Drafting Your Paper in HPMT 351: Clinical Chemistry
A Step-by-Step Student Guide

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Finding and Using Sources

Where do you start?

Before you begin collecting sources, you should conduct an informal, preliminary search to familiarize yourself with your chosen topic, or, in this case, the disease or disorder that most interests you. Start early and use the Internet! While Prof. Shearin-Patterson will probably not want to see Wikipedia as one of your final sources, there’s no harm in looking at it now. In addition, the bibliography at the bottom of the Wikipedia page can be very helpful in finding more legitimate sources.

What qualifies as a legitimate source and why does it matter?

You have a responsibility to your professor and your classmates to present convincing evidence that is current and that comes from a source recognized for its accuracy. To this end, you must critically evaluate any sources that you use. Is the source current? Will your reader or audience respect your source as trustworthy? You need to be particularly critical with Internet sources, as anyone can post anything on the web.

On the next sheet is a list of legitimate Internet sources that might be good places to start your search for legitimate sources.
Library Resources

York College Library
http://www.york.cuny.edu/library
Reference Desk: (718) 262-2023
reference@york.cuny.edu

In addition to helpful books of reference, the York College Library holds databases through which you can access full-text e-journals for free from school or home. If you have trouble accessing these databases, contact the library for help.

To access online journals in the field of Medical Technology, look under “Research Tools,” the first category on the library page and click “E-Journals by Title or Subject.” The next page should offer you three options: “Browse Journals by Title,” “Browse Journals by Subject,” or “Browse Journals by Medical Subject.” You might find your subject under “Browse Journals by Medical Subject,” or, under the “Health and Biological Sciences” entry in the drop-down menu for “Browse Journals by Subject.” You can find under the subheading “Medicine” twenty-two journals for “Medical Technology” that you can search. Simply click on the database link next to each journal title to begin your search.

As all of these journal articles are peer-reviewed, you and your audience can assume that they are legitimate sources. You will just want to make sure that your information is current, or that it has been published recently.

Online Resources for HPMT 351: Clinical Chemistry

There are also many legitimate online resources that might offer valuable information on your topic. Sites you can visit for legitimate sources, for example, include:

- Clinical Chemistry Online: http://www.clinchem.org/
- American Association for Clinical Chemistry (see especially, under the link “Resource Centers” at the top of their site, the “Resource Library” link): http://www.aacc.org
- Centers for Disease Control and Prevention: http://www.cdc.gov
- National Institutes of Health: http://www.nih.gov/
- World Health Organization: http://www.who.int/en/

You can also, of course, do a Google search for your topic, and see what comes up. However, remember to be critical and skeptical of anything you read. Ask yourself, “Who wrote this and what are her or his credentials? When did he or she write it and what did he or she write it for? Is it biased? Uninformed? Poorly written?” Web sites ending in “.edu,” “.org,” or “.gov.” are generally more trustworthy than those ending in “.com,” although you also need to be skeptical of these sites and may find many legitimate “.com” sources (like “nytimes.com” or “sciencedaily.com,” for instance).
Taking Notes

I have some good sources collected on my disease. Now what?

Reread and take notes! Taking notes as you research is not a waste of time. In fact, careful note taking will force you to think about how you will structure your paper. Every important point you make will be backed up with evidence that you find in your research when you write your paper. So why not use the research process as the first step to designing your paper? Develop a method for writing down or collecting important information. Useful methods include:

- Using a service like RefWorks, available free through the library (http://www.york.cuny.edu/library/reference-databases/bibliography-tools) to enter citations and take notes.
- Keeping index cards with each source or category listed at the top and citing the facts and figures or evidence that you plan to use in your paper with page numbers.
- Keeping a research notebook or file on your computer in which you record source material information and the relevant evidence for your paper.

You might section your notes by source or by category. See the seven questions on the next page, and note that you could design categories like “target population,” “signs and symptoms,” and “diagnostic tests” as you note-take to begin structuring your paper. Just make sure to keep your sources straight as you add quotations, statistics, or information from your sources.

