Chapter 16

Professional Organizations

Health writing can be a lonely profession. Often, only one health writer works at a media site or institution. Even major health publications and public information offices of major medical institutions tend to have small professional staffs. And freelance health writing is largely a solitary pursuit.

Professional organizations, such as the American Medical Writers Association, the Association of Health Care Journalists, and the National Association of Science Writers, can help overcome health writers’ isolation. Not only do such organizations offer fellowship and opportunity to exchange ideas. Also, through their meetings and publications, they offer information important in staying up to date and advancing in one’s career.

This chapter introduces professional organizations for health writers and members of related fields. Students reading the chapter should note that some of these organizations offer student memberships at a reduced rate. If such memberships are not announced, feel free to ask about them.

Main Organizations

American Medical Writers Association

Founded: 1940
Membership: more than 5,000
Address: 40 West Gude Drive, Suite 101
Rockville, Maryland 20850-1192
Phone: (301) 294-5303
Fax: (301) 294-9006
E-Mail: amwa@amwa.org
World Wide Web: www.amwa.org

The American Medical Writers Association (AMWA) serves members specializing in health writing and other areas of biomedical communication. Many members work for educational or other institutions, for the pharmaceutical industry, or as freelance writers or editors; relatively few
IV. Pursuing a Career

are reporters for daily media. The organization's scope is reflected by the names of its sections: Editing/Writing, Educators, Freelance, Pharmaceutical, and Public Relations/Advertising/Marketing.

AMWA holds an annual conference in the autumn; it also presents regional workshops and conferences. In addition, it publishes the AMWA Journal, the AMWA Membership Directory, the AMWA Job Market Sheet, and the online AMWA Freelance Directory. AMWA also has published books presenting highlights of selected AMWA workshops (Witte and Taylor 1997, Witte and Taylor 2001). As well as 18 regional chapters in the United States, AMWA has a Canadian chapter.

Education is a major emphasis of AMWA. The annual conference typically includes more than 70 workshops. By completing designated numbers and distributions of workshops, AMWA members can earn certificates. Different workshops serve different professional interests in AMWA; most of the workshops are intended to help develop professional skills, but some are meant to increase participants' biomedical knowledge. Among titles of repeatedly offered workshops likely to interest many health writers are Bibliographic Resources for Medical Communicators, Anatomy and Physiology for Poets, Effective Interviewing, Improving Comprehension: Theories and Research Findings, Newsletter Production, Writing About Health and Medicine for Consumer Publications, and Business Aspects of a Freelance Career.

Association of Health Care Journalists

*Founded:* 1997

*Membership:* more than 600

*Address:* 204 Murphy Hall
University of Minnesota
206 Church Street SE
Minneapolis, MN 55455

*Phone:* (612) 624-8877
*Fax:* (612) 626-8251
*E-Mail:* ahcj@umn.edu
*World Wide Web:* www.ahcj.umn.edu

The Association of Health Care Journalists (AHCJ), founded in 1997, strives to "improve the quality, accuracy and visibility of health care reporting, writing and editing" in order to advance public understanding of health-care issues. Its membership consists largely of journalists cover-
Professional Organizations

...ing health care and related areas for print, broadcast, and online media, either as staff members or on a freelance basis.

Activities of AHCJ include an annual conference. Many sessions at AHCJ conferences focus on health-care issues and policy. Others present biomedical information, offer guidance in researching and crafting health stories, or address other areas of professional interest. Conference activities have included field trips.

AHCJ has both published in hard copy and posted on its Web site a book-length manual, Covering the Quality of Health Care: A Resource Guide for Journalists (Stark et al. 2002). It also publishes a newsletter. In addition, it has quite an active listserv; whether or not one posts messages on this listserv, reading the questions and answers can provide fine continuing education.

National Association of Medical Communicators

*Founded*: 1982

*Membership*: about 300

*Address*: C/O Stewart Communications, Ltd.
325 West Huron Street, Suite 711
Chicago, Illinois 60610

*Phone*: (312) 751-1370

*Fax*: (312) 751-1372

*E-mail*: support@namc.into

*World Wide Web*: www.illinois.org/namc

The National Association of Medical Communicators (NAMC) was founded in 1982 as the National Association of Physician Broadcasters (NAPB). In 1997 it assumed its current name to more accurately reflect its membership, which has evolved to include health professionals and journalists working in various media. The NAMC has members in 40 states and abroad.

The NAMC holds an annual meeting in conjunction with the American Medical Association's Medical Communications and Health Reporting Conference. It also publishes a quarterly newsletter. Back issues of the newsletter are posted at the NAMC Web site.

National Association of Science Writers

*Founded*: 1934

*Membership*: more than 2,400
IV. Pursuing a Career

Address: P.O. Box 890
Hedgesville, West Virginia 25427
Phone: (304) 754-5077
Fax: (304) 754-5076
E-Mail: diane@nasw.org
World Wide Web: www.nasw.org

Founded by a dozen pioneering science reporters, the National Association of Science Writers (NASW) now numbers more than 2,400 members. About half are employed by the media or freelance full-time; most of the rest work in public relations or public information. In the NASW directory, a large proportion of members designate health, medicine, or related fields as among their areas of specialty.

Over the years, the NASW newsletter, *Science Writers*, has been an excellent resource. Articles in this quarterly newsletter often deal with health writing. The newsletter serves well for keeping up with issues, trends, and happenings in health writing and science writing. NASW also has published a 34-page primer titled *Communicating Science News: A Guide for Public Information Officers, Scientists and Physicians* (1996). This primer can be ordered from NASW or accessed at its Web site. In addition, NASW has active e-mail discussion groups.


NASW meets each winter in conjunction with the American Association for Advancement of Science national meeting, which many science writers cover. Until recent years, NASW held little more than a business meeting and social gathering. Now, however, NASW offers a substantial educational program. Topics of workshops have included science writing for the Internet, effective interviewing, risk reporting, and use of literary techniques in science writing.

Although NASW does not have regional chapters per se, it does have local affiliates. Areas with such science writers’ groups have included the New York City area, New England, Northern California, and the District of Columbia. The contact people for these groups change periodically; current information can be obtained from NASW.
16. Professional Organizations

Organizations in Related Areas

Associations in areas related to medical or science writing also can be resources for health writers. Information on such organizations is provided below.

Society of Environmental Journalists

*Founded:* 1990
*Membership:* more than 1,300
*Address:* P.O. Box 2492
  Jenkintown, Pennsylvania 19046
*Phone:* (215) 884-8174
*Fax:* (215) 884-8175
*E-Mail:* sej@sej.org
*World Wide Web:* www.sej.org

Programs and services of the Society of Environmental Journalists (SEJ) include annual conferences, regional conferences, and the *SEJournal*, a quarterly newsletter. Often the conference sessions or newsletter articles address health-related topics. Journalists, educators, and students can join SEJ; others, such as public relations professionals, cannot be members but can subscribe to the newsletter and attend the conferences.

Council of Science Editors Inc.

*Founded:* 1957
*Membership:* about 1,100
*Address:* 12100 Sunset Hills Road, Suite 130
  Reston, Virginia 20190-5202
*Phone:* (703) 437-4377
*Fax:* (703) 435-4390
*E-Mail:* CSE@CouncilScienceEditors.org

Although the Council of Science Editors (CSE), formerly the Council of Biology Editors (CBE), focuses mainly on the editing of scholarly writing in science and medicine, its activities and publications also can aid those who do popular health writing. CSE holds an annual meeting and offers retreats and short courses. It also publishes a periodical, *Science Editor*, as well as books on topics relating to science editing. Many CSE conference sessions
IV. Pursuing a Career

and Science Editor articles address aspects of medical editing; some deal with science and the popular media. CSE membership may especially interest health writers who do scholarly as well as popular editing or writing.

Broader Organizations

Various more general communications organizations can also be good resources for health writers. Among those to consider are the International Association of Business Communicators (IABC), Investigative Reporters and Editors (IRE), the Public Relations Society of America (PRSA), the Society of Professional Journalists (SPJ), and the Society for Technical Communication (STC).

International Association of Business Communicators

Founded: 1970
Membership: more than 13,000
Address: One Hallidie Plaza, Suite 600
San Francisco, California 94102
Phone: (415) 544-4700
Fax: (415) 544-4747
E-Mail: service_centre@iabc.com
World Wide Web: www.iabc.com

Investigative Reporters and Editors, Inc.

Founded: 1975
Membership: more than 5,000
Address: 138 Neff Annex
University of Missouri School of Journalism
Columbia, Missouri 65211
Phone: (573) 882-2042
Fax: (573) 882-5431
E-Mail: info@ire.org
World Wide Web: www.ire.org
Comment: For further information, see the section “Investigative and Depth Reporting” in Chapter 8.

Public Relations Society of America

Founded: 1947
Membership: about 20,000
Address: 33 Irving Place
New York, New York 10003-2376
Phone: (212) 995-2230
Fax: (212) 995-0757
E-Mail: membership@prsa.org
World Wide Web: www.prsa.org
Comment: PRSA includes a professional interest section, the Health Academy, for members working in health-care public relations.

Society of Professional Journalists
Founded: 1909
Membership: about 9,000
Address: 3909 North Meridian Street
Indianapolis, Indiana 46208
Phone: (317) 927-8000
Fax: (317) 920-4789
E-Mail: tharper@spj.org
World Wide Web: www.spj.org

Society for Technical Communication
Founded: 1953
Membership: about 25,000
Address: 901 North Stuart Street, Suite 904
Arlington, Virginia 22203
Phone: (703) 522-4114
Fax: (703) 522-2075
E-Mail: stc@stc.org
World Wide Web: www.stc.org

Though many health writers work alone, health writing need not be a lonely profession. Consider joining professional organizations in the field. Not only will you feel less isolated, you also will learn of career opportunities. Perhaps most important, the information you gain can make you a better health writer.

Exercises
1. Look at the Web sites of the American Medical Writers Association, the Association of Health Care Journalists, the National Association of
IV. Pursuing a Career

Medical Communicators, and the National Association of Science Writers. Then:
(a) briefly describe how these four organizations differ in emphasis.
(b) for each site, note at least one item that could aid you as a health writer.
(c) say which one of these organizations you would most like to join (or continue to be a member of). Explain your choice.

2. Go to the Web site of the Association of Health Care Journalists (AHCJ), and look at the program from a recent or upcoming AHCJ conference. For each group of simultaneous sessions, say which session you would choose to attend. State the reasons for your choices.

3. Look at the Web sites of at least three organizations listed in this chapter under "Organizations in Related Areas" and "Broader Organizations." From among these Web sites, identify at least one item that you could find useful as a health writer. Say how you would be likely to use the item.
Chapter 17

Educational Opportunities

Health writers come from a wide range of backgrounds. More important, superb health writers come from a wide range of backgrounds. These backgrounds include journalism, science, and the health professions; some of the best health writers have studied more than one of these fields. The issue is not what background you start with but how you round it out and how you stay up to date.

As well as learning on the job and through professional organizations, you can increase your health-writing knowledge and skill through courses and degree programs, internships, and fellowships. This chapter focuses on such educational opportunities. Although it emphasizes those opportunities specifically in health writing or science writing, it also discusses more general opportunities from which health writers can benefit.

Courses and Programs

College and university courses in health or science, in journalism and related fields, and specifically in health writing or science writing can aid health writers and health-writers-to-be. In addition, degree or certificate programs in science writing and related areas supply intensive preparation.

