



PROGRESS REPORT

Maddie's® Shelter Medicine Program, Cornell University

Objectives for September 1, 2010 – August 31, 2011



Executive Summary:

The sixth year of the program has been a year of new initiatives and maturation of the Maddie's Shelter Medicine Program at Cornell. Program activities (e.g., shelter medicine as a regular element of the Community Practice Service rotation for clinical veterinary students) and the shelter medicine courses are now accepted components of the professional veterinary curriculum at Cornell. The proposal for the establishment of an elective shelter medicine rotation was readily approved. A new section of Community Practice was formed with the addition of shelter medicine, nutrition, CPS surgery (doing S/N in area shelters), and dentistry. Dr. Berliner now chairs the weekly meetings of this new group. The Maddie's and Swanson Shelter Medicine Interns and visiting externs are now scheduled with all other interns and externs through the Cornell Hospital for Animals. In short, shelter medicine has joined the traditional disciplines within the College.

After development of the Maddie's Shelter Medicine Internship Training Program in early 2010, two interns were recruited and began training in June 2010. We celebrated the graduation of the Program's first Maddie's Shelter Medicine Intern (Dr. Kate Riley) and Swanson Shelter Medicine Intern (Dr. Michael Greenberg). Dr. Riley is now employed as a shelter medicine veterinarian at the North Shore Animal League on Long Island in New York. Dr. Greenberg has remained with our Program for a year to support Dr. Berliner's clinical work and teaching and is assisting with the development of a guide to the use of shelter metrics.

With stability in the Program, we were able to offer an Evidence-Based Medicine module for the interns and further develop our services to Tompkins County with consultations on Pet Point configuration, training and analysis of their shelter metrics.

Our four primary goals remain the same with emphasis on the delivery of shelter medicine care to small rural shelters, helping them access information and services to reduce suffering and save lives in traditionally under-served communities. This focus is reflected below in each of the four original program goals.

- **enhanced veterinary student training with regards to the overall welfare of companion animals, as well as shelter medicine;**
- **post DVM training in companion animal welfare and shelter medicine;**
- **outreach to local and regional shelters;**
- **creation and dissemination of knowledge regarding these topics.**

Our progress towards addressing these goals is outlined below:

I. CONTINUE AND EXPAND VETERINARY STUDENT TRAINING

A. Continue training

1. Offered three elective courses

Name of course	Course No.	Offered to	Enrollment 2011	No. years offered
Companion Animal Welfare	VTMED	First and second year students	49	13 years
Shelter Medicine I	VTMED	Third and fourth year students	11	7 years
Shelter Medicine II	VTMED	Third and fourth year students	10	4 years

(The 2011 syllabi for these courses are provided in Appendix I.)

2. Continued:

- a. Teaching of two sessions of Maddie’s® Shelter Medicine Rounds during the CPS clinical rotation for all veterinary students. Maddie’s® Shelter Medicine Rounds were held every two weeks during the year.
- b. Exposure of students taking the core Block IV “Host, Agent and Defense” course to shelter-based examples. These are used to teach principles of epidemiology and statistics using examples derived from Program experiences.
- c. Coordination and support of physical examination laboratories at the SPCA of Tompkins County during the Fall semester. These laboratories are required of all first-year veterinary students and include a comprehensive tour of the shelter as well as physical examinations of shelter animals (see previous reports). This is the first exposure of all of our veterinary students to the SPCA of TC and the first exposure of many to an animal shelter.
- d. Teaching of the Cat Handling laboratory for Block 7, demonstrating minimal and humane restraint of cats during medical examinations and procedures. This laboratory is taken by all veterinary students and involves shelter animals.
- e. Rotation of all third or fourth-year students through the “CPS Surgery” where students travel to one of four shelters to spay and castrate cats and dogs (under

the supervision of an experienced spay/neuter veterinarian). One of these shelters is the adoption guarantee shelter, the SPCA of Tompkins County.

