Opportunities for Veterinarians in the Federal Government

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Current Professional Activity of U.S. Veterinarians

Clinical Practice ~ 3,000 Veterinarians Working in Public Health at the Federal and State Levels
Number of Veterinarians in the Federal Government

Number of Veterinarians

- FSIS: 1044
- APHIS: 673
- ARMY: 889
- CDC: 117
- NIH: 92
- FDA: 120
- NIH: 92
- USDA: 120
- NIFA: 889
- CDC: 117
- NIH: 92
- FSIS: 1044
- Total = 3,177 on 12/31/2011
Areas of Responsibility for Federal Veterinarians

- Food safety and defense
- Food animal disease control
- Emerging diseases/zoonoses prevention and control
  - Human health programs
  - Environment, Wildlife health, Domestic animal health, Human Interface
- Immunization programs
- Environmental/ecosystem health
  - Toxicology, Contaminants, Wildlife Health
- Emergency response (human and animal)
- Bio and Agro Terrorism

- Outbreak Investigation
- Health promotion
- Injuries
- Occupational Health
- Drug effectiveness and safety
- Research and research animal care
- Domestic and global health
- More
Roles & Responsibilities of Federal Veterinarians

- Elected Officials and Other Policymakers (Schrader)
- Program managers
  - Disease surveillance, disease and injury prevention and control, research, outbreak investigation, emergency preparedness, response, animal care, import/export, etc.
- Researchers, Research Coordinators
- Epidemiologists, Public Health, Wildlife Veterinarians
- Scientific advisors
- Laboratory scientists (Microbiologists, pathologists, etc.)
- Risk assessment analysts
- Toxicologists, Biologists
- Foreign animal disease diagnosticians, response
- Lab Animal Veterinarians
- Other
Personnel Systems

- Civil Service
- Commissioned Corps of US Public Health Service
- Military Services
- Fellows
- Contractors
Veterinarians at CDC (December, 2008)

- Emerging Inf. Dis.: 36
- State Health Depts.: 18
- Occupational Health Safety: 5
- HIV/AIDS: 5
- Immunizations: 4
- Environmental Health: 10
- Reproductive Health: 1
- Occupational Safety & Health: 2
- OD: 1
- Research/lab animal: 1
- Global Health: 5
- Injury: 1
- AIDS/STD: 1
- Unknown: 1

Total: ~ 95
Veterinarians in Health and Human Services - CDC

- Center Director
- Center, Division, Branch Assoc. Directors/Chiefs
- Epidemiologists
- Laboratory scientists
- Liaisons from USDA (APHIS, FSIS) stationed at CDC
- EIS (Epidemic Intelligence Ser) Officers
- Fellows
- Laboratory Animal Care Veterinarians
Activities of Veterinarians at CDC

- Program leadership and management
- Policy development
- Disease and injury prevention, control, elimination, eradication – domestic and international
- Outbreak investigations
- Environmental risk assessment
- Epidemiologic studies / public health research
- Bio-, chemical terrorism, emergency public health preparedness
- Infection control
- Program evaluation
- Laboratory science
- Training
- Laboratory animal medicine, animal care
Veterinarians at NIH

Total: ~ 89
Veterinarians in Health and Human Services - NIH

- Research animal care
- Animal care and use, animal welfare
- Laboratory animal medicine and surgery
- Epidemiologists/program directors
- Toxicology
- Veterinary/comparative pathology
Veterinarians at FDA
December, 2008

Total: 140

Veterinary Medicine
Food Safety and Nutrition
Biologic Evaluation and Research
Drug Evaluation and Research
National Center for Toxicological Research
Office of the Commissioner
Unknown
Veterinarians in Health and Human Services - FDA

- Policy, planning, budgeting
- New animal drug review/ approval
- Surveillance for animal health/ adverse drug reactions; antibiotic resistance
- Veterinary pathologists, epidemiologists
- Laboratory animal medicine
FDA’s Center for Veterinary Medicine

“Using science and law to protect public and animal health”

• Approves safe and effective products for animals
• Enforces applicable provisions of the Federal Food, Drug, and Cosmetic Act & other authorities
• Animal drug review, compliance-related actions, post-approval monitoring, animal feed safety
• Surveillance for antibiotic resistance of food borne bacteria
• Guidance for preventing antimicrobial resistance resulting from use of antimicrobial drugs in animals
• Development of screening tests for drug residues in meat and milk
• Research to support animal drug approvals
Veterinarians in USDA

Total: ~ 1,714
Veterinarians in USDA - FSIS (December, 2008)

Total: ~ 976
Public Health Veterinarians in USDA-FSIS

“Protecting public health through food safety and defense”

Ensures meat, poultry, and egg products are safe, wholesome, unadulterated, properly labeled & packaged.

