjects may earn up to the max 100 points but may earn merely 5 points if all he/she does is mindlessly test subjects." Authorship is awarded to those who substantially and creatively contribute. For someone receiving class credit or payment (i.e., an employee) and only following instructions, acknowledgment should be considered	100 (10%)							
DATA ANALYSIS Simply running data through ANOVA, SPSS, or Excel is not enough to earn authorship; but devising new ways to look at data or otherwise contributing to novel insight(s) may result in points. Particularly labor-intensive or creative analyses may earn "full" points [depending on the project, the maximum of 200 points for this category may or may not be allocated]	200 (20%)							
WRITING Nothing happens if nothing is reported; usually shared by several people, maximum points are allocated to the one who shapes the conceptual content (but a good and insightful literature review may count heavily). If someone writes a first draft that is not used at all, no points are allocated; points are allocated based on the "final product"	250 (25%)							
TOTAL POINTS (or %) PER CONTRIBUTOR		Person 1	Person 2	Person 3	Person 4	Person 5	Person 6	TOTAL POINTS (or %)
		pts or %	pts or %	pts or %	pts or %	pts or %	pts or %	

Contributor Roles Taxonomy (CRediT)

#	ROLE	DEFINITION
1	Conceptualization	Ideas; formulation or evolution of overarching research goals and aims.
2	Data curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later re-use.
3	Formal analysis	Application of statistical, mathematical, computational, or other formal techniques to analyse or synthesize study data.
4	Funding acquisition	Acquisition of the financial support for the project leading to this publication.
5	Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.
6	Methodology	Development or design of methodology; creation of models.
7	Project administration	Management and coordination responsibility for the research activity planning and execution.
8	Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.
9	Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.
10	Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.
11	Validation	Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs.
12	Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.
13	Writing - original draft	Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation).
14	Writing - review & editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision - including pre- or post-publication stages.



Example: Promoting Equity, Inclusion, and Efficiency

- CHARM

- Multi-disciplinary, Multi-Institutional genomics implementation study
- 75 members
- 10 institutions
- Multiple time zones

“Halfway through the study, discussions about manuscript planning revealed variations in expectations regarding authorship and manuscript development.”

Example: Promoting Equity, Inclusion, and Efficiency

- Virtual Small Group Meetings
 - What does authorship mean to you? Why is it important?
 - What has been your experience in the past?
 - What challenges have you experienced?
 - What processes may help to address challenges that arise?
- Large Group Meetings
- Shared Drafts of Authorship Guidelines

Example: Promoting Equity, Inclusion, and Efficiency

- 1. Clarify roles and responsibilities of authors**
2. Articulate values and principles
3. Establish infrastructure to support manuscript development

Table 1.

Authorship roles and responsibilities

Responsibilities	Lead authors	Primary writing group	Secondary writing group
Contribute to CHARM project in a way related to the manuscript	X	X	X
Draft concept sheet and share with CHARM team	X		
Identify journal and audience	X		
Organize writing team	X		
Attend meetings about manuscript	X	X	
Draft manuscript	X		
Might contribute to drafting manuscript		X	
Provide guidance to primary writing group			X
Review, edit/comment on drafts		X	X
Make editorial decisions	X		
Approve final version	X	X	X
Submit manuscript to journal	X		
Respond to reviewer comments	X	X	X

The responsibilities for authorship are based on each author's role in the manuscript.

Example: Promoting Equity, Inclusion, and Efficiency

1. Clarify roles and responsibilities of authors
- 2. Articulate values and principles**
3. Establish infrastructure to support manuscript development

Equity

- Distribute authorship among those guiding key aspects of study
- Encourage junior members to be first author with seniors as mentors
- Lead authors are expected to identify second and third authors and up to two more senior authors

Inclusion

- Consider who has been active on project related to the manuscript when nominating as coauthor
- Ensure larger team is aware of manuscript(s) in progress

Efficiency

- Be realistic about capacity of team leaders to lead papers
- Be realistic about your own capacity to commit to a project
- Commit to full engagement in manuscript development

Activity: Developing an Authorship Policy

- Describe your team's approach to authorship
 - Does your team have an official policy?
 - What factors are important for your team in determining authorship?
 - Has your team experienced conflict related to authorship?
 - How was it resolved?

Questions?



References

- Coles, NA, DeBruine, L, Azevedo, F, Baumgartner, HA, & Frank, MC (2023). 'Big team' science challenges us to reconsider authorship. *Nature Human Behavior*, 7, 665-667.
- Lewis H, Biesecker B, Lee SS, Anderson K, Joseph G, Jenkins CL, Bulkley JE, Leo MC, Goddard KAB, Wilfond BS. Promoting equity, inclusion, and efficiency: A team science approach to the development of authorship guidelines for a multi-disciplinary research team. *J Clin Transl Sci*. 2023 Nov 30;7(1):e265. doi: 10.1017/cts.2023.685. PMID: 38229898; PMCID: PMC10790100.
- Resnik DB, Tyler AM, Black JR, & Kissling G. (2016). Authorship policies of scientific journals. *J Med Ethics.*, 42(3):199-202. doi: 10.1136/medethics-2015-103171.
- Rolland B, Scholl L, Suryanarayanan S, Hatfield P, Judge K, Sorkness C, Burnside E, Brasier AR. Operationalization, implementation, and evaluation of Collaboration Planning: A pilot interventional study of nascent translational teams. *J Clin Transl Sci*. 2020 Jul 24;5(1):e23. doi: 10.1017/cts.2020.515. PMID: 33948246; PMCID: PMC8057480.

Resources

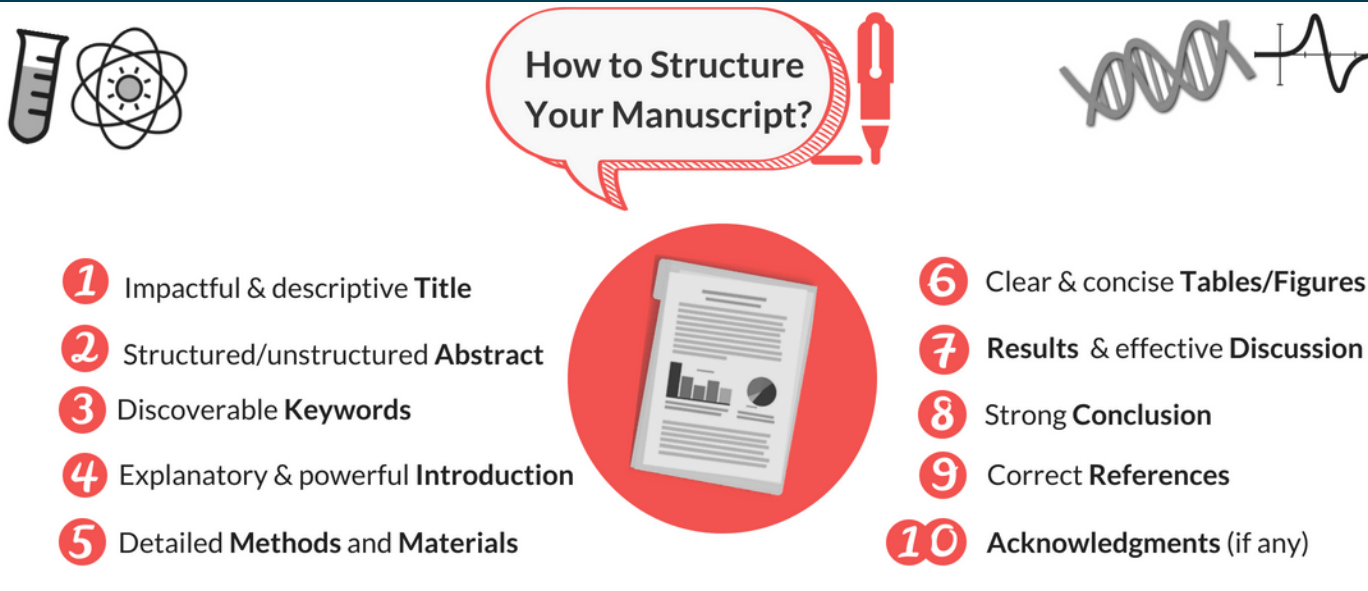
- [CAIRIBU Collaborative Science Tools](#)
- [CAIRIBU Collaborative Planning Template](#)
- [Elsevier Contributor Roles Taxonomy \(CRediT\) Statement](#)

