

Iowa Physicians: Legitimacy, Institutions, and the Practice of Medicine

Part One Establishing a Professional Identity, 1833–1886

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IN JUNE 1850, twenty-five physicians met in Burlington, Iowa, to establish the Iowa Medical and Chirurgical Society. John Sanford, the organizing force behind the new society, had attended the third annual meeting of the American Medical Association in 1849 and had been inspired by the call for physicians to organize state, district, and county associations. Physicians needed to band together not only to improve medical knowledge and

Many people contributed to the evolution of my work on the history of physicians in Iowa. The late Richard Nelson, M.D., spearheaded the project, and we produced a rough draft of a book in August 2000. The first of the three chapters I wrote for our book has been revised for this article; Dick Nelson's chapters remain in unpublished draft. I am deeply grateful to the following for their advice, comments, and assistance: Shelton Stromquist, Jennifer Gunn, Matt Schaefer, Sharon Avery, David McCartney, Beth Myers, Sonya Householder, and Natasha Wendt. A committee of senior physicians of the Iowa Medical Society provided a useful sounding board for the draft prepared with Dick Nelson: Marion E. Alberts, M.D., West Des Moines; Clarence H. Densen, Jr., M.D., Des Moines; Russell S. Gerard II, M.D., Waterloo; Louis R. Greco, M.D., Boone; John K. MacGregor, M.D., Mason City; Hormoz Rassekh, M.D., Council Bluffs; and George G. Spellman, Sioux City. Finally, I appreciate the comments and suggestions that Marvin Bergman and the anonymous reviewers for the *Annals of Iowa* offered for transforming book chapters into articles.

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practice by giving papers and discussing their experiences among their peers, but also to promote their professional interests through political and social action. The founding members of the Iowa society expressed their anxieties about the status of medicine in the new state when, as one of their first resolutions, they created a committee "to report on the causes which have contributed to depress the science, dignity and influence of the medical profession in Iowa."¹

The "science, dignity and influence of the medical profession in Iowa" is the focus of this article, the first of three that together offer an overview of the history of medicine in the state through World War II. This study centers on physicians, medical institutions, reforming rhetoric, and legal developments. Its limitations are clear: other medical practitioners and healers, including midwives, nurses, and itinerant peddlers of cure-alls are shadowy figures; the details of medical treatments and the reactions of patients to their doctors are fragmentary; behind-the-scenes nuances of political alignments are under-explored; how events and attitudes in Iowa compare with those of other midwestern states are sketchy at best. These areas beg for further research, especially into local archives and personal papers, that may help us grasp individuals' experiences with health care and the formation of health policies at the town and county level. Until researchers define comparative projects among midwestern states, moreover, answering questions about historical similarities and divergences among Iowa and its neighbors will have to wait.²

In the meantime, state-based studies of medical organizations and institutions provide a vital framework for mapping historical change.³ In the second half of the nineteenth century,

1. Quoted from the minutes of the first meeting by Walter L. Bierring, "Iowa State Medical and Chirurgical Society," in *One Hundred Years of Iowa Medicine: Commemorating the Centenary of the Iowa State Medical Society, 1850-1950* (Iowa City, 1950), 23; see also *ibid.*, 110; Paul Starr, *The Social Transformation of American Medicine* (New York, 1982), 37-47, 79-92. Chirurgical means surgical.

2. Jennifer Gunn of the History of Medicine Program at the University of Minnesota is currently working on a book about rural health care and physicians' practices throughout the Midwest.

3. Physicians have produced a number of state-based histories of medicine, including Walter L. Bierring's *One Hundred Years of Iowa Medicine*, for their

concerns about valid medical knowledge, professional standards, and the responsibility of physicians for the health of their communities, not just their own patients, engaged medical practitioners throughout the United States and its territories. The power to regulate medical practice and public health primarily devolved upon state legislatures, however, so the real work of getting policies, laws, and funding for public institutions in place depended heavily on the statewide lobbying efforts of doctors and their prominent lay friends.

In 1850, Iowa, like most other states at this time, had no laws regulating the practice of medicine: no requirements for a medical degree, no qualifying examinations, no state-authorized license for practitioners to show to prospective patients.⁴ The Iowa Medical and Chirurgical Society, renamed the Iowa Medical Society (IMS) in 1856, tried to define organized, mainstream medicine in the state and to speak for all legitimate medical practitioners on political and social issues. It did not. Throughout its first four decades, the meaning of "legitimate" practitioner was open to dispute. The ultimate political goal for the IMS in this period was a law that would require everyone who practiced medicine in Iowa to obtain a license with qualifications that

state medical societies. See Joseph I. Waring, *A History of Medicine in South Carolina*, 3 vols. (Charleston, SC, 1964–1971); Philip M. Hamer, ed., *The Centennial History of the Tennessee State Medical Association, 1830–1930* (Nashville, 1930); Henry P. Plenk, ed., *Medicine in the Beehive State, 1940–1990* (Salt Lake City, 1992); Albert F. Tyler, ed., *History of Medicine in Nebraska* (Omaha, 1977); John C. Crighton, *The History of Health Services in Missouri* (Omaha, 1993); and Edward E. Waldron, *From House Calls to HMOs: A History of Organized Medicine in North Dakota: The North Dakota Medical Association, 1887–1987* (Bismarck, ND, 1986). Historians have also contributed to this literature. See, for example, Thomas N. Bonner, *The Kansas Doctor: A Century of Pioneering* (Lawrence, KS, 1959); Ronald L. Numbers and Judith Walzer Leavitt, eds., *Wisconsin Medicine: Historical Perspectives* (Madison, WI, 1981); and Jane Eliot Sewell, *Medicine in Maryland: The Practice and the Profession, 1799–1999* (Baltimore, 1999). For background on the history of Iowa, see Joseph F. Wall, *Iowa: A Bicentennial History* (New York, 1978); and Dorothy Schwieder, *Iowa: The Middle Land* (Ames, 1996). All general information about the history of Iowa comes from these sources, unless otherwise noted.

4. Richard Shryock, *Medical Licensing in America, 1650–1965* (Baltimore, 1967), 30–35. Some colonies, and then a few states in the early republic, had had licensing laws, but these were generally repealed by the 1830s as critics complained about the unfair monopoly held by licensed doctors.

conformed to IMS standards.⁵ In 1886, the state legislature did pass a licensing act for medical practitioners, but, to the dismay of IMS leaders, the society's definition of suitable credentials did not prevail against the political support for practitioners with different therapeutic philosophies.

By the late 1870s, two significant groups of practitioners had organized themselves to counter the IMS's claims to exclusive therapeutic legitimacy, the eclectics and the homeopaths. In the years between the opening of the region to Euro-American settlement in 1833 and the Medical Practice Act of 1886, these practitioners gained a public identity just as mainstream physicians did, by creating medical organizations and institutions. Other medical philosophies and therapeutic regimens—and there were many—were not so much legislated out of existence as they were marginalized by their practitioners' unwillingness or inability to form societies, found medical schools, and lobby for inclusion in the administration of health regulations deemed necessary for the progress and prosperity of Iowa's citizens.

Medical Ideologies and Practical Health Care

To understand the history of medicine in Iowa, one must appreciate the diversity of medical philosophies explaining disease and therapeutic efficacy in mid-nineteenth-century America, and hence the *kinds* of practitioners who came to the new state. A great deal of health care in the decades of Euro-American settlement took place with no assistance from trained practitioners at all. Home remedies, family habits, religious convictions, distrust of doctors, poverty, fear, and expediency all affected the ways that settlers, both in rural areas and in towns, responded to illnesses and injuries.⁶

5. The IMS appointed a subcommittee in 1855 to work on "legalizing medical practice in this State," but the committee apparently made no report at the time. Bierring, "Iowa State Medical and Chirurgical Society," 24. The IMS debated the issue again after the Civil War; at times members opposed restrictive legislation. See, for example, the minutes of the 1874 meeting in the *Transactions of the Iowa State Medical Society* 2 (1872-1876), 37.

6. This range of variables is still crucial for understanding medicine from the point of view of the well, ill, or injured person in contrast to medical practice as defined in contemporary American law by physicians with M.D. degrees

Treating common ailments and basic sick nursing were part of women's expected roles, and self-reliance and making-do were key virtues of the idealized pioneer and farm families laying claim to Iowa's land.⁷ How ordinary people actually conceptualized health, disease causation, and appropriate treatments, however, is a challenging area for research.⁸ Some scholars have deduced popular attitudes towards the body using nineteenth-century literary sources and medical texts, but few have yet been able to piece together beliefs and medical practices based on the personal documents and items of daily life.⁹

from North American universities and by national licensing boards. See Emily Martin, *The Woman in the Body: A Cultural Analysis of Reproduction* (Boston, 1987); and Meredith B. McGuire, *Ritual Healing in Suburban America* (New Brunswick, NJ, 1988). People unfamiliar with the history of medicine sometimes assume that most medical treatments before World War I, if not before World War II, were ineffectual or harmful or, in contrast, that many past remedies, especially herbal remedies, did "work," but were then dismissed by scientific biomedicine. Neither of those approaches, or even a combination of the two, can help to explain medical choices, beliefs, and peoples' experience of medical treatments in the past.

7. For accounts of home remedies and self-help practices, as well as the work done by doctors in the pioneer era, see Madge E. Pickard and R. Carlyle Buley, *The Midwest Pioneer: His Ills, Cures, and Doctors* (Crawfordsville, IN, 1945); Bonner, *The Kansas Doctor*, 1-52; William J. Petersen, "Pioneer Doctors and Druggists," *Palimpsest* 50 (1969), 305-16. For the experience of women's caregiving and illness in this period, see Emily K. Abel, "Family Caregiving in the Nineteenth Century: Emily Hawley Gillespie and Sarah Gillespie, 1858-1888," *Bulletin of the History of Medicine* 68 (1994), 573-99. Still one of the best accounts of domestic and self-help medicine is the collection by Guenter B. Risse, Ronald L. Numbers, and Judith Walzer Leavitt, eds., *Medicine Without Doctors* (New York, 1977).

8. The extent to which Euro-American traders, settlers, and town folk in the Midwest incorporated Native American remedies and healing practices into their lives is a similarly difficult problem for historians to tackle. The disastrous effects that Euro-American diseases and medical systems had on Native American lives and cultures have been more thoroughly investigated in recent years. See Varro E. Tyler, "Three Proprietaries and Their Claim as American 'Indian' Remedies," *Pharmacy in History* 26 (1984), 146-49; Christopher Hobbs, "Golden Seal in Early American Medical Botany," *Pharmacy in History* 32 (1990), 79-82; Michael A. Flannery, "From *Rudbeckia* to *Echinacea*: The Emergence of the Purple Cone Flower in Modern Therapeutics," *Pharmacy in History* 41 (1999), 52-59. A good introduction to the effect of western medical ideologies on Native Americans is Robert A. Trennert and Mary L. Curtis, *White Man's Medicine: Government Doctors and the Navajo, 1863-1955* (Albuquerque, 1998).

9. Diane Price Herndl, "Critical Condition: Writing about Illness, Bodies, Culture," *American Literary History* 10 (1998), 771-85; Carolyn Sorisio, *Fleshing Out America: Race, Gender, and the Politics of the Body in American Literature, 1833-*

Surviving copies of well-thumbed and annotated handbooks and manuals for home health care indicate that nineteenth-century Euro-Americans turned to texts for medical advice, although it is not easy to tell if people used them along with, or instead of, consultations with doctors. Titles such as *Howard's Domestic Medicine* and *A Dictionary of Domestic Medicine and Household Surgery* promised readers practical do-it-yourself guides to diagnosis and treatment. Such books also told the family healer when to call in skilled practitioners and regularly recommended medications, such as opium and mercurials, that could not be gathered from either the wilderness or the kitchen garden.¹⁰ The importation and distribution of wholesale drugs to a broad retail market, along with the ready-made tonics and cure-alls popularized through advertising in the mid-nineteenth century, reminds us that practicing medicine without doctors did not mean practicing medicine without the doctors' tools—or promised substitutes for them.¹¹

1879 (Athens, GA, 2002); Stephen Nissenbaum, *Sex, Diet, and Debility in Jacksonian America: Sylvester Graham and Health Reform* (Westport, CT, 1980); Charles E. Rosenberg, "Catechisms of Health: The Body in the Prebellum Classroom," *Bulletin of the History of Medicine* 69 (1995), 175–97. Contrast with Jeanne H. Watson, "'A Laughing, Merry Group': Women Triumphant over Travail on the Overland Trails," *Californians* 12 (1995), 10–19; and J. K. Crellin, "Domestic Medicine Chests: Microcosms of 18th and 19th Century Medical Practice," *Pharmacy History* 21 (1979), 122–31.

