

# Teaching History of Pharmacy

W. Clarke Ridgway

It has been my experience over the past decade that the majority of our students have come to us predisposed to invest time and energy in the courses in the professional curriculum that are perceived as enhancing their knowledge and skills in the areas of pharmaceutical and clinical sciences. Conversely they have tended to express less interest in courses they view as not meeting the aforementioned objectives. This is, perhaps, an expected outcome of an admissions process that tends to preferentially select students who express an interest in and have demonstrated an aptitude for science-oriented course work. Seldom in admissions interviews have successful applicants stated a preference for courses in the social sciences or humanities.

Not surprisingly, these prejudices are changed very little during a student's academic career, as attested to by final-year student evaluations of our curriculum. Rare are the requests to increase non-science course offerings. Rather, the typical suggestion is for more pharmacology, therapeutics, or clinical monitoring, etc.

The dilemma, then, has been one of how to generate interest in a "non-science" course (such as the history of one's profession), in a populace clearly predisposed to ignoring such offerings. This is compounded by the fact that most of our students' last encounter with history was likely the American history survey course required in their junior year in high school. Thus, their knowledge base is typically quite shallow and their historical research skills virtually non-existent.

The solutions, admittedly still in process, I believe, focus on two related approaches. First, make it relevant, and second, make it hands-on. Admittedly, professional historians will decry the former, they're doing

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or learning now and how that was done or learned in some other time they are more likely to become interested in the topic (or, in today's parlance, more likely to claim "ownership" of the subject). The latter calls for using (as in handling) artifacts such as tools, books, botanical specimens, etc. This approach no doubt sends shivers down the spines of my curator colleagues, but the end result is a greater first-hand awareness of and appreciation for the development of the "art" or practice, of pharmacy and health care.

Two examples will, perhaps, demonstrate these connections. The first unit of the course is on Native American health care. In it we discuss not only the theory and practices of shaman-based medical care, but also prepare or demonstrate some of their dosage forms. For example, students might make a poultice using a base of *Avena sativa* (oats—cheap and readily accessible). This process demonstrates quite dramatically not only the originally intended external tenacity of such a concoction, but also the rationale for recommending a high-fiber diet based on oat bran. To this base are added one or more members of the species *Mentha*. These are not only readily available, but also illustrate why some species were no doubt originally tried as ingredients—their aroma. This then leads into a general introduction of both the basics of pharmacognosy (a course long absent from our curriculum) and modern herbal therapy (something every student has faced as an, admittedly, ignorant intern). The unit then concludes with an assignment requiring that the student work with references heretofore untouched. Each student picks a different herb or natural product, but one that is currently in the news. The student then creates a two- to three-page report that covers such areas as morphology, pharmacologically active chemical constituents, therapeutic indications, precautions, and toxicology. Students are given a list of references to use. This list includes several pharmacognosy-related texts, *Honest Herbal*, *Herbs of Choice*, and *Lawrence Review* (see Appendix A).

The second involves a unit on sectarian medicine. After examining nineteenth-century homeopathic kits and pharmacopeias, students next examine currently marketed homeopathic products (obtained from local pharmacies). A general discussion then ensues regarding past and current legal issues such as labeling. Likewise, after examining Thomsonian and later botanical literature, students then move to the Lloyd brothers and late nineteenth-century botanically-based pharmaceuticals, using Lloyd's *Specifics* and early Lilly and Parke-Davis products and catalogs. This leads into an examination of currently marketed herbal products (also obtained from local pharmacies) and a discussion revolv-

ing around production, standardization, and labeling issues. The unit concludes with an assignment that the students come to enjoy—the conduction and transcription of an oral history (see Appendix E). The subject is an elderly person in their family or community. The topic is past use of home remedies. Interviewees enjoy the interaction with the students, and the students gain a vivid impression of what health care was like in isolated communities in rural West Virginia at the turn of the century. Students follow scripted questions and prepare a two- to three-page summary.

Augmenting lectures with slides (I use 100's, most of which were copied from AIHP files), movies, and videos assist those students who are primarily visual learners. Using dosage forms tools and equipment, examining old OTC and Rx products, and leafing through decades-old references and textbooks not only helps those students who are tactile learners, but lets all students “see” history, or change over time.

Our course usually meets for two hours each week in the School's museum. This room houses the book, artifact, botanical specimen, and images collections. Occasionally, the group meets in the rare book room of the library or in one of the laboratories for demonstrations.