Manuscript Manufacturing

How to format your manuscript for the best results

Marie Fleisner, Editorial Specialist

Marshfield Clinic Research Institute

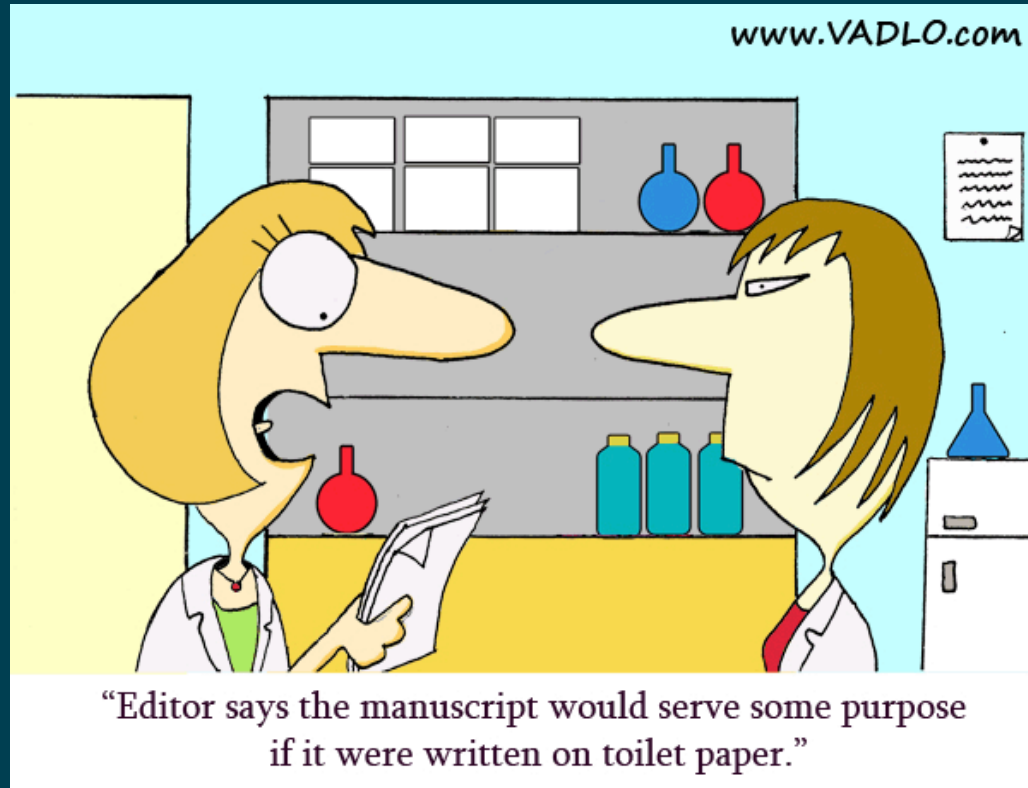


How to Structure Your Manuscript?

- 1 Impactful & descriptive **Title**
- 2 Structured/unstructured **Abstract**
- 3 Discoverable **Keywords**
- 4 Explanatory & powerful **Introduction**
- 5 Detailed **Methods and Materials**
- 6 Clear & concise **Tables/Figures**
- 7 **Results** & effective **Discussion**
- 8 Strong **Conclusion**
- 9 Correct **References**
- 10 **Acknowledgments** (if any)



Preparing Your Manuscript for Submission



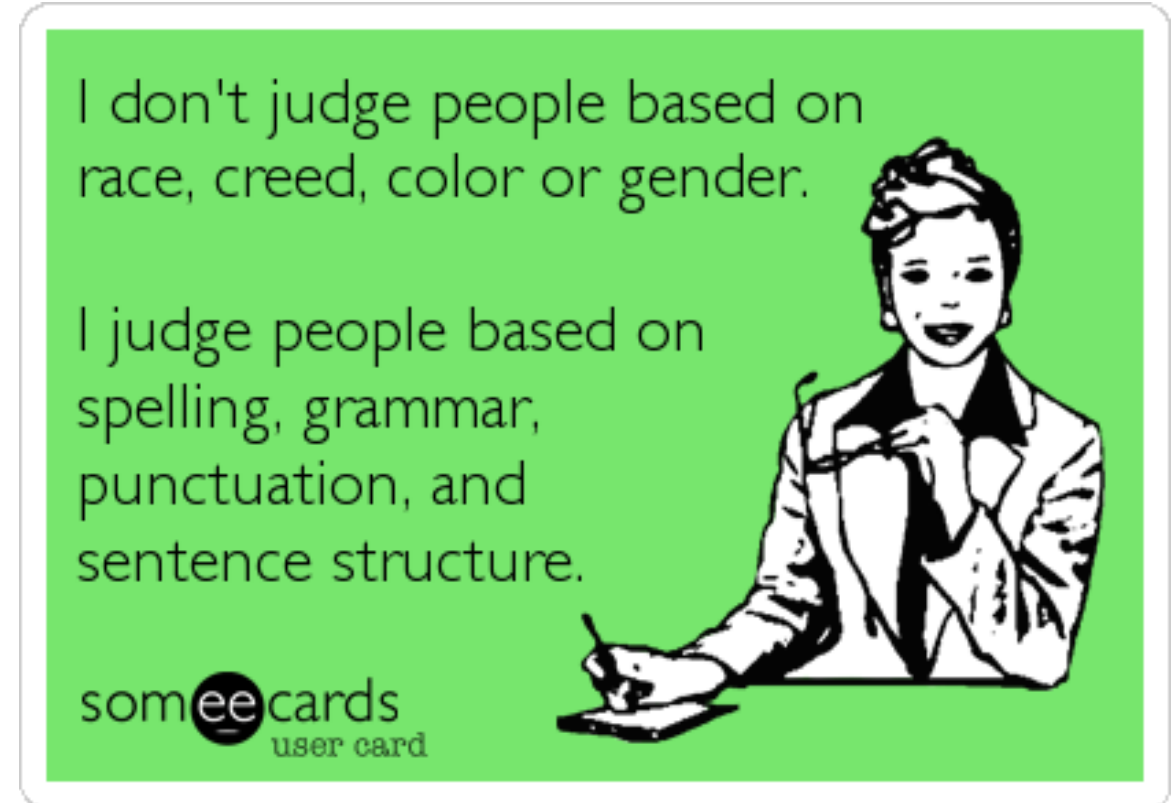
- Writing your manuscript can be as difficult and time consuming as conducting your study.
- But simply writing your paper isn't enough. You want your paper to stand out.
- Careful preparation is key to avoiding some common mistakes that can prevent your paper from being published.
- Identifying the proper target journal is **key**; AND...
- Following the Journal's author guidelines is **essential**.