10. Horton Howard, *Howard's Domestic Medicine* (Cincinnati, 1859); Spencer Thomson, *A Dictionary of Domestic Medicine and Household Surgery*, 10th American ed. (Philadelphia, 1877); Charles Rosenberg, "Medical Text and Social Context: Explaining William Buchan's 'Domestic Medicine,'" *Bulletin of the History of Medicine* 57 (1983), 22–42; idem, "John Gunn: Everyman's Physician," in Charles Rosenberg, ed., *Explaining Epidemics and Other Studies in the History of Medicine* (New York, 1992), 57–73; Lamar Riley Murphy, *Enter the Physician: The Transformation of Domestic Medicine, 1760–1860* (Tuscaloosa, AL, 1991); John C. Burnham, "Change in the Popularization of Health in the United States," *Bulletin of the History of Medicine* 58 (1984), 183–97. For brief descriptions of medicinals and their uses derived from mainstream pharmacopoeias in this period, see J. Worth Estes, *Dictionary of Protopharmacology: Therapeutic Practices, 1700–1850* (Canton, MA, 1990)

11. Norman Gevitz, "Domestic Medical Guides and the Drug Trade in Nineteenth-Century America," *Pharmacy in History* 32 (1990), 51–56; William J. Petersen, "Devils, Drugs, and Doctors," *Palimpsest* 50 (1969), 305–58. Petersen used a number of sources creatively to introduce Iowa readers to medical care in Iowa from the 1830s to 1920s, but his interpretations must be used with caution.

Calling in a doctor, if indeed there was a practitioner to be had, marked the point when the severity of sickness or injury, or the duration of a chronic condition, passed beyond the ability or willingness of the individual, the family, and neighbors to cope. Having a choice among practitioners was a luxury that came with increasing populations. In 1853, for example, reports at the annual meeting of the Iowa Medical Society noted that in addition to approximately 50 regular physicians—those acceptable to IMS members—there were several Thomsonians, eclectics, homeopaths, hydropaths, and generic “botanics” practicing in Louisa, Des Moines, Washington, and Keokuk counties.¹²

For the founding members of the IMS, all of these other healers were simply “quacks” who promised cures for the credulous and competition for properly educated doctors. For these other practitioners and their followers, however, they were not “quacks,” but legitimate healers whose treatment philosophies challenged the false assumptions of traditional, mainstream physicians. Thomsonianism, in particular, had a strong anti-physician, egalitarian appeal. In 1822 Samuel Thomson published his *New Guide to Health; or, Botanic Family Physician*, after patenting his “system” in 1813–1815. Thomson argued strongly against the harsh treatments of regular medicine, especially against bloodletting and medications containing compounds of mercury, arsenic, or other metals. At its core, his “system” placed cold as the cause of all illnesses, and favored treatment by “heat” through steam baths, taking in “hot” substances, such as cayenne pepper, and removing deleterious substances by vomiting induced by plant-based emetics.¹³ As others took up Thomsonianism, they introduced their own systems of “botanical” medicine, with variations on theories about the causes of illnesses and the rationale for treatment. At mid-century, then, “botanics” had become a catchall term for practitioners who promoted plant-based treatments as a way to set themselves apart from regular physicians.

12. Bierring, “Iowa State Medical and Chirurgical Society,” 27; [Editorial], *Iowa Medical Journal* 3 (1856), 301–2.

13. Susan E. Fillmore, “Samuel Thomson and His Effect on the American Health Care System,” *Pharmacy in History* 28 (1986), 188–91; Starr, *The Social Transformation of American Medicine*, 51–53.

"Hydropath" was a similarly generic term applied to those who championed the healing effects of water as a universal cure. "Taking the waters," immersion in various natural mineral springs, and steam bathing have long roots in European medical traditions, and visiting mineral water spas for drinking or bathing became a popular pastime for eighteenth-century elites. The nineteenth-century American versions of water-cure for domestic practice were both more egalitarian and more portable than the spa movement, as its practitioners advised on amounts of water to drink as well as on the time, duration, and temperature for rubbing with wet cloths and bathing at home.¹⁴ Water temperature was a key factor in the water-cure regimen. Cold water tightened what was loose, closed the body's "pores" and stimulated sluggish circulation. Hot water loosened what was tight, opened the "pores" and relaxed the over-stimulated system. After mid-century, hydropathy became entwined with the "hygiene" movement, which stressed the healthful and moral benefits of personal and domestic cleanliness.¹⁵

Both botanical medicine and hydropathy offered "natural" therapies based on simple models of disease causation. Practitioners learned these systems through books, inspiration, and working with other healers. Training was ad hoc at best, however, and practitioners primarily depended on public acceptance of their self-proclaimed knowledge and skills throughout the nineteenth century.

14. Roy Porter, ed., *The Medical History of Waters and Spas* (London, 1990); Susan E. Cayleff, *"Wash and Be Healed": The Water-Cure Movement and Women's Health* (Philadelphia, 1987). For examples of books aimed at the domestic audience, see R. T. Claridge, *Every Man His Own Doctor: The Cold Water, Tepid Water, and Friction-Cure ...* (New York, 1849); Joel Shew, *Hydropathy; Or, The Water-Cure: Its Principles, Processes, and Modes of Treatment &c.*, 4th ed. (New York, 1851); and John King, *American Family Physician; Or, Domestic Guide to Health* (Indianapolis, 1860). In Iowa, there were spas or mineral springs in Colfax (Jasper County), Lineville (Wayne County), Storm Lake (Buena Vista County), and Eddyville and Ottumwa (Wapello County). William Edward Fitch, *Mineral Waters of the United States and American Spas* (Philadelphia and New York, 1927), 370-75; *Ottumwa Daily Courier*, 6/18/91. See also a copy of the Fountain House letterhead in Cherokee, with a list of baths and other water services on its reverse side, in a folder titled Medicine—Disease and Disease Prevention, misc. items, State Historical Society of Iowa, Iowa City.

15. Russell T. Trall, *The True Healing Art* (New York, 1862).

In contrast, by the mid-nineteenth century, eclectics and homeopaths defined themselves not only as important critics of regular medicine's theories and therapies, but also as opponents of uneducated and ill-trained healers. Both of these groups saw medicine as a complex subject requiring study and experience working with an established doctor before a practitioner could treat the ill and injured.

Homeopathy was the most respectable rival to regular medicine in the 1850s. Its students required considerable training, even formal courses, before being considered ready for independent practice. Dr. Samuel Hahnemann developed homeopathy in Germany in the 1790s. He based his system on his own experience with trying small doses of drugs on himself when healthy to see how they acted on patients when sick. From this work he determined that drugs that produced the same symptoms as a disease were much more effective in curing those diseases—*similia similibus curantur* (like cures like)—because symptoms, such as nausea, showed the body's natural attempts to heal itself, which the practitioner only needed to enhance. Hahnemann also claimed that drugs should be given in very small doses, so he diluted the medicinal substances into parts per hundreds of thousands, even millions. Hahnemann's books, especially the *Organon of Rational Medicine* (first ed., 1810), inspired many practitioners to embrace his system and establish homeopathic medical schools, such as the Hahnemann Medical Colleges in Philadelphia (1848) and Chicago (1860).¹⁶

While homeopaths had a distinct, clearly articulated philosophy of healing based on assisting the body's natural responses to disease, eclectics overtly rejected medical "theories" and embraced empiricism. In the 1830s Wooster Beach, a regular physician interested in the claims of the botanics, surveyed the American medical scene and decided that the best approach to medical practice was to apply what worked in treating dis-

16. Ronald L. Numbers, "Do-It-Yourself the Sectarian Way," in Risse, Numbers, and Leavitt, eds., *Medicine Without Doctors*, 57–62. Numbers also details the provision of homeopathic books and drug kits for use by lay people at home. Norman Gevitz has a particularly useful survey of homeopathy in his "Unorthodox Medical Theories," in W. F. Bynum and Roy Porter, eds., *Companion Encyclopedia of the History of Medicine*, 2 vols. (London, 1993), 2:1604–12.

ease, regardless of whether or not the treatment could be justified or explained in terms of contemporary theories of physiology and pathology. For Beach, and those who followed this practical ideology, viable remedies from regular doctors, homeopaths, botanics, and hydropaths could all be flung together as medical resources. Treatments were not to be rejected on *a priori* philosophical grounds. Eclectics did agree with regulars and homeopaths that medical practitioners needed education and training, and eclectic medical schools started to open in the 1840s.¹⁷

Botanics, hydropaths, homeopaths, eclectics, and other fringe practitioners all defined themselves in part by their critiques of regular medicine. At mid-century, regular medicine was the medicine of university and collective elites, still centered on the knowledge and practices produced in European cities. Regular physicians "fought" disease, combating symptoms through drugs and procedures that could produce dramatic effects on the body. Over-stimulation, fever, or a pounding pulse called for bloodletting; fainting or collapse required stimulants. Any hint of constipation required purges. Venereal diseases, especially syphilis, demanded ointments and pills containing mercury. Emetics for vomiting, sudorifics for sweating, and diuretics for promoting urination had all been used for centuries in regular medicine. Models for understanding human physiology had undoubtedly changed in the first half of the nineteenth century, as highly educated physicians worked out the principles of cell theory, and pathologists more precisely defined diseases in tissues, but practice still depended on ridding the body of whatever ailed it and then providing supportive care during recuperation.¹⁸

17. Ronald L. Numbers, "The Making of an Eclectic Physician: Joseph M. McElhinney and the Eclectic Medical Institute of Cincinnati," *Bulletin of the History of Medicine* 47 (1973), 155-66.

18. These generalizations are discussed more fully in a number of survey texts of the history of medicine. See, for example, Roy Porter, *The Greatest Benefit to Mankind: A Medical History of Humanity* (New York, 1998); and John Duffy, *From Humors to Medical Science: A History of American Medicine* (Urbana, IL, 1993). Claims that regular medicine was more "scientific" than other medical systems must be assessed in terms of what "science" meant in American society between 1830 and 1880. For a thoughtful and well-researched discussion of

Ordinary regular doctors performed surgical procedures as well as treating acute and chronic diseases. Eclectic and homeopathic practitioners also set broken bones, drained abscesses, and bandaged wounds. The philosophical differences in treatment appeared more in the therapies used to deal with the medical side of surgical conditions, such as infections and problems with healing, rather than in the surgical techniques themselves. More differences among the range of practitioners may have arisen from deciding when surgery, such as draining fluid accumulating in cysts, was really required, than in promoting alternative surgical interventions.¹⁹

The settlers who came to Iowa in the 1830s through the 1870s had, potentially at least, a diverse collection of medical practitioners championing an assortment of medical philosophies and treatment options to deal with their illnesses. In pragmatic terms, of course, much depended upon just what sort of practitioners happened to be accessible, and whether having the local doctor come to call really seemed to be a better idea than relying on family, friends, and neighbors to make do.

Regular Physicians: Respectability, Ethics and Education

As the founding members of the Iowa Medical Society expressed concern over the depressed state of the "science, dignity and influence of the medical profession in Iowa," they had two issues to face. The first was competition from "quacks." The second was the sorry state of regular medicine itself. These were connected, for, as one Iowa doctor observed, "quacks [will] continue to flourish" until "all physicians become gentlemen and discard the arts of quackery."²⁰ Regular physicians advertised, claimed cures, and, in general, behaved just like the irregular practitioners

this complex issue, see John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885* (Cambridge, MA, 1986).

19. This observation is derived from years of reading primary sources in eighteenth- and nineteenth-century medicine rather than from systematic inquiry; the question begs for research.

20. Bierring, "Iowa State Medical and Chirurgical Society," 27.

who lured the credulous away from educated doctors. The problem, from the perspective of the AMA and its affiliated state societies, arose because just about anyone could become a regular practitioner. There were dozens of medical schools by mid-century, but an M.D. degree was not required for practice, so many regular doctors learned from a mentor through informal apprenticeship, or "private pupilage." Paid by cash or by the free labor of an assistant learning the trade (or both), doctors could take on whom they pleased as students, including those, as John Sanford put it in 1851, so "deficient" in basic education that they were "not competent to promote" the "usefulness and dignity" of their chosen profession.²¹

One of the reasons to have a medical society, then, was to identify—first by self-selection—the regular practitioners who considered themselves the appropriate leaders of "the" medical profession. To become a member of the IMS after 1850, a physician had to be a "regular practitioner" who had "a diploma from a respectable medical college, *or* a license from any respectable medical society *or* upon the recommendation of a majority of the board of censors," which was a committee of the society itself.²² IMS members would presumably know which colleges and societies counted as "respectable," just as their board of censors would know whom to recommend to join the group.