Science, Health, and Communication Courses

More and more, it appears, employers of health writers favor candidates with both solid science backgrounds and strong communication skills. Thus, if you are still pursuing a degree, try to plan accordingly. If you have already graduated, consider returning for one or more courses in such fields.

To be best prepared as a health writer, try to study science subjects ranging from the molecular to the population level. Possibilities along this spectrum include biochemistry, cell biology, anatomy (which deals with body structure), physiology (which deals with body function), and epi-
IV. Pursuing a Career

demography (which deals with disease distribution in the population). Among other areas useful to study are microbiology (the study of microorganisms), genetics, and nutrition. In addition, courses on topics such as the health-care system, human diseases, and environmental health can be of value. If you have graduated and wish to take several such courses, consider pursuing a master’s degree in public health.

Try to obtain a solid grounding in study design and statistics. Among courses that can offer such grounding are those in epidemiology, statistics, and research methods. If possible, take a statistics course that focuses on sound reasoning about information rather than one that emphasizes number crunching. If you do not take such a course, read a book with a similar emphasis. Such books include A Mathematician Reads the Newspaper (Paulos 1995) and Seeing Through Statistics (Utts 2004); the latter includes many examples from areas health writers cover.
17. Educational Opportunities

Not only credit-bearing courses but also non-credit programs can provide helpful biomedical background. Such programs include the “mini-med schools” (Stephenson 1996) that medical schools and other biomedical institutions have launched. Intended to teach the public about medical science, mini-med schools can be a good resource for current and future health writers.

Various classes in journalism or communications can assist you as a health writer. In addition to basic courses in reporting, courses well worth considering include those in information gathering, depth or investigative reporting, magazine writing, and public relations. Even if you do not plan a broadcasting career, consider taking a course in broadcast journalism; the versatility may well increase your marketability, and if you work in media relations, knowing how broadcast media function can increase your effectiveness. Other useful areas of study include graphics and the new(er) electronic media. And, as one young health writer suggests, consider taking a course in medical terminology.

Courses and Programs in Health and Science Writing

Courses and programs specifically in health writing or science writing can help you integrate your learning from science courses and communication courses, as well as develop knowledge and skills specific to health writing and related realms. They also can help you obtain internships and jobs in health writing. Many of these educational opportunities are described in the Directory of Science Communication Courses and Programs in the United States (Dunwoody and Harp n.d.), available as a PDF file from Professor Sharon Dunwoody, University of Wisconsin-Madison School of Journalism and Mass Communication, dunwoody@facstaff.wisc.edu.

Various colleges and universities offer undergraduate or graduate health-writing courses at least occasionally. Some of these courses aim mainly to help students develop health-writing skills; others focus largely on analyzing the coverage of health. Science-writing courses, which are much more common than courses specifically in health writing, often include material on writing about medicine and health.

Some universities have now established master’s degree programs in medical or health journalism. For example, at the University of North Carolina at Chapel Hill, the School of Journalism and Mass Communication offers a master’s program in medical journalism. Distinctive strengths of this program appear to include instruction in medical reporting for tel-
Internships with a health emphasis include the National Cancer Institute (NCI) graduate internships in science writing. Open to students enrolled in graduate programs, these six-month paid internships offer opportunities to prepare fact sheets and news releases, answer inquiries from journalists, report on scientific meetings, and obtain experience in other aspects of cancer communication. Information is posted at internship.cancer.gov.

The Kaiser Family Foundation sponsors a summer internship program for young minority journalists interested in reporting on public health issues. The typical intern in this program is a new or recent college graduate and already has considerable reporting experience, for example, including a previous internship. Each intern is matched with a newspaper or television station. Further information is available at www.kff.org.

Among other sites that have offered science-writing or health-writing internships are JAMA (in Chicago), Science News and Science (in Washington, DC), the Rodale magazine Men's Health (in Emmaus, Pennsylvania), and various health-related associations. In addition, health-writing internships are available at hospitals, universities, and pharmaceutical companies. Faculty who teach science writing or health writing often know of local and other internships. Also, contacting a publication or public information office where you may wish to do an internship may disclose an opening or lead to the creation of one.

The Business Press Educational Foundation (BPEF) offers an internship program for advanced undergraduates and graduate students. Through this program, students spend the summer working for business-to-business media (in other words, publications for specific occupational groups). Among possibilities available are publications for health-care professionals. Information has been posted at www.americanbusinessmedia.com/jobs/internships.cfm.

If your background is in science, consider applying for the American Association for the Advancement of Science (AAAS) Mass Media Science and Engineering Fellows Program. This program offers about 20 summer internships per year at newspapers, magazines, broadcast media, and online sites. Applicants must be advanced students pursuing degrees in science, engineering, or the health professions; students in fields such as journalism, science writing, and English are not eligible. Since the program began in 1975, more than 450 fellows, most of them graduate students, have participated. Many subsequently have pursued careers in science writing or have combined science-communication work with other
IV. Pursuing a Career


**Fellowships**

Various mid-career and other fellowships give health writers and others opportunity to pursue nondegree study or work on special projects. Some of the fellowships are specifically in medical writing or science writing; others are more general. A number that may especially interest health writers are listed below.

The array of fellowships keeps changing; new fellowships are created, established fellowships evolve, and some are discontinued. Up-to-date listings of many fellowships appear each year in the last issue of the magazine *Editor & Publisher*. Also, more specialized publications, such as the National Association of Science Writers newsletter, *ScienceWriters*, sometimes contain information on fellowships. Some fellowships are announced as well on Web sites of organizations such as the Association of Health Care Journalists.

**Health and Science Writing Fellowships**

**Kaiser Media Fellowships in Health**

Contact: Penny Duckham

Executive Director, Kaiser Media Fellowships Program
Kaiser Family Foundation
2400 Sand Hill Road
Menlo Park, California 94025
Phone: (650) 854-9400
Fax: (650) 234-9220
E-mail: pduckham@kff.org
World Wide Web: www.kff.org

This fellowship program, started in 1993, is for print and broadcast journalists interested in health policy, health financing, and public health. During their fellowship year, fellows work on individually designed projects and participate in program seminars and site visits.

**Knight Science Journalism Fellowships at MIT**

Contact: Boyce Rensberger, Director

Knight Science Journalism Fellowships
17. Educational Opportunities

MIT E32-300
77 Massachusetts Avenue
Cambridge, Massachusetts 02139-4307
Phone: (617) 258-8249
Fax: (617) 258-8100
E-mail: boyce@mit.edu
World Wide Web: web.mit.edu/knight-science

In this program, experienced journalists who cover science, technology, medicine, or the environment, or who wish to do so, spend an academic year at the Massachusetts Institute of Technology. Fellows both pursue individually chosen activities, such as taking courses and visiting laboratories, and attend program seminars.

Knight Journalism Fellowships at CDC
Contact: CDC Foundation
50 Hurt Plaza, Suite 765
Atlanta, Georgia 30303
World Wide Web: www.cdcfoundation.org/fellowships/knight

This three-month fellowship, based at the Centers for Disease Control and Prevention, gives journalists opportunity to explore public health in depth. Each fellow receives classroom instruction, joins a team investigating a disease outbreak, and receives other experience. Journalists unable to spend the full three months can apply to attend only the 10-day intensive seminar, or "boot camp," at the beginning of the fellowship program.

The Rosalynn Carter Fellowships for Mental Health Journalism
Contact: Director, Mental Health Program
The Carter Center
One Copenhill
Atlanta, Georgia 30307
Phone: (404) 420-5165
Fax: (404) 420-5158
E-mail: ccmhp@emory.edu
World Wide Web: www.cartercenter.org

This program gives journalists grants to study topics regarding mental health or mental illness. Recipients visit The Carter Center at the beginning of their fellowship year to meet with their project advisors and again
IV. Pursuing a Career

at the end of the year to present their projects. While working on their projects, they need not leave their jobs.

The Marine Biological Laboratory Science Journalism Program
Contact: Science Journalism Program
         Marine Biological Laboratory
         7 MBL Street
         Woods Hole, Massachusetts 02543-1015
         Phone: (508) 289-7423
         E-mail: pclapp@mbl.edu
         World Wide Web: www.mbl.edu/sjp

This program gives science journalists opportunity to observe and participate in the process of science. Participants normally begin the fellowship with one of two laboratory courses: a course in research techniques in basic biomedical science (probably the preference of most health writers) or a course in environmental research techniques. They can then spend up to seven weeks taking science courses, working in research laboratories, or both.

Hastings Center Journalist-in-Residence Program
Contact: Director of Education and Outreach
         The Hastings Center
         21 Malcolm Gordon Road
         Garrison, New York 10524-5555
         Phone: (845) 424-4040
         Fax: (845) 424-4545
         E-mail: visitors@thehastingscenter.org
         World Wide Web: www.thehastingscenter.org

This program gives journalists opportunity to spend time at the Hastings Center, a long-established research institute that focuses on ethical issues in health and related areas. A journalist-in-residence may delve into a specific issue in biomedical ethics or explore more broadly such issues and their presentation to the public. Journalists in this program typically stay for two weeks but may stay longer.

Health Coverage Fellowship
Contact: Health Coverage Fellowship
         C/O Blue Cross Blue Shield of Massachusetts Foundation
17. Educational Opportunities

Landmark Center
401 Park Drive
Boston, Massachusetts 02215
Phone: (617) 246-3744
E-mail: info@bcbsmafoundation.org
World Wide Web: www.bcbsmafoundation.org

This example of a localized program offers Massachusetts journalists an
intensive nine-day briefing about health care and ways to cover it in the
popular media. Health-care issues in Massachusetts are emphasized. After
the briefing, fellows can contact the program director for help throughout
the next year.

Morris Fishbein Fellowship in Medical Editing
Contact: Richard M. Glass, MD
Morris Fishbein Fellowship in Medical Editing
The Journal of the American Medical Association
515 North State Street
Chicago, Illinois 60610
Fax: (312) 464-5824
E-mail: richard_glass@jama-archives.org

If you are a physician, you can apply for this opportunity to spend a year
at the JAMA editorial offices in Chicago. Fellows participate in various
aspects of editing and also write articles for publication. Although the fel-
lowship is not in health writing per se, it may appeal to and assist those
interested in this realm.

Other Fellowships

Nieman Fellowships
Contact: Program Officer
Nieman Foundation
One Francis Avenue
Cambridge, Massachusetts 02138-2009
Phone: (617) 495-2237
Fax: (617) 495-8976
E-mail: nieman@harvard.edu
World Wide Web: nieman.harvard.edu
IV. Pursuing a Career

Recipients of Nieman Fellowships, granted to experienced journalists, spend a sabbatical year at Harvard University pursuing courses of study of their own design. During this time, they take classes, participate in a seminar series, and otherwise pursue learning opportunities at Harvard. Resources available include those at Harvard Medical School and the Harvard School of Public Health.

Alicia Patterson Foundation Fellowships
Contact: The Alicia Patterson Foundation
1730 Pennsylvania Avenue, NW, Suite 850
Washington, DC 20006
Phone: (202) 393-5995
Fax: (301) 951-8512
E-mail: info@aliciapatterson.org
World Wide Web: www.aliciapatterson.org

The Alicia Patterson Foundation offers grants to help journalists pursue independent projects full-time for a year. Since the program was established in 1965, a substantial number of the projects have been on health-related topics.

Additional Resources

Additional resources for continuing to learn include science writers' briefings, science publications, and journalism magazines.

