Pioneer Science and the Great Plagues

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and successfully guided the school into the new age, with peak enrollments of sixty-two in 1916–1917 and a move to a new building on the Université Laval campus in 1914.

In the post–World War I era, enrollments dropped—to sixteen in 1920—and the school’s mounting debt drove the Université Laval/University of Montreal to establish a committee for change. The result was that the school was moved to the Institut Agricole d’Oka in 1928—placing the school under Trappist monks—with the new name École de Médecine Vétérinaire de la Province de Québec. Daubigny resigned the same year. The school was taken over by the Quebec Department of Agriculture in 1947 and moved to its present location at the University of Montreal campus in Saint-Hyacinthe. Today, a large multi-specialist clinic, the private Centre Vétérinaire Daubigny, serves the companion animal population of Quebec City.

The different curricula, standards, and connections to livestock diseases of the two English-speaking Canadian veterinary schools allowed Toronto to survive and Montreal to fail. Toronto’s Smith recognized what McGill’s McEachran did not, that nineteenth-century veterinary education should follow the practical dictates of the livestock industry. Their lessons left a similar pattern in the United States: Harvard failed, and Iowa survived. And in Canada, the practical French-speaking School of Veterinary Medicine, founded by farm boy Daubigny, survived and prospered.

8. PIONEERS IN THE MIDWEST FRONTIER: PHYSICIANS IN VETERINARY PRACTICE

The earliest cultural fabric of the midwestern American territories was created by English-speaking eastern Americans moving west. The language of the first rural settlers, earthier and less cultured than in the East, came from a unique North Midland English dialect carried through Ohio, Indiana, and Illinois, absorbing dialects and changing as it moved west. Migrating New Englanders carried along New Jersey English, the biblical language of the Quakers, and the Low German (Plattdeutsch) from Pennsylvania and the Maryland Hessian Barracks. There was also some West Country English with its curious use of the verb be—not “We are . . .” but “We be movin’ west.”
The language was changing. Within two decades, the early settlements of the Midwest and Great Plains were being infiltrated by old-world immigrants who were not speaking English and not Congregationalist, Methodist, or Anglican. Germans, the Dutch, Scandinavians, Danes, and even the Swiss and Luxembourgers were immigrating to the Midwest and Great Plains, soaking into the gauze of early American settlements and changing place names to Holstein, Schleswig, New Prague, New Glarus, and Guttenberg. They spoke broken English and wrote, if at all, poorly. Historical novels of the region written by early eastern authors created characters that spoke in the author’s style, and the patois and character of the earliest midwestern frontier language seemed to be lost. But it can be found in Hamlin Garland’s book *Main-Travelled Roads.* With his family, author Garland had moved continually westward in search of a better life—from Wisconsin, to Iowa, and then to Nebraska Territory. In Iowa he lived in Osage during his formative years, and his books were an anti-idyllic snapshot on the nature and misery of farm life, which was closely tied to populist revolts of the time.

As Garland described the midwestern farmer in the nineteenth century, he “put in the storms as well as the sun. I included the mud and the manure as well as the wild roses and the clover.” But however accurate that was, his descriptions of settlers communicating with their neighbors and with their animals were flawless. Here a farmer, “sitting bent and cold but cheery under a slough hat,” talks and encourages his team of four horses: “Come round there, boys!—Round agin! We got t’ finish this land. Come in there, Dan! *Stiddy* Kate,—stiddy! None o’ y’r tantrums, Kittie. It’s purty tuff, but got a be did. *Tchk!* *tchkt!* Step along, Pete! Don’t let Kate git y’r single-tree on the wheel. *Once* more!"

Although regional factions no longer exist in veterinary medicine, when ignored, the words of Garland do apply to urban populist-driven resentments in the South, Great Plains, and Midwest that erupt now and then with scary implications. Translated into modern and republican terms, the words of Garland’s characters in their groping for a fairer society should still be menacing to modern politicians who forget: “A man like me is helpless. . . . Just like a fly in a pan of molasses. There ain’t any escape for him. The more he tears around the more liable he is to rip his legs off.”