- f. Offering of two Shelter Medicine Club clinics per month at the SPCA of Tompkins County, as well as offsite visits to the SPCA Annex at the Ithaca Mall to provide direct, primary care for shelter animals.
- g. Visits of all CPS students to the SPCA of Tompkins County (at least 2 mornings weekly) while on their Community Practice Rotation.
- h. Maddie's® Shelter Medicine Case Rounds, a series of lunchtime lectures on interesting clinical cases in shelter medicine. These weekly, 45-minute, brown-bag rounds were open to all members of the veterinary college, and attracted students from all four classes. Sessions were case-based and interactive, with Dr. Berliner or a shelter medicine intern presenting a medical or behavioral scenario, and leading students through diagnosis and management of a condition in a shelter setting. Topics included ringworm, sarcoptic and demodectic mange, parvovirus, severe anxiety, Manx syndrome, heartworm disease, FIV, FeLV, upper respiratory disease, and trauma triage in the shelter.
- i. "On-call Shelter Medicine Crew" consisting of veterinary students who responded to requests for medical services at the SPCA of Tompkins County under the supervision of Dr. Berliner.
- j. Evening and luncheon presentations open to the College community entitled:
 - Dr. Andy Newmark (Lollypop) – "From Exam Room to Court Room: The Veterinarian's Role in Animal Cruelty Cases"
 - Dr. Michael Greenberg – "Non-surgical Sterilization Methods"
 - Dr. Elizabeth Berliner – "Focus on Kitten Neonates and Bottle Feeding"
- k. Presentations regarding "Dangerous Dogs" and "Dog Bites: A Public Health Problem / Epidemic" in core Block VII "Animals, Veterinarians and Society".
- l. Presentations regarding "Normal Cat Behavior: the Challenge of Cats in Clinical Settings" (EB) and "Normal Dog Behavior: the Challenge of Dogs in Clinical Settings"(MG) in *core Block VII* "Animals, Veterinarians and Society."

3. Expanded training opportunities in shelter medicine

- a. Six shelter medicine externs spent 2 weeks with us.
 - David Brooks (North Carolina State University)
 - Heather Burrows (Cornell University)
 - Melanie Santspree (Michigan State University)-3 weeks

- Kristen Coates (Cornell University)
 - Jessica Hekman (Tufts University)
 - Steven Gentilella (Cornell University)
- b. Externships were awarded by the Maddie’s Shelter Medicine Program for Cornell students to travel to other shelters / humane organizations:
- Nikki Clifford (Pennsylvania SPCA – Philadelphia)
 - Jayne Kubat – PAWS (Pets are Wonderful Support – California)
 - Patrick Ayscue - (Pinellas County Animal Service– Florida)
 - Stephanie Silberstang – (SPCA of Houston Texas)
- c. Approval (without reservations) of a 2 week Clinical Rotation in the Principles and Practice of Shelter Medicine for 3rd and 4th year students.
- d. Expansion of special presentations and guided tours (of the SPCA of Tompkins County) regarding animal sheltering and shelter medicine in the United States (including the Adoption Guarantee philosophy) to groups of visiting Italian and Japanese veterinary students.

II. TRAINING OF TWO SHELTER MEDICINE INTERNS

A. Recruitment

Cornell posted two shelter medicine internship positions in October 2010 through the American Association of Veterinary Clinicians Veterinary Internship and Residency Matching program (www.virmp.org). Two interns were identified and recruited for these positions. One serves as the Maddie’s® Shelter Medicine Intern (Dr. Nicole Putney) and the other serves as the Swanson Shelter Medicine Intern (Dr. Kate Gollon). Their training will extend from June 2011 through June 2012. See Appendix II for details of the internship training program.

