

VETERINARY MEDICINE

Timeline of Events

1950s

- American Board of Veterinary Public Health was the very first veterinary subspecialty recognized by the AVMA. (1951)
- Canada declared free of FMD. (1953)
- Vesicular exanthema of swine eradicated from U.S. (1959)

1960s

- Equine piroplasmiasis first reported in the U.S. (1961)
- Swine brucellosis program begins. (1961)
- Congress authorizes hog cholera eradication program. (1961)
- Southwest screwworm eradication program begins. (1961)

1970s

- Outbreak of VEE in Texas leads to vaccination of 2.8 million horses. (1971)
- Introduction of Newcastle disease into California by double yellow-headed parrots. (1971)
- Meat and poultry inspections transferred to APHS (renamed APHIS). (1972)
- Outbreak of cattle tick fever in Alice, Texas. (1972)
- Sheep scabies eradicated in U.S. (1973)
- Newcastle disease eradicated in U.S. at cost of \$56 million. (1974)
- Last case of hog cholera in the U.S. (1976)
- Outbreak of Newcastle disease in pet birds in 40 states and Puerto Rico. (1977)
- Meat and poultry inspection functions in APHIS transferred to Food Safety and Quality Service. (1977)
- American College of Veterinary Preventive Medicine recognized by the AVMA. Renamed from American Board of Veterinary Public Health. (1978)
- Contagious equine metritis diagnosed in Kentucky. (1978)
- Cattle tick fever rediscovered in Puerto Rico. (1978)
- National Poultry Improvement Plan transferred to APHIS from ARS. (1979)
- New facility at the NVSL in Ames, IA. (1979)
- Foot and Mouth disease vaccine bank for U.S., Canada and Mexico established. (1979)
- Initial proliferation of clinical specialties in veterinary medicine.

1980s

- Continual proliferation of clinical specialties in veterinary medicine.
- Center for government and corporate veterinary medicine established at Virginia-Maryland College of Veterinary Medicine. (1983)
- Pew National Veterinary Education Program published *Future directions in veterinary medicine*. Also referred to as The Pew Report. (1988)
- First shipment of livestock released from HSTAIC. (1980)

- Congress passes the Swine Health Protection Act to regulate feeding of garbage to swine. (1980)
- Highly pathogenic avian influenza outbreak in 4 states in northeastern U.S. (1983)
- Eradication of African swine fever from Haiti, 1981 to 1984. (1984)
- Pilot projects for eradication of PRV in 5 states. (1984)
- Bovine TB reactor rate decreases below 0.003 percent. (1984)
- First genetically engineered PRV vaccine licensed by APHIS. (1986)
- First Public Veterinary Practice Career Program class (1986)
- Ad hoc committee on brucellosis in Yellowstone National Park formed. (1988)
- Restructuring of APHIS yields increase in administrative units from 4 to 11, all of which still exist as of 1998. (1988)
- Antimicrobial residues problems prompt a USDA rule to identify all swine involved in interstate commerce. (1988)
- APHIS begins “Rapid Completion Plan” to finish brucellosis eradication program. (1989)
- State-Federal-industry swine PRV eradication program began. (1989)

1990s

- Second Public Veterinary Practice Career Program. (1990)
- Number of cattle herds quarantined for brucellosis decreases below 1000 for the first time. (1990)
- Field trial successfully completed on Parramore Island, Virginia, for the first genetically engineered oral raccoon rabies vaccine. (1991)
- Bovine TB recognized as a serious problem in deer and elk. (1991)
- Number of cattle herds quarantined for brucellosis decreases below 500 for the first time. (1992)
- Screwworm eradicated from Belize and Guatemala. (1992)
- Scrapie Voluntary Flock Certification Program begins. (1992)
- Third Public Veterinary Practice Career Program. (1992)
- APHIS begins a control program for the brown tree snake in Guam. (1993)
- National Trichina Research Project established with cooperaters from APHIS, ARS, FSIS, and the NPPC.
- Fourteen states declared “free” of PRV. (1995)
- Number of sheep flocks enrolled in the Scrapie Voluntary Flock Certification Program equals 100. (1995)
- Number of cattle herds quarantined for brucellosis decreases below 100 for the first time. (1993)
- Tracking programs organized in veterinary school curriculum. Tracking programs permit students to “specialize” in areas such as epidemiology, public health.
- Moderate proliferation of “international programs” in veterinary colleges provide international experiences for students..

Trends

Applicants, veterinary students, new graduates and the curriculum

- There were 6400 applicants in 1981 and 2600 projected for 1992.
- The number of veterinary students with exposure to animal (and plant) agriculture decreased and continues to decrease as the number of U.S. citizens with direct ties to agriculture continues to decrease.
- Veterinary colleges selected for and began to graduate professional technicians during the decades of the 70s and 80s. These veterinarians lack abilities in the non-technical dimensions of veterinary medicine. Fewer of these veterinarians are qualified for positions that require managerial and policy skills, unless they received advanced training.
- Veterinary medicine severed its ties to public health (e.g. zoonoses) during the decades of the 70s and 80s, but appears to be attempting to recapture this turf during the 90s, possibly as a survival mechanism.
- Veterinary students shy from careers in public practice (e.g. food inspection) during their DVM training. Public practice is often viewed as a “last resort” career track, a career track for the “tail-end of the class”.
- The percentage of females in each class greatly increased during the 1980s and continues to be 50 to 70 percent of the total in the 1990s.
- Females were only 7 percent of 4429 students in 1967. Females were 55 percent of 8751 students in 1987.
- The female:male ratio in 1980 was 1:1.25. The ratio of females:male ratio in 1988 was 1:0.67.
- Ethnic minorities comprised only 5 to 7 percent of all applicants during the 1980s. They comprise an even smaller percentage of veterinary graduates. They are virtually non-existent in graduate programs.
- There is a movement towards decreasing core requirements and increasing electives, in accordance with trends in revising preclinical veterinary curricula.
- There is a movement towards species tracking in clinical areas.
- Several schools are offering emphasis areas/tracking in non-clinical practice career development. This is associated with expanding niches for veterinarians in biomedical research, governmental, and industrial positions.
- Typically, less than 5 percent of new graduates enter public or corporate practice. Less than 1 percent of new graduates enter federal service specifically.
- Only 0.1 percent of females and 0.2 percent of males of the class of 1997 entered federal service specifically.