Additional writing assignments introduce students to other types of historical sources, both primary and secondary. In primary sources, old journals and hometown newspapers hold unusual fascination for many students (see Appendix B). I recommend accessing antiquarian primary sources via the Nydia King Sources for the History of Pharmacy microfiche (available through AIHP), since actual texts are rare, expensive, and often in poor condition.

Secondary sources are more readily available in most health sciences libraries. For secondary journal articles, our students use *Pharmacy in History*, *Bulletin of the History of Medicine*, *Journal of the History of Medicine and the Allied Sciences*, and *Medical History* (see Appendix C and D). Students may also review a book-length secondary source. While these are plentiful in most health sciences libraries, students usually do not choose this option, given the amount of time required. Students choosing to review a book are given a list of suggested works. Students may also conduct an oral history of an elderly pharmacist. The object of these assignments is not to produce trained historians, but simply to acquaint them with the tools of the trade.

Student grades are based primarily on their performance on two exams, one given around midterm, the second during final exam week. Each exam typically requires two hours for completion, due to the short-answer essay-style questions. The remainder of the grade is deter-

mined by the quality of the written reports. Most students earn grades of A or B. Class size has ranged from as few as four to as many as thirty.

Student evaluations of the course generally range from good to excellent. The most commonly used descriptive phrase is “very interesting.” Perhaps from such seeds historical oaks may grow.

## APPENDIX A

### HERBAL DRUG WRITING ASSIGNMENT

Choose one of the herbs listed below and research its use (past and/or present) as a home remedy.

Ginger	_____
Saw Palmetto	_____
Ipecac	_____
Chamomile	_____
Garlic	_____
Ginkgo	_____
Valerian	_____
Capsicum	_____
Black Cohosh	_____
Yohimbe	_____
Colchicum	_____
Witch Hazel	_____
Aloe	_____
Sanguinaria	_____
Echinacea	_____
Podophyllum	_____
Pacific Yew	_____
Sassafras	_____
Ginseng	_____
Feverfew	_____
Clove	_____
Pennyroyal	_____
Melatonin	_____

Results of the research should be written up in the following format:

Description: Photocopy, drawing, or brief description of plant or plant part

History:

Active constituents:

Current usage:

Toxicology:

Information can be obtained from the references listed under “Herbal Bibliography”

### Herbal Bibliography

Herbs of Choice: The Therapeutic Use of Phytomedicinals, Tyler, Varro E., Haworth Press, New York, 1994.

The Honest Herbal, Tyler, Varro E., Haworth Press, New York, 3rd ed. 1993.

A Field Guide to Medicinal Plants: Eastern and Central North America, Foster, Steven, and Duke, James A., The Peterson Field Guide Series, Houghton Mifflin Co., New York, 1990.

Medicinal Plants of the Pacific West, 1993

Medicinal Plants of the Mountain West, 1979

Medicinal Plants of the Desert and Canyon West, 1989, all by Michael Moore

Handbook of Medicinal Herbs, Duke, James A., CRC Press.

HerbalGram, quarterly publication of the American Botanical Council and the Herb Research Foundation.

German Commission E Monographs–American Botanical Council’s English Translation of 410 German Commission E Monographs collated into a single volume.

Trease and Evans’ Pharmacognosy, Evans, W. C., Bailliere Tindall, London, 13th ed., 1989.

Pharmacognosy, Tyler, Varro, E., Brady, Lynn R., and Robbers, James E., Lea & Febiger, Philadelphia, 9th ed., 1988.

The Lawrence Review of Natural Products, monthly monographs published by Pharmaceutical Information Associates, Ltd.

A Guide to Medicinal Plants of Appalachia, U.S.D.A. Forest Service Research Paper NE-138.

For historical usages, see

U.S. Dispensatory- older editions

American Medicinal Plants, Millspaugh, Charles F., 1892, reprinted by Dover Publications, Inc., New York, 1974.

Individual plant monographs published by Lloyd Brothers—late nineteenth-century and early 20th century.

Pharmacographia: A History of the Principal Drugs of Vegetable Origin, met with in Great Britain and British India, Fluckiger, Friedrich A., Hanbury, Daniel, Macmillan and Co., London, 2nd ed., 1879.

## APPENDIX B

### Pharmacy 283 History of Pharmacy

#### ASSIGNMENT:

Read and summarize an article from a primary pharmacy source, journal (article length), written before 1960.

#### SIGNIFICANCE:

Many of pharmacy's problems and concerns seem to recur over time, often in a slightly modified form. So, too, do the efforts to solve these problems and to prevent them from returning. For this exercise, you are to read an article from an old pharmacy journal and summarize the contents in no more than two pages.