To raise the status of regular practitioners, the AMA and its associated state societies proclaimed standards of professional conduct that would, ideally, foster collective solidarity and demarcate respectable regular physicians from both irregular healers and poorly educated regulars. The AMA Code of Ethics, adopted by the IMS in 1856, included basic ethical principles, such as patient confidentiality, but much of the document focused on how physicians should behave when dealing with other practitioners and the public. It was the physician's duty, for example, "to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposters." In order to maintain the dignity of regular medicine, physicians should not advertise their services, manufacture or sell patent

21. *Ibid.*, 25.

22. *Ibid.*, 23, quoting from the first IMS constitution; emphasis added.

medicines, hold a patent on "any surgical instrument," poach patients from another regular physician, or make "contumelious and sarcastic remarks" about the profession to which they belonged. The regular doctor, moreover, should maintain "a greater purity of character, and a higher standard of moral excellence" than members of other professions. Regular physicians should willingly consult with one another over difficult cases, with due attention to keeping secret any disputes over treatment. Regular physicians, however, should *not* consult with any practitioner "whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry," which meant the homeopath, hydropath, and all other irregulars. Adhering to this last principle, generally called the "exclusion clause," was supposed to demonstrate how much regular doctors disapproved of different medical systems, since such refusals meant the loss of consulting fees and community goodwill. To the dismay of the AMA's elite, however, affiliated state and county societies—not to mention nonmembers—rarely abided by the rule.²³

A collective profile of medical practitioners in the state 26 years after the founding of the IMS illustrates that, while regular practitioners indeed dominated the practice of medicine in Iowa, homeopaths and eclectics definitely counted as legitimate doctors. Charles Lothrop, a regular physician practicing in Lyons, published a *Medical and Surgical Directory of the State of Iowa* in 1876. In it he listed the names, towns, and type of practice of all the medical practitioners he had been able to locate in the state, county by county. For some physicians, the data were extensive, including the titles of articles published in medical journals; for others, only the last name and nearest town were included. It is impossible to know just how complete or accurate the *Directory* was. In later editions, Lothrop reminded practitioners that they

23. Article I, sections 1, 3, and 4, and Article IV, section 1, of the American Medical Association's Code of Ethics (1847), reprinted in Stanley Joel Reiser, Arthur J. Dyck, and William J. Curran, eds., *Ethics in Medicine: Historical Perspectives and Contemporary Concerns* (Cambridge, MA, 1977), 26–34. For the IMS adoption of the AMA code, see Bierring, "Iowa State Medical and Chirurgical Society," 24, 30. See also Starr, *Social Transformation*, 91–92, 98, 101–2.

needed to send him corrections—including, if necessary, proof of their graduation from a medical school if their names had not been printed on official lists of graduates—or simply put up with any errors that persisted.²⁴

He evidently had no problem including homeopaths and eclectics, a sign of collegiality that should have upset AMA purists. Lothrop depended on “agents” (primarily other practitioners) who had sent him information. Not only did Lothrop include homeopathic and eclectic doctors in the *Directory* but, according to his key to symbols, he was also willing to include various fringe healers, although few took advantage of this publicity. Lothrop did not include a category for midwives, however, strongly suggesting that, despite his openness to different kinds of practitioners, he drew an editorial line at considering women who were skilled in assisting at childbirth as properly belonging in his *Directory*.²⁵

Even if Lothrop’s *Directory* has biases and gaps, which are nearly inevitable given the scope of the project, the numbers of individuals listed in his categories offer rough estimates of the extent and type of practitioners across the state (see table 1). The dominance of self-defined regular practitioners is obvious. Closer scrutiny shows, however, that only a little over half of the state’s practitioners (1,082 out of 1,996) had graduated from a regular medical school, and only 60 percent of the names appear with any sort of M.D. degree at all.

Among the regular physicians with medical degrees, a handful reported graduating from distinguished European and British universities, including those in Norway, Berlin, Utrecht, Edinburgh, Glasgow, and London. Others sported degrees from well-known eastern institutions, such as Harvard, Yale, Columbia, and the University of Pennsylvania. The vast majority, how-

24. Charles H. Lothrop, *The Medical and Surgical Directory of the State of Iowa* (Lyons, 1876), 15; idem, *The Medical and Surgical Directory of the State of Iowa for 1886 and 1887* (Clinton, 1886), 9, 116.

25. Lothrop, *Medical and Surgical Directory* (1876), 15. Iowans certainly had midwives assisting at births. Provisions in the 1880 *Code of Iowa* to collect information on all births and deaths in the state required midwives, as well as physicians, to register with county clerks so that county administrators would know who would be responsible for signing birth certificates. See 1880 *Code of Iowa*, Title XI, chap. 6, sec. 3, 5.

TABLE 1
IOWA PRACTITIONERS, 1876

	Total Number	Education
Regular physicians	1498	
Graduates of medical schools		1082
Did not attend/did not graduate/unknown		416
Homeopathic physicians	161	
Graduates of medical schools (usually homeopathic)		58
Did not attend/did not graduate/unknown		103
Eclectic physicians	175	
Graduates of medical schools (usually		70
Did not attend/did not graduate/unknown		105
Other	3	
No information on education or type of practice	159	
Total number of practitioners listed	1996	
with an M.D.		1210
without an M.D.		786

Source: Charles H. Lothrop, *The Medical and Surgical Directory of the State of Iowa* (Lyons, 1876), 153-240.

ever, had received their degrees from Rush Medical College, which opened in Chicago in 1837, and from two Iowa medical schools, one in Keokuk (begun in 1850) and the other in Iowa City (begun in 1870). Having medical schools in the state appears to have boosted the number of regular Iowa practitioners with degrees, and perhaps the number of regular practitioners in general, by making professional education locally accessible.²⁶

Collective Identities: Schools, Journals, Teaching Hospitals

Medical schools created an even larger portion of the next generation of educated practitioners, presumably effectively indoctrinated into professional ideologies and loyalties. Professional publications, especially medical journals, similarly attracted attention to the dedication that practitioners had for their occupation. Writing books, articles, and case studies dem-

26. Lothrop, *Medical and Surgical Directory* (1876).

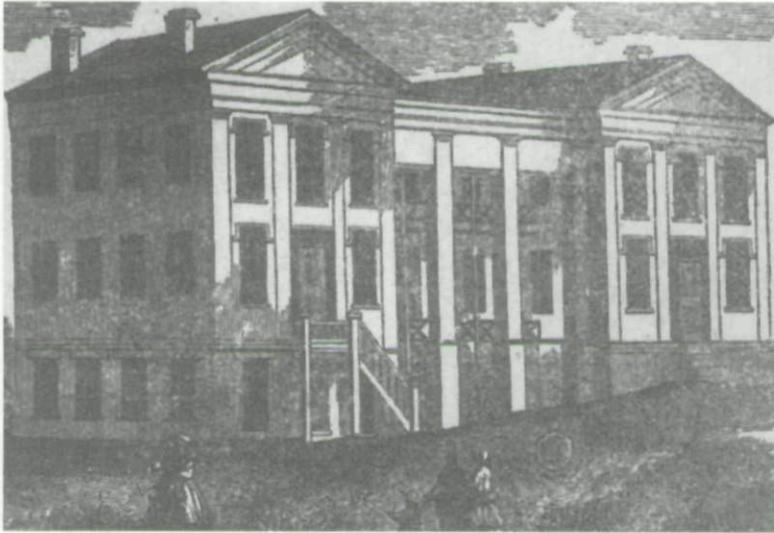
onstrated active, ongoing attention to the advancement of medical knowledge; reading them evinced ongoing efforts at self-improvement. Creating hospitals supported by charitable donations, too, could generate goodwill among a town's citizens, even when the underlying motive was to provide patients to use for teaching. Visible advocacy on health issues requiring government attention displayed regular physicians working for the public good, although getting immersed in political tangles and party chauvinism could have unpleasant side effects.

None of these methods was unique to regular physicians. Homeopaths, eclectics, and proponents of other medical systems also lobbied legislatures and started medical societies, schools, hospitals, and journals throughout the United States. In Iowa, eclectic practitioners organized the Iowa State Eclectic Medical Society in 1868, with 39 members by 1876. Iowa homeopaths, in turn, started the Society of Homeopathic Physicians of Iowa in 1870, listing 59 members in 1876, at least four of whom were women.²⁷ Such groups provided focus for practitioners who wanted to counterbalance the authority that regular physicians hoped to exert through their own organizations. Regular physicians, nevertheless, were always in the majority, and so tended to have more resources—in both time and money—to work on professional goals outside of their own practices.

Institution building in Iowa began with the founding of medical schools. A group of regular physicians started a medical school in 1848, first in Rock Island, Illinois, and then across the Mississippi at Davenport. This group moved their school to Keokuk in the summer of 1850, shortly after the board of trustees of the recently created State University of Iowa in Iowa City (1847) granted the group's request that the Keokuk school be named the state university's Medical Department. John Sanford, the physician who organized the IMS, was the new dean of the Keokuk school, and three of the other six members of the faculty were among those who gathered for the first meeting of the society.²⁸ Such overlap is hardly surprising. Sanford needed credi-

27. *Ibid.*, 89–90, 113–14.

28. Bierring, "Iowa State Medical and Chirurgical Society," 21; John T. McClintock, "Medical Education in Iowa," in *One Hundred Years of Medicine in Iowa*, 235–42.



The Keokuk Medical School opened in 1850 in this "First Medical Building." Sketch reproduced from One Hundred Years of Iowa Medicine (Iowa City, 1950).

bility for the school, and the IMS needed credibility for regular practitioners. The interests of the IMS and of medical educators in Iowa would remain intertwined, although society meetings would become venues for infighting as well as for proselytizing.

One of the signs of a good medical school in the mid-nineteenth century was access to a hospital where students could observe their professors caring for patients, instead of just hearing lectures about how to practice. The Keokuk faculty set to work on this as soon as the school opened in 1850, and their "University Hospital" started taking patients in 1851. As in the vast majority of general hospitals in the United States, charitable donations—including the time of the faculty physicians and surgeons—supported the Keokuk hospital. Hospitals were for the poor. Anyone who could afford medical attendance had care at home, including surgery. The occasional traveler might seek refuge in a hospital when ill or injured, but the usual view held that hospitals were places to be avoided. People preferred to stay out of hospitals, not because they were always the death traps

of sensationalized stories, but due to the stigma of poverty and dependence on charity. In general, hospitals, especially those outside of large urban areas, were modest, housing at most 30 or so patients at a time. Such facilities provided medical schools with a small amount of clinical "material" and, it was hoped, at least some opportunities for major operations for students to observe. The Keokuk hospital seems to have thrived, perhaps partly due to the level of traffic along the Mississippi, until it was co-opted for army use during the Civil War.²⁹

In 1851 the state legislature reaffirmed that the College of Physicians and Surgeons at Keokuk was the Medical Department of the State University of Iowa, and gave the department permission to grant medical degrees.³⁰ Seventy students attended the school in 1854–55, and class sizes continued to increase. With a hospital, large lecture theaters, growing collections of *materia medica* specimens and anatomical models, a library, and considerable civic support, the Keokuk college seemed to be headed for a long and successful place in Iowa medical education.³¹

Not surprisingly, Keokuk was also the home of Iowa's first medical journal. Beginning publication in September 1850, the *Western Medico-Chirurgical Journal* aimed to serve practitioners in Iowa, Illinois, and Missouri as a venue for observations on their own cases, short articles on medical topics, and a digest of medical news published in other journals. The publication was short-lived, lasting only until early 1854. It was more or less replaced by the first version of the *Iowa Medical Journal*, which was explicitly "conducted by the Medical Department of the Iowa University," with prominent contributions from the faculty.³² Like its predecessor, the *Iowa Medical Journal* contained original

29. Clyde A. Boice, "Hospitals in Iowa," in *One Hundred Years of Iowa Medicine*, 372–74. After the war, if the college continued to house patients, it certainly did not call this section the "University" hospital, because its connection to the State University of Iowa had been severed.