The main point of note-taking is to read your sources actively, thinking of what you might include from the source in your own paper. As you carefully record your citations, you will also more likely avoid accidental plagiarism when you begin writing.
Organizing Your Paper
Part I: Collecting Your Ideas

You have your sources and you have read them and taken notes. Now, consider the assignment Prof. Shearin-Patterson has given you. Try breaking down each of her questions and supplying the response, based on your research notes, on this sheet:

1. What is the disease or disorder?

2. Who is the “target population,” or the group of people mainly affected by this disease?

3. Why did you select this topic? What interests you about this disease?

4. What happens to the body in the course of the disease?

5. What are the signs and symptoms of this disease?

6. What laboratory tests are used in the diagnosis of this disease? In its management or treatment? How do these tests work?

7. What impact on health care costs does the treatment of this disease have?
Organizing Your Paper
Part II: Making an Outline

Now, you have everything you need in place to write your paper. You just need to think about how to put it together. How many paragraphs will you include? What will be the main idea of each paragraph? Organize your notes into an outline like the example below:

1. Introduction Paragraph: I will begin with a startling statistic about growing rates of breast cancer in the U.S. to catch the reader’s attention. I will then let the reader know that I will be telling him or her who is most affected by this disease, what its signs and symptoms are, what it does to the body, what laboratory tests are used in its diagnosis and treatment, and what its health care costs are.
2. Body Paragraph #1: I will tell the reader who is most affected by breast cancer, including American statistics in different age ranges and within different races for both women and men. I will also talk about risk factors including diet and exercise.
3. Body Paragraph #2: I will give the signs and symptoms of breast cancer and explain the different types of this disease.
4. Body Paragraph #3: I will explain what breast cancers can do to the body if untreated as well as how breast cancers respond to treatments like chemotherapy and mastectomies, including survival rates.
5. Body Paragraph #4: I will discuss the laboratory tests used to diagnose breast cancer.
6. Body Paragraph #5: I will discuss the laboratory tests used to manage the disease.
7. Body Paragraph #6: I will discuss the healthcare costs of these tests in particular and the overall costs of treating breast cancer in general.
8. Conclusion Paragraph: I will conclude by stating that, despite the developments made in diagnosing and treating breast cancer, there is still much work to be done. I will also explain that I chose this topic because I was alarmed when I read in the newspaper that almost any woman is at risk for the disease and that heredity is not a strong risk factor. I wanted to learn much more about this disease that could impact any one of us.

Organizing Your Paper
Part III: Drafting and Reverse Outlining

Now, write a draft!

When you are finished, you may find that you have strayed from your outline. This often happens when writing. Why not make a reverse outline, or an outline of what each of the paragraphs in your draft is doing and restructure and revise the essay based on that outline?
Working Research into Your Paper: Paraphrasing and Quoting

Quote from article:

“In the new study, mammograms, combined with modern treatment, reduced the death rate by 10 percent, but the study data indicated that the effect of mammograms alone could be as low as 2 percent or even zero” (2010).


Paraphrase
When used without other treatments, the impact of mammograms on the death rate is practically insignificant according to a recent study (Kolata, 2010).

Embedded Short Quote
As Gina Kolata reports, a recent study claims that the impact of mammograms alone on the death rate “could be as low as 2 percent or even zero” (2010).

Full Quote
Gina Kolata writes, “In the new study, mammograms, combined with modern treatment, reduced the death rate by 10 percent, but the study data indicated that the effect of mammograms alone could be as low as 2 percent or even zero” (2010).

Keep full quotes to a minimum, relying on paraphrasing and embedded short quotes to integrate your research into your writing.

Using ACS or APA Style
For a good guide to ACS style see: http://library.williams.edu/citing/styles/acs.php
For a good guide to APA style see: http://owl.english.purdue.edu/owl/resource/560/01/
It is important that you follow one of these styles consistently to give credit to your sources and show that you are a professional in the discipline of Clinical Chemistry.