Suitable subjects include: efforts to organize the profession, to standardize (or not) pharmacy education, to control (or not) prescription pricing, to train (or not) sub-professionals, to control use of addicting drugs, to alter (or not) business practices. In your summary, compare and/or contrast the view expressed in the article with any present-day arguments on the same subject.

- OR -

Select an article dealing with a drug or pharmaceutical product or process. In addition to summarizing the article, include a comparison with modern-day use of the drug or process (ex.: an 1870's article on the use of chloral hydrate might mention strengths, dosage forms, indications, precautions, etc. Compare these with the present-day use of chloral hydrate).

If the article discusses a botanical product, include a summary of the chemical constituents of that plant, as described in Pharmacognosy by Trease and

Evans (1983), or Pharmacognosy by Tyler, Brady and Robbers (1981) both available in the Medical Center Library.

SUGGESTED JOURNALS:

American Journal of Pharmacy  
Pharmaceutical Era  
Druggists' Circular and Chemical Gazette  
West Virginia Pharmacist  
The Virginia Pharmacist  
Lloydia  
Journal of the American Pharmaceutical Association (1912-1939),  
Scientific Edition (1940-1960), Practical Pharmacy Edition (1940-1960)  
Pharmaceutical Abstracts (1935-1948)  
New Remedies  
Pharmaceutical Journal  
West Virginia Medical Journal  
Journal of the American Medical Association  
New England Journal of Medicine  
Lancet  
The Druggist  
Therapeutical Gazette  
American Professional Pharmacist  
American Medical Reporter  
Eclectic Medical Journal  
Boston Medical and Surgical Journal  
American Medical Times  
American Druggist  
Drug Topics  
Proceedings of the A.Ph.A. (1852-1911)\*  
Yearbook of the A.Ph.A. (1912-1934)\*  
Transactions of the A.M.A.\*

\*These works are the official records of the annual meetings of these groups and include resolutions, floor debates, committee reports, speeches, etc. If you choose one of these publications, summarize the floor debates on any one subject, or summarize a committee report and its ultimate fate.

## APPENDIX C

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## ASSIGNMENT:

Read and summarize an article dealing with pharmacy or drug use from a secondary source of historical information.

## SIGNIFICANCE:

Secondary sources are those articles, essays, monographs, etc. written by persons not personally involved with the activity being described. The authors are usually historians, and are writing on a topic they have researched from a number of different primary and secondary sources. As such, these authors can often approach and analyze their subject from a number of angles, and can give a more complete account of a person or event than any single source can. Their value also lies in the ability of the author to present hypotheses or conclusions on one topic that may have relevance to other subject as well.

## PROCEDURE:

Choose any of the journals listed below. Read one article, and summarize the contents in no more than three pages.

Please note the limitations—on non-pharmacy journals, use an article dealing with drug use or therapeutics or other pharmacy related subjects. Be sure to clear your article with me beforehand.

All the journals listed below are available in the Medical Center Library.

## SUGGESTED JOURNALS:

Pharmacy in History—published by the American Institute of the History of Pharmacy. (Any article greater than five pages in length is acceptable.)

Bulletin of the History of Medicine—contains many fine articles on pharmacy and drugs.

Journal of the History of Medicine and the Allied Sciences—similar to the BHM cited above.

Journal of the History of Biology—has occasional articles on drug investigations pharmacology, or on persons active in these fields.

Medical History—similar to the BHM and JHMAS. (English)

Interested in a particular topic? Use the Index Catalogue of the Library of the Surgeon General's Office, Index Medicus, or Bibliography of the History of Medicine; all available in the Medical Center Library.



## APPENDIX D

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## ASSIGNMENT:

Read and summarize information of a pharmaceutical nature obtained from primary sources of a popular genre.

## SOURCES:

Newspapers, popular journals or magazines, pamphlets.

## PROCEDURE:

Scan a newspaper or magazine that was published 25, 50, 75, or 100 years ago on or near your birthday. (Example: If you were born on September 10, 1966, read a newspaper published September 10, 1961, 1936, 1911, or 1886; OR read a magazine published in September of 1961, 1936, 1911, or 1886.)

If you choose to read a newspaper, summarize any article it contains dealing with the health care of the times. This may concern any local epidemics that might be in progress, the causes of death if listed in the obituaries, health programs in the local schools or community, etc. It may be necessary to scan several issues before or after your birth date to locate such items.

Secondly, note the advertisements for local pharmacies or OTC drug products that appear. Compare these advertisements with today's papers. Summarize the differences and similarities as to style, content, use of artwork, etc. One page should be sufficient to cover this topic.