B. Training Experiences

1. Drs. Riley and Greenberg completed training in CPS, dentistry, small animal medicine, pathology and dermatology.
2. Humane Alliance Trip: Drs. Riley and Greenberg (accompanied by Dr. Berliner) travelled to Humane Alliance in Asheville to experience their high quality, high volume spay/neuter model.
 - a. On the way they visited the Washington Animal Rescue League, DC; Richmond SPCA (no-kill shelter); Asheville Humane Society; DC Animal Control; Alexandria Animal Rescue League, VA; Richmond Animal Control, VA; Humane Society of Washington County, MD.
3. Drs. Riley and Greenberg each spent a week training at the SPCA of Erie County (a Maddie’s Fund Community shelter)

4. Dr. Riley trained for a week at the Humane Society of Monroe County (i.e., Lollypop Farm)
5. Drs. Riley and Greenberg and faculty attended the Midwest Veterinary Conference for their Shelter Medicine tract.
6. Dr. Riley spent a week training at the Massachusetts SPCA in Boston, MA.
7. Drs. Riley and Greenberg spent 2 weeks training with Kelley Bollen to complete their shelter behavior rotations.
8. Drs. Riley and Greenberg spent a week training with Dr. Scarlett in a new rotation entitled “Evidence Based Medicine in Shelter Medicine”.
 - a. The rotation was developed to enhance our interns’ ability to intelligently consume the shelter medicine literature.
9. Drs. Riley and Greenberg made shelter medicine-related presentations to the house staff of the Cornell University Hospital for Animals as part of the requirements for all CU interns
 - i. Dr. Riley - *Streptococcus equi* subsp. *Zooepidemicus* (*Strep Zoo*)
 - ii. Dr. Greenberg – Non-Surgical Sterilization of Dogs and Cats
 - b. (note: this was a wonderful opportunity to expose all of the hospital house staff to issues relating to shelter medicine, increasing their understanding as well as legitimizing the shelter medicine discipline).
10. Drs. Riley and Greenberg each participated in the Humane Society Veterinary Medical Association – Rural Area Veterinary Services Program (HSVMA-RAVS). HSVMA-RAVS is a non-profit veterinary outreach program combining community service and veterinary education to bring free veterinary services to underserved rural communities (where poverty and geographic isolation make regular veterinary care inaccessible). Dr. Riley spent a week in Pine Ridge, South Dakota. Dr. Greenberg spent a week in Cheyenne, South Dakota and a second week in Pine Ridge, South Dakota.
11. Continuation of monthly Infectious Disease Group meetings (composed of members of Shelter Medicine, the Animal Health Diagnostic Center, and clinical college faculty) to discuss interesting developments and outbreaks in infectious disease for the purposes of collaboration.

C. Graduation: We completed the first year of our Maddie’s Shelter Medicine Internship Program with the graduation of the first two interns.

III. ADD DEPTH AND BREADTH TO OUR SHELTER MEDICINE OUTREACH EFFORTS.

A. SPCA of Tompkins County

1. Continued the collaboration with the SPCA of Tompkins County during which Cornell Shelter Medicine Program provided daily oversight and primary care for the medical program at the shelter. Aspects of the collaboration included:
 - a. The creation of complete policies and protocols for the shelter's medical program
 - b. The development of staff training programs
 - c. The re-design of spaces to address wellness, infectious disease protocols and humane housing
 - d. Increased primary care experience for the Interns in Shelter Medicine, including medical care, high quality, high volume surgical and anesthesia experience.
 - e. Ongoing educational presentations relating to shelter animal care at weekly shelter staff meetings, including:
 - Extern presentations to staff of the SPCA of TC at the shelter's weekly staff meetings
 - Melanie Santsprea – Vaccination in the Animal Shelter
 - Kristen Coates – Quality of Life for Shelter Animals
 - Jessica Hekman – Positive Options for Pit-bulls in Your Community
 - Steve Gentilella – Cat Coat Colors
 - f. Ongoing educational presentations relating to shelter animal care at monthly shelter volunteer's potluck dinners by EB
 - a. Feline Fostering for Optimal Wellness
 - b. Focus on Kitten Neonates and Bottle Feeding
 - g. Improved collaboration between the college and the shelter on cruelty cases, emergency care of homeless animals, and outbreak diagnosis and management
 - h. Provision of on-site training to staff at the SPCA of TC to enhance the use of Pet Point® to gather basic demographic data
 - i. Initiation of two Spay-your-Mama clinics to reach pregnant cats in the community before their offspring became part of the shelter's intake this year
 - j. Critique and modification of the mapping system for Pet Point at the shelter by SH
 - k. Preparation of training materials and training by SH for staff to improve data entry
 - l. Provision of assistance by SH to fix errors in Pet Point's Asilomar report for SPCA of TC
2. The new Executive Director of the SPCA of Tompkins County assumed his responsibilities in mid May
3. Continued presence of EB on the Animal Issues Committee, a Board of Directors Committee, for the shelter