30. 1851 *Code of Iowa*, Title XIV, chap. 65, sec. 1026–28; McClintock, "History of Medical Education," 238–40.

31. McClintock, "History of Medical Education," 240–44; "Announcement," *Iowa Medical Journal* 3 (1856), 314–19. For an overview of medical education in nineteenth-century America, see Kenneth M. Ludmerer, *Learning to Heal: The Development of American Medical Education* (New York, 1985).

32. Title page, *Iowa Medical Journal* 1 (1853–54).

articles by local authors and digested medical news from elsewhere. Considering that journal subscriptions were costly for individual practitioners, the abstracts and extracts from other publications were important for disseminating both recent discoveries and comments on practice from major medical centers.

On October 29, 1853, for example, the British *Lancet* carried an article on "Deaths from the Inhalation of Chloroform" at University College Hospital and St. Bartholomew's Hospital, London, that month. Chloroform had entered medical practice as a general anesthetic for childbirth and surgery in 1847, and had been received with great enthusiasm as a safe method of relieving pain. As the title suggests, this report sounded a cautionary note and contained advice on how to use the anesthetic carefully—advice that had been extracted and translated from a French memoir on the subject. The *Boston Medical and Surgical Journal* copied the *Lancet* essay verbatim, and the editors of the *Iowa Medical Journal*, in turn, copied it from the Boston volume, releasing it to its readers in January 1854.³³ This chain of dissemination illustrates how Iowa physicians could link themselves to the larger Euro-American world of medical knowledge, whether or not they actually applied that knowledge to their own patients in any systematic way.

In contrast with the news culled from prestigious medical journals, the original contributions of midwestern physicians were either essays about medicine as a profession, comments on experience with particular medications, or detailed reports on interesting cases, such as "Secondary Syphilis: Death from Falling in of the Epiglottis," by Dr. Grafton of Janesville, Wisconsin. In an example of one of the more general essays, John Sanborn, dean of the Keokuk medical school, wrote on the "Importance of a Sound Medical Education," with such stirring remarks as "Every young physician who passes forth from the halls of medical instruction, goes as an apostle of medical science."³⁴ The

33. "Deaths from the Inhalation of Chloroform," *Iowa Medical Journal* 1 (1853-54), 183-85; "St. Bartholomew's Hospital: Death from Inhalation of Chloroform," *The Lancet*, 10/23/1853, 410-11; "Deaths from Inhalation of Chloroform," *Boston Medical and Surgical Journal* 49 (1853), 359-63.

34. J. E. Sanborn, "Importance of a Sound Medical Education," *Iowa Medical Journal* 1 (1853), 5.

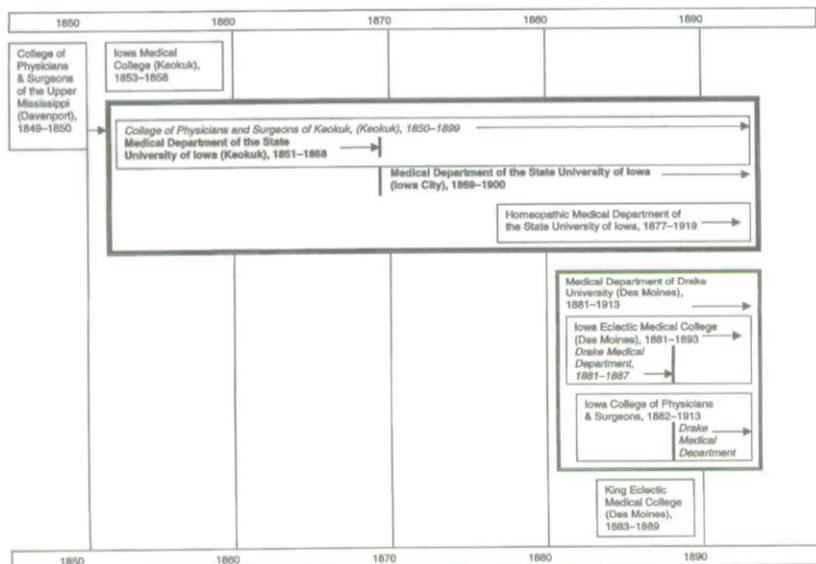
role of the journal as an avenue for advancing the interests of the Keokuk school and, implicitly, the interests of the IMS itself, underscores the process by which regular medicine gained local and regional legitimacy. It was hardly enough, however, to ensure that competing interests within regular medicine itself would step aside for the sake of professional unity.

The *Iowa Medical Journal* ceased publication in 1869, after producing only five volumes during hard financial times in the late 1850s and then the Civil War. Its last issue corresponded to the months when the State University's Medical Department in Keokuk was suddenly stripped of its university status. The State University had finally started undergraduate classes in Iowa City in 1855, and the law school moved there from Des Moines in 1868. Unbeknownst to the Keokuk group, an ambitious medical practitioner, Dr. Washington Peck of Davenport, and his political supporters, Judge John Dillon and John P. Irish, a state senator, member of the university's board of trustees, and editor of the *State Democratic Press*, an Iowa City newspaper, had laid the groundwork for opening a medical department on the Iowa City campus. In September 1868 Peck presented his proposal to the board of trustees, which approved it.³⁵ The public announcement that autumn of this new enterprise set off several years of bitter wrangling and politicking in the board of trustees (reorganized into a board of regents), the legislature, and the IMS.

The behind-the-scenes political maneuvering did not square with the collegial behavior hoped for from fellow physicians. It was particularly galling to the Keokuk faculty that the organizers had not invited any of them to move to their school in Iowa City, as had been done with the law school professors in Des Moines. At the meetings of the Iowa Medical Society in 1869 and 1870, the medical school issue clearly divided the membership. Dr. William Watson of Dubuque presented a long resolution in 1870 decrying the formation of the new medical school. Watson labeled the efforts of members of the society "who have been active in the organization of the medical department of the State University, [as] injudicious, and injurious to the interests

35. McClintock, "History of Medical Education," 268-69.

FIGURE 1
MEDICAL COLLEGES IN IOWA, 1850-1890



of the medical profession and the people of the State."³⁶ IMS members voted to send Watson's statement to the governor as a measure of their feelings. Despite this censure and the introduction of a bill in the legislature that would have ended the Iowa City project, the new faculty proceeded to open their department in the autumn of 1870 with 37 students.³⁷

Funding was one of the central issues in the controversy over the Iowa City school. Throughout the United States at that time, the vast majority of medical schools, whether formally attached to universities or not, were self-funding. Called "proprietary" schools, such institutions depended heavily on the investments of their faculty in time and money for the buildings, libraries, and other teaching materials; the faculty literally owned the schools and their contents. City or state loans (as in

36. "Iowa State Medical Society—Eighteenth Annual Meeting," *Transactions of the Iowa State Medical Society* 1 (1867-1871), 130-31.

37. McClintock, "History of Medical Education," 272-75.

Keokuk) were repaid with interest, and community donations were heartily welcomed. Professors received no salaries. Whatever income they gained from their labor came from profits from student tuition and, upon retirement, from selling their shares to another professor. Faculty also benefited, sometimes the most, from the private practice generated by having a prominent position in the community as a medical expert, as well as from referrals from their former students. In general, moreover, all American professional schools, not just medical ones, were self-supporting. They simply were not considered among the educational opportunities that states owed to their citizens, as were primary and secondary schools, teachers' colleges, and some access to a higher "liberal" education.

The Iowa City medical department started out on the proprietary model, although with some initial outlay by the legislature to change part of an existing building into lecture rooms and other facilities for the medical faculty. The faculty, with no set salaries, were to have total control over student tuition and any donations from well-wishers. To give their students clinical experience, the faculty had to open an outpatient clinic and were responsible for all of their other needs. This arrangement did not last. In 1873 the medical department managed to get a small amount from the regents to fit up its first hospital, which opened that year with the nursing and charitable assistance of the Catholic Sisters of Mercy. With enrollment in the medical department up to 100 students, however, the faculty wanted to expand quickly. In a move that horrified the Keokuk faculty and many other Iowa physicians, the board of regents decided to provide the medical professors with salaries: \$900 per year, when tuition was \$80 per year for the medical students. Even more disturbing, in 1878 the medical department received a \$20,000 appropriation from the legislature for operating funds, and started on the path of asking for more funding at each budget cycle. In 1874, 1876, and 1878, the IMS passed censures on the moves toward state funding, then apparently gave up.³⁸

38. *Ibid.*, 275, 278-80; Carl B. Cone, *History of the State University of Iowa: The College of Medicine*, unpublished manuscript (1941), Special Collections, University of Iowa Libraries, Iowa City, 43-53.

During this period of rancor and competition, the medical schools in Iowa City and Keokuk were nearly identical in their admission standards, curriculum, and graduation requirements. They also resembled most of the proprietary schools active at this time in the United States. First, there were no admission requirements, except for the means to pay tuition. To graduate (and not all students bothered to do that) at either school, a candidate had to be 21 years old and to have completed three years of medical education, with at least one year of practical instruction by an active practitioner and two years of courses. At least the final year of courses had to be taken at the school from which the student hoped to graduate.³⁹

The standard curriculum consisted of lectures on the theory and practice of surgery, the theory and practice of medicine, midwifery and the diseases of women and children, physiology and anatomy, and chemistry and the *materia medica*. To this set, some schools added medical jurisprudence, a course on dentistry, perhaps some hands-on experience with a microscope, chemical analysis, and human dissection, and clinical experience in outpatient clinics or a hospital. The yearly session lasted four months, from late October to early March, with all of the courses given each year. After the first year, the student simply repeated exactly the same courses in the second year, presumably picking up what was missed the year before. During the second year, as well, the student wrote a thesis, which, given the surviving examples, did not have to be particularly original, well written, or lengthy. The final steps were an examination, usually orally by the professors, and payment of a fee in the range of one-quarter to one-third of the annual tuition. If the professors failed the candidate in the examination, they were supposed to return the fee, which went directly into the faculty's pockets. As a result, cynics doubted that many medical students failed due to incompetence.⁴⁰

As similar as they were in admission standards, curriculum, and graduation requirements, there were a few significant differences between the two Iowa medical schools in 1870. First,

39. McClintock, "History of Medical Education," 228-30.

40. *Ibid.*, 229-30, 275-76; Ludmerer, *Learning to Heal*, 11-15.

because the new medical department was actually in Iowa City, the State University's chemistry professor, Gustav Hinrichs, could be persuaded to teach chemistry to the medical students. Hinrichs joined the university in 1863 as professor of natural philosophy and chemistry. Born and educated in Germany, Hinrichs believed that students should learn science in the laboratory as well as in lectures. Because providing laboratory space and equipment for students was a rather expensive undertaking for the low-budget state university, Hinrichs did not get very far with his plans. He was an outspoken proponent of laboratory work and scientific research, nevertheless, and having a professional chemist teaching medical students did add some luster to the new department.⁴¹

The second difference was not one that the medical faculty welcomed; indeed, they were taken by surprise when the university applied its regulations to them, since the university's trustees had not subjected the medical department in Keokuk to the same rules. They had to admit women. By state mandate, the state university was coeducational. This provision made sense when the university was envisioned as an institution centered on undergraduate education, for many of the small private academies and colleges springing up in the Midwest taught both men and women. Educated women, in turn, could teach school, and teaching children was one of the few respectable occupations for women, especially single women, during this period. For the trustees, and then the newly established board of regents in 1870, the language of coeducation for women applied to the new professional departments—law and medicine—and no amount of faculty protest in 1869 and early 1870 would budge them. Of the 37 students in the first medical class in Iowa City, then, 10 were women, and the Iowa City medical department became the first university-affiliated medical school in the Midwest to graduate women physicians who had been taught in fully coeducational classes.⁴²

41. Stow Persons, *The University of Iowa in the Twentieth Century: An Institutional History* (Iowa City, 1990), 9–10. Hinrichs was such an outspoken critic of education at the university that he was dismissed in 1885. *Ibid.*, 10.

42. McClintock, "History of Medical Education," 275. On the origins of the tradition of coeducation in Iowa and the Midwest, see Doris Malkmus, "Origins



Three women pose proudly along with 12 men in the University of Iowa homeopathic class of 1882. Photo courtesy of Special Collections (UIHC), University of Iowa Libraries, Iowa City.

