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A Bicentennial Reflection on Veterinary Medicine in Iowa

by
Dr. J. W. Sexton

Editor's note: Dr. Sexton's father was also a veterinarian. Dr. Sexton tied the recollections of his father together with those of other veterinarians who practiced earlier in this century to write this article. Thus he has given us a rare look at parts of our history by the men who could remember it. Currently, Dr. Sexton is practicing in the Bovine Clinic, Iowa State University.

The bicentennial year of 1976 is an important year to the people of the United States, for during this period we are making a special effort to pause and reflect on the past, evaluate the present, and speculate on the future. The past of veterinary medicine has been colorful and marked with vigor, excitement, and scientific progress, and we anticipate the same for the future.

The tree of veterinary medicine has many branches, and time does not allow us to explore them all here. But each facet had its own indomitable pioneers. Veterinarians in the Public Health Service fought public apathy and ignorance. Regulatory veterinarians performed their duties despite scorn and abuse from the very people they were trying to help. Extension veterinarians dutifully disseminated information and help to farmers who felt there was no need for them. Veterinary instructors prepared students, often with only the meagerest of facilities. Other veterinarians foresaw a need for cohesion in the young profession and forged state and national organizations. And last, but by no means least, the rugged practitioners, armed with woefully inadequate drugs and equipment, but evidently supplied with

more than adequate amounts of good sense, dedication, and physical endurance, brought veterinary medicine to the livestock producer. These men took the initial steps towards giving veterinary medicine the respected status it holds today. And to these known and unknown men we owe much, for they are our heritage.

THE PRACTICING VETERINARIAN

The rural veterinary practitioner pioneered a segment of veterinary medicine which can be richly romanticized. From the late 1800's on, these men came to both large and small Iowa communities from veterinary colleges in Ames, Iowa, Kansas City, Mo., Chicago, Ill., St. Joseph, Mo., and Guelph, Canada, to name a few. To these communities the graduate veterinarian was a new part of the professional cadre, because veterinary needs had previously been tended to by self-trained practitioners. Many of these unschooled practitioners, though later referred to as quacks, were highly successful, having a great deal of both perceptivity and experience, and were adept at handling the more routine veterinary duties of the time. A colorful era of veterinary medicine was necessarily brought to an end when the Iowa Legislature passed the Practice Act, forbidding the practice of veterinary medicine by nongraduates unless they had been practicing before the year 1900.

In the early years veterinary practice was a strenuous profession. This was in large part due to the significant equine population. The number of horses in our

country showed a steady growth throughout the early part of this century, peaking in about 1926. Though the number of horses started to decline after that, it was the widespread outbreak of Equine Encephalomyelitis in 1937-1939 that decimated the horse population rapidly.

"Sleeping sickness" took on epizootic proportions very quickly. Most farms had large stables of fine horses, and farms with no cases of the disease were considered lucky and unusual. Often many horses were affected on the same farm at the same time. Treatment by different veterinarians varied greatly, but usually included ice packs to the head, forced feeding, stimulants, and support in slings. Great effort in nursing care was put forth in many cases, and when, and if, the case became hopeless, euthanasia was often a slow and agonizing decision. Stories became legend of how veterinarians, with the aid of drivers, worked almost around the clock. Vaccines became more efficacious and the epidemic subsided. But one could look back on the carnage and realize things could never be the same again.