Especially for health writers who hope to move into broadcasting or wish to strengthen their broadcasting skills, the American Medical Association’s Annual Medical Communications and Health Reporting Conference is a resource to consider. Held in the spring, this conference deals largely with television. The conference is more expensive than most held by communications organizations, but discounts are available to students and residents and to members of the National Association of Medical Communicators. Information about the upcoming conference is posted at the AMA Web site, www.ama-assn.org.

Various organizations hold workshops, seminars, or conferences to brief health writers and other journalists on science. For example, each autumn the Council for the Advancement of Science Writing (CASW), in collaboration with a university host, holds a several-day New Horizons in Science Briefing. Commonly, a considerable number of the sessions address in-
17. Educational Opportunities

medical topics. Information is available from CASW, P.O. Box 910, Hedgesville, West Virginia 25427, telephone (304) 754-5077, e-mail diane@nasw.org, www.casw.org.

Day-long to several-day briefings sometimes are available as well on individual topics that may interest health writers, for example, genetics, medical evidence, or stem cells. Those offering such briefings have included the Knight Science Journalism Fellowships program at MIT (web.mit.edu/knight-science) and FACS (www.facsnet.org). Such funders often pay at least partial expenses for journalists chosen to attend. To keep posted on such opportunities, check Web sites of sponsors and look at publications, Web sites, and listservs of organizations in health writing and related realms.

Also, the American Medical Association has held science reporters’ conferences with presentations on various medical topics. Among the many other groups that present such events or have done so are the American Cancer Society, the American Heart Association, the American Lung Association, and some government agencies concerned with health. Of course, health writers should assess material from these conferences, like that from other sources, for soundness, completeness, and newsworthiness.

Although few health writers have the time and travel funds to attend many such briefings and conferences, almost any health writer can draw on other means for keeping up with science, medicine, and related issues. Good written resources in science and medicine include the weekly magazine Science News, the news sections of Science and JAMA, and review articles and other articles in medical journals. Among less-specialized resources are the major news magazines, which often run well-researched stories on medical topics, and newspapers, some of which publish science or health sections. The broadcast media, through programs such as Nova, can likewise aid in keeping up with medical science. So can World Wide Web sites featuring medical news.

For keeping up on issues and trends in journalism, resources include magazines such as the American Journalism Review, the Columbia Journalism Review, and the Quill, all of which sometimes publish articles on health writing. Health writers working in public information or public relations, especially those in academic settings, may find much of use in CASE Currents, published by the Council for Advancement and Support of Education.

And finally, your ongoing search for story ideas and your information gathering for stories will contribute much to your continuing education. No matter what your initial educational background, and no matter what
IV. Pursuing a Career

types of opportunities you pursue to increase your knowledge and skills, health writing is a field in which you will always continue to learn.

Exercises

1. Imagine that within the next several years you will apply for one of the year-long fellowships described in this chapter. Which fellowship would you choose, and why? What would propose to do during your fellowship year? Why? (In preparing your answers, feel free to consult materials other than this chapter.)

2. Drawing on information in this chapter and elsewhere, draft a five-year plan for your continuing education in health writing. State both what you hope to do and why.

3. As well as providing experience, an internship can help build one’s health-writing portfolio. Consider, for example, the accompanying example of an article, “Blood Relatives,” which health and science writer Linda Wang prepared while a graduate intern at Science News. As a closing exercise for this chapter and the book as a whole, please do the following:
   (a) Identify types of sources the author used. Give examples.
   (b) Note at least four strengths of this article. At least one strength should regard content, and at least one should regard crafting. Support your choices, for instance by providing examples.
   (c) State one change you might make if editing this article. Say why you would consider the change.
   (d) Imagine that you will prepare a current article on the topic. Say how you would start to do so.
   (e) Imagine that you can do a health writing internship anywhere you wish. Where would you choose to intern? Why?
Example

Article 17-1: A Feature Article Prepared During an Internship

“Blood Relatives: First-generation artificial blood is about to hit the market”

Linda Wang

*Science News*, March 31, 2001. Reproduced with permission (conveyed through the Copyright Clearance Center, Inc.).

Last year, the tally of blood transfusions climbed to a record high. More people are donating blood than ever before, but a rapidly aging society is using it up even faster as the number of elective surgeries and medical treatments requiring blood transfusions continues to rise.

This year, things are starting out even worse. “We have in fact seen the worst... in memory, in terms of blood availability,” says Harvey G. Klein, president of the American Association of Blood Banks in Bethesda, Md.

In 1999, the U.S. Food and Drug Administration put a ban on blood donations from people who lived in the United Kingdom for more than 6 months between 1980 and 1996. Of concern was the spread of the human version of mad cow disease, Creutzfeldt-Jakob disease, that had hit the United Kingdom. More recently, an FDA advisory committee recommended adding people from France, Ireland, and Portugal to the ban. The spread of AIDS and other bloodborne diseases such as hepatitis has also diminished the blood supply by excluding potential donors.

If only there were substitutes that could fill some of blood’s roles in the body, artificial substances that would be free of the supply constraints and contamination vulnerabilities of the real stuff. Besides the roles these substitutes could play in general surgery, such products could save lives during emergencies and major disasters in which blood isn’t readily available. It could also be a medical boon to developing countries that don’t bank blood.

For decades, researchers have sought to develop a partial replacement for blood. Now, several companies are about to release the first line of artificial blood products. “I’ve watched this field over the last 20 years, and this is the most promising that it’s been,” says George Nemo, head of the transfusion-medicine program at the National Heart, Lung, and Blood Institute in Bethesda, Md.

Half the blood supply could potentially be replaced with the new substitutes, claims Robert M. Winslow, president of Sangart, a San Diego-based
company developing one of them. Although these products are far from perfect—and researchers are already developing a more sophisticated generation of artificial blood—they carry the oxygen that will keep people alive.

Blood is a wondrous concoction of red blood cells, white blood cells, platelets, and plasma—which is itself a cocktail of proteins, carbohydrates, hormones, and other biochemicals—that together fight infections, heal wounds, deliver oxygen, and remove wastes.

The molecular heart of blood’s oxygen-carrying ability is the protein known as hemoglobin, which jam-packs red blood cells. More than 250 million hemoglobin molecules can crowd inside a single cell. Each hemoglobin scoops up to four oxygen molecules from the lungs and carries them to all of the body’s other tissues. Once depleted of its oxygen cargo, a hemoglobin molecule snatches up carbon dioxide made by cells and brings the gas to the lungs, where it’s exhaled.

Hemoglobin has been a favorite starting point for developers of blood substitutes. For one thing, different blood types, such as type A and type B, are based on different sets of proteins, known as antigens, that cover the surfaces of red blood cells. If a doctor gives a patient the wrong type of blood, that person’s immune system will reject the foreign cells.

In the 1960s, researchers tried to circumvent complications from cell-surface antigens by making a blood substitute using free hemoglobin extracted from cells. Surprisingly, the naked molecule turned out to be toxic. Normally, hemoglobin exists as a molecule of four tightly bound units. But outside the red blood cell, the units fall apart. In animal studies, the hemoglobin fragments caused kidney damage.

In the 1970s, the Department of Defense continued supporting the quest to develop free hemoglobin into a blood substitute for wounded troops. This work led to ways of chemically rejoining fragmented hemoglobin molecules. Around the same time, other researchers were stabilizing whole hemoglobin molecules by polymerizing several of them into sturdier complexes.

A turning point for blood-substitute efforts came in the early 1980s with the rise of AIDS and the realization that HIV could spread the disease through blood. These fears built into “hysteria about the blood supply,” recalls Steven Gould, president of Northfield Laboratories in Evanston, Ill. The threat of tainted blood thrust the quiet field of blood-substitute research into the limelight, he says.

The demand for a safe blood product drove companies to try to quickly
bring apparent laboratory successes with hemoglobin-based substitutes into clinical trials. "We were going for the home run" without fully understanding all the effects hemoglobin could have, says Nemo.

Baxter Healthcare of Deerfield, Ill., entered the fray with a product called HemAssist, which is based on a hemoglobin molecule with enhanced stability. The company suffered a setback, however, during clinical testing of HemAssist in trauma patients. Of 52 patients receiving the blood substitute, 24 (46 percent) died. Of 46 patients getting a saline solution, only 8 (17 percent) died. The company-sponsored researchers reported the results in the Nov. 17, 1999 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Baxter halted the research.

"We get surprised by [hemoglobin] all the time," says Abdu Alayash, a product reviewer at FDA. "This is an extremely reactive molecule that can interact with a number of biological molecules in the body."

Researchers working with clumps of polymerized hemoglobin molecules have had more success than those working with single-but-modified hemoglobin molecules have. The most likely reason for this, says biochemist John Olson from Rice University in Houston, is that the molecular clumps are so much bigger than single molecules, which are small enough to slip out of blood vessels. Once out, the molecules gobble up nitric oxide in the vessels' smooth muscle tissue. The resulting drop in nitric oxide prevents those vessels from relaxing, a condition that leads to high blood pressure. As it turns out, polymerized hemoglobin is too big to slip through blood vessels and take up nitric oxide, so it's less prone to raise blood pressure than lone hemoglobin molecules are, Olson says.

Researchers have been taking all of these lessons to heart. Several companies are nearing the finish line in the competition to be the first to put a polymerized-hemoglobin blood substitute on the market. Their sources of hemoglobin include cows' blood and unused banked blood older than its 42-day shelf life.

Biopure Corporation of Cambridge, Mass., is a frontrunner in the race with a product based on hemoglobin extracted from the red blood cells of cows. The company has completed clinical trials of the product, called Hemopure, in the United States, Europe, Canada, and South Africa. It's already filed for approval to sell Hemopure in South Africa and will soon do the same in the United States and Europe, says Maria Gawryl, vice president of research and development at Biopure.

Close behind is Northfield Laboratories with its polymerized product, PolyHeme, which is based on hemoglobin extracted from outdated human
blood. PolyHeme is in the third phase of clinical trials, the final leg of testing before the company can file for approval from FDA.

Hemosol in Toronto is in a similar position, with a polymerized hemoglobin product, called Hemolink, made from outdated human blood. The company has completed the final phase of clinical trials in Canada and has ongoing clinical trials in the United States.

These products tend to be costly and outdated human hemoglobin is often limited in supply. So another company has taken an approach that doesn’t rely on hemoglobin at all.

Alliance Pharmaceutical in San Diego has created a blood substitute made of synthetic chemicals called perfluorocarbons. These chains of carbon molecules with many attached fluorine atoms can carry large amounts of oxygen and carbon dioxide.

“What [such a product] has going for it is that it’s cheap and can be produced in large amounts,” says Winslow of Sangart. Perfluorocarbons may also provide an alternative for patients who decline any natural blood products for religious reasons.

But Alliance recently suffered a setback. During a clinical trial, patients receiving the perfluorocarbons product—called Oxygent—during cardiac surgery experienced a higher rate of stroke than patients in a control group. The company suspended the trial in January to investigate the cause of the strokes.

“We unfortunately have to take a little time out here in our clinical development before we forge ahead, but this is a huge market that’s not going away,” says Peter Kelpert, director of Oxygent development at Alliance.

Other perhaps more promising products are in the works but further back in the developmental pipeline. For example, to reduce hemoglobin's tendency to pick up nitric oxide and raise blood pressure, Rice University's Olson aims to alter the molecule's structure and properties.