Structure and Style

General Structure of a Scientific Manuscript

- Title Page
- Abstract
 - *Keywords*
- Introduction
- Materials and Methods
- Results
- Discussion
 - Limitations
 - Conclusion
- Reference List
 - Appendices
- Tables & Figures



Identifying a Suitable Journal

A. Use keywords from your article in Google or PubMed to first identify some journals or use Journals from your reference list

B. Go to the journal's website and read the "Aims and Scope" sections. Read some articles in the journal.

C. Search the Web of Science Master List (<https://mjl.clarivate.com/home>) or use available publisher services such as Elsevier's Journal Finder (<https://journalfinder.elsevier.com/>) where you can search by abstract or keywords.

D. Use Think. Check. Submit. (<https://thinkchecksubmit.org/>), a simple checklist researchers can use to assess the credentials of a journal or publisher.

E. Start with what you have read. You should already be familiar with published studies similar to yours.



Tip 2 - Title and abstract: sell your paper!



Identifying a Suitable Journal

Additional factors to consider:

A. The topics the journal publishes.

- A. Is the scope and topic narrowly defined with a specific focus or broad and general?
- B. Is the content research-based and analytical with the aim of creating new knowledge?

B. The journal's target audience. ...

C. The types of articles the journal publishes. ...

D. Length restrictions for articles. ...

E. The reputation of the journal. Consider the prestige of the authors that publish in the journal and whether your research is of a similar level.

F. Time to publication:

- A. Does the journal usually publish articles quickly?
- B. Is the "time to publication" important for you?
- C. Do you need the paper for a grant or for tenure?



Identifying a suitable journal – Impact Factor

1. Don't start "too high"

- Don't be dazzled by the Impact Factor
- These journals receive thousands of submissions and are very competitive, so your research must meet their standards

2. However, avoid starting "too low"

- Submitting to a low or no-impact-factor journal may get easy acceptance, but if your work is important, it may not receive the long-term recognition it deserves

3. Open Access Journals/Fees

- Open access allows anyone to read your article, free of charge, online, which can make your article more likely to be read and cited.
- Be sure you have the funds to pay
- Fees can range from <\$1,000 to >\$10,000



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



Beware of Predators



With the increased launching of publications and publishers, it can be difficult to distinguish between a predatory journal and a legitimate open-access journal.

Predatory is defined as “those that unprofessionally abuse the author-pays publishing model for their own profit” (Beall 2012).

Tips for Identifying Predators

- Beware of unsolicited emails
- Consult with the medical reference librarians
- Carefully review the journal’s website and editorial board; if possible, try to contact an editor
- Look for the peer review process and publication timelines
- Search for the journal on PubMed, Medline, Scopus, Web of Science.
- Sources for identifying an appropriate journal:
 - Journal/Author/Name Estimator (JANE)
<http://www.biosemantics.org/jane/>
 - Scimago Journal & Country Rank (SJR)
scimagojr.com/journalrank.php
 - Directory of Open Access Journals (DOAJ)
<https://doaj.org>



Format and Style

Go to the of the section of the Journal's website called "Author Instructions" or "Guide for Authors." This will give you the specific details for manuscript preparation and formatting.

- a. Most author instructions are very detailed and will tell very specifically what the requirements are, including manuscript components and word count.
 - b. Tip: Downloading a sample article from the journal will be helpful in formatting the paper.
- House style is how a paper is laid out-the section headings, word count and referencing convention used.
 - Author instructions will provide for any word limits for the specific manuscript type (case report, original research, review, etc.) as well as for types of manuscripts **not** accepted. (For example, some journals do not publish case reports.



*If unsure, send a query to the journal editor or editorial office. Editorial staff will be able to answer your questions, saving you time by ensuring your manuscript is the right fit for the journal.



Format and Style

- Read examples of articles in the journals you are considering to be sure your article is a good fit.
- Read and follow the author guidelines.
 - Types of articles accepted (don't submit a case report if the journal doesn't accept case reports)
 - Word count (if the word limit is 2000 words and you submit a 5000 word paper, your paper will be rejected)
 - Language/Tense—past, present, future
 - Third vs first person
 - Referencing convention (AMA vs Chicago vs APA vs Vancouver)
 - Format your references in the journal's designated style.
 - Many journals use the ICMJE style guidelines for manuscript preparation. (http://www.icmje.org/manuscript_1prepare.html) This is a good site that gives basic manuscript preparation information.
 - Reference/bibliography software can be a benefit (i.e., Endnote, RefWorks, Mendeley, etc.)
 - Assistance from an editorial specialist (at MCRI, it's free!)



Step 2: Format and Style

Units of Measure: Generally, units of measure (length, height, weight, volume, etc.) should be reported in metric units, unless otherwise specified by the journal.

Numbers: General rule is when using a number <10, it should be spelled out (three instead of 3.) However, if referring to an age...a 3-year-old child... or a unit of measure...3 years, 3 inches...then the numeral is used. A numeral should never begin a sentence; the sentence should be rewritten so the number doesn't come first. If this is not possible, then the number should be spelled out. A number containing a decimal or fraction should be a numeral (not spelled out) such as 1.5.

Abbreviations/Acronyms: Some abbreviations/acronyms are universally known (such as DNA, RNA, URL, COVID-19); however, most acronyms must be spelled out at their first use. Some authors, due to their field of expertise, may believe that an acronym is known by everyone, but it's really not.

- The spelled-out abbreviation followed by the abbreviation in parenthesis -- methicillin-resistant *Staphylococcus aureus* (MRSA)-- should be used on first mention, and then the acronym used after that.
- An acronym must be used at least **three** times; if only used twice, spell it out each time.



Step 2: Format and Style

Past vs present tense. Results should be described in past tense (you've done these experiments, but your results are not yet accepted "facts"). Results from published papers should be described in the present tense (based upon the assumption that published results are "facts").

Third vs first person. There has been a shift in academic writing from a focus on the passive voice (it was done, it was suggested...) to the active voice (we interviewed, the authors suggested...). When using the passive voice, it is better to say "It is possible to .." than to say "One could ...". Using the impersonal pronoun "one" often seems noncommittal and dry.

Punctuation. Pay attention to punctuation, it can change the meaning of what you're trying to say. For example:

I find inspiration in cooking my family and my dog.

I find inspiration in cooking, my family, and my dog.

"A woman, without her man, is nothing" OR

"A woman: without her, man is nothing"



Step 2: Format and Style

Data. Data is the plural of “datum”; In a scientific paper it is never singular. So in a sentence you would say, “Data **were** collected” – not “Data was collected.”

However...there are some journals (e.g., the IEEE Computer Society) that allow usage of data as either a mass noun or plural based on author preference.