The protest over women becoming regular medical practitioners was not a quirk of the new department's faculty. On that issue, the faculty held a common view in the profession, one clearly expressed by Dr. J. W. H. Baker, president of the IMS, in his address at the 1867 annual meeting. He strongly endorsed the views recently published in the *Boston Medical and Surgical Journal*. "The more moderate duties of professional life might be assumed by women," Baker said, "but the most laborious matters would be left for the sterner sex. What would the people do with a child-bearing doctor! What an acceptable excuse for delay in night calls could be offered by the lactating doctor!" He

of Coeducation in Antebellum Iowa," *Annals of Iowa* 58 (1999), 162-96. The medical school at the University of Michigan has entered the literature as the first coeducational school in the Midwest, as women were admitted in 1870. Regina Markell Morantz-Sanchez, *Sympathy and Science: Women Physicians in American Medicine* (New York, 1985), 111. Michigan's faculty insisted that women medical students be taught in separate courses, however, and that the faculty willing to teach them be paid an additional \$500 per year. Horace W. Davenport, *Fifty Years of Medicine at the University of Michigan, 1891-1941* (Ann Arbor, 1986), 20-21.

went on to detail the problems that women could not overcome, such as menstruation, the weakness of "overflowing sympathy," and the "peculiar characteristics of the female mind" that interfere with close, rational observation. Furthermore, he explained, woman's "nicer sense of delicacy . . . should interfere with her acquiring that knowledge of the human frame which is necessary to the practitioner."⁴³

Given these concerns and attitudes, the first year of classes in the State University Medical Department must have had its tense moments for both faculty and students. At the end of the academic year, the reporter for the *State Press* turned the awkward issue into a triumph for the people of Iowa. "This class has been a peculiar one in many respects," the reporter wrote in March 1871.

At the inception of the session the presence of the ladies among its members was feared as the introduction of a disturbing element. Even in Bellevue [in New York City], the ladies who sought admittance had been mobbed and insulted. . . . It remains for Iowa City to put the older colleges to blush by the treatment of its lady medical students. The lectures proceeded precisely the same as to a male class of gentleman, and in the work of the dissecting room was witnessed a sight unique in the history of science and of the world. Ladies and gentlemen worked together upon the same subjects and at the same time, and it was remarked that the dissecting room differed from that of other colleges in the quietness which reigned there and the freedom from jest and ribaldry. Ladies and gentlemen never forgot that they were ladies and gentleman, and in the Medical Department of the State University of Iowa, woman conquered, as she will always and everywhere in each legitimate [*sic*] field.⁴⁴

Women physicians hardly "conquered" Iowa medical practice, as their numbers remained quite small until the late twentieth century, but they certainly persevered. Before the medical department in Iowa City awarded degrees to women, a few had

43. J. W. H. Baker, "Medicine Not an Exact Science [1867]," *Transactions of the Iowa State Medical Society* 1 (1867-1871), 15; "Female Practitioners of Medicine," *Boston Medical and Surgical Journal* 76 (1867), 272-73.

44. This newspaper article has been preserved in a book of clippings kept by Dr. W. D. Middleton, one of the faculty, for the spring of 1871, now in William D. Middleton Collection, State Historical Society of Iowa, Iowa City.

started to practice in the state after studying elsewhere. Delia Irish, the first woman physician to join the IMS—in 1875—received her M.D. from the Women's Medical College in Philadelphia in 1868 and served as a physician in the New York Infirmary for Women and Children after graduation.⁴⁵ In Lothrop's 1876 *Directory*, nine regular women physicians (all graduates of medical schools) were listed with their obviously feminine first names, as were ten homeopathic women physicians, seven with degrees and three without. Since most names appeared only with first initials, however, it is impossible to know from this source how many women actually practiced in the state during this period.⁴⁶

The *State Press's* accolade to women's influence in 1871 particularly stressed how their presence created a decorous atmosphere in the dissecting room. This reference must have touched a raw nerve among Iowa City's inhabitants that March. The new department had just squeaked by a scandal that had erupted in January over the use of a body stolen from a local cemetery as a "subject" in the dissecting room. Teaching anatomy using human materials was an issue that plagued medical schools throughout Europe and North America in the eighteenth and nineteenth centuries.⁴⁷ By the mid-eighteenth century, it was a truism that doctors, particularly surgeons, needed to learn human anatomy. The subject had traditionally been taught through lectures, illustrations, models, and, where possible, a demonstration of a dissection on a human body. The key problem was obtaining a human corpse. For centuries the only state-sanctioned source was the bodies of criminals executed by the state for heinous crimes of murder. Dissection was a public punishment after death, one clearly associated with torture and a soul condemned for eternity.

45. M. Abbie Cleaves, "Memorial of Delia S. Irish, M.D., of Davenport," *Transactions of the Iowa State Medical Society* 4 (1879-1880), 187-88. Dr. Irish died of tuberculosis at age 35.

46. That women practitioners did choose to go by their initials only is clear from the case of J. Sarah Braunworth, an 1876 graduate of the Iowa City school. In Lothrop's 1876 *Directory* (p. 217), she is listed as "J. Sarah Braunworth"; in the 1886 *Directory* (p. 161), she is listed only as "J. S. Braunworth."

47. Susan C. Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London* (New York, 1996), 176, 182-83; Ruth Richardson, *Death, Dissection, and the Destitute* (London, 1987).

By 1800, however, state executions of a few people each year simply could not fill the demand for lecture demonstrations, much less for the major innovation in anatomy teaching that characterized the best medical schools—requiring students to dissect bodies themselves. A common solution was to rob graveyards, which anatomy assistants and students had also done for centuries.

In the early nineteenth century, even robbing pauper and slave graveyards, a practice citizens mostly ignored, did not fill the demand, and thefts from the graves of respectable people began to create a furor in cities with aggressive medical schools. England's Anatomy Act of 1832 provided a model for Anglo-American communities, and eastern states started to adopt forms of it to appease their citizens and medical faculties. The act basically stated that the bodies of those who died in state-supported institutions, particularly workhouses, hospitals for the poor, asylums, jails, and prisons, and who did not have relatives or friends to claim them for burial, could be delivered to medical schools for dissection. If the person clearly stated before death that he or she did not want to be dissected, then that wish was supposed to have been respected. There was no requirement to ask people about their preference, however. The medical school was then responsible for the decent burial of the remains after dissection was completed.⁴⁸

There was no anatomy act in Iowa until 1872. The Keokuk school managed to supply its dissecting rooms with bodies of the poor shipped in from elsewhere, particularly those brought upriver from St. Louis.⁴⁹ Iowa City did not have that advantage, but the medical faculty had promised the trustees and regents that bodies would be brought in from outside, transported from Chicago or other major cities. This turned out to be far more difficult than they expected, however. It is not clear what material

48. For a broad survey of the use of human parts in the history of medicine to the mid-twentieth century, see Susan C. Lawrence, "Beyond the Grave: The Use and Meaning of Human Body Parts: An Historical Introduction," in Robert Weir, ed., *Stored Tissue Samples: Ethical, Legal, and Public Policy Implications* (Iowa City, 1998), 111–42.

49. Keokuk was still importing cadavers from St. Louis in the 1880s. See *Daily Gate City*, 11/19/1887.



A dissecting class at the University of Iowa, including one woman, poses with a specimen. Photo courtesy State Historical Society of Iowa, Iowa City.

was available for the students in the fall of 1870, but the anatomy professor, Henry Boucher, was apparently desperate as classes opened in January. The newspaper accounts vary, but there is no doubt that the body of an Iowa City woman was taken from her grave shortly after burial in January. The family discovered the desecration, and, observing lights in the basement anatomy rooms of the medical school, went to the sheriff and demanded that he search the building. Apparently the judge delayed issuing a warrant to search the building, and then the sheriff delayed in serving it, long enough for word to get to those involved and for the body to be removed. After some behind-the-scenes negotiations, the family promised not to continue their fuss if the body was returned. When the corpse turned up at the undertakers, the face had been partly dissected. The anatomist, Henry

Boucher, was strongly encouraged to resign, and did so at the end of the term.⁵⁰

By March, the incident had been smoothed over enough for Isaac Potter, one of the students (who the department's janitor, Dominick Bradley, later claimed had helped dissect the face) to joke at commencement that "the citizens had watched over the medical institution by night and guarded it by day." His comment "brought the house down with roars of laughter."⁵¹

The grave-robbing incident spurred the legislators who supported the new medical school to act. According to the bill they passed, if medical schools or physicians within the state requested bodies to study, they were allowed to receive the bodies of the poor, from state institutions and elsewhere, who were to be buried at state expense. Medical schools were to keep careful records of these cadavers and, if a relative turned up to claim the corpse within six months, to turn it over immediately. The law prohibiting body snatching and the mutilation of corpses not covered by this statute remained on the books to preserve the sanctity of the dead who had the funds and friends to bury them.⁵² After this point, medical schools had a legal supply of corpses to use for anatomical dissection, although how well institutional and local authorities cooperated with the demand is an open question.

Despite the obvious advantages that the medical department of the State University in Iowa City acquired in the 1870s, the demand for medical training kept the College of Physicians and Surgeons in Keokuk flourishing. In 1878, for instance, 220 students graduated from the Keokuk school. Homeopaths and eclectics also stepped up to provide medical schools to educate their practitioners. As practitioners of these systems had organ-

50. *Iowa City Republican*, 1/4/1871, 1/18/1871; *Iowa City Tribune*, 2/10/1871, 2/11/1871, 6/3/1871 (clippings in Dr. Middleton's scrapbook).

51. *Iowa City Tribune*, 6/3/1871; *Iowa City Daily Democrat*, 3/2/1871.

52. 1880 *Code of Iowa*, Title XXIV, chap. 9, sec. 4018-4020. This law was passed by the General Assembly of 1872. Section 4017, the statute against body snatching and mutilation of the dead, dates back to the 1851 *Code of Iowa*, Title XXIII, chap. 145, sec. 2714, which prohibits removing a body from its place of rest and disposing of it elsewhere. Such a violation was a serious misdemeanor, with a punishment of up to one year in prison, a fine up to \$1,000, or both.

ized themselves into societies and stressed that they at least agreed with regular physicians on the importance of professional education, they had founded medical colleges throughout the United States. In Iowa the homeopaths were organized enough, and popular enough among lay adherents, to demand—and get—a Department of Homeopathy opened at the State University in 1877. Homeopathic students took classes with the regular students on subjects where there was philosophical accord, but then concentrated on homeopathic subjects when studying therapeutics for their M.D. degrees. In turn, an Eclectic Medical Department opened at Drake University in Des Moines in 1881, offering M.D. degrees to those who previously would have had to go out of state for a formal education in eclectic medicine.⁵³

By 1881, in short, Iowa had four medical schools representing the three major approaches to medical practice. It was not at all obvious either to physicians or to lay people in the 1860s to 1880s that only one sort of medical knowledge, one system of medical therapeutics, was “right.” If regular physicians claimed superiority because they went to medical school and got an M.D. degree, homeopathic and eclectic physicians could do the same. As other issues captured public attention in the 1860s to 1880s, regular physicians, especially those in the IMS, may have been among the most visible practitioners promoting legislation for health reform. In the end, however, they had to share authority with other educated and organized medical professionals. The healers who remained nearly invisible, and hence relatively powerless, were the botanics, hydropaths, and other self-professed medical folk. They did not disappear, but neither did they set the political agendas that would end up making it illegal to practice medicine without a license.

Collective Identities: Public Duties, Public Health

Educated medical practitioners had much to say about public health by the middle of the 1800s. Exactly how much the efforts regular physicians made to lobby for public health reform contributed to the increase in their prestige and credibility between

53. McClintock, “History of Medical Education,” 244, 258–60, 296–99.

1850 and 1886 is difficult to estimate, but such activism clearly placed them in public view.⁵⁴ The 1843 Code for the Territory of Iowa had no references at all to medical practice, medical substances, or sanitation in its basic statutes for bringing law to the wilderness. The Code of Iowa published in 1851, in contrast, contained the work of the first state legislatures (1846, 1848, and 1850) and included various regulations that educated physicians had promoted in the first half of the nineteenth century.