As a start, he's studying myoglobin, which normally provides muscle cells with oxygen, as a model for hemoglobin. He and his colleagues have engineered myoglobin molecules that remove much less nitric oxide than normal.

Both myoglobin and hemoglobin are proteins with pockets that catch oxygen molecules. To discourage myoglobin from catching nitric oxide as well, the Rice researchers replaced the small amino acids leucine and valine in the protein's oxygen pocket with tryptophan, a larger amino acid. The substitution reduced the opening, allowing the altered myoglobin to
carry oxygen but not nitric oxide. Unfortunately, the modified myoglobin also locked onto the oxygen too tightly. Olson solved that problem by making another amino acid substitution that weakened myoglobin's hold on the oxygen. Animals given this fully modified myoglobin have maintained normal blood pressure.

Baxter Healthcare has worked with Olson's group and made similar changes in hemoglobin. Animals given these modified hemoglobin products have also maintained normal blood pressure.

Researchers at Sangart are trying to increase the length of time hemoglobin products last once infused into the bloodstream. At the moment, these only last a few days. Now, the researchers are attaching large soluble chains of polyethylene glycol to individual hemoglobin molecules. These chains seem to keep the hemoglobin circulating longer before they're filtered out of the body, says Winslow. The polymers also envelop the hemoglobin molecule in a layer of water, creating a complex too large to leak out of the blood vessels, he says.

Taking another tack, researchers at SynZyme in Irvine, Calif., are trying to add more functions of whole red blood cells to hemoglobin products. Red blood cells, for instance, contain enzymes that rid the body of harmful oxygen radicals. These destructive molecules proliferate when tissues lose blood. In an effort to create a product that mimics the protective function of red blood cells, the researchers are attaching antioxidant enzymes, such as catalase and superoxide dismutase, to hemoglobin.

Thomas Change of McGill University in Montreal is doing something along those lines. However, instead of attaching enzymes to hemoglobin, he and his colleagues are designing a biodegradable membrane that will contain hemoglobin, antioxidant enzymes, and other components of a red blood cell. Unlike real red blood cells, however, these artificial cells would be antigen free.

Genetic engineers also have joined the quest for blood substitutes. Using recombinant DNA technology, researchers are altering the genes that encode hemoglobin and then putting those genes into Escherichia coli bacteria, which then produce modified molecules. Chien Ho and his colleagues at Carnegie Mellon University in Pittsburgh have made altered hemoglobin that is stable outside a red blood cell. They reported their research in the Nov. 14, 2000 BIOCHEMISTRY.

None of these products will duplicate all the functions of whole blood. Red blood cells have a membrane that allows them to circulate in the body for a couple of months, whereas the kidneys filter out blood substitutes in
IV. Pursuing a Career

days. "You can't keep people in the hospital and keep pouring this stuff through," notes Rebecca Haley, chief medical officer of biomedical services of the American Red Cross in Washington, D.C.

The products coming to market will serve the emergency needs of trauma victims and patients undergoing surgery, says Klein. However, at least 30 percent of whole blood goes to people with diseases requiring longer-term blood replenishment, he points out. Bone marrow–transplant patients, for example, need blood or a substitute until their bodies replenish their own supply of red blood cells, which can take weeks.

As a consequence, says Haley, for the foreseeable future, people will still need to donate the real thing, even as artificial blood substitutes finally begin finding their medical niches.
References

Sources Cited

References


Cancer risk communication: What we know and what we need to learn. 1999. Journal of the National Cancer Institute Monograph Number 25.

Cassels, Alan, Merrilee Atina Hughes, Carol Cole, Barbara Mintzes, Joel Lexchin, and James McCormack. 2003. Drugs in the news: How well do Canadian newspapers report the good, the bad and the ugly of news prescription drugs? Ottawa: Canadian Centre for Policy Alternatives.


References

Chickering, Helen. 2004. E-mail communication to Tom Linden, MD, May 9, 2004.


Christiano, Donna. 1995. Just because it's arthritis... *McCall's*, September, E10 ff.
benefits from the coverage? *Canadian Medical Association Journal* 139:
657–61.

expanding, reporters have a responsibility to question facts—and state them

claims and controversies in health and other fields*. 2d ed. Ames: Iowa State
University Press.

Committee on Risk Perception and Communication. 1989. *Improving risk communica-

Cowley, Geoffrey, with Karen Springen, Anne Underwood, Nadine Joseph, Joan
Raymond, and John Horn. 2002. Hepatitis C: The insidious spread of a killer
virus. *Newsweek*, 22 April, 46–53.

Creno, Cathryn. 1992. Sarah’s story: Be sure to ask the right questions before writing
about the mentally ill. *Quill*, May, 22–25.

Publishing Group.

Books.


Deming, Stephanie. 2001. From data to headline: How science is reported in the

De Pasquale, Sue. 1995. Live from Baltimore—It's the Johns Hopkins Science Review!

Disabilities Committee of the American Society of Newspaper Editors. 1990.
*Reporting on people with disabilities*. (Brochure.) Washington, DC: American
Society of Newspaper Editors.


Dunwoody, Sharon, and Dustin Harp. n.d. *Directory of Science Communication
Courses and Programs*. University of Wisconsin-Madison School of Journalism
and Mass Communication.

Eisenberg, David M., Ronald C. Kessler, Cindy Foster, Frances E. Norlock, David R.
Calkins, and Thomas L. Delbanco. 1993. Unconventional medicine in the
United States: Prevalence, costs, and patterns of use. *New England Journal of
Medicine* 328: 246–52.
References


Fahmy, Sameh. 2001. Encephalitis in Ouachita: 31 cases now confirmed. News-Star (Monroe, LA), 24 August, 1A, 6A.


Flatow, Ira. 2004. E-mail communication to Tom Linden, MD, May 4, 2004.


Hancock, Elise. 2003. Ideas into words: Mastering the craft of science writing. Baltimore: Johns Hopkins University Press.


References


Janis, Pam. 1996. In the kitchen: You can't be too clean. USA Weekend, January, 5-7, 8.

Johnson, Timothy. 2004a. E-mail communication to Tom Linden, MD, May 4, 2004.

Johnson, Timothy. 2004b. E-mail communication to Tom Linden, MD, May 14, 2004.


References


References


Ulene, Art. 2004a. E-mail communication to Tom Linden, MD, May 5, 2004.

Ulene, Art. 2004b. E-mail communication to Tom Linden, MD, May 6, 2004.

Ulene, Art. 2004c. E-mail communication to Tom Linden, MD, May 8, 2004.

Ulene, Art. 2004d. E-mail communication to Tom Linden, MD, May 8, 2004.


References


Sources of Additional Help or Perspective


References


Aumente, Jerome. 1995. A medical breakthrough: Once the province of correspondents without a clue, network medical reporting now showcases specialists who use their expertise to sort through the confusing welter of reports, studies, developments and "cures." American Journalism Review, December, 26–33.


References


Dark, Sandra. 2001. You don't have to be a doctor to make it in the health field. *Writer's Digest*, November, 59–61.


Gersh, Debra. 1993. Writing about your own ordeal. *Editor & Publisher*, 20 February, 12–3, 42.


References


Lane, Dorothy S., Anthony P. Polednak, and Mary Ann Burg. 1989. The impact of


References


References


References


Index

A
ABC, 162
Abstracts, 18, 22
Academic Medicine, 23
Accident, versus injury, 279
Accuracy
  of details, 112–113
  of resources, 111–112
Actualities, 178
Acute, 188
Adolescent health, information
  resources, 278–279
Advanced Medical Technology
  (AdvaMed), 275
Advertisements, classified, 302
Affect/effect, 196
Age, 188
Age-adjusted rates, 86
Agency for Health Care Research and
  Quality (AHRQ), 41
Aging, information sources, 277–278
"AIDS in the Heartland," 137
Alicia Patterson Foundation
  Fellowship, 322
AlphaGalileo, 52
Alternative medicine, 275–276
Altman, Lawrence K., 4–5
Amazon.com, 144
American Academy of Allergy, Asthma
  and Immunology (AAAAI), 217
American Academy of Pediatrics
  (AAP), 279
American Association for the
  Advancement of Science
  (AAAS), 15, 32, 44
  annual meeting, 50
  Journalism Awards, 207, 211
  Mass Media Science and
    Engineering Fellows
    Program, 317–318
American Board of Medical Specialties
  (ABMS), 59
American Cancer Society (ACS), 269, 323
American College of Emergency
  Physicians, Journalism Awards, 214
American Family Physician, 18
American Geriatrics Society, 278
American Health Consultants, 19
American Heart Association (AHA), 268, 323
American Institute of Biological
  Sciences (AIBS), Media Awards, 211
American Journalism Review, 323
American Lung Association (ALA), 268, 323
American Medical Association (AMA).
  See also JAMA: Journal of the
    American Medical Association
    conferences, 167, 322–3
    Directory of Physicians in the United
      States, 59
"Doctor Finder," 59
Medical Communications and
  Health Reporting
  Conference, 167, 322
American Medical Association Manual of
  Style, 185
American Medical Television (AMT), 166
American Medical Writers Association
  (AMWA)
  address, 305–306
  code of ethics, 250–251
  Medical Book Awards, 211
American Men and Women of Science, 55
American Psychiatric Association, 272
Index

American Psychoanalytic Association Award, 215
American Psychological Association, 18, 185, 272
American Society for Microbiology (ASM), 44, 270
Public Communications Award, 215
American Society of Anesthesiologists (ASA), Media Award, 215
American Society of Healthcare Publication Editors Awards, 211
American Society of Newspaper Editors, Disabilities Committee, 185
American Society of Plastic Surgeons, Circle of Excellence Media Awards, 215
American Stroke Association (ASA), 272
American Veterinary Medical Association (AVMA), 280
Analogies, 104–106
Anchor intro, 175
Ancker, Jessica, 157–159
Anecdotes, 77–78, 108
Animation, 171, 182
Anonymity, interviews and, 61
Anson Jones, MD, Awards, 212
Applicability, medical studies, 92
Arthritis, information sources, 273
Arthritis Foundation, awards, 217
Articles feature. See Feature articles how-to, 143
investigative, 126, 136–138, 235–245
news stories/news releases, 123–135
overviews, 138–141, 146–148
personal-experience, 143
profiles, 142, 148–151
research, 19–24
review, 22–23
service, 142–143
ASA Guide to Freelance Writing, The, 260–262, 265, 301
Assignment letters, 262
Associated Press Stylebook and Briefing on Media Law, 185, 260–266
Associated Press Stylebook and Libel Manual, 264
Association of Health Care Journalists (AHCJ), 46–47, 71, 167, 277
address, 306–307
code of ethics, 253
fellowships listings, 318
Associations, as information sources, 42–45
Attributions, Unlimited, 42, 49
Audience assessing, 99–100
feedback, 113–115
Audio clean, 19
elements, television script, 167, 171
pad, 177
streaming, 180
Audiotapes, of conferences, 47
Averages, 87
Awards. See also under specific award health/science writing in general, 211–213
health/science writing on specific areas, 214–218
journalism, 203–210
online resources, 218
Award-winning works, as models, 203–210
B
Ban, Elizabeth, 57
Barnesandnoble.com, 144
Barry, Dave David, 146–148
Beginnings, 100–102
Bergman, Jules, 164
Bias, avoiding, 257
Big picture evaluation, 94, 112
Billboard paragraph, 102
Blogs, 181
“Blood Relatives: First-generation artificial blood is about to hit the market” (Science News), 325–330
BMJ (British Medical Journal), 15
Book reviews, 143
example, 157–159
in journals, 23
Books medical, 12–14
writing/publishing, 143–144
Bookstores, online, 144
Index