Repetition of ideas (winding sentences) Academic writing needs to be clear and concise. It’s important to maintain a balance between restating key points to highlight critical messages for the reader and becoming overly repetitive.

Improper Capitalization. Be sure to know what should be capitalized and what should not. Proper nouns are always capitalized (of course); directions that are names, such as North, South, East, and West when used as sections of the country but not when used as descriptions, such as “I was driving in the western part of the state”. Titles of people, such as “President Lincoln”, but not when referring to a position, such as “Dr. Smith is the president of the university.”



Plagiarism

- One of the most common writing errors is plagiarism.
- Plagiarism is when text, ideas, concepts, and images are copied “as is” from previously published work without properly crediting the source.
- Writing that is presented as original, without proper citations is unethical and is considered a copyright infringement by the journal.
- **Even if this was done inadvertently – failing to cite your sources, paraphrasing, or quoting someone without credit – plagiarism is a serious offence and could result in manuscript rejection, penalties, and sometimes even legal action.**
- **Even quoting your own previous studies without properly citing the source is considered plagiarism.** To eliminate this, researchers must check their work and ensure that all required citations have been noted.
- **Plagiarism checking software:** Grammarly, Duplichecker. iThenticate, but it costs.



Creating an Effective Title

Your Title Matters

- It is the first thing a reader will see. More people will read the title than any other part of your publication.
- The title will be reproduced in the table of contents.
- It will be used by librarians and by most abstracting services.
- Readers use the title to decide whether to read further.



TABLE 1. Elements of a good title for a scholarly publication

Element	Good title	Poor title
Length	10 to 15 words or 31 to 40 characters	Longer than 15 words
Punctuation	Commas, colons, or semicolons	Question marks and exclamation points
Keyword use	Yes	No
Abbreviations	No	Yes
Jargon	No	Yes
Humor	No	Yes
Geographic location	No	Yes
Correct grammar and spelling	Yes	No
Follows journal guidelines	Yes	No
Clearly states the point of the article	Yes	No

Bowman D, Kinnan S. Creating effective titles for your scientific publications. Video Gie. 2018;3(9):261.



Creating an Effective Title

Titles should:

- Describe contents clearly and precisely, so readers can decide whether to read the report
- Reflect the tone of your article
- Provide key words for indexing

Titles should NOT:

- Include wasted words such as "studies on," "an investigation of"
- Use abbreviations and jargon
- Attempt to attract attention with humor or puns

Humorous or "Punny" Titles

- *Medical marijuana: Can't we all just get a bong?*
- *Gut Microbiome to Brain Signaling: What Happens in Vagus...*
- *Carbon monoxide: to boldly go where **NO** has gone before*
- *A Lucky Catch: Fishhook Injury of the Tongue*



Abstract: A succinct summary of the entire paper

Recent surveys indicate that more than 80% of researchers only ever read abstracts.

Guidelines for an effective abstract:

- State the main objectives. (What did you investigate? Why?)
- Describe the methods. (What did you do?)
- Summarize the most important results. (What did you find out?)
- State major conclusions and significance. (What do your results mean? So what?)
- Stay within the word limit set by the journal!



Tables and Figures:

- Tables and figures should summarize results, not present large amounts of raw data.
- Tables should not duplicate results already described in the text.
- Tables should be sequentially numbered. Each table should have a title that describes the point of the table. If necessary to interpret the table, specific descriptions about what a result represents or how the results were obtained can be described in a legend below the table.
- Figures should be sequentially numbered. Each figure should have a title that describes the point of the table. If necessary to interpret the figure, specific descriptions about what a result represents or how the results were obtained can be described immediately following the title.

Note: Ensure that each table and figure is cited appropriately within the text.

Savage Chickens

by Doug Savage



Formatting Your Paper – in summary

Proper formatting may not increase the probability of final acceptance of your manuscript, but it will increase the probability that your paper will make it through the first round of editorial checks and potentially make it into the hands of an editor/reviewer

Editorial reasons for rejection:

- Manuscript does not fall within the journal's aim and scope
- Doesn't conform to the journal's style and conventions
- Inadequate style, grammar, punctuation, or English
- Sentence structure is clumsy and awkward; does not flow
- Paper is not properly contextualized
- Presentation is messy, with sloppy proofreading
- Writing is incomprehensible

An improperly formatted and error-laden paper is likely to be returned or even rejected more quickly than a better-prepared manuscript.



References

- Albert T, Wager E. 2003. How to handle authorship disputes: a guide for new researchers. *The COPE Report* 2003:32-34.
- American Copy Editors Society. *Telling the Truth and Nothing But*. Digital Newsbook; 2013.
- Beall J. 2013. Medical publishing triage – Chronicling predatory open access publishers. *Annals Med Surgery* 2(2):47-49.
- Bowman D, Kinnan S. Creating effective titles for your scientific publications. *VideoGIE.org* 2018;3(9):261.
- Cicutto L. Plagiarism: avoiding the peril in scientific writing. *Chest* 2008;133:579-81.
- Laine C, Winker MC. Identifying predatory or pseudo-journals. *Biochem Med*. 2017;27:285–291.
- Maloy S. Guidelines for writing a scientific manuscript. 2012. Available at: <http://www.sci.sdsu.edu/~smaloy/MicrobialGenetics/topics/scientific-writing.pdf>. Accessed 15 Sept 2019.
- Office of Research Integrity. *Ethically Inappropriate Writing Practices*. Available at: <http://ori.hhs.gov/plagiarism-27>
- Primack RB, Cigliano JA, Parsons C. 2014. Co-authors gone bad – how to avoid publishing conflicts. *Biolog Conservation* 176:277-280. Available at: <https://doi.org/10.1016/j.biocon.2014.06.003>. Accessed 15 Sept 2019.
- Siebers R, Holt S. Accuracy of references in five leading medical journals. *Lancet* 2000;356:1445.



Crafting the story for a manuscript

Nasia Safdar, MD, PhD

ICTR Faculty Director for Networks, UW SMPH

Research Director, UW Clinical Trials Institute

Professor, Infectious Diseases

April 9, 2024

Myth about scientific communication

"The most effective mentors are the ones who provide *copious written corrections* on mentee writing."