Starting compensation, long-term compensation, and educational debt

- Starting salaries for veterinarians are not competitive with salaries of other health and non-health professions, many of which may require a much shorter duration of training.
- Real income (i.e. starting salaries adjusted for inflation) for new graduates who entered private practice, non-private practice, and advanced study programs decreased from 1980 to 1989.
- While starting salaries did increase during the 1990s, real income (i.e. the starting salaries

adjusted for inflation) probably equaled inflation and therefore did not increase substantially.

- The educational debt of a newly graduated veterinarian is staggering! The average debt of a Michigan State University graduate in 1990 was \$34,800. The average debt of a Michigan State University graduate in 1997 was \$67,000. (For comparison purposes, the monthly payment for these educational loans may exceed the monthly payment on many home loans in the U.S.
- The long-term income of Federal veterinarians with 8 to 12 years of service approximates that of other public practice veterinarians. The long-term income of Federal veterinarians with more than 8 to 12 years of service gradually severely lags behind that of other public practice veterinarians.
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- The income-spread between Federal veterinarians with advanced academic degrees versus those without is smaller than the income-spread of other public practice veterinarians with advanced academic degrees versus those without.
- The long-term income of Federal veterinarians always severely lags behind that of corporate veterinarians.

Public veterinary practice

- Agencies will not engage directly in as many disease control programs as they have in the past.
- Agencies will be required to improve their scientific and technical competency in order to function as information-intensive agencies.
- Agencies will be required to draw upon technical and scientific information knowledge base to make policy and regulatory decisions related to animal production and health and to human safety.
- Agencies will become major generators of information about the occurrence, epidemiology, and economic impact of diseases.
- Agencies will establish roles in assessing the risk of animal diseases, animal pathogens, and chemical residues in foods to human and animal health.

Desired qualifications of public and corporate practice veterinarians

- Communication skills, both oral and written. Translation of veterinary medical sciences to non-veterinarians.
- A sense of public policy. How policy is established; how it is implemented; how it is enforced.
- Recognition that consumers are the driving force. Concern for the public's health should be first. In the past, the veterinary profession has placed its patients first, its clients second, and public health's interest third. The order must be reversed.
- Interpersonal skills. Team player. Skills in hiring and motivating employees.
- Leadership skills.

- Technical knowledge concerning animal health, especially in the areas of information collection and analysis--epidemiology, problem solving, statistical analysis. Other areas are information management, risk assessment, sociology, public policy.
- Analytical and problem solving abilities. Ability to identify a problem, collect and evaluate the information needed to solve the problem.
- Knowledge and sensitivity to world politics; movement of animals, fourth hurdle trade policies.
- Knowledgeable about contemporary issues, e.g. animal welfare, animal rights.
- Self-motivation. Lifetime learner.
- Versatility and flexibility.
- Knowledge about the dynamics of the various animal industries.

Uncertainties For The Future

- As Veterinary Services' activities in traditional disease control programs diminishes, will the agency have sufficient qualified veterinarians to carry out newly evolving responsibilities in areas such as epidemiology, problem solving, statistical analysis, information management, risk assessment, economics, international trade, sociology, public policy?
- Lack of opportunities for career advancement (and concomitant increases in income) for veterinarians in Federal service appears to be "capped" much earlier than for other public practice veterinarians. The impact of these caps on the stability of Veterinary Services' workforce of the early 21st century is yet to be determined. If presented with more rewarding financial opportunities, will veterinarians pursue those opportunities?
- If the veterinary educational debt continues to increase, will the veterinary profession be able to continue to attract a sufficient number of competitive students who eventually will become employees of Veterinary Services and other APHIS units?
- If the number of veterinary students with backgrounds in animal agriculture continues to decrease, will the veterinary profession be able to continue to attract a sufficient number of students who will assist Veterinary Services in addressing animal health issues? Will the agency have veterinary liaisons to the various industries that it has served in the past?
- Newly evolving responsibilities will gradually be taken over by animal scientists and dairy scientists, rather than veterinarians. The small number of youngsters who will have ties to animal agriculture after year 2000 will choose to bypass the long, arduous, expensive veterinary school route to pursue shorter, more cost-effective training programs (e.g. in schools of agriculture). The disinterest in agriculture along with the dilution of livestock-related issues from veterinary curricula will result in the vast majority of veterinary school products not being trained to contribute to the mission of Veterinary Services.
- If additional training beyond the veterinary degree will be required to maintain and/or develop the necessary agency expertise, will the infrastructure and resources be available for training?

References

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