Getting Organized to Write

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Characteristics of good scientific or medical writing

- Thorough research
- Accurate information
- Logical organization
- Clarity of thought and writing
- Readability

Overview of the writing process

- Plan – explore the problem; do background work (eg, read the study protocol)
- Make an outline
- Freewrite – write what you know; fill in details later
- Rewrite – think about what is important to your study and what your reader needs to know; add those details
- Edit
- Keep writer's block at bay!

Planning

How to plan

- Determine your audience
- Know what you need to accomplish
- Learn about your subject
- Develop your thesis
- Develop your protocol
- Work with the appropriate committee and staff members

What to consider when choosing a target journal

- Appropriateness for your message. Is your study in line with the aims and scope of the journal?
- Type and length of articles published
- Impact factor
- Likelihood of publication
- Journal circulation
- Print versus online-only
- Subscription versus open access (note that open access journals may charge additional fees)
- Readership of the journal. Will you reach your target audience?
- Publication fees, color image charges, page charges

Important manuscript requirements to consider

- Institutional review board (IRB) approval is required for all research manuscripts involving human subjects (prospective studies, clinical trials, and retrospective database reviews). For more information about how to obtain IRB approval for your clinical study, e-mail clinicalresearch@texasheart.org
- Many journals require registration of clinical trials in a public trials registry (eg, ClinicalTrials.gov) when or before the first patient is enrolled as a condition of considering the manuscript for publication
- Patient approval is required for case reports in which the patient can be identified
- Institutional Animal Care and Use Committee (IACUC) approval is required for all manuscripts based on animal studies. For more information about obtaining IACUC approval, call or e-mail Melissa Moon (832-355-7339; mmoon@texasheart.org)
- Protocols may contain provisions for manuscripts
- Talk to a statistician, if possible, before gathering data if you plan to apply statistical tests to the results
- Data from THI cannot be presented without professional staff approval (in abstracts, posters, or manuscripts)

- Surgical data cannot be presented without approval of the surgeons

The writing process

1) Outlining

- Ensures direction; builds consensus
- Use a system that works for you: brainstorming, mind maps, cluster diagrams, idea trees, sticky notes

Things to include in the outline

- Thesis, headers, relevant points, information that supports your thesis
- Possible tables and figures

Things to remember when outlining

- Audience (readers, peer reviewers, peers)
- Ideas cause most writing problems, not grammar
- If you can outline, you can write

Collaborative planning – discuss your message (purpose, key points) or outline with someone else, attend publication/research meetings

- Helps you crystallize your ideas
- Helps you recognize incongruous ideas
- Helps you create new ideas
- Helps you articulate key points
- Ensures that the correct message is conveyed
- Ensures that data are analyzed correctly

2) Freewriting (generating ideas)

- Brainstorm to stimulate creative thought

- Use your outline as a guide
- Don't try to write polished prose
- Write sections of the paper, but don't try to edit or rewrite at this point
- Don't censor; write whatever you think about, but stay focused on the topic

3) Rewriting

- Recognize writer-centered prose
    - Produced by freewriting
    - Characterized by missing referents, inappropriate language (eg, jargon), underdeveloped ideas, unfocused discussions, gaps in logic, missing background, lists, extraneous information
- Change writer-centered prose to reader-centered prose
    - Know your target audience
    - Find a common focus of interest
    - Decide what you want the reader to think or learn
    - Determine what the reader needs to know, how much background information the reader needs
    - Keep the writing simple. Use cues: purpose statement, headers, transitions, key words, topic sentences, standard sentence patterns

Other steps to consider in rewriting

- Expand, delete, reorganize
- Eliminate unfocused information; add relevant information
- Does each paragraph function well in the overall plan?
- Does your argument unfold well?
- Are there any contradictions?
- Were you ever confused as you read?
- Did you have to reread anywhere?

- Are your conclusions obvious?

4) Editing

- Detect, diagnose, revise – learn the rules of writing
  - http://owl.english.purdue.edu/owl (writing tools and resources)
  - http://www.thesaurus.com/ (thesaurus)
  - http://www.online-medical-dictionary.org (medical dictionary)
  - http://grammar.ccc.commnet.edu/grammar (grammar)
  - Consult the *AMA Manual of Style* (10th Edition) for specific rules (print and online versions available)
  - Consult books on biomedical writing (eg, *Essentials of Writing Biomedical Research Papers* by Mimi Zeiger)
- Ask your co-authors and/or colleagues to review and critique the manuscript
- Once the content has been finalized, send your manuscript to Scientific Publications for editing (e-mail Stephen Palmer, spalmer@texasheart.org)

Writer's block

Causes of writer's block

- Internal criticism
- Unrealistic expectations that produce anxiety
- Fear of failure, of being found a "fraud"
- Perfectionism or insecurity over perceived incompetence
- Impatience, depression, environment
- Rigidity
- Procrastination—evaluation anxiety
- Too busy

Strategies for overcoming writer's block

- Relax; rest if tired
- Write in a pleasant environment; set aside a time and place
- Have a daily goal; make notes to prompt you where to begin next
- Focus on your writing; don't try to multi-task (limit social interruptions and telephone calls)
- Begin writing with a pleasant activity or brief ritual
- Practice writing regularly
- Understand the format, eg, biomedical paper
- Break down large, complex assignments
- Set realistic deadlines
- Reward yourself when you've finished a task
- Recognize the difference between perfection (leading to endless torment) and excellence (leading to happiness). Don't be a perfectionist. Remember your deadline
- Control your internal critic; think positive
- Remember your other successes
- Find a "friendly" critic
- Be aware of burnout symptoms (restlessness, tedium, and cynicism)

Cure burnout with planning

- Recognize writer's block
- Learn more about your audience, purpose, or topic. Do more research
- Let your thoughts incubate
- Beware of the "mastery model": if writing's not easy for me, I must not be cut out for it

Contact Stephen Palmer in Scientific Publications (spalmer@texasheart.org) when you are ready to have your manuscript professionally edited.