Boy Behind the Mask, The, 137
Brand names, drugs, 191–192
Breakthroughs, 189
Briefings, 323
Broadcasting
career opportunities in, 297–298
radio, 178–179
television, 161–178
Brochures, 35, 43
B-roll, 171, 175, 182
Business Press Educational Foundation (BPEF), 317

C
Cable Health Network (CHN), 166
Cambridge Illustrated History of Medicine, 13
Cambridge World History of Human Disease, The, 13
Canadian Medical Association Journal, 15
Canadian Science Writers' Association, Awards, 212–213
Cancer, information sources, 268–269
Cancer Handbook, The, 269
Cancer Risk Communication: What We Know and What We Need to Learn, 287
CAPHIS Top 100 List, 65–66
Capitalization, 189
Career options
finding health-writing opportunities, 301–303
freelance writing, 299–300
print, broadcast, and electronic media, 291–298
public information and public relations, 298–299
Case, versus patient, 189–190
Case-control studies, 84
CASE Currents, 323
Case series, 83–84
Casey Journalism Center on Children and Families, 279
Causality, 91
CBS, 161
CBS Reports, 163–164
Center for Science in the Public Interest, 56
Centers for Disease Control and Prevention (CDC), 194, 269, 286
components of, 39–40
media relations office, 40
publications, 19
Centers for Medicare & Medicaid Services (CMS), 41
Charity, ethical issues, 259
Chickering, Helen, 172–73, 175
Child health, information resources, 278–279
Children’s Beat, The, 279
Chronic, 188
Circle of Excellence Media Awards, 215
Clark/Payne Award, 212
Classified advertisements, 302
Clinical trials, randomized double-blind controlled, 78–79, 84; See also Research
Clinician’s Research Digest, 18
Clinics, as information sources, 46
Clusters, 91
Cochrane Collaboration, 275
Cohort studies, 84
Columbia Journalism Review, 276–277, 323
Communicating Science News: A Guide for Public Information Officers, Scientists and Physicians, 308
Communications, courses in, 313–316
Compare to/compare with, 196–197
Comparisons, 109–110
Complementary medicine, 275–276
Complete Guide to Aging and Health, The, American Geriatrics Society, 278
Comprise, 197
Concepts, explaining, 103–104
Conclusions, medical studies, 92
Conferences
as information sources, 47–49
science writers’, 44
Confidence intervals, 89, 96
Confidentiality, 250, 257–258
Conflict of interest, 55, 256–257
Consumer and Patient Health Information Section (CAPHIS), Medical Library Association, 66
Consumer health libraries, 10
Content, ethics and, 253–254
Index

Context, 112
evaluating, 94
of research, 22, 124–125

Continual/continuous, 197

"Contracts: Protecting Writers' Rights" 260

Contracts, 261–262

Control of Communicable Diseases Manual, 270

Copyright, 260–261

Copyright Book: A Practical Guide, The, 261

Copyright Clearance Center, 261

Copyright Office (U.S.), 261

Correlation, 91

Cost-effectiveness analysis, 84

Cost evaluation, 94

Council for the Advancement of Science Writing (CASW), 214, 316

New Horizons in Science Briefing, 322–323

Council of Biology Editors (CBE), 309

Council of Science Editors (CSE), 309–310

Courses. See Educational opportunities

Covering Health Issues: A Sourcebook for Journalists, 277

"Covering Medical Technology: The Seven Deadly Sins" 274

Covering the Quality of Health Care: A Resource Guide for Journalists, 277, 307

Craft of Interviewing, The, 53

Craft of Science Writing, 99

Crewsden, John, 67

Criterion/criteria, 197

Critical Condition: Health Care in America (ABC News), 181

Crossover trials, 83–84

Cross-sectional studies, 82–84

Current Contents, 18

D

Deductions, allowed, 265

Defamation, 264

Degrees, 190

De Pasquale, Sue, 162

Details, accuracy of, 112–113

Diagnostic and Statistical Manual of Mental Disorders, 272

Diagrams, 106

Dictionaries, medical, 12

Dictionary of Bias-Free Usage, The, 198

Different from, 197

Directories

online, 70

printed, 36

Directory of Physicians in the United States, American Medical Association (AMA), 59

Directory of Science Communication Courses and Programs in the United States, 315

DIRLINE, 31–32

associations listings, 42, 49

Disabilities

interviewing people with, 62

writing about, 185–188

Disability, defined, 186

Discover, "Vital Signs", 142

Discovery, 178

Discovery Health, 178

Discussion groups, 70–71

Discussion section, journal articles, 19, 22

Diseases

capitalization of names, 189

eponyms, 190

information sources, 267–273

writing about, 185–188

Disfigurement, photographs of, 258

Distribution, of statistical values, 87

Documentaries, television, 163–164, 177–178

Dold, Catherine, 43

Dolandi's Illustrated Medical Dictionary, 12

Double-blind studies, 79

Drafts, reviewing, 113–114

Drug approval, clinical trials, 79–82

Drugs, generic and brand names, 191–192

Dumont, 161–162

E

Easter Seal Society, 62, 185

ECRI, 274

Editor & Publisher, 302

awards and fellowships, 218, 318

Editorials, 22
Index

<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editors, health, 297-298</td>
<td></td>
</tr>
<tr>
<td>Educational institutions, as information sources, 45-46</td>
<td></td>
</tr>
<tr>
<td>Educational opportunities courses and programs, 313-316</td>
<td></td>
</tr>
<tr>
<td>fellowships, 318-322</td>
<td></td>
</tr>
<tr>
<td>internships, 316-318</td>
<td></td>
</tr>
<tr>
<td>Effect/affect, 196</td>
<td></td>
</tr>
<tr>
<td>Elements of Style, The, 99</td>
<td></td>
</tr>
<tr>
<td>E-mail, 67, 69-70</td>
<td></td>
</tr>
<tr>
<td>interviews, 53</td>
<td></td>
</tr>
<tr>
<td>Embargoes, on journal articles, 24-27</td>
<td></td>
</tr>
<tr>
<td>Employment opportunities, sample job announcements, 292-298</td>
<td></td>
</tr>
<tr>
<td>Encyclopedia of Associations, 42, 49</td>
<td></td>
</tr>
<tr>
<td>Encyclopedia of Bioethics, 13, 250</td>
<td></td>
</tr>
<tr>
<td>Encyclopedias, 9, 12</td>
<td></td>
</tr>
<tr>
<td>Endings, strong, 110-111</td>
<td></td>
</tr>
<tr>
<td>Environmental Protection Agency (EPA), 285</td>
<td></td>
</tr>
<tr>
<td>Epilepsy Foundation, Distinguished Journalism Awards, 215</td>
<td></td>
</tr>
<tr>
<td>Eponyms, 190</td>
<td></td>
</tr>
<tr>
<td>Eric W. Martin Award for Excellence in Medical Writing, 212</td>
<td></td>
</tr>
<tr>
<td>Error, margin of, 89</td>
<td></td>
</tr>
<tr>
<td>Ethicist, 250</td>
<td></td>
</tr>
<tr>
<td>Ethics and accuracy of graphs, 258-259</td>
<td></td>
</tr>
<tr>
<td>in choice of employers and publication site, 254-255</td>
<td></td>
</tr>
<tr>
<td>codes of, 250-253</td>
<td></td>
</tr>
<tr>
<td>confidentiality and, 257-258</td>
<td></td>
</tr>
<tr>
<td>and conflict of interest, 256-257</td>
<td></td>
</tr>
<tr>
<td>content and, 253-254</td>
<td></td>
</tr>
<tr>
<td>freelancing and, 255</td>
<td></td>
</tr>
<tr>
<td>fundraising/charity and, 259</td>
<td></td>
</tr>
<tr>
<td>ghostwriting and, 255</td>
<td></td>
</tr>
<tr>
<td>privacy and, 254-257-258</td>
<td></td>
</tr>
<tr>
<td>resources, 250</td>
<td></td>
</tr>
<tr>
<td>and topic choice, 253-254</td>
<td></td>
</tr>
<tr>
<td>in use of photographs, 258-259</td>
<td></td>
</tr>
<tr>
<td>EurekAlert!, 7</td>
<td></td>
</tr>
<tr>
<td>Examples, use of, 103-104</td>
<td></td>
</tr>
<tr>
<td>Experts interviewing, 51-52, 55-58</td>
<td></td>
</tr>
<tr>
<td>television interviews with, 176</td>
<td></td>
</tr>
<tr>
<td>Explanations of concepts, 103-104</td>
<td></td>
</tr>
<tr>
<td>of function, 104-106</td>
<td></td>
</tr>
<tr>
<td>of terms, 103-104</td>
<td></td>
</tr>
<tr>
<td>transformative, 106-107, 285</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>FACsNET, 97, 323</td>
<td></td>
</tr>
<tr>
<td>Fact sheets, 35</td>
<td></td>
</tr>
<tr>
<td>Fair use, 260</td>
<td></td>
</tr>
<tr>
<td>&quot;FDA OKs Ovarian Cancer Drug&quot; (AP), 130-131</td>
<td></td>
</tr>
<tr>
<td>Feature articles, 138-143</td>
<td></td>
</tr>
<tr>
<td>examples narratives, 219-235</td>
<td></td>
</tr>
<tr>
<td>overview article, 139-141, 146-148, 325-330</td>
<td></td>
</tr>
<tr>
<td>profile, 145-151</td>
<td></td>
</tr>
<tr>
<td>leads, 101</td>
<td></td>
</tr>
<tr>
<td>Fellowships, 318-322</td>
<td></td>
</tr>
<tr>
<td>Fever, versus temperature, 190-191</td>
<td></td>
</tr>
<tr>
<td>Fewer/less, 198</td>
<td></td>
</tr>
<tr>
<td>Field Guide for Science Writers, A, 308</td>
<td></td>
</tr>
<tr>
<td>Field Guide to Germs, A, 270</td>
<td></td>
</tr>
<tr>
<td>Files, idea, 6</td>
<td></td>
</tr>
<tr>
<td>FirstGov, 36</td>
<td></td>
</tr>
<tr>
<td>Five W's and an H, 123-124</td>
<td></td>
</tr>
<tr>
<td>Flatow, Ira, 172</td>
<td></td>
</tr>
<tr>
<td>Flowcharts, 106</td>
<td></td>
</tr>
<tr>
<td>Focus, story, 102-103</td>
<td></td>
</tr>
<tr>
<td>&quot;Focus on Healthcare: A Handbook for Journalists&quot; 276</td>
<td></td>
</tr>
<tr>
<td>Follow up, versus follow-up, 198</td>
<td></td>
</tr>
<tr>
<td>Food and Drug Administration (FDA), 39-40, 274</td>
<td></td>
</tr>
<tr>
<td>drug approval process, 79-82</td>
<td></td>
</tr>
<tr>
<td>press office, 40</td>
<td></td>
</tr>
<tr>
<td>Franklin, Jon, 141, 219</td>
<td></td>
</tr>
<tr>
<td>FREDDIE Awards, 212</td>
<td></td>
</tr>
<tr>
<td>Freedom of Information Act (FOIA), 262-263</td>
<td></td>
</tr>
<tr>
<td>Freelancing ethics and, 255</td>
<td></td>
</tr>
<tr>
<td>opportunities for, 299-300, 264-265</td>
<td></td>
</tr>
<tr>
<td>and taxes, 264-265</td>
<td></td>
</tr>
<tr>
<td>Friendly, Fred W., 163</td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Complementary and Alternative Medicine, 276</td>
<td></td>
</tr>
<tr>
<td>Funding, research, 125-126</td>
<td></td>
</tr>
<tr>
<td>Fundraising, ethical issues, 259</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
</tr>
<tr>
<td>Garrett, Laurie, 270</td>
<td></td>
</tr>
</tbody>
</table>
Index

