Introduction

One of the most important skills for a graduate student, and often the one most difficult to master, is the ability to clearly communicate via the written word. It is a skill that you need on the first day of graduate school and one that you will need for the remainder of your professional life; it is a skill that requires constant improvement. There is no easy path to mastery of this skill. In fact, there is only one path to mastery. Just like starting an IV or doing CPR, the way we become proficient is through practice. More specifically, someone shows us what to do, we attempt the skill, we receive feedback, change (and hopefully improve) performance, receive more feedback, improve performance, and repeat.

What we read also influences both our writing ability and our perception of the world. On one level, if we confine our reading to EMS trade magazines, our writing will be different than if we also read peer-reviewed journals such as Annals of Emergency Medicine, Prehospital Emergency Care (PEC) and JAMA. Reading those journals will influence not only the content of an author’s writing, but the style, quality, depth and technical components as well. As you read articles from those journals, note not only what the author states, but also how the author writes. Consider the vocabulary as well as the tone and structure of the paper.

On another level, reading works from writers such as Herman Melville\(^1\) (e.g. Moby Dick), Jack London\(^2\) (e.g. Call Of The Wild), Mark Twain\(^3\), or James Fenimore Cooper\(^4\), just to mention a few of my favorite authors, can help inspire your writing to grand new heights. I would be remiss if I did not mention that Benjamin Franklin\(^5\) illustrates another style useful for the manager - and Renaissance person. If you do nothing else for yourself this semester, read at least the first chapters of Moby Dick and Franklin’s autobiography.

Technical components

Generally, papers for the EHS program should follow the following guidelines. The title page includes the title, author’s name, author’s email address, course number, date of submission and a running head; papers less than five pages do not require a separate title page. The running head is usually a shortened version of the title. Each subsequent page in the document should include the running head in italics at the top right hand corner of the page and the page number at the bottom right hand corner.

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\(^4\) Cooper JF. *The Pioneers*. Available at: [http://xroads.virginia.edu/~UG02/COOPER/chapters.html](http://xroads.virginia.edu/~UG02/COOPER/chapters.html). Accessed August 13, 2002


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Your paper should be written in a standard format such as Turabian, APA, MLA, or a format such as the one used by JAMA or Annals of Emergency Medicine. You may use both footnotes and endnotes. Footnotes are placed at the bottom of the page using small Roman Numerals. They generally clarify or expand a point that may be tangential to the focus of the paper. Endnotes are used as a citation for a statement of fact or to reference a quote. They are placed at the end of the document under the heading “References.” The endnote references should follow one of the accepted formats noted above. See the UMBC Library website for more information on styles and formatting.

Page limits set by the faculty generally do not include the title page or references. Use margins of at least one inch. Use a 12-point font for all writing except the footnotes; footnotes may be of 10-point font. The faculty (and journal editors) generally prefers that you use a font such as Times New Roman or Arial; avoid the use of “exotic” fonts.

Citation

“Your opinions, by themselves, are worthless in scholarly or professional writing. All assertions, other than those that are widely accepted, are expected to be substantiated in this type of writing.” Any statement of fact (short of “the sky is blue”) requires a reference. ANY material copied from other sources must be placed within quotation marks and be appropriately referenced. This is a very important point – ANY material copied from other sources that is submitted without proper citation may be viewed as plagiarism and is grounds not only for failure of the class but for dismissal from the program. You are responsible for being familiar, and compliant, with all related rules such as the UMBC Academic Integrity Policy and student resources.

Your professors will generally (almost exclusively) want you to reference peer-reviewed journals. “Peer-reviewed” generally means that articles are “examined both by the editor and one or more specialists in the individual field before approval is given to publish.” The peer-review process gives the reader a level of assurance that independent experts in the discipline have examined the paper and agreed that: the research methods were sound; the findings are consistent with the objective and research methods; and, that the recommendations are appropriate based on the subject population, research methods and findings. By contrast, articles in non-peer-reviewed publications may have been selected simply because the editor believed they would help sell more copies of the magazine. It is possible to find much helpful information in non-peer-reviewed publications; however, when formulating decisions or recommendations, we must remember that these publications may have no more reliability than personal web sites or blogs. Examples of peer-reviewed journals include Annals of Emergency Medicine, JAMA, PEC and Prehospital and Disaster Medicine (PDM). EMS related magazines that do not meet the peer review criteria include JEMS, EMS Magazine and Firehouse. If in doubt, go to the publication’s home page and determine if the articles are reviewed by independent scholars prior to publication. See the UMBC Library resource page for more information.
Quotes

Your professors are not interested in reading material written by other people while they are reading your papers. Your papers are expressions of your thoughts, experiences and education; they are opportunities for you to practice and improve your techniques and, they are examples of your writing ability. In other words, if you choose to include them in a paper, quotes should be few and short; they must also be in quotation marks with appropriate citation.