As immigrants moved into the Midwest and Great Plains, farriers and unschooled, apprentice-trained veterinarians came with them to serve the
livestock industry. After spending a few months apprenticed to a practitioner with an established reputation and trained only by observation and oral instruction but with no further education or formal training, a budding horse doctor typically started business as a “veterinary” in the town livery stable. There had been no classes, no textbooks, and no graduation — only a letter stating he had trained for nine months under the eyes of a “veterinary.” Veterinarians could do that in the 1870s. They had to know how to treat abscesses, bad teeth, inflamed sores, intestinal colic, and disease caused by poisonous plants. Surgical skills for traumatic injuries, especially for those acquired during birthing, were needed. Dominating surgical procedures were the castrations of stallions, mares (called spaying), and ridglings, males with undescended testicles that remained in the abdomen.

Harrison Shaw Titus, a pioneer “vetinary” (or vitin’ry, as the new Yorkshire immigrants in Eden Township called him), had been born in Sheboygan County, Wisconsin, and moved with his family to a Mississippi River town, where he learned the farrier trade. After a monthlong apprenticeship to a practitioner, Titus moved again to central Iowa — following the railroad as it laid track westward.

Much of the history of the early American veterinary profession has been lost despite the need for preservation. Apprentice-trained veterinary practitioners often advertised as veterinary surgeons. Many were located in livery stables that provided daily rental horses and buggies — early versions of rent-a-car businesses, they were close to railroad stations and hotels.

RURAL POPULATIONS BEYOND the Appalachians had been mired in superstition and cared for by midwives, patent medicines, and traveling salesmen. People treated their wounds and fevers with home remedies of whiskey, turpentine, and bag balm that were good “for man or beast.” Cattle were another matter; their loss meant disaster for the frontier family. In small rural villages without a veterinarian or experienced farrier it was not uncommon for a physician to derive much of his income from the practice of veterinary medicine. Three of them — David Fairchild, William Mayo, and Sesco Stewart — would play roles in midwestern medical and veterinary sciences.

In 1853 there were nearly two hundred physicians in the United States, graduates of eastern American medical schools, that practiced veterinary medicine. In Olmstead County, Minnesota, two remarkable physicians treated animals in the first years of their medical practices. David Fairchild and William Mayo had
been exposed to critical science in their early years and they shared an intense curiosity and, unusual for the time, had microscopes that enhanced the scientific basis and reputation of their practices. Fairchild would become dean of a medical school, a historian of pioneer medicine, and a founding scientist of the first state veterinary school; Mayo gave birth to one of the great medical hospitals in the nation. Both had practiced briefly as a veterinarian.

David Sturgis Fairchild, for his medical training, attended lectures at the University of Michigan in 1866–1867; the next year, to finish his MD degree, he moved to Albany Medical College of Union University, at the time one of the country’s prominent medical schools. The New England Fairchilds were descendants of the puritan Thomas Fairchild, whose offspring included an astonishing number of academic educators. After practicing in his hometown for a year, Fairchild moved west to begin his own practice in the small village of High Forest in Olmsted County, Minnesota. Human patients were few, and he was called on to treat animals. Outgoing, robust, and handsome, Fairchild soon was appointed to the Olmsted County Board of Commissioners.

Ten miles, as the crow flies, from High Forest was the practice of William Mayo. Mayo had emigrated from England, where he had trained as a chemist under the Quaker John Dalton, who promoted the new idea that all matter was composed of atoms. Emigrating to America, he worked as a chemist in Bellevue Hospital in New York City and then moved west, teaching chemistry and obtaining his MD degree from the itinerant Indiana Medical College, a primitive medical school that moved west to Iowa as the Keokuk Medical College. Mayo was short, wiry, and formal; a grandson described him as “strange, fierce, striving and restless.” To avoid the malarial swamps in Indiana, William Mayo moved his family from his short-lived medical practice in Lafayette, Indiana, to Minnesota. As with Fairchild in High Forest, patent medicine, midwifery, and home remedies were in vogue, and farm families in La Sueur did not need or trust him for their own health care but did bring him their livestock. For several years, William Mayo survived as a veterinarian. In 1862, as Civil War recruiting began in the Midwest, he had obtained an appointment as an examining physician for a regional military enrollment board in Rochester, Minnesota.