Chapter 146, in line with other regulations concerning fraud in commerce, condemned the sale of "adulterated drugs and medicines," "unwholesome provisions," and "adulterating food or liquor." Apothecaries, the law continued, must label clearly all the poisons that they sell, including "arsenic, corrosive sublimate, prussic acid, or any poisonous liquid or substance." Failure to do so could lead to accidental poisoning. The most severe punishment—up to five years in a penitentiary and/or a fine of up to \$1,000 and a year in a county jail—was reserved for anyone who inoculated himself or another with smallpox, "with intent to cause the prevalence or spread of this infectious disease."⁵⁵

The general fear of smallpox stemmed in part from the haphazard application of vaccination, which provided immunity to smallpox by an infection with the non-fatal cowpox. Most—but by no means all—regular physicians supported vaccination; after Edward Jenner introduced it in England in 1798, it seemed a remarkable medical tool for preventing smallpox epidemics. Smallpox could spread rapidly through an unvaccinated community with devastating results. The idea that smallpox might be intentionally spread, however, evoked a deeper terror, one perhaps feeding on persistent rumors that Euro-Americans had deliberately distributed blankets infected with smallpox to Native Americans in the eighteenth century.⁵⁶

54. Lee Anderson, "'Headlights Upon Sanitary Medicine': Public Health and Medical Reform in Late Nineteenth-Century Iowa," *Journal of the History of Medicine and Allied Sciences* 46 (1991), 178–200. Anderson provides a sophisticated analysis of the role of public health in the rise to dominance of regular medicine in Iowa and the United States, particularly emphasizing the role of individual elite medical reformers, such as William S. Robertson.

55. 1851 *Code of Iowa*, chap. 146.

56. The historians who have studied smallpox in Iowa have not discussed the statute against spreading smallpox by intent. See Philip L. Frana, "Smallpox:

From the 1850s through the 1870s, prominent members of the IMS lobbied state representatives to introduce bills that both furthered the interests of regular physicians and—according to those physicians—promoted the health and well-being of Iowans. In 1866, for instance, the legislature granted the governments of cities, incorporated towns, and townships the *voluntary* power to act as local boards of health, including passing regulations “respecting nuisances, sources of filth, and causes of sickness,” provided that each local jurisdiction was willing to raise the taxes necessary to pay for enforcement of the rules.⁵⁷ A patchwork of local ordinances ensued, although some legislation regarding nuisances and public health, such as making it illegal to throw the bodies of dead animals into water sources, made it to the state level in these years.⁵⁸ Several physicians urged legislators to expand the state’s public responsibility for its unfortunate citizens, as well as to protect them from nuisances. Territorial and early statehood legislators created statutes to cover care for the poor in each county, but such laws did not touch specifically on the medical needs of those supported by county funds until 1880, when “medical attendance” was included as a proper item of relief along with food and clothing.⁵⁹

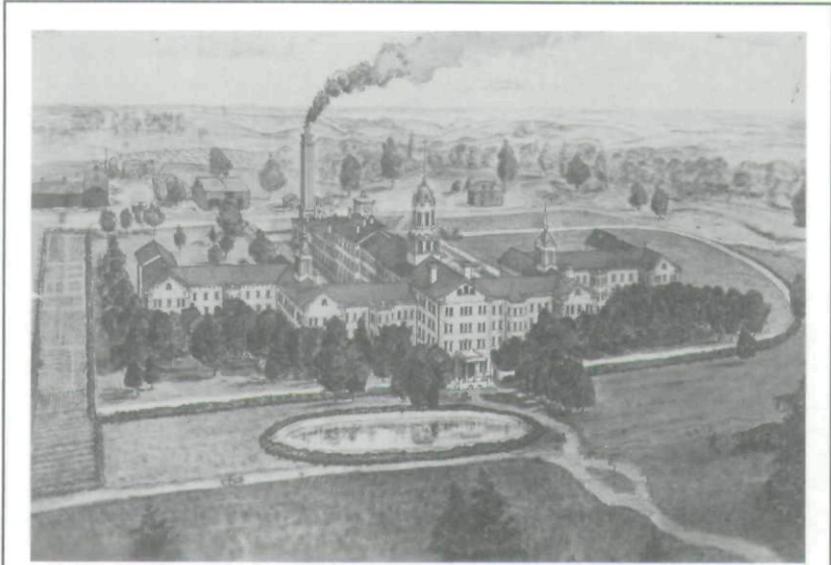
In 1852–53, the legislature took on the plight of the impoverished or unmanageable insane as a special class of needy citizen. It passed an act to establish the first state-funded Hospital for the Insane, later choosing Mount Pleasant as the site. The hospital opened in 1861 with room for 300 patients. By 1862, it was caring for 216 patients; it was full in 1865, and overcrowded in 1868. A second asylum opened in Independence in 1873, and a

Local Epidemics and the Iowa State Board of Health, 1880–1900,” *Annals of Iowa* 54 (1995), 87–118. For an introduction to the evidence for, and stories about, the deliberate use of infected materials against Native Americans, see Bernhard Knollenberg, “General Amherst and Germ Warfare,” *Mississippi Valley Historical Review* 41 (1954), 489–94, and the subsequent comments in “Communications,” *ibid.* (1955), 762–63; Clyde D. Dollar, “The High Plains Smallpox Epidemic of 1837–38,” *Western Historical Quarterly* 8 (1977), 15–38; and Adrienne Mayor, “The Nessus Shirt in the New World: Smallpox Blankets in History and Legend,” *Journal of American Folklore* 108 (1995), 54–77.

57. 1880 *Code of Iowa*, Title IV, chap. 9, sec. 415–20.

58. See, for example, 1880 *Code of Iowa*, Title XXIV, chap. 10, sec. 4041.

59. *Ibid.*, Title XI, chap. 1, sec. 1360.



In 1880 an artist sketched this view of the State Hospital for the Insane at Mount Pleasant. Courtesy State Historical Society of Iowa.

third in Clarinda in 1888.⁶⁰ In 1874 IMS president William S. Robertson made "an eloquent and earnest appeal for the Idiotic and feeble-minded Children of Iowa, and for the establishment by the State of an Asylum for their care and education."⁶¹ The legislature heeded the call, authorizing the construction of an asylum in 1876 at Glenwood. All of these institutions employed one or more physicians to direct medical care. Accounts of their work, along with papers given by doctors concerned about the mental health of Iowans, were included regularly at meetings of the IMS and county medical societies, and appeared in the *Iowa*

60. Boice, "Hospitals in Iowa," 375-76; 1853 *Laws of Iowa*, chap. 134; Gregory Calvert, "A Short History of The Mental Health Institute at Mount Pleasant 1855-1899," *Annals of Iowa* 41 (1972), 1023-26.

61. "[Minutes of the] Twenty-Second Annual Meeting," *Transactions of the Iowa State Medical Society* 2 (1872-1876), 31. For the context of the movement both to protect and to sequester mentally handicapped people, see Philip M. Ferguson, *Abandoned to Their Fate: Social Policy and Practice toward Severely Retarded People in America, 1820-1920* (Philadelphia, 1994).

State Medical Reporter, a medical journal published between 1883 and 1887 to spur activism among Iowa physicians.⁶²

In building large institutions to house the "insane" and "feeble-minded" at state expense, the Iowa legislature followed a common practice in nineteenth-century social engineering. Throughout Europe and North America, the "solution" to the chronic problem of dealing with people who were troubled mentally or emotionally and were unable to provide for themselves was to shelter them together where they could be fed and clothed and possibly educated and treated enough to become productive members of society. Encouragement to build specialized asylums arose in part from exposés in the 1830s and 1840s of the treatment of the impoverished insane and mentally impaired. When thrown upon the county or town for tax-supported poor relief, some unfortunates ended up chained in ramshackle hovels, or farmed out as laborers for hard-hearted masters who abused them. By the 1860s, constructing asylums was considered a sign of a civilized, enlightened government formed by equally enlightened citizens. As these institutions encountered problems, such as overcrowding, chaining of the violent, neglect, and physical and sexual abuse, the rosy glow of state beneficence dimmed. The Iowa legislature was but one of many governments that later passed more and more stringent requirements for inspection of its asylums, and provided protection from staff reprisals for inmates who reported ill treatment.⁶³

In the early years of statehood, county courts—relying on the judgment of a jury if the person in question wished it—decided whether or not a person was insane. At stake in these

62. See, for example, Jennie McCowen, "Insanity in Women," *Transactions of the Iowa State Medical Society* 6 (1883–1885), 438–51; G. H. Hill, "Care of the Incurable Insane," *ibid.*, 432–37. Gershom Hill sporadically submitted reports on the Hospital for the Insane in Independence to the *Iowa State Medical Reporter*. See "Iowa Hospital for the Insane," *Iowa State Medical Reporter* 1 (1884), 157, 174.

63. For the meaning of the asylum in American political and social life, see David J. Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic*, rev. ed. (Boston, 1990); and *idem*, *Conscience and Convenience: The Asylum and its Alternatives in Progressive America* (Boston, 1980). See also Gerald N. Grob, *Mental Institutions in America: Social Policy to 1875* (New York, 1972); and *idem*, *Mental Illness and American Society, 1875–1940* (Princeton, NJ, 1983). For the legislation on increasing inspection of asylums in Iowa, see the 1897 *Code of Iowa*, Title XII, chap. 2, sec. 2299–2304.

decisions was the appointment of a guardian who would be responsible for the care of the insane person, and manage his or her property. Nothing in the 1851 Code of Iowa suggested that the court seek a medical opinion; responsible citizens could surely see if men and women were "incapable of conducting their own affairs." With the imminent opening of the Mount Pleasant asylum, the Iowa legislature established a commitment process that still left the initial determination of lunacy up to the court, but required the judge (or the "relatives or friends" of a private patient) to send a detailed account of the patient's history, symptoms, and prior treatment with the patient being committed. After 1868, however, all requests to the court to decide on insanity, be it for the appointment of a guardian or commitment to the hospital, required the expert assistance of "some regular, practicing physician" both to do the initial examination and to sit on a three-member commission appointed by the judge to "make all proper inquiries in relation to the mental condition of said person." Two years later, the legislature went further, requiring every county in the state to create a three-member board of "Commissioners of Insanity" consisting of the clerk of the circuit court, a "respectable practicing physician," and "a respectable practicing lawyer." The 1870 act gave the commissioners extensive responsibilities for overseeing the county's "lunatics," whether they were committed to the state hospital or cared for at the county poorhouse.⁶⁴

These legislative details illustrate the expanding authority that medicine had to determine the meaning of mental conditions in the mid-nineteenth century, as well as the lay acceptance of that claim to expertise. For Iowa practitioners, moreover, such decisions in Des Moines showed that not only were the claims of elite specialists acknowledged, but that legislators also believed that ordinary "respectable" physicians throughout the state had the training and experience to serve as local "commissioners of insanity." This was the first time that the state government explicitly called on physicians, as a category, to perform a public duty at the county level. While such statutes

64. 1851 *Code of Iowa*, Title XII, chap. 50, sec. 858; 1860 *Code of Iowa*, Title XII, chap. 59, sec. 1479, 1490; 1868 *Laws of Iowa*, chap. 179, sec. 1-4; *ibid.*, chap. 109, sec. 15, 18.

did not define the characteristics of a "respectable physician," much less distinguish a regular practitioner from a homeopath, or an eclectic from a botanic, they did assume (in principle) that a "respectable physician" could determine when inappropriate behavior signaled culpable deviation or helpless insanity.

In the 1870s, public health meant public morality: being good and being well were intertwined, and adherence to middle-class values was as vital for health as proper diet, adequate rest, and being careful around sharp objects. Hooking morality to medicine allowed physicians to put themselves forward as natural leaders, imbued with the knowledge that promoted physical and moral well-being in both individuals and the community. This belief, and the potent rhetoric of moral and physical health, did not mean that physicians were the only community leaders or that their agendas necessarily won the day. Yet this perspective encouraged a number of Iowa physicians to use moral language when embracing popular movements, such as temperance, or when promoting public health issues.⁶⁵

Like other professional experts in American life in the later nineteenth century, such as engineers and chemists, physicians eager for reform via legislative acts needed to balance carefully the tension between American individualism and paternalistic protectionism. The values associated with democratic rhetoric—equality, autonomy, self-sufficiency, free choice—often supported those who argued against restrictive medical licensing and state funding to assist the poor. Physicians who believed that the state must make and enforce regulations to ensure the health of all citizens couched their views in terms of the need to protect upstanding folk from the dangers to health embodied in unscrupulous salesmen, the morally lax, the ungrateful poor, and ignorant immigrants. Such people could sell harmful potions, spread disease and drunkenness, or, by dirty habits, accumulate waste and rubbish that tainted the air and the water. At the same time, however, physicians needed to present themselves, and the state, as protectors of the worthy poor and benign instructors of the merely ignorant, who did not realize the harm they caused by traveling after exposure to smallpox or selling the

65. Anderson, "Headlights Upon Sanitary Medicine," 184–85.

meat of animals that died from disease. Reform-minded physicians envisioned state-level boards of health as the proper instruments for regulating and enlightening citizens in all matters concerning public health, including the proper registration of vital statistics and control over dangerous quacks.