Field Opportunities

- Regulatory oversight / front-line supervision in slaughter & processing plants; District office managers, technical; Humane handling & slaughter specialists; Trainers; Laboratory services.

International Public Health Assessment and Policy

- International food safety coordination; Participation in Codex Alimentarius.

Scientific public health policy, assessment/technical support

- Oversee, monitor, evaluate meat, poultry, egg product public health hazards from farm-to-table.
- Trace-back, laboratory, environmental, & food safety assessments in support of foodborne illness / outbreak investigations.
Field public health veterinarians, epidemiologists, supervisors and program managers, risk analysts, toxicologists, biologists, scientific advisors, research coordinators, and more

Expanded public health assurance duties

- Assess food safety systems in plants
- Identify & evaluate production system safeguards affecting chemical, physical, & microbiological hazards
- Conduct residue sampling & testing for violative drugs & other chemical hazards
- Analyze data to determine adequacy of food safety system controls & prevent adulteration with pathogens
- Assist with recalls of adulterated meat & poultry products
- Oversee & enforce requirements for humane handling and slaughter of livestock & GMPs for poultry
- Outreach to educate public, producers, & regulated industry
Veterinarians in USDA-APHIS (December, 2008)

Veterinary Services: 550
Animal Care: 71
Plant Protection and Quarantine: 21
International Services: 17
Biotechnology, Regulatory Services: 14
Wildlife Services: 1
Policy and Program Development: 1
Unknown: 1

Total: ~674
Veterinarians in USDA – APHIS

Protects and promotes US agricultural health, administers the Animal Welfare Act, carries out wildlife damage management activities

Veterinary Services: Protects and improves the health, quality, marketability of US animals, animal products, and veterinary biologics by

- Preventing, controlling, and/or eliminating zoonotic and animal diseases
- Directing national programs to eradicate selected animal diseases
- Coordinating national animal health emergency preparedness and management
- Ensuring the safe import of animals, animal products, biologics
- Certifying animals, animal products, veterinary biologics for export
- Diagnosing foreign and domestic animal diseases
- Monitoring animal health and conducting surveillance for animal diseases of US livestock and poultry
- Managing key activities in laboratory network
Veterinarians in USDA – APHIS

- **Biotechnology Regulatory Services Unit**: Develops appropriate regulatory policies, to address today’s biotechnology issues and challenges

- **Animal Care**: Provides leadership in establishing acceptable standards of humane animal care and treatment; monitors and promotes compliance with Animal Welfare Act
  - Inspections of laboratories housing research animals; dog breeding facilities, zoos, horse shows, amusement parks
  - Education and cooperative efforts

- **Wildlife Services**: Provides Federal leadership in managing problems caused by wildlife
Veterinarians in USDA – APHIS

**International Services:** Reduces threats to US agriculture

- Cooperates in major surveillance, disease eradication, and control programs in foreign countries
- Stationed in 27 countries on 6 continents to ensure safe entry of animals and animal products into the US & assist with US agricultural product exports

**Plant Protection and Quarantine:** Safeguards agricultural and natural resources from risks associated with entry, establishment, or spread of animal and plant pests and noxious weeds.

- Work in ports to screen products for diseases/pests that could put US agriculture at risk
Skills and experience of staff

- Clinical experience, exams, diagnosis, necropsy, sample collection
- Foreign Animal Diseases
- Epidemiology
- Investigation methods
- Threat and risk assessment
- Disease surveillance
- Disease control
- Leadership
Veterinarians in USDA – ARS

U.S. Scientific research agency for solving agricultural problems of national importance

- National Programs in Food Animal Production, Animal health, Arthropod Pests of Animals and Humans, Aquaculture, Human Nutrition, Food Safety
- Program Components: Pathogen detection, microbial genomics, epidemiology of disease, host pathogen interactions, genetic resistance to disease, disease control strategies, animal immunology, mechanisms of disease
- Initiatives: biodefense, zoonotic disease, respiratory diseases, reproductive/neonatal disease, enteric diseases, parasitic diseases, TSEs
- 8,100 people; 2,100 scientists (~ 40 veterinarians = ~ 1.9% of scientists)
Veterinarians in the Department of Interior (December, 2008)