Until the 1920's the veterinarian made his visits in horse drawn carriages. This means of transportation had a very decided impact on the practice of veterinary medicine, restricting the number of visits he could make and also made it necessary for many veterinarians to have offices or facilities in the local "livery-barn". These livery-barns served as the first clinic-like situations for the practitioner, as the farmers would often bring their horses to the barn when they came to town, leaving them to be tended to by the veterinarian. Such procedures as dental work, routine worming, and minor surgery were often done at these times. It was not unusual for the veterinarian to spend the greater part of a Saturday floating teeth at the local livery barn. Many veterinarians had their own string of driving horses, and when the time for the transition to the automobile came, many veterinarians retired their horses to a life of ease, sentimentally remembering the long hard years of service. It was also not unusual for the early veterinary practitioner to use the local railroad to get to the next community where he would hire a team and buggy to complete his visit. Due to the slow

mode of travel, many visits required the veterinarian to remain with the patient until the outcome was well established. Many hours of visiting, swapping stories, and waiting were spent while tending the needs of a colicky horse or a foaling mare. It was commonplace for these practitioners to leave home in the evening to make a sick call and not return until the sun was up the following morning. Though in a lay terminology "Horse Doctor" was synonymous with veterinarian in these early years, it should be noted that other species were ministered to besides the horse. Cattle, swine, and poultry were also cared for, as well as small animals.

The armamentarium of these early veterinarians was very limited as viewed by the practitioner of 1976. Nux Vomica, magnesium sulfate, sweet spirits of niter, arecoline, pilocarpine, strychnine, barium chloride, and turpentine were some of the drugs that were commonly used. The medication was mixed and compounded by the veterinarian for the specific complaint of the patient. In the early 1940's the sulfonamides, and shortly later penicillin, followed by other antibiotics, did much to broaden the effectiveness of his treatment. Though there were some of the biological agents being used by the veterinarian before the 1950's, it should be noted that from then until now there has been great progress made towards research, production, and use of many new agents.

Anti-hog cholera serum was produced by Dr. Dorset in 1907, but it was produced in rather limited quantities. In 1913 a "wave" of hog cholera was sweeping the country, and it was estimated that Iowa lost nearly \$30,000,000 worth of hogs. This was approximately 25% of the state's swine population. This prompted the General Assembly to appropriate \$35,000 to provide for the production of hog cholera serum and virus. Permits to use hog cholera virus were issued to more than 1200 veterinarians and farmers. This opened a new dimension to veterinary service which grew to great proportions in many areas throughout the state.

This proved a great benefit to the swine producer, but each year many veterinarians had disheartening and disappointing experiences with unfavorable post-

vaccination reactions. The advent and widespread acceptance of modified vaccines in about 1948 did much to alleviate this problem, and the use of live virus was outlawed in Iowa. Later, the use of all hog cholera vaccines was forbidden in Iowa because the disease had been adequately controlled so that vaccination could be discontinued. This was viewed with mixed emotions by many veterinarians. It is a laudable accomplishment for the veterinarians of Iowa to have played such a major role in this disease control program. Vigilance is still being practiced today regarding the disease.

When mentioning drugs and biologics, it would be in error not to make some comment of the men who sold them to the veterinarians. The "drug salesmen" were the life line of veterinary news and information to the men in practice. In the earliest times they often traveled by train, and their presence was usually looked forward to by the veterinarian. Since there were relatively few publications and meetings, these men supplied the practitioner with the latest information in veterinary medicine, news of friends, of course, some gossip, and usually filled their order of drugs. They kept tabs on the pulse of medicine in their territory, and should vacancies occur in practices, they could use their influence to fill them with likely customers. The same tendency may prevail today, but not with the individual or singular characteristic it did in the 1950's. It can be repeated that these men exerted a strong influence on the rural practitioner.

Another epic chapter in the history of veterinary medicine was the eradication program of bovine tuberculosis. The pen of Upton Sinclair stirred the American people to the need of food inspection and the problem of widespread disease in many food producing animals. The enactment by the General Assembly of a bill to test all cattle in Iowa for tuberculosis and the slaughter of all reactors met with much opposition by many farmers. The fortitude and perseverance of both the practitioner and the regulatory veterinarian in the face of threats and violence surely marks one of their finest hours. One of the particularly trying times was around Tipton, Iowa, when the state militia had to be called to

enforce the law and allow the veterinarians to carry out their duties. This particular action was later referred to as the "Johnson County Cattle War". Numerous other incidents occurred when tempers flared and veterinarians were harassed, but none reached the seriousness of the situation in Johnson County. Within the span of three decades, tuberculosis was a disease well on its way to eradication.