Gender, 188, 198
Generic drug names, 191-192
Genres
  book reviews, 143, 157-159
  book writing, 143-144
  feature articles, 138-143
  health columns, 143, 151-157
  investigative reporting, 126, 136-138, 235-245
  news releases, 123-126
  news stories, 123-126
  obituaries, 142
George Foster Peabody Awards, 213
“Germs” 103-104
Gerontological Society of America, 278
Ghostwriting, 255
Givler, Amy, 154-157
Glass, Ira, 178
Glimmer files, 6
Global Health Council, Excellence in Media Award, 216
Government information sources
  federal, 36-41
  state/local, 41-42
  websites, 68
Graphics
  over-the-shoulder, 177
  television script, 171
  use of, 106
Graphs, accuracy of, 258-259
“Growing Up Too Fat: Kids Suffer Adult Ailments as More Become Dangerously Obese” (San Francisco Chronicle), 137, 235-245
Guidelines for Bias-Free Writing, 198
“Guidelines for Reporting and Writing about People with Disabilities” 187

H
Hallman, Tom, Jr., 137
Handicap, defined, 186
Hartman, Tari Susan, 62
Harvest of Shame (CBS Reports), 163-164
Hastings Center Journalist-in-Residence Program, 320
Headline, 107
Health and Human Services (HHS), U.S. Department of, 36, 50
  agencies of, 39-41
Health associations, 42-45
Health-care system, 46, 276-277
Health-care technologies, information sources, 273-276
Health columns, 143, 151-157
Health courses, 313-316
Health Coverage Fellowship, 320-321
Health departments, state and local, 41-42
Health, Etc. (HomeLife), 154-157
Health Hotlines, 32, 49
Health Information Resource Center, 214
Health Insurance Portability and Accountability Act (HIPAA), 174, 263
Health policy
  information sources, 276-277
  reporting, 181-182
Health professionals
  associations of, 44
  interviewing, 58-60
Health Resources and Services Administration (HRSA), 41
Health Resources Publishing, 19
Health writers, scope of, 3
Health writing, courses in, 315-316
Heart disease, information sources, 267-268
Herbert, Donald, 163
Herb Lampert Student Writing Award, 212
Heterosexism, 199
Hopefully, 199
Hospitals, as information sources, 46
How-to articles, 143
How to Get Happily Published, 144
Hubs, online, 68
Human interest, 108-109
Hunger in America (CBS Reports), 164
Hyperlinks, 180
I
I Can Hear It Now, 164
Ideas, saving, 6; See also Topics
Ideas into Words: Mastering the Craft of Science Writing, 53, 99
Index

Illustrations, reprint permission, 13-14
Improving Risk Communication, 287
IMRAD format, 19, 22
Incidence, and prevalence, 193
Incidence rate, 85-86
Indemnifications, 262
Indexes, online, 68
Index Medicus, 28
Industry, as information source, 46-47
Infectious diseases, information sources, 269-270
Information
-gathering, 6-7
new, 4-5
Information evaluation
alternatives, 92-93
applicability, 92
big picture, 94
consistency, 77
costs, 94
interpretations, 91-92
sources, 75-77
statistics, 84-92
study design, 77-84
uniqueness, 93-94
Information sources
on aging, 277-278
anecdotal, 77-78
child/adolescent health, 278-279
diseases, 267-273
environmental risk, 285-288
evaluation of, 75-77
health-care, 276-277
health-care technologies, 273-276
health policy, 276-277
institutional
associations, 42-45
conferences, 47-49
educational institutes, 45-46
evaluating, 76-77
finding, 31-35
government, 36-42
health-care institutions, 46
industry, 46-47
organizations, 42-45
interviews, 51-64
journals. See Medical periodicals
libraries, 9-12
medical books, 12-14
online, 10-12
discussion groups, 70-71
e-mail and, 67, 69-70
web sites, 65-68
telephone numbers for, 33-34
veterinary medicine, 280
injury, versus accident, 279
injury prevention, information sources, 279
institutional information sources
finding, 31-35
types of assistance, 35
Institutions, names of, 194
Internal Revenue Service (IRS), 265
International Association of Business Communicators (IABC), 209, 310
International Committee of Medical Journal Editors, 24
Medical Journals and the General Media, 26-27
International Health & Medical Media Awards, 212
Internet. See Online resources; World Wide Web
Internships, 303, 316-318
Interpretations, 91-92
Interviewing
by e-mail, 53
by telephone, 53
on camera, 174-176
disabled persons, 62
health professionals, 51-52, 58-60
patients, 60-63, 174-176
people with mental illnesses, 273
in person, 53-54
researchers, 55-58
tips, 53-55
Interviews That Work, 53
Introduction section, journal articles, 19
Introduction to Reference Sources in the Health Sciences, 13
Inverted pyramid style, 123
Investigative Reporters and Editors (IRE), 137, 277, 310
Investigative reporting, 126, 136-138
example, 235-245

3 5 5
Index

Investigative Reporting for Print and Broadcast, 136–137
"It's gettin' hot in here: Spring Break, days at the beach and sunburns are on tap for students next week" (The Battalion), 146–148
Ivanhoe Broadcast News, 166

J
JAMA: Journal of the American Medical Association, 14–15, 323
internships at, 317
JAMA Report VNR, 167
news section, 47
table of contents from, 20–21
"Your Doctor's Education" 59
Jargon, use of, 172
Jennings, Peter, 164–165
Job advertisements, excerpts, 292–298
Johns Hopkins File, 7, 162
Johns Hopkins Magazine, 162
Johns Hopkins Science Review, 161–163
Johnson, Timothy, 164–165, 181
Joseph D. Ryle Award, 216
Journalism, courses in, 315
Journalism awards, 203–210
Journalists
and physicians, 59–60
web Web sites, 68
"Journalist's Guide to Covering Prescription Drugs: An Essential Checklist for Reporters and Editors" 274
Journal of the American Medical Association. See JAMA
Journal of the National Cancer Institute, 269
Journals
medical. See Medical periodicals nonresearch, 18–19
peer-reviewed, 23–24
scientific, 15, 18
web Web sites, 68
Journal Watch, 18
Journal Watch for Psychiatry, 18
Jules Bergman Award, 213
K
Kaiser, Jocelyn, 148–151
Kaiser Media Fellowships in Health, 318
Kanter Awards, 216
Kaplan, Madge, 4
Key words, 104
Kill fee, 262
Kinescope recordings, 162–163
Klass, Perri, 257
KNBC, 165
Knight Science Journalism Fellowships, 318–319, 323
"Know Your Rights" 260
KTTV Fox 11 News, television script, 168–171
L
Labels, avoiding, 186
Lancet, The, 15
Laws, health-writing and, 260–266
Leads, 100–102
inverted pyramid, 123
nut graf and, 102
television stories, 175
Learning Channel, 178
Less/fewer, 198
Letters to the editor, 23
Libel, 264
Libraries, 9–12
Library of Congress, 144
Library of Medicine. See National Library of Medicine
Life expectancy, versus life span, 193
Lifetime Medical Television (LMT), 166
Linden, Tom, 161, 168–171
Literature search, journals, 27–30
LocatorPlus, 11
Longitudinal studies, 82
Lowe, David, 163
Lung disease, information sources, 268
M
Macromedia Flash, 180
Magazines
freelancing for, 299–301
job opportunities at, 291–292, 296–298
writer's guidelines, 300
Maggie Awards, 217
Malformations, photographs of, 258-
Index

Marine Biological Laboratory Science Journalism Program, 320
Mathematician Reads the Newspaper, A, 314
May, Meredith, 137, 235
McGraw-Hill Encyclopedia of Science and Technology, 9
Mean, 87
Media
fundraising through, 259
health professionals and, 58–60
health writing for, 291–298
publication restrictions, 24–27
researchers and, 55–58
"Media and Medicine," 250
Media guides, 43
Median, 87
MedicalResource, 51–52, 63
Medical books, 12–14
Medical Journals and the General Media, International Committee of Medical Journal Editors, 26–27
Medical Letter on Drugs and Therapeutics, The, 19
Medical libraries, 9–12
Medical Library Association, Consumer and Patient Health Information Section (CAPHIS), 66
Medical News Network, 166
Medical periodicals, 14–19
embargoes on articles, 24–27
leading, 16–18
literature search, 27–30
peer-reviewed, 23–24
structure of, 19–23
Medical schools, as information sources, 45
Medical studies
conclusions, 92
interpretations, 91–92
statistics, 84–92
types of, 77–84; See also Clinical trials; Research
Medical television broadcasting
history of, 161–167
medical script, 167–172
story focus, 172–173
story packaging, 173–177
Medicine, usage, 193–194
Medicine, Media and Morality: Pulitzer Prize-Winning Writings on Health-Related Topics, 209
"Mediterranean Diet—A Model for Healthy Eating" (Argus-Courier), 151–154
MEDLINE, 28
MedlinePlus, 11, 65
Medstar Television, 166
Meetings, lists of, 47
Men's Health, internships, 317
Mental Health Media Awards, 216
Mental illness, information sources, 272–273
Merck Manual of Diagnosis and Therapy, The, 12
Merck Manual of Medical Information, The, 12
Merck Veterinary Manual, The, 280
Meta-analyses, 22, 83–84
Methods section, journal articles, 19
"Metric Style Guide for the News Media," 110
Metric system, 110
Mini-med schools, 315
Misconceptions, countering, 106–107
Mode, 87
Modern Healthcare, 19
Monographs, 13
Morbidity, 86
Morbidity and Mortality Weekly Report, 19, 40
Morris Fishbein Fellowship in Medical Editing, 321
Mortality, 86
"Mrs. Kelly’s Monster" (The Baltimore Sun), 141, 219–235
Multimedia programs, 180
Murrow, Edward R., 163
My Own Country: A Doctor's Story, 137

N
Narratives, 138, 141–142
element, 219–235
National Academies Communication Awards, 213
National Association of Medical Communicators (NAMC), 167
address, 307
Index