Understanding how language works

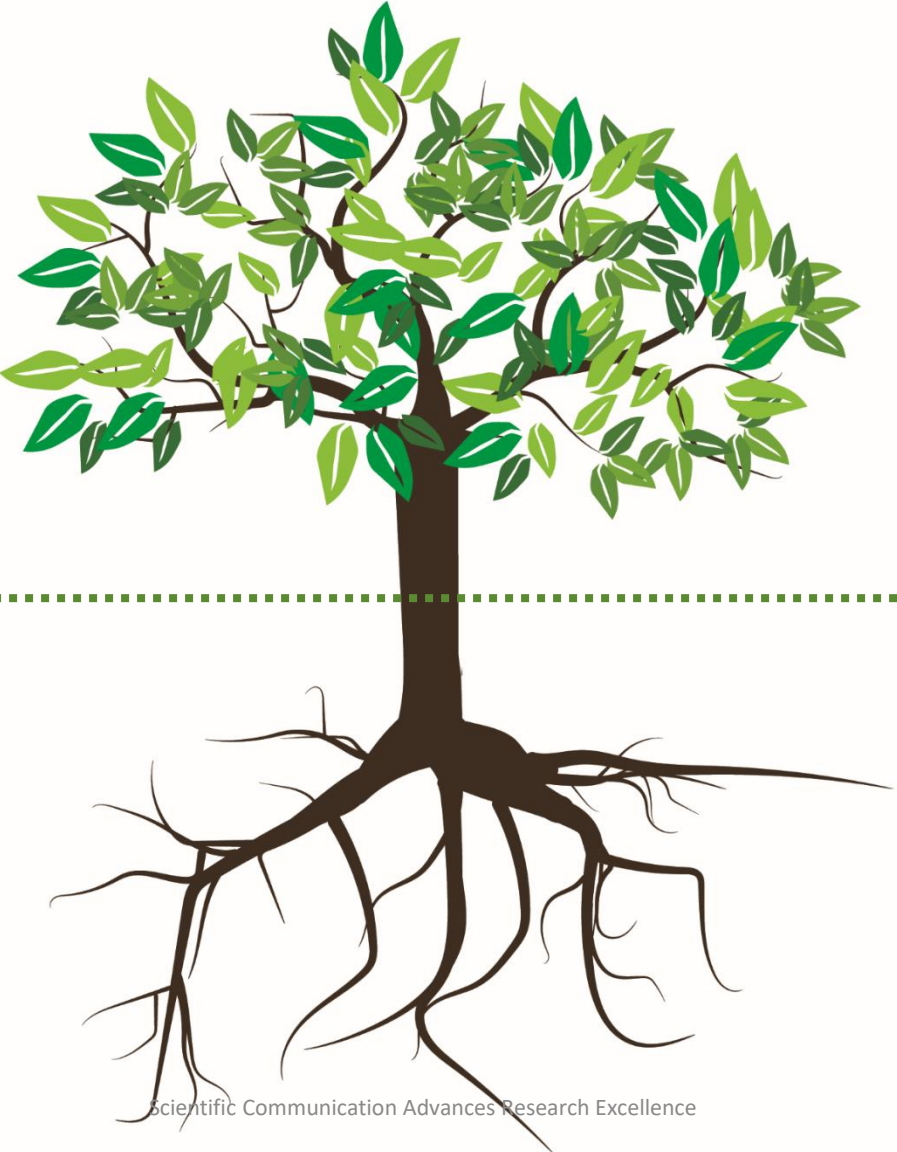
Language is learned through repetition and imitation of **peers** and **seniors**. This happens **gradually, over time**.

All modes of language reinforce the others (speaking, listening, writing, reading).

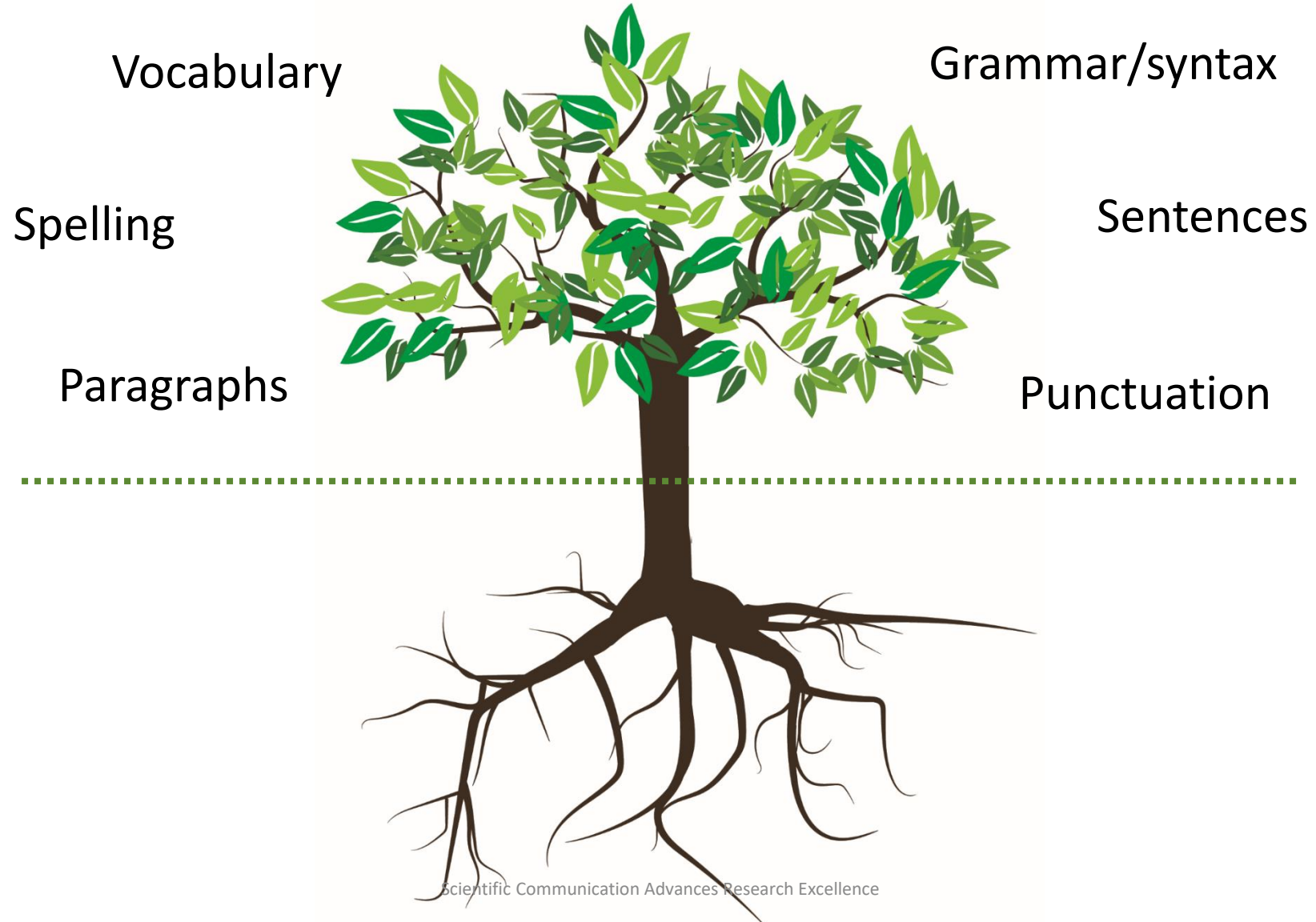
Acquiring ANY new style of language takes time and practice.