HISTORY OF THE COLLEGE OF VETERINARY MEDICINE AT ISU

The history of veterinary medical instruction in Iowa begins with the act signed by Governor Lowe on March 22, 1858, providing for the establishment of a State Agricultural College and Farm that was to include "Veterinary Studies" among the courses to be taught. However, because of hard times and the Civil War, classes did not begin at the college until 1869. In the meantime, Morrill had introduced into the United States Senate the Land Grant Act, and President Lincoln signed the bill in 1862. Iowa Agricultural College and Farm was the first college to accept the provisions of this act.

The initial freshman class at Iowa State Agriculture College in 1869 numbered 173. By 1900 the total enrollment had reached 800, and currently is over 21,000.

While history indicates that practically all the early veterinary colleges in Europe and the United States were either established or sponsored by persons especially interested in fine horses, no such factor was apparent in the establishment of the "School of Veterinary Science" here in Iowa. A dean of one of the medical colleges had this to say about its curriculum. "It is a remarkable fact that beginning in the year 1879 there was in operation at the Iowa State College at Ames, Iowa, a college of veterinary medicine with stiffer entrance requirements and a longer and fuller course of instruction than any college of human medicine in the country."

In December, 1871, President Welch reported that "for additional instruction the seniors of the agriculture course will need a professor of practical agriculture who, besides other important duties, will give

lectures on comparative anatomy, physiology and veterinary science." Veterinary Science and Practice was included at that time in the second semester of the senior year in agriculture.

The first class graduated from the college in 1872, having received instruction in veterinary science. These instructions were given by Dr. H. J. Detmers, the first professor of veterinary science at Iowa State College. There is no record of a veterinarian on the staff from 1872-1876, before Dr. Stalker was elected as Professor of Agriculture and Veterinary Science in November of 1876. In May of 1877 an appropriation of \$50.00 was made to the "Department of Veterinary Medicine."

At this time the combined course in agriculture and veterinary science was a four-year course. The sophomore year was largely stock judging, and the last year was devoted to veterinary science. The catalog statement was as follows: "The study and practice of Veterinary Science occupy 5 days a week during the senior year. Lectures are given on veterinary anatomy, physiology, materia medica, pathology, diseases and treatment, surgery, sanitary science and practice. Free clinics are held one afternoon each week, where the students have an opportunity of seeing an extensive practice and acting as assistants in surgical operations. Animals taken into the hospital for treatment are placed under the care of members of the class who treat them under the direction of the professor in charge. Students take this work in rotation, so that all become familiar with actual practice."

An action of May 23, 1879 is recorded as follows: "Ordered that the course in the Veterinary School be extended one year; that Professor Stalker and the President of the College be authorized to arrange the proper studies, and that the Board hereafter, on recommendation of the faculty, will confer a suitable diploma on such students as shall complete such extended course." Thus was the birth of the Veterinary Division ("School") 97 years ago. Since that time its existence has been uninterrupted. This marks the founding of the first veterinary school in the west. Also, it makes the Iowa State University College of Veterinary Medicine the oldest state

veterinary college in existence.

The first veterinary hospital was a barn located west of the Horticulture Department. This was an exceedingly unpretentious building, only a barn at best, and a poor one at that, but here the first classes received their clinical training.

The college catalog of 1879 announced that, "The course occupies two years. Sessions begin in March and continue till the latter part of November, with a vacation of two weeks in July. At the close of each term examinations will be given on the subjects taught during the term. These examinations will be final, with the exception of the following subjects: viz., anatomy, materia medica, therapeutics, and veterinary medicine and surgery. On the last named branches the student must pass an examination at the end of his course. The method of examination will largely be under the control of the Professor in charge, but in every case will be such as to give ample proof of the efficiency of the candidate."