National Association of Medical Communicators (continued) awards, 213
code of ethics, 250, 252–253
National Association of Neurological Surgeons, Neurosurgical Media Awards, 217
National Association of Physician Broadcasters (NAPB), 167, 307
National Association of Science Writers (NASW), 48, 70–71
address, 307–308
awards, 214
Science in Society Awards, 207–208
National Cancer Institute (NCI), 37–38, 268
graduate internships, 317
National Center for Complementary and Alternative Medicine (NCCAM), 38, 275
National Center for Injury Prevention and Control (NCIPC), 279
National Center on Disability and Journalism, 62, 201
Style Guide, 188
National Health Information Awards, 213
National Health Information Center (NHIC), “Toll-Free Numbers for Health Information” 32
National Heart, Lung, and Blood Institute (NHLBI), 37, 268
National Institute for Health Care Management, Journalism Awards, 217
National Institute of Allergy and Infectious Diseases (NIAID), 37–38, 269
National Institute of Arthritis and Musculoskeletal and Skin Disease (NIAMS), 38, 273
National Institute of Child Health and Human Development (NICHD), 37–38, 278
National Institute of Dental and Craniofacial Research, 37–38
National Institute of Environmental Health Sciences (NIEHS), 38, 285
National Institute of Neurological Disorders and Stroke (NINDS), 38, 271
National Institute on Aging (NIA), 37, 277
National Institutes of Health (NIH), 37–39, 194
agencies of, 268–269, 271–278, 285;
See also under individual agencies
Medline Plus, 11, 65
publications from, 9
telephone numbers for, 38
National Institutes of Mental Health (NIMH), 38, 272
National Library of Medicine (NLM)
DILRINE, 31–32, 42, 49
Health Hotlines, 32, 49
list of leading journals, 16–18
MEDLINE, 28
PubMed, 29–30
resources, 27–29, 32
telephone number, 38
Web site, 11, 38
National Mental Health Association
(NMHA), 272
Mental Health Media Awards, 216
National Network of Libraries of Medicine, 10
National Press Club, awards, 216
National Public Radio (NPR), 178, 297
National Safety Council, 279
Nature, 15
NBC, 161
Neergaard, Lauren Laurant, 130
Neurologic disorders, information sources, 271–272
Neurosurgical Media Awards, 217
New England Journal of Medicine, 14–15
News articles, leads, 100
New Science Journalists, The, 137
Newsletters, 18–19, 299–301
News magazines, job opportunities at, 291–292, 296–298
Newspapers, writing for, 291, 296–297
News releases, 123–126
association conferences, 44
evaluating, 4–5
example, 131–135
News rooms, 49
News sections, journals, 23
News stories, 123–126
examples, 127–131
Newswise Guide to Journalism Awards, 218
“Next Round of Health Care Hotspots, The” 277
Nieman Fellowships, 321–322
Nightline, 165
“Night Wanderings” (New York Times Magazine), 139–141
Nobel Prize, 199
Nonproprietary names, drugs, 191–192
“Nora Volkow: New Head of Drug Institute is Wired for Action” (Science), 148–151
Nova, 163, 177–178, 323
Novack, John, 19
Numbers. See Statistics
Nut graf, 102

O
Obituaries, 142
Observational studies, 79, 82
Occupational Safety and Health Administration (OSHA), 286
Office of Disease Prevention and Health Promotion (ODPHP), 40–41
Communication Support Center, 32
Office of Medical Applications of Research (OMAR), 274
Official ABMS Directory of Board Certified Medical Specialists, The, 59
Okie, Susan, 5
Online resources, 10–12; See also World Wide Web sites
discussion groups, 70–71
e-mail, 67, 69–70
Internet sites, 65–68
On Writing Well, 99
Opening shot, video, 175
Ophthalmologist, 194
Optician, 194
Optometrist, 194
Opus Communications, 19
Organizations
as information sources, 42–45
professional, 305–312; See also specific organization
Web sites, 68
Orientation devices, 107
Over-the-shoulder (OTS) graphic, 177
Overview articles, 138–139
total, 139–141, 146, 148

P
Pan American Public Health Reporting Awards, 217
Patient
defined, 187
versus case, 189–190
Patients
concerns of, 4
interviewing, 60–63, 174–176
television interviews with, 174–176
Peabody Awards, 213
Peer review, 23–24
Percent change, 87–88, 96
Pharmaceutical companies, as information sources, 46
Pharmaceutical Research and Manufacturers of America (PhRMA), 46, 275
Pharmaceuticals, references, 13
Phenomenon/phenomena, 197
Photographs, 108, 258–259
Physician, usage, 193–194
Physicians
biographical information on, 59
and journalists, 59–60
Physician’s Desk Reference, 13
Physician’s Journal (LMT), 166
Plagiarism, 261
Planned Parenthood Federation of America, Maggie Awards, 217
Points of entry, 107–108
Poole, Lynn, 162
Power, statistical, 89–90
Press briefings, 44
Prevalence, and incidence, 193
Prevalence rates, 86
Preventative/preventive, 194
Privacy, 254, 257–258
Index

Privacy law, 263–264
Production, video/audio, 179
Professional organizations, 305-312;
See also specific organization
Profiles, 138, 142
example, 148–151
ProfNet, 52
Proposal, book, 144
Prospective research, 79, 84
Psychiatrist, 195
Psychologist, 195
Public Broadcasting Service (PBS), 163
Public domain, 260
Public figures, privacy of, 258, 263
Public health, Web sites, 68
Public health official, health departments, 41–42
Public information, 45–46, 58
career options, 298–299
institutions, 35
Publicity, pre-publication, 24–27
Public Radio International, 178
Public relations, 35, 45–46, 58,
298–299
Public Relations Society of America, 310–311
Publishers, book, 144
PubMed, 11, 28, 29–30
Pulitzer Prize, 204
Pulitzer Prize Feature Stories: America's Best Writing, 209
P values, 89, 95

Q
Query letter, 300–301
Questions, health care, 3–4
Quill, 250, 323
freedom of information issue, 263
Quotations
analogies as, 105
to provide human interest, 108–109

R
Radio medical reporting, 178–179
Radio-Television News Directors Association (RTNDA), 174
code of ethics, 253
privacy regulations, 263
Randomized controlled trials, 78–79, 84
Ranges, 87
Rate of response, surveys, 86–87
Reader, 177
Record keeping, sources, 7
Reference books, 12–13
Reiss, Jeffrey, 166
Relative risk, 88, 95
Reminder phrase, 103
Rensberger, Boyce, 172
Reporter's Environmental Handbook, The, 286
Reporter stand-ups, 167, 171, 173
Reporting on Risk: A Journalist's Handbook on Environmental Risk Assessment, 287
Research
articles, 19–24
background, 27–30
case series, 83–84
context of, 22, 124–125
crossover trials, 83–84
cross-sectional studies, 82–84
funding, 125–126
limitations of, 125
longitudinal studies, 82
meta-analyses, 83–84
observational, 79, 82
preliminary, 48
prospective, 79, 84
retrospective, 79, 82, 84
statistics, 84–92
unpublished, 24–27
Research and Training Center on Independent Living, 187
Research Channel, 162–163, 178
Researchers
attitude toward press, 57
interviewing, 55–58
Resources, accuracy of, 111–112
Response rates, 86–87
Results section, journal articles, 19
Retrospective research, 79, 82, 84
Review articles, 22–23
Rios, Jose, 168
Risk
absolute, 284
Index

environmental, 285–288
perception of, 281–282
presenting, 282–285
ratio, 88
relative, 284
statistics on, 284
Rosalynn Carter Fellowship for Mental Health Journalism, 319–320
Rouche, Berton, 141–142
Rowan, Katherine E., 106
Russell L. Cecil Awards, 217

S
Sabol, Cathy, 162–163
Samet Journalism Award, 217
Scaremongering, 254
Science, 15, 323
internships, 317
news section, 47
Science broadcasting, 161–167; See also Television news reporting
Science courses, 313–316
Science Editor, 48, 309–310
Science Friday, 172
Science in Society Journalism Awards, 213–214
Science lesson, 173, 183
Science News, 18, 47, 323
internships, 317
Science Sources, 32, 50
Science Writers, 308, 318
Science writing, 315–316
Scientific American, “Understanding Clinical Trials” 79–82
Scientists, associations of, 44
Scientists’ and NonProfits’ Ties to Industry, 56
Scientists’ Institute for Public Information, 52
Screening, 91
Script, medical television, 167–171, 182
“Secret in the Marrow, The” (Discover), 116–121
Seeing Through Statistics, 85, 314
See It Now, 163
SEJournal, 309
Sensitivity
in choice of wording, 186–187
statistical, 90
Sergel, Roger, 181–182
Serious/severe, 188
Service articles, 142–143
Severson, Kim, 137, 235
Sexist terms, 198
Sexual orientation, 199
Sidebar, 107
Sigma Delta Chi Awards, 204–207
Sigma XI, 52
Significance, statistical, 88–89
Significant, 199
Signs, and symptoms, 195
60 Minutes, 164
Sizes, presenting effectively, 110
Slandering, 264
“Smoking and Breast Cancer May Be Linked, Study Shows” (NPR), 127–129
Society for Neuroscience, 44, 272
Society for Technical Communications, 311
Society for Women’s Health Research, Journalism Award, 216
Society of Environmental Journalists (SEJ), 286, 309
Society of Professional Journalists (SPJ) address, 311
code of ethics, 253
freedom of information, 263
Sigma Delta Chi Awards, 204–207
SOGC/CFWH Journalism Award, 218
SoRelle, Ruth, 114
Sound
bites, 167, 171, 174–175
natural, 167, 175, 177
Sound on tape (SOT), 177
Sourcebook of Medical Illustration, The, 14
Sources
anonymous, 61
consistency, 77
evaluation of, 75–77
notes on, 7
television stories, 173–174
Speakers, introducing, 176
Specificity, statistical, 90
Stand-ups, reporter, 167, 171, 173
Statisticians, 85
Statistics
averages, 87
Index

Statistics (continued)
clusters, 91
certainty intervals, 89, 96
courses in, 314
medical studies, 84–92
percent change, 87–88, 96
power, 89–90
ranges, 87
response rates, 86–87
risk, 88, 95, 284
screening, 91
sensitivity, 90
significance, 88–89
specificity, 90

Stedman’s Medical Dictionary, 12
Sternberg, Joel, 163
Stone, John, 139
Storytelling, documentary, 163
Studies. See Research
Study design, 77–84
Style. See also Technique
inverted pyramid, 123
resources, 185, 187–188
Substance Abuse and Mental Health Services Administration (SAMHSA), 41
Sugg, Diana K., 115, 296
Supers, 171, 176
Support groups, online, 70
Symptoms, and signs, 195