The landscape: Scientific style

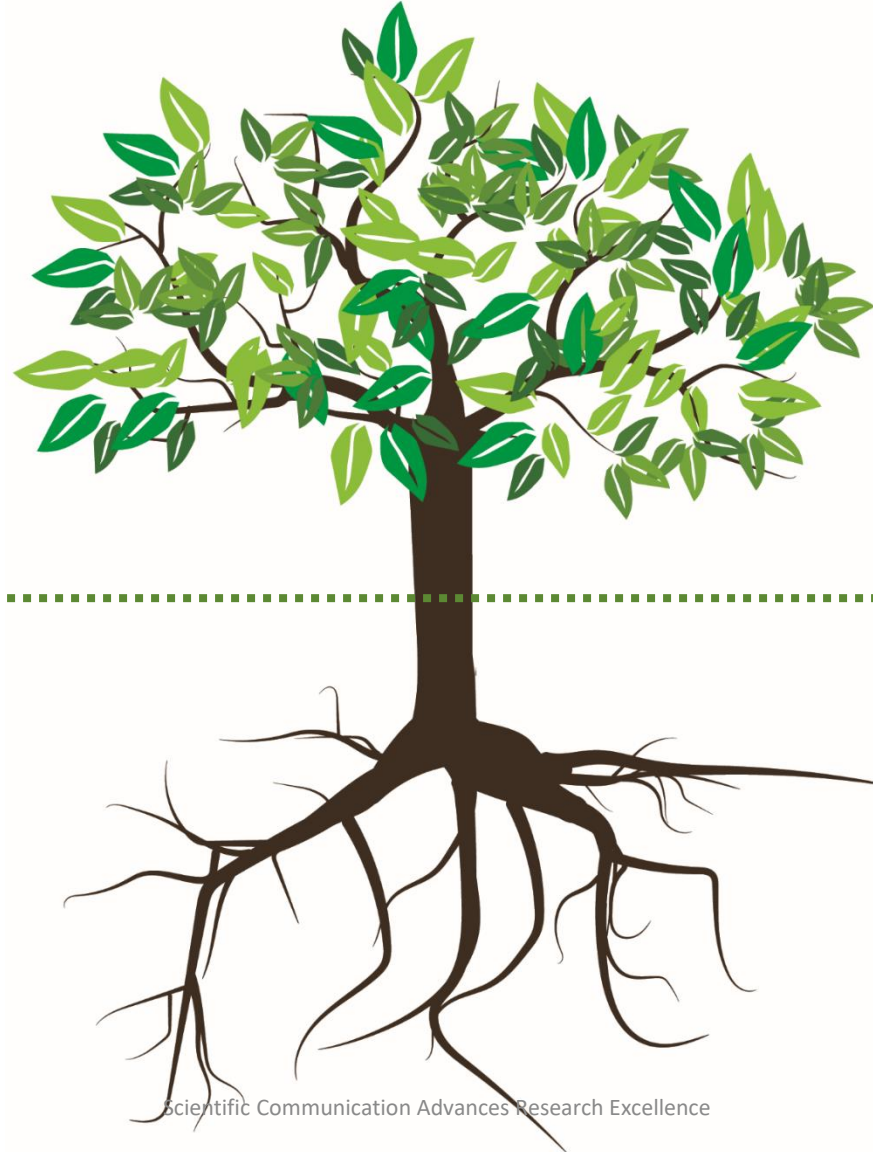
What's visible



The landscape: Scientific style

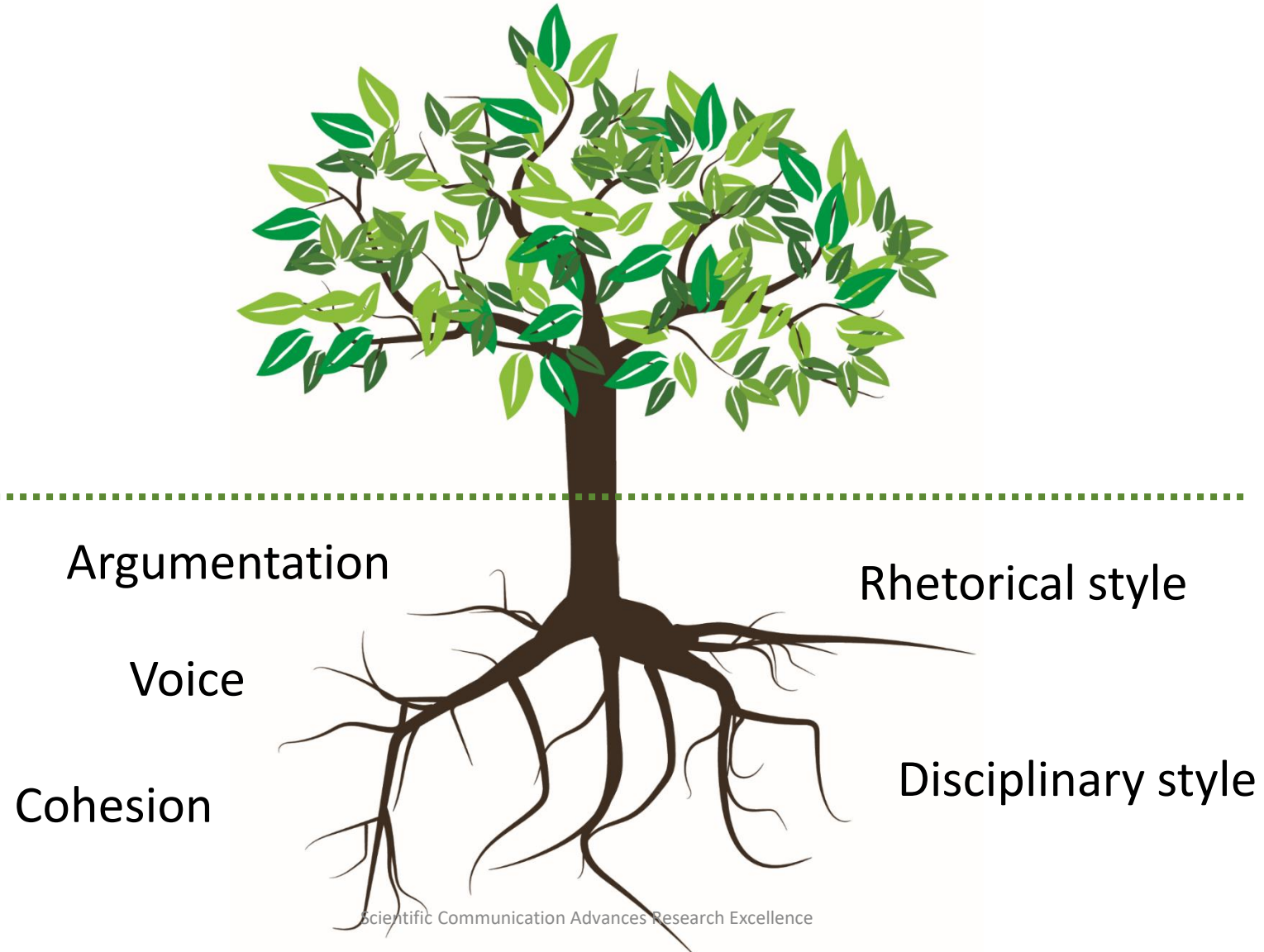


The landscape: Scientific style

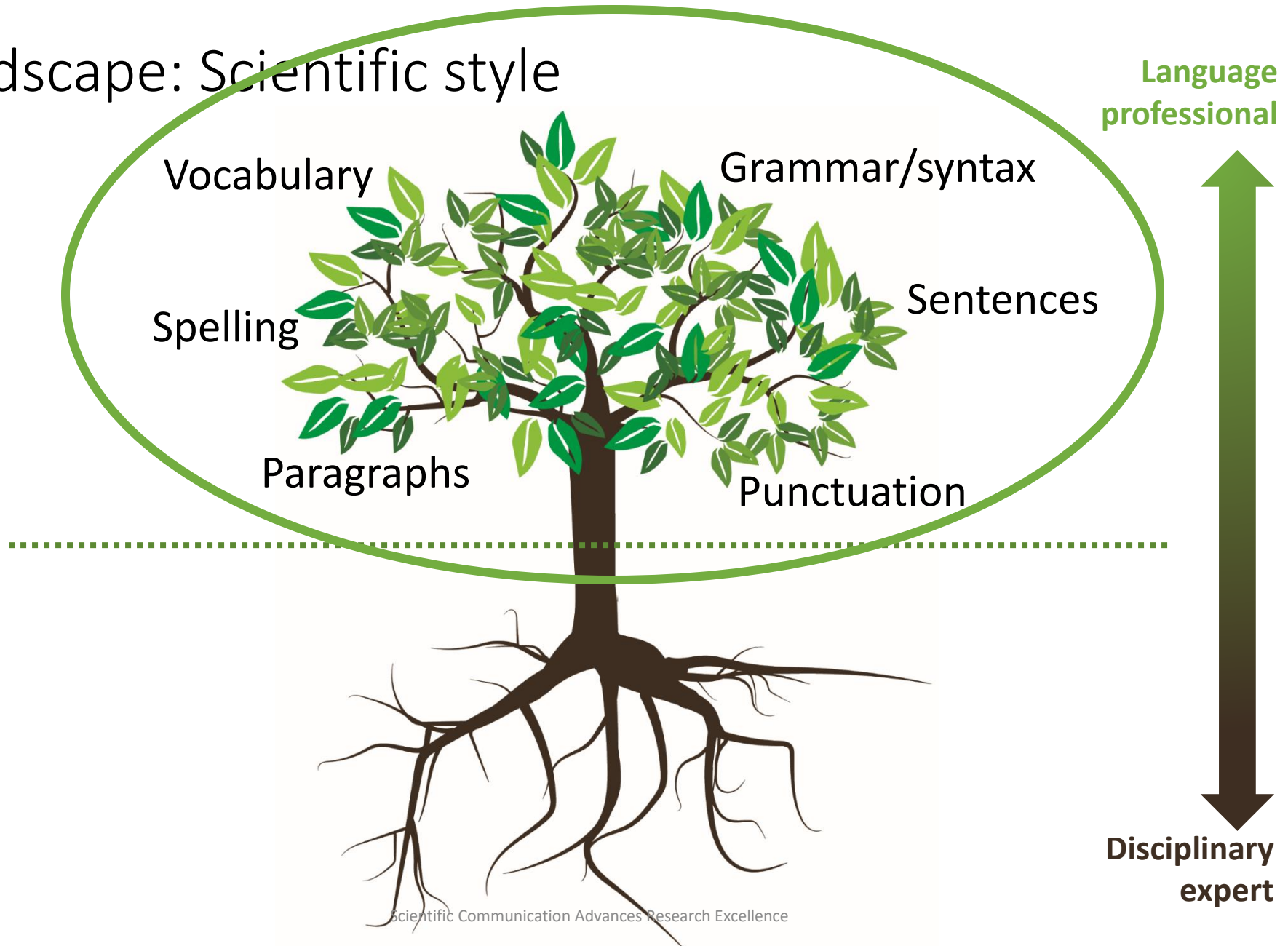