The entrance requirements of the first announcements were stated as follows: "Candidates for admission must be at least sixteen years of age. Before entering the classes they must pass an examination in reading, orthography, geography, grammar, and arithmetic. Candidates for graduation must be eighteen years of age or over, must have completed the entire course of study and attained a standing of seventy-five per cent in all the studies pursued, and finally shall present an acceptable thesis upon some subject approved by the faculty. A graduation fee of five dollars will be required." On June 18, 1884 the Board of Trustees appropriated \$10,000 for two buildings for the "Veterinary Department" and let a contract for the construction of a "Veterinary Hospital" for the consideration of \$5,950; also \$150 for a well, pump, and sewers for the veterinary buildings. The hospital was a substantial brick building 45x50 feet and two stories high. From a sanitary point of view this was one of the best, if not the best, infirmary in the United States. This building was opened June 1, 1885, and was used by the Veterinary Division until 1912 and removed in 1926 to make room for the new Memorial Union.

In 1887 the faculty decided that two years did not afford sufficient time to acquire the thorough scholarship that is demanded by the progressive state of Veterinary Science. This led to the adoption of a three year curriculum. At that time the Veterinary Department had but one class room, though there were "two and sometimes three classes in progress at the same time."

The veterinary section had in preparation some mallein (1893) and stated that "tuberculin has also given promise of becoming a valuable diagnostic agent."

The year 1903 marks the introduction of the first four-year course to be adopted by any veterinary college in the country. There were 30 freshman entered that fall, and it was reported later that, "the experiment of making the course in veterinary medicine four years in length has proven successful. It would appear that in veterinary medicine, as in human medicine, the school that seeks to furnish the most thorough and scientific education to its students is appreciated by the better class of young men who are expecting to qualify themselves for a creditable professional career."

The Iowa State University College of Veterinary Medicine has continued to expand its course of training, its faculty, and its facilities throughout the years. A five-year curriculum was instituted in 1931, and the minimal six-year course of study in effect today was started in 1948. In 1873 there was only one member on the veterinary staff. By 1912 the staff had increased to eight, and practically everyone was a department head. At the present there are 95 full time staff members with the rank of instructor or above. In addition, when the National Animal Disease Center was built in Ames in 1960, six members of its personnel were added to the Iowa State University staff in the capacity of collaborators at the veterinary college. There are also four collaborators on the staff who work in various fields of industry.

The facilities of the veterinary college have changed dramatically since the early part of this century. The veterinary quadrangle, a landmark still visible on campus and just vacated by the veterinary school this past year, was completed in 1912 at a cost of \$150,000. Since that time