T
Table of Contents, example, 20–21
Talking about People: A Guide to Fair and Accurate Language, 198
Talk Straight, Listen Carefully: The Art of Interviewing, 53
Taste, ethics and, 254
“Taxes and deductions” 265
Tax laws, 264–265
Technique
access to further information, 111–112
accuracy, 112–113
audience assessment, 99–100
audience feedback, 113–115
beginning effectively, 100–102
ending strongly, 110–111
examples, 116–121
exercises, 115–116
explanation, 103–107
focus, 102–103
human interest, 108–109
orientation, 107
points of entry, 107–108
presenting numbers and sizes, 109–110
sources related to, 115
Telephone, interviews, 53
Television, career opportunities in, 297–298
Television news reporting
history of, 161–167
medical script, 167–172, 182
production, 179
reader, 177
sound on tape, 177
story focus, 172–173
story packaging, 173–177
voiceover, 177
Television script
elements of, 167–172, 182
example, 168–171
Temperature, versus fever, 190–191
Terminology
general, 196–200
medical usage, 188–190
sensitivity Guidelines, 186–187
traditionalism in, 196
Terms, explaining, 103–104
Textbooks, medical, 13–14
That/who, 200
Thinking Like Your Editor: How to Write Great Serious Nonfiction—and Get It Published, 144
This American Life, 178
Thomas, Lewis, 103–104
Timebomb: The Global Epidemic of MultiDrug Resistant Tuberculosis (The AMWA Journal, review), 157–159
Times as/times more, 195
“Tipsheet for Reporting on Drugs, Devices, and Medical Technologies” 274
Titles, 107, 190
Today Show, 165–166
Tomorrow, 162
Tomorrow’s Careers, 162
Toner, Mike, 137
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethics and evaluating</td>
<td>253-254</td>
</tr>
<tr>
<td>finding</td>
<td>3-4</td>
</tr>
<tr>
<td>investigative reporting</td>
<td>126, 136</td>
</tr>
<tr>
<td>Toxicology and Environmental Health Information</td>
<td>286</td>
</tr>
<tr>
<td>“Toxics and Risk Reporting”</td>
<td>287</td>
</tr>
<tr>
<td>TOXNET</td>
<td>286</td>
</tr>
<tr>
<td>Track</td>
<td>167</td>
</tr>
<tr>
<td>Tracking</td>
<td>180</td>
</tr>
<tr>
<td>Trade names, drugs</td>
<td>191-192</td>
</tr>
<tr>
<td>Trade publications</td>
<td>19</td>
</tr>
<tr>
<td>Trafford, Abigail</td>
<td>276</td>
</tr>
<tr>
<td>Transformative explanations</td>
<td>285</td>
</tr>
<tr>
<td>20/20, 165</td>
<td></td>
</tr>
<tr>
<td><strong>U</strong></td>
<td></td>
</tr>
<tr>
<td>Ulene, Art</td>
<td>165</td>
</tr>
<tr>
<td>“Ultrafast CT with Electron Beam: Accurately Predicts Heart Attacks in Seemingly Healthy People, Study Shows” (AHA), 132-135</td>
<td></td>
</tr>
<tr>
<td>“Understanding Clinical Trials” (Scientific American), 79-82</td>
<td></td>
</tr>
<tr>
<td>Under way</td>
<td>200</td>
</tr>
<tr>
<td>Uniqueness</td>
<td>200</td>
</tr>
<tr>
<td>United States government, information sources</td>
<td>36-42; See also individual agencies</td>
</tr>
<tr>
<td>Upcut</td>
<td>175</td>
</tr>
<tr>
<td>Update (LMT)</td>
<td>166</td>
</tr>
<tr>
<td>USP Drug Information</td>
<td>13</td>
</tr>
<tr>
<td><strong>V</strong></td>
<td></td>
</tr>
<tr>
<td>Veterinary medicine, information resources</td>
<td>280</td>
</tr>
<tr>
<td>Viacom</td>
<td>166</td>
</tr>
<tr>
<td>Victor Cohn Award</td>
<td>214</td>
</tr>
<tr>
<td>Video</td>
<td></td>
</tr>
<tr>
<td>elements, television script</td>
<td>171</td>
</tr>
<tr>
<td>streaming</td>
<td>180</td>
</tr>
<tr>
<td>Video news releases (VNRs)</td>
<td>167</td>
</tr>
<tr>
<td>Video production</td>
<td>179</td>
</tr>
<tr>
<td>Videotapes, of conferences</td>
<td>47</td>
</tr>
<tr>
<td>“Vital Signs” (Discover)</td>
<td>142</td>
</tr>
<tr>
<td>Voiceover (VO)</td>
<td>177</td>
</tr>
<tr>
<td>Voicing</td>
<td>180</td>
</tr>
<tr>
<td>Voyeurism</td>
<td>258</td>
</tr>
<tr>
<td><strong>W</strong></td>
<td></td>
</tr>
<tr>
<td>Wang, Linda</td>
<td>325-330</td>
</tr>
<tr>
<td>Warranties</td>
<td>262</td>
</tr>
<tr>
<td>Watch Mr. Wizard</td>
<td>163</td>
</tr>
<tr>
<td>WCBV</td>
<td>164</td>
</tr>
<tr>
<td>Weaver, Daniel C.</td>
<td>116</td>
</tr>
<tr>
<td>Weaver, Eris</td>
<td>151-154</td>
</tr>
<tr>
<td>Weblogs</td>
<td>181</td>
</tr>
<tr>
<td>WGBH</td>
<td>163, 178</td>
</tr>
<tr>
<td>“When Bugs Fight Back”</td>
<td>137</td>
</tr>
<tr>
<td>Which Medical Specialist for You, 58-59</td>
<td></td>
</tr>
<tr>
<td>White, Ted</td>
<td>178</td>
</tr>
<tr>
<td>Whittle, Chris</td>
<td>166</td>
</tr>
<tr>
<td>Who's Who</td>
<td>55</td>
</tr>
<tr>
<td>Who/that</td>
<td>200</td>
</tr>
<tr>
<td>Wistar Institute Science Journalism Award</td>
<td>214</td>
</tr>
<tr>
<td>WMAR-TV</td>
<td>162</td>
</tr>
<tr>
<td>WNBQ</td>
<td>163</td>
</tr>
<tr>
<td>Wording</td>
<td></td>
</tr>
<tr>
<td>gender-neutral</td>
<td>198</td>
</tr>
<tr>
<td>sensitivity guidelines</td>
<td>186-187</td>
</tr>
<tr>
<td>World News Tonight</td>
<td>164-165</td>
</tr>
<tr>
<td>World Wide Web</td>
<td></td>
</tr>
<tr>
<td>career opportunities</td>
<td>297</td>
</tr>
<tr>
<td>credibility of sites</td>
<td>66-67</td>
</tr>
<tr>
<td>Health Awards</td>
<td>214</td>
</tr>
<tr>
<td>information sources</td>
<td>65-68</td>
</tr>
<tr>
<td>IRE Resource Center</td>
<td>137</td>
</tr>
<tr>
<td>job postings</td>
<td>302</td>
</tr>
<tr>
<td>medical reporting</td>
<td>180-181</td>
</tr>
<tr>
<td>World Wide Web sites</td>
<td></td>
</tr>
<tr>
<td>Advanced Medical Technology (AduMed)</td>
<td>275</td>
</tr>
<tr>
<td>Alicia Patterson Foundation</td>
<td>322</td>
</tr>
<tr>
<td>AlphaGalileo</td>
<td>52</td>
</tr>
<tr>
<td>American Academy of Allergy, Asthma and Immunology (AAAI)</td>
<td>217</td>
</tr>
<tr>
<td>American Academy of Pediatrics (AAP)</td>
<td>279</td>
</tr>
<tr>
<td>American Association for the Advancement of Science (AAAS)</td>
<td>32, 50</td>
</tr>
<tr>
<td>Journalism Awards</td>
<td>207, 211</td>
</tr>
<tr>
<td>American Board of Medical Specialties (ABMS)</td>
<td>59</td>
</tr>
<tr>
<td>American Cancer Society (ACS)</td>
<td>269</td>
</tr>
</tbody>
</table>
Index

World Wide Web sites (continued)
American College of Emergency Physicians, 214
American Family Physician, 18
American Geriatrics Society, 278
American Heart Association (AHA), 268
American Institute of Biological Sciences (AIBS), Media Awards, 211
American Lung Association (ALA), 268
American Medical Association (AMA), 59
American Medical Writers Association, 211, 305–306
American Psychiatric Association, 272
American Psychoanalytic Association (APSA), 215
American Psychological Association, 18, 272
American Society for Microbiology (ASM), 215, 270
American Society of Anesthesiologists (ASA), 215
American Society of Healthcare Publication Editors, 211
American Society of Plastic Surgeons, 215
American Veterinary Medical Association (AVMA), 280
Arthritis Foundation, 217
Association of Health Care Journalists (AHCJ), 253, 277, 306–307
BMI, 15
Canadian Medical Association Journal, 15
Canadian Science Writers' Association, awards, 212–213
CAPHS Top 100 List, 65–66
Carter centerCenter, 319
Centers for Disease Control and Prevention (CDC), 40, 269, 286
Copyright Office, 261
Council for the Advancement of Science Writing, 214
Council of Biology Editors (CBE), 309
Council of Science Editors (CSE), 309
Easter Seal Society, 62
ECRI, 274
Environmental Protection Agency (EPA), 285
Epilepsy Foundation, 215
EurekAlert!, 7
FACSNET, 97, 323
Food and Drug Administration (FDA), 40, 274
Gerontological Society of America, 278
Global Health Council, 216
government, 68
Hastings Center, 320
Health and Human Services (HHS), 36, 41, 50
Health Information Resource Center, 214
Internal Revenue Service (IRS), 265
International Association of Business Communicators, 209, 310
International Committee of Medical Journal Editors, 24
Investigative Reporters and Editors (IRE), 310
journalists, 68
Journal of the American Medical Association (JAMA), 14, 59
journals, 68
Journal Watch, 18
Kaiser Media Fellowships in Health, 318
Knight Science Journalism Fellowships, 318–319
The Lancet, 15
Library of Congress, 144
LocatorPlus, 11
Marine Biological Laboratory, 320
MediaResource, 63
medical dictionaries, 12
medical library links, 11
MEDLINE, 28
MedlinePlus, 11, 65
meetings lists, 47
Merck, 12
Index

Modern Healthcare, 19
Morbidity and Mortality Weekly Report, 19, 40
National Academies Communication Awards, 213
National Association of Medical Communicators (NAMC), 307
National Association of Neurological Surgeons, 217
National Association of Science Writers (NASW), 207, 214, 307–308
National Cancer Institute (NCI), 268
National Center for Complementary and Alternative Medicine (NCCAM), 275–276
National Center for Injury Prevention and Control (NCIPC), 179
National Center on Disability and Journalism, 201
National Health Information Center (NHIC), 32
National Heart, Lung, and Blood Institute (NHLBI), 268
National Institute for Health Care Management, 217
National Institute of Allergy and Infectious Disease (NIAID), 269
National Institute of Arthritis and Musculoskeletal and Skin Disease (NIAMS), 273
National Institute of Child Health and Human Development (NICHD), 278
National Institute of Environmental Health Sciences (NIEHS), 285
National Institute of Mental Health (NIMH), 272
National Institute of Health (NIH), 10, 37, 39, 268–273
National Library of Medicine (NLM), 11, 38
National Mental Health Association (NMHMA), 216, 272
National Network of Libraries of Medicine, 10
National Press Club, 216
National Public Radio (NPR), 178
National Safety Council, 279
Nature, 15
New England Journal of Medicine, 14
Nieman Fellowships, 321
Occupational Safety and Health Administration (OSHA), 286
Office of Disease Prevention and Health Promotion (ODPHP), 40
Office of Medical Applications of Research (OMAR), 274
organizations, 68
Pan American Health Organization, 217
Pharmaceutical Research and Manufacturers of America (PhRMA), 46, 275
ProfnNet, 52
public health, 68
Public Relations Society of America, 310–311
PubMed, 11, 28
Pulitzer Prize, 204
Radio-Television News Directors Association (RTNDA), 174, 253
Science, 15
Science News, 18
Sigma Delta Chi Awards, 204
Sigma Xi, 52
Society for Neuroscience, 272
Society for Technical Communications, 311
Society for Women’s Health Research, 216
Index

World Wide Web sites (continued)
  Society of Environmental Journalists (SEJ), 286, 309
  Society of Professional Journalists (SPJ), 204, 253, 263, 311
  TOXNET, 286
  Wistar Institute, 214
  writing awards, 211-218
  Wrapparound, 178

WriterL, 71
  "Writers and Law" 261
  Writer's Market, 300-301
  Writing contests, 210-219
  Writing techniques. See Technique
  Writing to video, 173

Y
  You Can Write for Magazines, 260, 301