In 1875 the Iowa Medical Society formed a committee to work on a bill to establish a state board of health that would oversee the work of county and city boards of health. Iowa was lagging behind its politically active neighbors. Although in previous decades *cities* in the East and Midwest had created boards of health (which were often limited in existence to times of crisis), *state* boards were a relatively recent innovation, with Massachusetts (1869), California (1870), Minnesota (1872), Michigan (1874), Wisconsin (1876), Colorado (1877), and Illinois (1877) leading the way. Iowa's "Act to Establish a State Board of Health" passed the legislature in 1880 (after failing the previous session) with an appropriation of \$5,000 for its work but no powers to enforce the regulations it was about to make.⁶⁶

The act made no provision for the regulation of medical practice, which some regular physicians considered as part of protecting the public's health, but such a stipulation would have prevented the bill from passing at that time. Indeed, William Robertson, who chaired the IMS board of health committee, came to a significant rapprochement with Iowa's homeopaths in January 1880, just before the bill was introduced to the Iowa House and Senate on January 29. Representatives of the Hahnemann Medical Society, the professional society formed by the state's homeopaths in 1870, agreed to support the IMS bill.⁶⁷ Although not explicitly required in the act, the seven physician members of the first State Board of Health appointed by the governor included three regular, two homeopathic, and two eclectic physicians.⁶⁸

66. *Ibid.*, 186–87. For details on the act's provisions, see 1880 *Code of Iowa*, Title XI, chap. 6. Adjustments to the powers and duties of county, township, and city governments following from the act appear in relevant parts of the *Code*.

67. For a description of Robertson's work behind the scenes, and as a member of the Iowa Senate, to get the bill through, see Anderson, "Headlights Upon Sanitary Medicine," 186–87.

68. The list of first appointees to the Board of Health, with their practice affiliations, appears after the text of the act in the appendix to the *Transactions of the Iowa State Medical Society* 4 (1879–1880), 238. According to data compiled in

Such an arrangement clearly suggests the behind-the-scenes political compromise required to convince legislators that the leaders of the three most organized groups of doctors, despite their differences over therapeutics, were united on the need for a State Board of Health.

The 1880 act created a Board of Health with nine members and a full-time salaried secretary. The attorney general was a member *ex officio*, and there was to be one civil engineer in addition to the seven physicians appointed by the governor. The act required the board to produce biennial reports for the governor, reports that are a rich source for the board's trials, tribulations, and triumphs well into the twentieth century. The heaviest bureaucratic task given to the board was the challenge of collecting vital statistics—marriages, births, stillbirths, and deaths—from every one of Iowa's 99 counties.⁶⁹ Mayors and aldermen of cities, councils of towns or villages, and trustees of townships were all required "to appoint a competent physician," who, together with each of these local governments, formed a local board of health. What had been permitted since 1866 was now required. This "health officer," along with local government clerks, was responsible for providing annual reports on vital statistics and other public health matters to the state board. In 1883 Iowa had 363 incorporated cities and towns and 1,589 townships, for a total of 1,952 local boards of health, each with a health officer. It is difficult to know precisely how many different doctors held the position, not only because a physician could serve as a nominal health officer for more than one local jurisdiction, but also because it is not clear how many local administrators actually complied with the law.

1914, of the 48 state boards of health, only those of Iowa, Kentucky, Kansas, Nebraska, and South Dakota specified that physician members had to be of different "schools" or actually specified that homeopaths, or homeopaths and eclectics, be represented. See Charles V. Chaplin, *A Report on State Public Health Work* (Chicago, [1916]), appendix, table 2. Other states may have had homeopaths and eclectics appointed to their boards, of course, but explicit inclusions of members from different "schools" seems to have been largely a midwestern phenomenon, and one worth further investigation.

69. The first board spent part of its first official meeting approving forms that were to be distributed to each county. Walter L. Bierring, "Early Records of Public Health in Iowa," *Journal of the Iowa State Medical Society* 28 (1933), 83–85.

Under the act, the State Board of Health had to depend on hundreds of correspondents for its information, without any direct control over their qualifications or reliability. Even more significant for the ordinary small-town or rural doctor was the way the act's authors assumed that local governments could appoint "a competent physician" who would agree with the state's right to collect information on births and deaths and to declare quarantines on families with certain diseases. It was up to each local board of health to make and enforce appropriate regulations about handling nuisances or other possible sources of disease, quarantining and caring for victims of infectious diseases, and otherwise protecting the area from smallpox "or other sickness dangerous to the public health."⁷⁰ All local doctors and midwives, moreover, were to register their names with the clerk of the circuit court. This was not a clause to set standards of education required to register, but an attempt to learn the names of those who provided the data on births, stillbirths, and causes of death to the county clerks, for without their cooperation the state's vital statistics would have been incomplete and unreliable.

Contemporary critics and later historians have discussed the act's multiple weaknesses, including the difficulties the state board had in getting local practitioners to register with the clerks, and the clerks to forward their annual reports. Jurisdictional squabbles were bound to arise, moreover, since epidemics did not confine themselves to an area supervised by only one local board of health.⁷¹ The authors of the Board of Health's first report to the governor complained that data on the cause of death went unreported for at least half of the Iowans who died in 1880-81. The number of deaths reported to them for October 1880 to October 1881 was 10,668, while the number given by the U.S. Census for June 1879 to June 1880 was 19,377. The board

70. 1880 *Code of Iowa*, Title XI, chap. 6, sec. 21. Records surviving from the town of Fairfield confirm the range of activities taken on by the physician appointed by the local board of health: inspecting nuisances, declaring quarantines, ending quarantines, and monitoring travelers and residents suspected of having contact with contagious diseases, especially smallpox. See Minutes, Board of Public Health, Fairfield, BM F161, State Archives of Iowa, State Historical Society of Iowa, Des Moines.

71. For details on several jurisdictional disagreements, see Frana, "Smallpox."

asserted, without explanation, that 33 percent of the deaths for that period had been "omitted by the [census] enumerators." Thus, they calculated that the number of Iowa deaths for 1880-81 was about 25,836, more than twice the number reported to them. As a result, the prevalence of fatal diseases in Iowa was largely unknown. They proceeded to tabulate what information they had, however, and produced nearly 800 pages of tables to show the governor and legislature the results of their investment in the new government office.⁷²

Mortality data for Iowa revealed patterns familiar to medical tabulators throughout the Western world: the major causes of reported deaths in 1880-81 were the diseases of miasmas, contagions, and infections. Diphtheria and croup (1,158), pneumonia (961), and tuberculosis (917) topped the list, followed by scarlet fever, malarial-type fevers, typhoid fever, enteritis, and diarrheal diseases. Forty percent of deaths occurred in infancy and among children under the age of five.⁷³

Noxious smells, filth, putrefying flesh, raw sewage, and slimy, decaying organic matter all seemed powerfully associated with contaminated air and unhealthy water, which caused, or stimulated, diseases, some of which might then be transmitted from one person to another. Although some European researchers postulated that microscopic organisms might cause many of these illnesses, only a few convincing cases had been made by 1880. Even if microorganisms were responsible, most physicians and lay people still associated these diseases with complex environmental and constitutional factors. Tuberculosis, for example, appeared to have a strong hereditary component, given the way that it ran in families. Even after Robert Koch demonstrated with impeccable laboratory methods in 1882 that a bacillus caused tuberculosis, the conviction remained that the disease required a hereditary, or constitutional, predisposition for it to catch hold and flourish within the body.⁷⁴

72. Iowa State Board of Health, *First Registration Report of the State Board of Health for the Year Ending October 1, 1881* (Des Moines, 1883), 1-28 (quotation from page 3).

73. *Ibid.*, 4, 39-71.

74. William G. Rothstein, *American Physicians in the Nineteenth Century* (Baltimore, 1972), 265-69; Porter, *The Greatest Benefit to Mankind*, 259-60, 405-14.

Although the highest death rates occurred from diphtheria, pneumonia, and tuberculosis, the State Board of Health faced numerous questions and concerns about smallpox. Smallpox attracted attention in part because it was seen as a disease that came from "outside," brought by "foreign" immigrants. It was also the only one of the serious infectious diseases for which a specific, reliable preventive measure existed. In its initial 1881 report, the board stated that in 1880-81, 22 people had died from smallpox, a figure it later revised upward to 75. In 1880-82, a number of steps were taken to control smallpox and the threat it represented. For example, midwestern boards of health (and others) tried to convince steamship companies to require vaccinations before letting immigrants leave Europe; and they worked with railroad companies to have all their employees vaccinated, and to require all passengers to have proof of vaccination before they were allowed on trains.⁷⁵

Iowa's State Board of Health urged local boards to report cases of smallpox and to require all children to be vaccinated. When local authorities lagged in forming boards of health in 1880, much less in passing local health regulations, the attorney general ruled that the regulations passed by the state board were to be considered "of full force and effect on the people, without subsequent endorsement or action of such local boards."⁷⁶ In 1882, the state board decreed that if smallpox appeared in a particular area all children must be vaccinated before being allowed to attend school. Yet correspondence from local health officers and physicians demonstrates that local authorities found it hard to believe that they could enforce such a rule, and several were reluctant to order quarantines.⁷⁷

As the example of smallpox illustrates, it was relatively easy for the physicians on the State Board of Health to make regulations and recommendations and to mail them out as circulars to

75. Iowa State Board of Health, *First Registration Report* (1883), 23-26, 38-43, 62-63. There was also a great deal of concern about the spread of yellow fever up the Mississippi valley, and hence work to organize the inspection of immigrants at the port of New Orleans and at riverboat stops up the river. See Frana, "Smallpox."

76. Iowa State Board of Health, *First Registration Report* (1883), 128.

77. *Ibid.*, 63.

local authorities. It was much more difficult to convince those local authorities to accept and enforce the regulations among their neighbors, despite the seemingly evident danger of smallpox, diphtheria, scarlet fever, and Asiatic cholera. It was difficult not only because some of the regulations demanded interference in families, such as overruling parents' ideas about their children's readiness to return to school or work, but also because of the expenses incurred when clothes and furniture had to be burned, wallpaper stripped, and walls whitewashed. Such high sanitary standards looked fine in print but appeared heavy-handed when imposed after a child had died—or recovered—from a terrifying illness such as scarlet fever or diphtheria. Quarantines of from three weeks to 40 days, moreover, affected families, business people, workers, and general travelers, disrupting local economies and straining the goodwill of those suddenly responsible for feeding those who were quarantined. Resentment of, and resistance to, state power exercised for the "public good" was understandably intertwined with the relief and reassurance that others felt when an outbreak of smallpox did not become an epidemic, or scarlet fever was limited to the children of a few unfortunate families.

Counting and controlling disease, as the Iowa State Board of Health set out to do in 1880, was but one of the main planks of public health in the late nineteenth century. The other was the rise of sanitary engineering, although that was far more pressing for large urban areas, such as New York City and Chicago, than it seemed to be for rural locations, towns, and small cities. Building enclosed sewers for human waste and storm runoff and constructing cisterns and miles of piping for water supplies were significant investments and needed considerable local support for city councils even to contemplate. Anticipating the seemingly obvious connection between disease and sewage, noxious smells, and contaminated water, the designers of the State Board of Health included a civil engineer as a member. Dr. R. J. Farquharson, the secretary appointed in 1881, ensured that the engineer would be ready to act with expert advice, as he purchased a large number of books on sanitary science for the board's library, including *Drainage of Houses and Towns, Sanitary*

*Engineering, Sewers and Drains, and the Municipal and Sanitary Engineer's Hand-book.*⁷⁸

In 1880 Iowa had seven cities with populations of over 10,000, although none were even close to the size of "great cities," which had over 100,000 inhabitants. Des Moines (22,408) and Dubuque (22,254) topped the list, followed by Davenport (21,831), Burlington (19,450), Council Bluffs (18,063), Keokuk (12,117), and Cedar Rapids (10,104). All of these cities were on major rivers and railway lines. None, it appears, had a problem with disease that required more than the efforts to vaccinate for smallpox and quarantine for other diseases as they appeared. Open runoff channels took care of storm water and sewage, which ran easily into streams and rivers. Water supplies came from the rivers and wells into neighborhood pumps, and seemed perfectly fine for healthful consumption. Indeed, as Maureen Ogle argues in her study of water supplies in three Iowa cities from 1870 to 1890, the most pressing concern for municipal authorities in this period was adequate water under enough pressure to fight fires among multistory downtown buildings, not the quality of the water or sewage disposal. Providing "public" water supplies in the 1860s and 1870s meant building cisterns linked to fire hydrants to supplement hand-pump tanks on wagons and buckets filled from horse troughs.⁷⁹

Even before the State Board of Health was formed in 1880, cities and towns had ordinances forbidding nuisances, such as refuse piles and stagnant collections of sewage, which they dealt with on a case-by-case basis. Complaints about smells from the sewage runoff from a hotel in Iowa City in the 1870s, for example, led city leaders to consider building a sewage system. But a proper sewage system required a pumped and piped water supply that would provide enough water to keep the sewage flowing into the river. Enthusiasm for this idea in Iowa City, and other small cities, came from the prospect that the city would then appear "clean" and "progressive" and hence would attract more business and settlement. Ogle writes convincingly

78. *Ibid.*, 102-3.