What's invisible

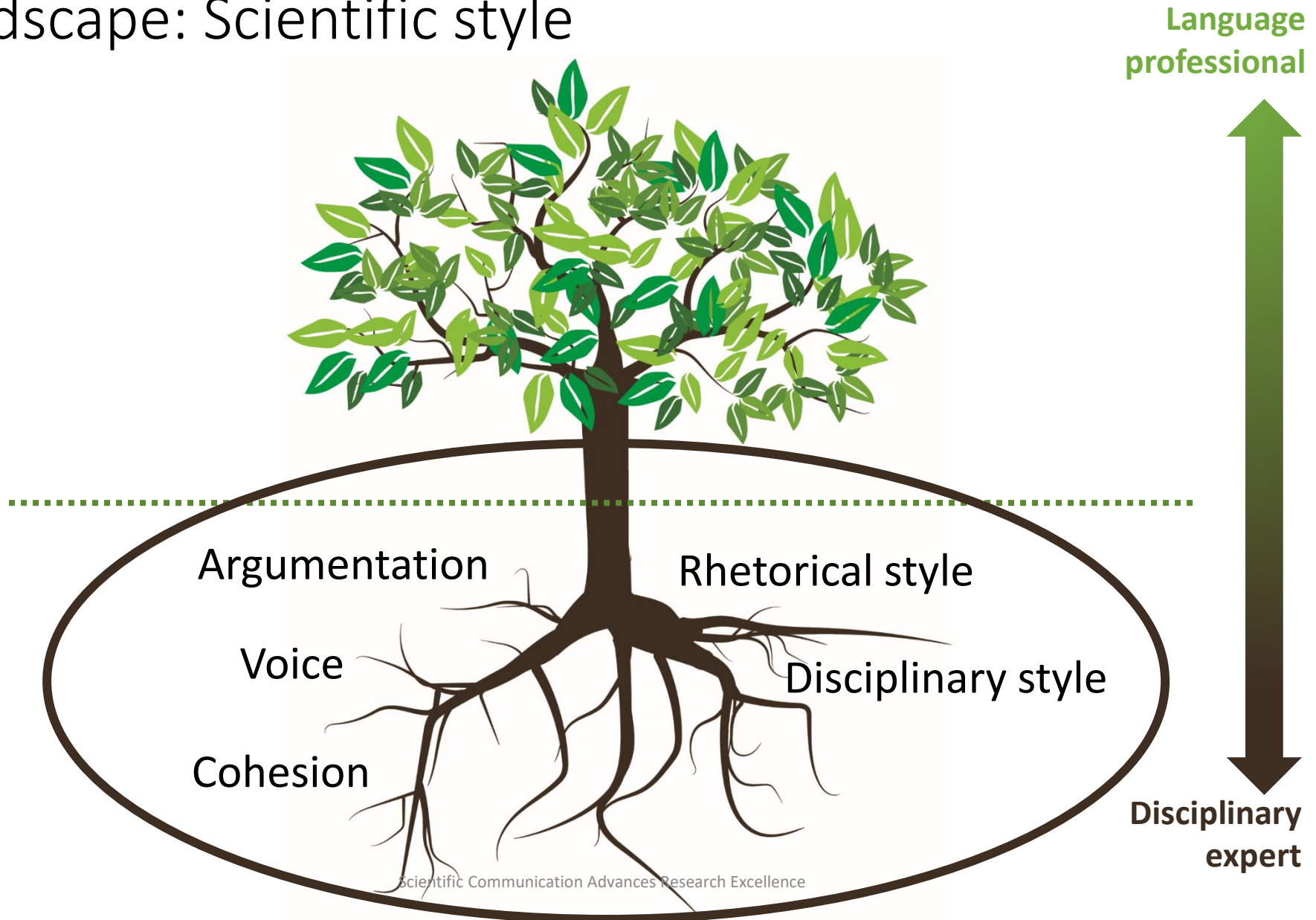
The landscape: Scientific style



The landscape: Scientific style



The landscape: Scientific style



Mentor's tree



Mentor's tree



Mentee's tree?