Total: 30

- US Geological Survey: 15
- US Fish and Wildlife: 3
- National Park Service: 3
- US Forest Service: 4

Legend:
- Yellow: US Geological Survey
- Pink: US Fish and Wildlife
- Green: National Park Service
- Orange: US Forest Service
Veterinarians in the Department of Interior: US Geological Survey -- National Wildlife Health Center

Assesses the impact of disease on wildlife and identifies the role of pathogens in contributing to wildlife losses

- Wildlife policy
- Wildlife health assessments
- Wildlife mortality investigations (including laboratory diagnosis)
- Infectious and zoonotic disease research
- Studies of diseases affecting endangered species
- Assessment of interactions between environmental contaminants and infectious agents

- Wildlife disease surveillance
- Wildlife Disease Information Node
- Wildlife Vaccine Development
- DOI liaison to DHS
- Legal cases for FWS Law Enforcement, Forensics, Endangered Species Reintroduction and Recovery
Veterinarians in the Department of Interior: US Fish and Wildlife Service

Conserves, protects, and enhances fish and wildlife and their habitats for the continuing benefit of the American people.

- Natural Resources, Conservation, planning, policy
- Migratory Bird Management, Habitat Conservation
- Fish and Wildlife Management and Habitat Restoration
- Endangered Species – classification, conservation
- International Affairs
- Law Enforcement
- National, Regional, State Offices
Veterinarians in the Environmental Protection Agency (EPA)

Research and Development
Pesticide Programs
Pollution Prevention and Toxic Substances
Air, Standards, and Quality
Environmental Response Team
Ecosystems Protection, Remediation, Region 8
Environmental Assessment, Region 10
Other Environmental Programs

Total: 20
Veterinarians in EPA

Risk assessment and evaluation
- Superfund sites, Eco-toxicological (metals, antimicrobials, sludge borne, water and food borne pathogens)

Policy analysis, development

Emergency response
- CCRF, environmental contamination

Research into adverse health effects of air, drinking water and terrestrial pollution

Research animal care

Zoonotic diseases and associated public health risks
- Concentrated Animal Feeding Operations, prions, expert witnesses

Methods development
Veterinarians in the Air Force

~ 90 veterinarians

Public health officers

Traditional public health functions

Medical intelligence, deployment health support, decontamination of chemical/biological/radiological casualties, food safety

Additional training offered/recommended–epidemiology, toxicology, food safety

MPH important
Veterinarians in the Army

Total: 566 active duty and civilians
(December, 2008)
Veterinarians in the Army
(439 active duty, 167 Army Reserve, 13 National Guard)

- Public Health Specialists
- Comparative Medicine
- Lab Animal Medicine
- Pathology

Veterinary Positions
- Veterinary laboratories
- DoD Military Working Dog Center
- Veterinary Treatment Facilities
- Caisson Horses (Fort Myers)
- Deployable/ overseas units
- Special Forces Units
CVMs with Options for Public Health Degrees

- Auburn
- CO State
- Iowa State
- Kansas State
- Michigan State
- North Carolina State
- The Ohio State
- Texas A & M
- Tufts University

- UC Davis
- U of GA
- U IL
- U MN
- U TN
- U WI
- VA-MD
CVMs with Public Health Programs

- Cornell U
- LA State
- OK State
- U FL
- U Missouri
- U Penn
Summary

- Exciting career opportunities exist across the health spectrum at Federal, State, Local levels
- Shortages in veterinarians working in public health exist at all levels (State, Federal, International) across all areas
- Veterinarians currently comprise ~ 0.5% of U.S. public health workforce
- Veterinarians working in public health surpass the number labeled “public health veterinarians”
  - Veterinarians work in public health positions not exclusively designated for veterinarians
- Multiple and exciting educational programs for veterinarians interested in public health
Current “Hot” Issues

- One Health/ One Medicine
- Threat of Pandemic Influenza – Links to Avian Influenza
- Transmissible Spongiform Encephalopathy (e.g., BSE)
- Natural / Intentional Emergencies
  - Counter-terrorism; biologic, agricultural, nuclear
- Foodborne illness reduction
- Antimicrobial resistance
- Pet food contamination
- Animal welfare, human slaughter and handling enforcement
- Shortage of food supply, public health, environmental veterinarians
  - National Veterinary Medical Service Act
  - Veterinary Workforce Expansion Act