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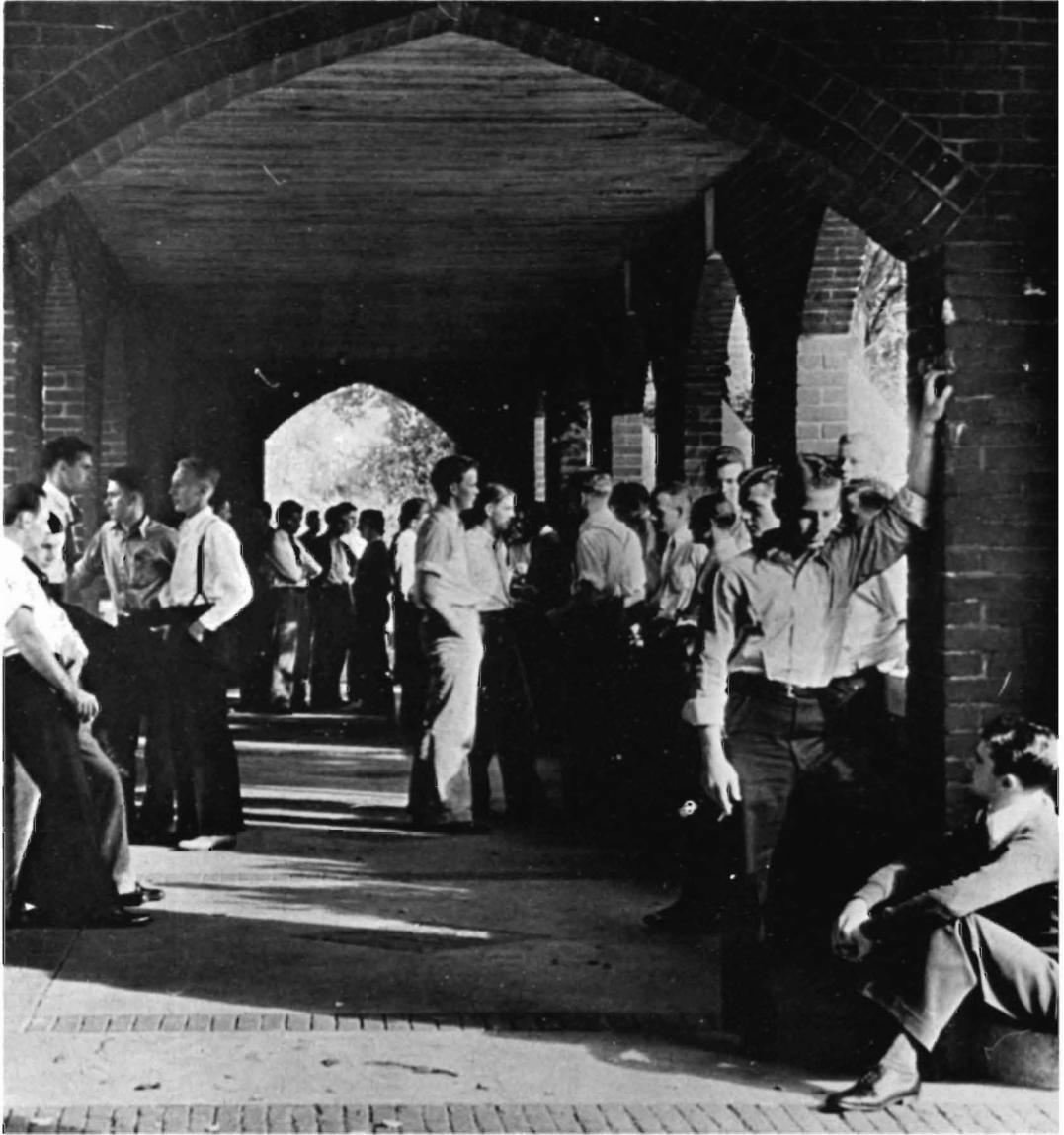
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1. "Suckling Mouse Brain Rabies Vaccine (SMBV): Duration of Immunity in Dogs"; *Veterinary Medicine/Small Animal Clinician*, January, 1976.

2. "Improved Rabies Vaccine Licensed for Dogs and Cats," *U.S. Dept. of Agr.*, News Release USDA 1098-73.

3. "Improved Rabies Vaccine Licensed for Dogs and Cats," *News Section, Jnl. of the AVMA*, 162:12:1021.



Students relax in the arched walkway of the old veterinary quadrangle.

the Stange Memorial Clinic, a diagnostic wing, a biomedical engineering wing, and the Veterinary Medical Research Institute were added to the facilities. Just this fall, the veterinary college has completed a move to an entirely new 26.5 million dollar facility located near the research institute. The much needed space and modern equipment at the new school will allow even more effective research and teaching activities to be carried out. Also, an increased class size of 120 students was made

possible by the new facility. It is a wonderful expression of the multi-faceted teaching, research, and diagnostic functions of a modern school of veterinary medicine and a credit to our state.

I would like to mention people who contributed help in this—

Dr. Margaret Sloss
Dr. Stanley Hendricks
Dr. Fred Wertman
Dr. John Herrick
Dr. Robert Stewart



The ambulatory wagon next to the then-new veterinary clinic in about 1915.



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