79. Lawrence H. Larsen, "Urban Iowa One Hundred Years Ago," *Annals of Iowa* 49 (1988), 445; Maureen Ogle, "Redefining 'Public' Water Supplies, 1870-1890: A Study of Three Iowa Cities," *Annals of Iowa* 50 (1990), 507-30.

that the pressures from overcrowding and existing disease rates that compelled large cities to create municipal waterworks and sewers—the usual public health argument—motivated city leaders in Iowa far less than the lure of progress and prosperity they hoped would come with public improvements. Once committed to these complex systems, moreover, the problems they created required even more development. By 1885, eleven Iowa cities, small and large, had invested in the latest waterworks technology with a network of underground mains, and had then discovered that they had to build new sewer systems because the old trench and stream system could not handle the outflow produced by indoor plumbing and manufacturing use.⁸⁰ Whether the piped water supplies and sewage systems then prevented health problems in the 1880s and 1890s, however, requires further research.

Collective Identities: Licensing

In the eyes of many medical reformers, caring for the public's well-being not only required legislation to build insane asylums, organize boards of health, and forbid nuisances, but also to regulate medical practice itself. In the same year that the Iowa legislature established the State Board of Health without any provision for licensing medical practitioners, it also passed "An Act to Regulate the Practice of Pharmacy and the Sale of Medicines and Poisons." Two years later, it approved a bill to regulate the practice of dentistry. These acts defined *pharmacist* and *dentist* and set up state boards composed of appointed practitioners with the power to set licensing standards for their professional brethren. Both acts sought to protect the public from unscrupulous practitioners whose claims to expertise could not be substantiated by education, experience, or peer examination.⁸¹ Both acts, moreover, carefully excluded categories of people who did

80. Ogle, "Redefining 'Public' Water Supplies."

81. 1880 *Code of Iowa*, Title XXIV, chap. 10; 1888 *Code of Iowa*, Title XII, chap. 19; Lee Anderson, *Iowa Pharmacy, 1880–1905: An Experiment in Professionalism* (Iowa City, 1989), 42–52; and idem, "A Case of Thwarted Professionalism: Pharmacy and Temperance in Late Nineteenth-Century Iowa," *Annals of Iowa* 50 (1991), 751–71.

some of the tasks associated with pharmacists and dentists, but who did not claim to *be* pharmacists or dentists. Physicians who compounded and sold their own medications, for instance, were not regulated as pharmacists, just as physicians who pulled teeth were not regulated as dentists. "Itinerant vendors," moreover, who claimed that they could treat or cure diseases "by any drug, nostrum, or manipulation or other expedient" could continue their livelihoods as long as they paid \$100 per year for a license from the Commissioners of Pharmacy.⁸² The lucrative cure-all and tonic trade was safe.

By the late spring of 1882, then, pharmacists and dentists required licenses to practice, but medical practitioners, who performed surgery, prescribed potentially dangerous medications, and determined insanity still did not. Continuing public support for eclectic and homeopathic practitioners stalled legislation that would have given regular physicians control over licensing examinations and educational standards. Regular, homeopathic, and eclectic physicians without degrees, moreover, who feared that a licensing act might send them back to medical school or sit them in front of an examining board, joined citizens who were simply against any further expansion of state power to block such legislation. But the tide was turning in American society towards more widespread acceptance of the idea that certain kinds of expertise required education and training, and that licensing protected rather than exploited the consumer.⁸³

The political process that led to the passage of Iowa's Medical Practice Act in 1886 culminated the efforts of regular physicians to claim a monopoly over correct medical knowledge and the authority to define it. In this, they failed. Just as Dr. Robertson had had to work with the state's leading homeopaths to get the State Board of Health established, so too did regular physicians finally have to compromise with homeopaths and eclectics to succeed with the regulation of physicians. The bill passed the legislature in the spring of 1886 and went into effect on July 1 of that year. To appease doctors currently practicing in the state who did not have a medical degree, the act specified a six-

82. 1880 *Code of Iowa*, Title XXIV, chap. 10, sec. 10.

83. Shryock, *Medical Licensing*, 47-48, 51-55; Starr, *Social Transformation*, 102-7.

month grace period, to January 1, 1887, during which physicians without degrees could obtain a certificate from the Board of Examiners without taking an examination, although they did need to provide affidavits that they had practiced in Iowa for at least five years. Their certificates would, however, state the conditions under which they had received it, clearly distinguishing them from doctors with medical degrees or successful examinations.⁸⁴ When that generation died out, all Iowa physicians would need to satisfy more rigorous requirements to practice medicine—at least according to the intent of the law.

The new Board of Examiners consisted of the seven physicians who served on the State Board of Health, with the assistance of the Board of Health's staff secretary, who had to be a physician. In defining the Board of Examiners, the act stated in several places that of the seven physicians on the board, at least five "representing the different schools of medicine on the board" had to agree when issuing licensing certificates to applicants.⁸⁵ This phrase did not refer to literal schools, but rather indicated the diversity of styles of medical practice taught in medical schools granting M.D. degrees. As ambiguous as this reference was, it nevertheless served to formalize the practice of having regular, eclectic, and homeopathic physicians on the Board of Health and hence on the Board of Examiners.⁸⁶

The Board of Examiners certified graduates of medical schools "legally organized and in good standing" without an examination, as long as they presented a genuine medical diploma. In this way, too, graduates of homeopathic and eclectic medical schools were licensed to practice when the act went into effect. Candidates without a medical degree from a recognized school, including practitioners settled in Iowa for less than five years,

84. 1888 *Code of Iowa*, Title XII, chap. 8f. For the details of how the certificates were distributed and examinations given in the act's early years, see Board of Medical Examiners, Minutes of Record, 5/18/1886-2/6/1901, Department of Health, State Archives of Iowa, State Historical Society of Iowa, Des Moines.

85. 1888 *Code of Iowa*, Title XII, chap. 8f, sec. 2546.

86. In 1945, Walter Bierring commented on the awkward fact that homeopaths and eclectics were still expected to be represented on the Board of Medical Examiners even though most practitioners of these "schools" were dying out. See "Transactions of the Annual Meeting," *Journal of the Iowa State Medical Society* 35 (1945), 295.

had to sit for written examinations in "anatomy, physiology, general chemistry, pathology, therapeutics, and the principles and practice of medicine, surgery and obstetrics." A decade later, in 1896, continuing differences between modes of practice were clarified when a revision to the act specified separate examinations in the *materia medica*, therapeutics, and the principals and practice of medicine with "a set of questions . . . corresponding to the school of medicine which the applicant desires to practice."⁸⁷

The 1886 act defined a physician as anyone who "publicly professes to being a physician or surgeon" and practices, or prescribes or furnishes drugs for the sick, or "shall publicly profess to cure or heal by any means whatsoever." Excluded from this definition were medical students, those who tried to provide help in an emergency, and "women who are at this time engaged in the practice of midwifery." The act did not cover military practitioners, pharmacists, or those who sold mineral waters. All certified physicians, moreover, had to register with the clerk of the court in the counties where they practiced, and to maintain a proper registration when they moved. This provision reinforced the 1880 requirement that all local practitioners register with the court so that the State Board of Health would know who was responsible for reporting births, deaths, and causes of death.

The Board of Examiners had the power to revoke a certificate at any time for a practitioner's incompetence, if five of the examiners voted in favor of the decision. The board could also revoke a certificate if a doctor presented fraudulent credentials or was convicted of a felony. Practicing medicine without a certificate was henceforth a misdemeanor, subject to a fine of between \$10 and \$100, or imprisonment in the county jail between 10 and 20 days—a bit less severe than the punishment that could be levied for throwing a dead animal into a water source.

Enforcing the statute became the responsibility of the local police and local courts. Whatever regular physicians thought about unlicensed practitioners in their midst, then, local authorities would have to agree that the law had been broken before taking action. Magistrates and judges, moreover, had the

87. 1897 *Code of Iowa*, Title XII, chap. 17, sec. 2576; sec. 2577 states that certificates issued will specify what "school" of medicine the practitioner practices.

power to interpret the law's definition of "medical practice" in the cases that came before them.⁸⁸ With the Medical Practice Act, educated doctors gained some control over their occupation, but in the end, lay judgments determined specific professional boundaries.

Conclusion

In 1886 the state took on the responsibility for a formal definition of the medical profession(s) in Iowa. Since it covered homeopaths and eclectics, the definition clearly did not mesh with the vision held by many members of the IMS. Considering that their own code of ethics frowned upon consultations with practitioners of the other schools, much less sitting with them on boards of health or examining boards, members of the IMS had to recognize that legislation was no easy route to professional dominance. During their daily routines, these physicians had to decide whether they would abide by their code of ethics and refuse to work with certified homeopaths and eclectics, or be less high-minded and more collegial. Regular physicians who avoided joining the IMS could ignore this touchy issue, although they may then have faced snubs by local physicians active in the society. In either case, the 1886 act certainly did not resolve the problem of competing medical systems that had partly motivated physicians to form the IMS in 1850. The law did, however, make it harder for self-proclaimed practitioners to make a living from their visions of healing through herbs or taking cold baths.

88. The only reasonably accessible accounts of legal cases are those that were appealed to a higher court whose decisions were published. Finding how county judges and juries interpreted the ways the act applied to various local healers requires considerable research into court records and local newspapers, which was beyond the scope of this project. Cases that went to appeal involving the Medical Practice Act include: *The State v. Mosher* (78 Iowa 321, 10/7/1889); *Iowa Eclectic Medical College Association v. J. C. Schrader, et al. Board of Medical Examiners* (87 Iowa 659, 5/9/1893); *State of Iowa v. G. H. Heath* (125 Iowa 585, 11/17/1904); *State of Iowa v. J. Wilson Edmunds* (126 Iowa 333, 11/17/1904); *State of Iowa v. J. C. Wilhite* (132 Iowa 226, 11/22/1906); *State of Iowa v. A. J. Kendig* (133 Iowa 164, 2/5/1907). These appeals generally argued against the constitutionality of the Medical Practice Act, so the question of exactly what constituted medical practice was not debated explicitly, although clearly it had been part of the arguments in the original complaints.

The history of medicine in Iowa is much more than the history of institutions and laws. Institutions and laws nevertheless outline the distribution of medical authority among the groups who define medical knowledge and who bring it to the ill and injured. The opening of medical schools and insane asylums, body-snatching and the Anatomy Act, and demands that county clerks record births and deaths provide the context in which people from the 1830s to the mid-1880s understood medicine and medical care. Whether ordinary people settling the western counties knew, or cared, about the differences between regular physicians and eclectics, or prayed for a homeopathic physician to replace the hydropath practicing in the nearest town, are questions that take on different significance when considered for the Iowa of 1850 or the Iowa of 1886. Neither institutions nor laws necessarily made Iowans healthier in 1886 than they were in 1847, either, despite the claims of regular physicians in the IMS over those decades. In 1886, nevertheless, institutions and laws had undoubtedly improved the "dignity and influence of the medical profession in Iowa." Regular practitioners starting out in 1886 had far less to fear from competing medical systems than they would have to worry, in the coming decades, about keeping up with young doctors full of new ideas about medical science.

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