If you choose a magazine or journal article, summarize the contents in a one- or two-page report. Popular magazines such as Life, Look, The Saturday Evening Post, Colliers, Time, Newsweek, etc. will give you a look at what the average American was exposed to in terms of drugs and health care. Be sure to pick an article pertaining to the use of medications. This may include new drugs on the market, the overuse or abuse of drugs, legislation concerning drugs, activities of the professional organizations of pharmacy, or articles on the manufacturing, pricing, or distribution of medicines.

Be sure to include the name of the newspaper or magazine and the date of the issue that you are citing.

Newspaper should be from your hometown, if possible. County papers will suffice for those from towns too small to issue their own. Colson Hall (second floor, West Virginia Collection) contains on microfilm, copies of dozens of small town newspapers. Check with the librarian at the desk opposite the door on the second floor on how to use these microfilms.

Students not from the West Virginia/Appalachian area may use the New York Times, Washington Post or other large city newspaper.

## APPENDIX E

Pharmacy 283  
History of Pharmacy  
Guide Sheet for Folk Medicine  
Oral History Assignment

## PURPOSE:

To collect first-hand recollections of Appalachian folk medicine; the kind practiced without professional advice and handed down by laymen from one generation to the next.

## INTERVIEWEE:

Select one of the oldest people you know. The subject may be a relative, friend, or neighbor. Contacting your subject and explaining the purpose of the interview prior to the visit itself may aid him/her in recalling favorite family home remedies. If the subject is an immigrant to this country, ask them what remedies their family used in their country of origin and if they continued using them after immigration or if they changed and how.

## COURSE CREDIT:

To receive credit for this exercise, the student must submit a written report of the interview and summarize his/her findings in a short oral report in class.

## WRITTEN REPORT:

Include the name and address of the interviewee and the time and date of the interview. Two or three pages will be sufficient.

This report will become part of a file of Appalachian Folk Medicine to be housed in the School of Pharmacy.

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## Hints On Conducting An Interview

1. Use a tape recorder or take brief notes. Write up the most useable parts immediately following the interview.
2. Tell the person specifically what you are interested in, and why. Use a "warm-up" question to guide the person's reminiscences in the right direction—such as the worst epidemic of personal memory, or what the drugstore was like in his/her youth.

3. Keep your questions brief, asking only one at a time. Ask open-ended questions that invite detailed responses; not questions that can be answered with a brief yes or no.

Ex.: “Could you tell me about . . . ?” “What was it like . . . ?” “How did your parents treat your . . . ? (cold, stomach ache, cut, etc.).”

4. Prepare your questions in advance of the interview, but ask them in a natural, relaxed style.
5. Elderly persons sometimes need a few moments to recollect or add to a response. Periods of silence are to be expected—don’t jump in with another question.
6. Once you’ve obtained the remedy or belief to treat or prevent a disease, try to elicit where the person learned about it and from whom. Also try to determine the last time (by decade) they used the remedy and why (if) it was given up.
7. Attempt to find out what remedies the subject’s grandparents or an elderly family friend may have used. If successful, such information could easily span a century or more.
8. You might want to include the subject’s spouse; sometimes two memories are more efficient than one.
9. Be sure to thank the interviewee for their time. You may even offer to provide them with a copy of your report as a courtesy.

REMEMBER: You will be perceived as a representative of West Virginia University as well as a student. Proper attire and etiquette are a necessity.

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Guide Sheet for Pharmacist’s  
Oral History Assignment

PURPOSE:

To collect first-hand information on the teaching and practice of pharmacy.

INTERVIEWEE:

Select one of the oldest pharmacists you know.

FORMAT:

Follow the general guidelines of interviewing contained in the guide sheet for Appalachian Folk remedies.

**COURSE CREDIT:**

To receive credit for this exercise, the student must submit a written report of the interview and summarize his/her findings in a short oral report in class.

**WRITTEN REPORT:**

Include the name and address of the interviewee and the time and date of the interview. Two or three pages will be sufficient.

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**Hints on Conducting the Interview**

1. If the pharmacist is still actively employed—call or write ahead of time to arrange a meeting.
2. You may ask more detailed questions.
3. Subjects to cover:
  - a. the person's earliest memory of a drug store
  - b. why he/she chose pharmacy
  - c. their educational background (what types of courses, how were they taught, how useful were they, etc.)
  - d. work settings
  - e. changes they have observed in: types of prescriptions filled, public attitudes, business practices
  - f. unusual or humorous incidents
  - g. would they choose pharmacy over again if they were just starting out then and today
  - h. any personal philosophy or words of wisdom they would like to pass on to today's students