Defining the Core Elements of the approach to manuscript writing

Creating a storyline

- It is a **set of a few key sentences**, not a composed prose paragraph.
- It is not an actual communication to an actual reader or audience. It is the **template** for *one or more* finished communications.
- The narrative we'll be creating here should be **simple, everyday language** and should be in first person singular ('I').

Benefits of this exercise

- Leads us through an important cognitive-developmental process
- Is applicable to all forms of scientific reporting, including to the public
- Eliminates vagueness
- Makes one's thinking process transparent before you write a full draft,
- Can be introduced at any time; *doesn't depend on having results.*
- Can also be used for critical reading, analyzing writing, or creating outlines.

The problem, in a nutshell...

We don't truly understand where we're headed before we start to write.



Standard elements of a research report

Background
Gap in Knowledge
Purpose
Approach/Methods
Results
Conclusion
Significance
Implications
Next Steps

CORE elements of the storyline

Background

Gap in **3** Knowledge

Purpose **2**

Approach **1** / Methods

Results

Conclusion

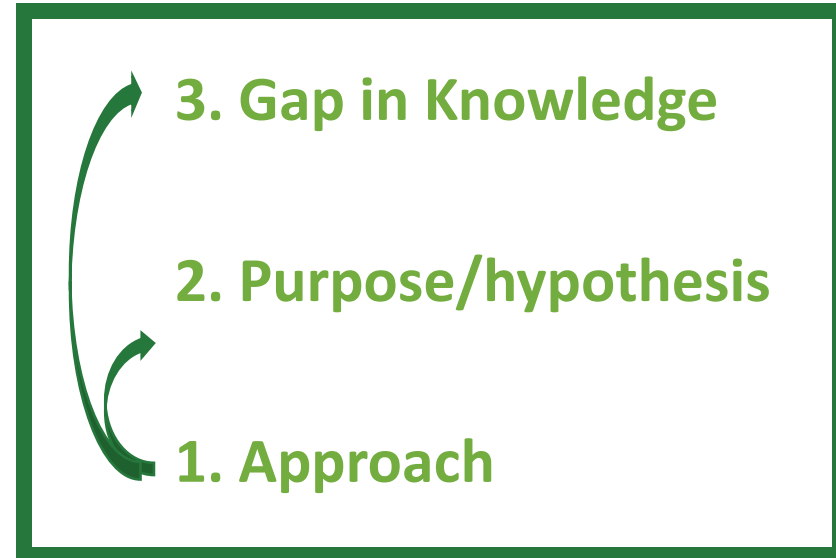
Significance

Implications

Next Steps

The key to an airtight research report

Starting with the approach can help us isolate the other elements.



1 What did the writer do?

The writer should say in ***ONE SENTENCE*** generally.

what ***THEY*** did,

This is the **Approach**.

- For early-stage researchers reporting on their own project, first person singular—“I”—should be used in the core elements. This can be changed to ‘we’ later if desired.

.

2 What was THEIR goal in doing that?

Say in **ONE SENTENCE** what *the DESIRED OUTCOME OR GOAL* was for doing that.

This is the **Purpose** statement.

- What was the writer supposed to accomplish by doing that? They should stay *very close* to what they did.
- **Purpose** statements will have *in order to* or just *to*, sometimes *aim, seek, or goal*.

3 What PROBLEM did achieving THIS outcome solve?

Say in **ONE SENTENCE** what *problem or unmet need* was supposed to be solved with this outcome.

This is the **Gap in Knowledge** statement.

- Stay *very close* to your purpose.
- **Gaps in knowledge** should have negative phrases like *not yet understood, is yet to be described, unclear*, etc.

Example A

1 Approach (what I did):

I cultured C diff from stool specimens collected from participants over a 2 year period in the university hospital

Example A

1 Approach (what I did):

I cultured C diff from stool specimens collected from participants over a 2 year period in the university hospital

2 Purpose (my goal): I did this in order to determine the frequency of positivity for C diff in human stool specimens.

Example A

1 Approach (what I did):

I cultured C diff from stool specimens collected from participants over a 2 year period in the university hospital

2 Purpose (my goal): I did this in order to determine the frequency of positivity for C diff in human stool specimens.

3 Gap in Knowledge:

Until now, what percent of human stool specimens from hospitalized patients contain C diff is unknown.

Standard elements blocks of a research report

Background

Gap in Knowledge

Purpose

Approach/Methods

Results

Conclusion

Significance

Implications

Next Steps

Use the core elements as inspiration for Significance and Implications

For Significance

LOOK TO 

- Purpose: I did this in order to identify percent positivity of C diff in stool specimens
- Significance: The significance of this work is that we now know what percent of stool specimens have C diff.

For Implications

LOOK TO 

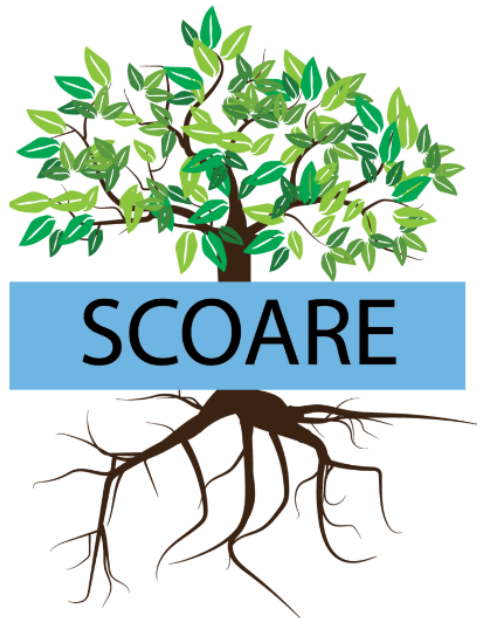
Gap in Knowledge

- Gap in Knowledge: We don't completely understand percent positivity of C diff in stool specimens
- Implications: Now that we understand this, we can develop interventions to reduce the positivity of C diff in stools.

Summarizing the ‘core elements’ method

1. To get started, work from the Approach and stay close to it.
2. Identify core elements—no more than 1 sentence for each.
3. Use plain language.
4. Use linguistic cues to help signal the elements and use very similar phrasing in the gap and purpose.
5. Repeat these steps to get to 2-3 key messages for the paper

www.SCOAREresources.com



Welcome to the **Scientific Communication Advances Research Excellence (SCOARE)** website!

To get started, click on any of the tabs in the upper right corner of the website.

Here, you will find articles, discussions, videos, and webinars to help you...

- Learn more about best practices in SciComm mentoring
- Identify SciComm mentoring strategies from other workshop participants
- Troubleshoot challenges or barriers you experience in your SciComm mentoring

Questions? Contact SCOARE@mdanderson.org

For more info on our SciComm research, see the Research Articles tab.



Draft, Submit, Revise: A Manuscript Writing Series

Thank you!

Next up, our *IN-PERSON* Edit Like A Reviewer Sessions

May 8th 1:30-3:00 PM at UW Madison **SPOTS STILL AVAILABLE**

May 9th 8:30-10:00 AM at UW Madison CLOSED

May 22nd 8:30-10:00 AM at MCRI **SPOTS STILL AVAILABLE**

Email Jen Merems at merems@wisc.edu to get a spot

Last zoom session, Wednesday June 5th 12-1:00PM Navigating Submissions