Unlike some of the science-based medical schools in the East, those in the Midwest in the mid-1800s were rudimentary; they played little role in
creating veterinary science. Frontier physicians, like veterinarians, were often apprentice-trained. As cities grew along the Mississippi River, private medical schools moved in. The Indiana Medical College began as a tiny, unstable, and short-lived school—from 1842 to 1850—in La Porte. William Mayo graduated in its last class and taught chemistry during his short time in Indiana. The school was unsuccessful and moved to Iowa to become the College of Physicians and Surgeons of the Upper Mississippi in Davenport. It graduated fifteen physicians before it again moved south on the river to join a medical group in Keokuk.

In the winter of 1850–1851, the Iowa State Legislature recognized the Keokuk Medical College as the official Medical Department of the State University of Iowa. The arrangement in Keokuk would operate in a new building as the College of Physicians and Surgeons of the State University of Iowa and would continue as the state-sponsored medical college for another twenty years, when the medical school moved to Iowa City.

A medical department for the university in Iowa City was approved as the university’s medical college in 1870. It opened for its first class in September with a dean and eight faculty; thirty-seven students enrolled, eight of them women. The curriculum was a mere two-week course of lectures followed by sixteen weeks of clinical training. In Keokuk the medical school would continue to operate as an independent institution until it closed in 1908 and transferred its records to Drake University in Des Moines.

The early lack of support and vision for medicine in the Midwest led to medical quacks, worthless patent medicines, and the appearance of quasi-medical businesses: the Palmer Chiropractic operation in Davenport, Still Osteopathic School in Des Moines, and the Iowa Homeopathic College of Medicine in Iowa City. The University of Iowa had two medical schools operating simultaneously: the allopathic medical school, the one operating today, and the Iowa Homeopathic College of Medicine. Started in 1876 as the Homeopathic Medical Department, the Board of Regents allocated funds for a homeopathic school building and hospital, which opened at the corner of Jefferson and Dubuque Streets in Iowa City in 1895.

Homeopathy attempted to cure sickness by stimulating the body to recover itself using a loopy belief, the law of similars and the infinitesimal dose. Instead of looking at symptoms as the unwanted evidence of disease, it viewed them as signs the body was healing itself—giving remedies that would cause the same symptoms in a normal person. Treatments were plant and chemical extracts
diluted to one part per million. The lack of science caught up to the scam and the homeopathic school and hospital closed in 1919.\textsuperscript{37}

Veterinary homeopathy had first been formalized when a German veterinarian named F. A. Gunther published his \textit{Homeopathic Veterinary Medicine} in about 1840. It appeared on the American scene when a second edition was translated into English and published in the U.S. in 1853. The book was publicized big-time by Dr. F. Humphreys, a prominent physician in Philadelphia, who took up veterinary work treating horses with dilute suspensions of belladonna (one part in a trillion of water), which had “the horse on his feet in two hours. Ten doses at 12-hour intervals ‘perfected the cure.’” Humphreys printed pamphlets and books on homeopathy that flooded the eastern markets.\textsuperscript{38}

Humphreys’s remedies cost less than a penny per dose, which he prophesized that “any sensible, faithful man of ordinary intelligence can master without difficulty.”\textsuperscript{39} But like human homeopathy, science caught up with veterinary homeopathy and it was gone. J. F. Smithcors, in noting the frequent brutal treatments delivered by veterinarians in those days, wrote that “at a time when both men and animals literally died of the doctor, homeopathy at least gave them the opportunity to die of disease—or recover with the aid of Nature, perhaps assisted by homeopathic nursing care.”\textsuperscript{40}

\section*{9. NEW PLAGUES, CIVIL WAR, AND THE UNITED STATES DEPARTMENT OF AGRICULTURE}

A rapidly spreading respiratory disease of cattle entered Massachusetts on July 23, 1859, with four Dutch cows imported by Winthrop Chenery of Belmont, near Boston. The cows, shipped from Rotterdam, had high fevers, labored breathing, and frothy noses. They were all so sick when they arrived in Boston that only two were able to walk from the boat to Mr. Chenery’s farm.\textsuperscript{41} When the carcasses were examined, the lungs were heavy and inflamed and the lining of the rib cage was rough and carpeted with tags of clotted serum. The disease was recognized immediately as contagious pleuropneumonia, but not before it had begun to spread through the area. Within the next four years the disease had appeared in twenty townships in Massachusetts. The potential for massive outbreaks in eastern states and the need to prevent contagious pleuropneumonia from spreading westward into the cattle country of the open