Sections

Papers should generally include an introduction, a literature review, a body (e.g. what you want to do, how you want to do it, how you will know it was effective, your findings, conclusions and or recommendations) and a summary. Subheadings should be used generously throughout the paper.

Sharing your knowledge. Why publish?

“EMS professionals are typically very creative. Over the years a plethora of innovative practices have been implemented. Unfortunately, we have not been as good at sharing our experiences. This has meant that EMS agencies must again and again “reinvent the wheel”. As a profession we all pay the cost when our limited resources are used on basic problems and not on creating new opportunities.

An early example of one paper that had a great influence on the profession is the research published by Dr. Pantridge\(^1^2\). His description of prehospital advanced life support inspired the world. There are other reasons to publish. They include:
- That is what scientists (and professionals) do
- It is a hallmark of a profession
- It helps create a strong professional community
- It’s good for patient care
- There may be some personal benefit in terms of professional, academic or monetary recognition
- It provides academic credibility for our profession.”\(^1^3\)

Improving style

Michael L. Callaham, MD, the Editor in Chief of Annals of Emergency Medicine, shared some simple advice for future authors when he wrote, “All good writing should be lucid, and simplicity is a higher accomplishment than complexity in both communication and science”\(^1^4\). He went on to promise to readers that he would strive to simplify the publication’s style and to make information easier to find.

Orson Scott Card is an accomplished writer and writing teacher (and one of my favorite contemporary authors). He advises writing students who are having trouble with style to take out a 3x5 card and simply write down “what happens and why”\(^5^1^5\). This simple...
exercise focuses you on helping the reader understand your point. Although fiction and scientific journal articles are written very differently, their authors do share at least one objective: neither wishes to bore their reader to tears.

**The comprehensive exam**

The comprehensive exam is taken during a student’s final semester in the program; it is an opportunity for the candidate to write three scholarly papers during the exam period.

Our emphasis on writing is about more than just your technical writing ability. For example, an administrator with only an undergraduate degree might write: “My opinion is that we should add drug x to our inventory because Pfizer Corp (the manufacturer) says it is the best drug for our patients.” An administrator with a graduate degree might write: “I recommend that we add drug x because I did a Medline search and found four peer-reviewed papers and one non-peer-reviewed paper about clinical trials that were done on this drug. Four of the papers (published in “Circulation”, “The New England Journal of Medicine” and two in “JAMA”) found that the drug induced positive changes among the subjects. In addition, the subjects were similar to our patient population and the researchers found no significant side effects. The fifth paper, published in “The Medical Annals of the Fifth Street Clinic in Podunk”, did not find significant changes among the subjects studied. However, that journal is not peer-reviewed and many of the subjects studied were asthmatic Eskimo pygmies; therefore the research is not necessarily applicable to our patient population.”

A person with a master’s degree bases his or her opinions and recommendations on reliable information. A person with a master’s degree knows: where to find reliable information; how to analyze and synthesize that information; and, how to present his or her recommendations in a scholarly manner. The skills you learn in graduate school are not how to do CPR better or how to run a better code. The skills you learn are how to be a better presenter, how to be a better decision maker, how to be a better thinker. The comprehensive examination is a measurement of those skills. Every project in the program is an opportunity for you to practice and improve those skills.

**Recommended reading**

For those of you writing some of your first graduate level papers, the following resources may be helpful:

Writing Guidelines for Graduate Papers:

A crucial book in the library of every graduate student is: "A Manual for Writers of Term Papers, Theses, and Dissertations" (Chicago Guides to Writing, Editing, and Publishing) by Kate L. Turabian (Paperback - March 1996). Another helpful book is the APA style manual; information about it can be found at: [http://www.apastyle.org](http://www.apastyle.org).
Other useful URLs:


Conclusion

Writing is not only a crucial skill for graduate students, it also defines you as a professional. It may be the one skill that, more than any other, determines not only the grades you will receive in school but also the accomplishments you will achieve in your lifetime. You were not “born” with this skill any more than you were born with good CPR skills. Both require practice to achieve proficiency. In the case of writing, practice generally lasts a lifetime.

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References:


7 Jackson GB. *Writing Guidelines for Graduate Papers*. Available at: http://www.gwu.edu/~gjackson/writingguidelines.PDF. Accessed August 13, 2002


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