4. Ongoing collaboration between the shelter medicine program and the SPCA of Tompkins County demonstrated new successes with:
 - a. a decreased length of stay,
 - b. decreased illness in shelter cats, and
 - c. decreased shelter population overall without increasing euthanasia of healthy or treatable animals
(See Appendix III for data.)

B. Lollypop Farm

Began a collaboration to analyze the medical data at Lollypop to facilitate teaching Cornell veterinary students the value of population data to monitor the health of shelter animals and populations

C. Continued Outreach to other shelters

1. *Schuylar County Humane Society*: Continued consultation on the design of their new shelter
2. *Humane Society of Rome, NY*: Continued consultation on their enrichment program and on periodic disease issues
3. *Animal Care Sanctuary in Pennsylvania*: continued consultation with this Adoption Guarantee Shelter as it transitions from a sanctuary to a shelter, including design of dog and cat housing, protocols, etc.
4. *Watertown Conference for the North Country Animal Coalition*: Intern and faculty ½ day conference regarding shelter medicine.
5. *Humane Society of Yates County*: consultation regarding their medical program
6. Continuation of Maddie's® Shelter Medicine Consultation Email Service (for veterinarians, shelters and other interested parties)
7. Continuation of monthly program newsletter, *Shelter Watch*
8. ASPCA / Maddie's® Shelter Medicine Program Annual Mini-conference (see Appendix IV).
 - o There were 200 attendees to the 2011 shelter medicine conference
9. Continued revision of the Maddie's® Shelter Medicine Website at Cornell

The website's main page was redesigned and updated. Work is continuing to upgrade the website template to enhance user friendliness and posting of content.

We have added a section describing the services that we provide to shelters such as:

- Half and full day seminars regarding shelter medicine and behavior
- In-shelter targeted and full shelter evaluations
- Email and telephone consultations.

Similarly Ms. Bollen added a wealth of shelter behavior-related materials and the staff is working to expand the information section of our website.

D. Outreach to Communities: Southside Community Center

1. EB and interns continued a regular clinical presence at the twice monthly subsidized wellness clinic (Southside) offered by veterinary students for low-income owners in downtown Ithaca. This is an important component of shelter medicine because:
 - This has resulted in increased numbers of clients applying for subsidized spay/neuter services through the local Shelter Outreach Services program.
 - This has also provided students with insight into proactive ways to keep shelter pets healthy, and in loving homes, especially in times of financial stress.
2. *Central NY Animal Welfare Coalition*: EB consulted regarding creation of a sustainable monthly veterinary wellness clinic for low income pet owners in urban Syracuse.

IV. CONTINUE CONDUCT OF ANIMAL SHELTER-RELATED RESEARCH

A. Completed initial data collection for a study of Body Condition Scoring in Shelter Cats.

B. Funding from *The Clara L.D. Jeffery Charitable Trust*

1. Using this funding, the housing for sick cats in the Infirmary of the SPCA of TC was renovated to enlarge the cage space available to cats housed in the smallest stainless steel cages.
2. This funding is also being used to develop behavioral criteria to identify cats failing to thrive in the colony environment in the adoption area of the SPCA of TC. Additional individual caging has been ordered and the behavior of cats in the new caging will be compared to that observed in the colony housing.

C. Accepted for publication / published

Hayward, J.J., Dubovi, E.J., Scarlett, J.M., Janeczko, S., Holmes, E.C., Parrish, C.R.. Microevolution of canine influenza virus in shelters and its molecular epidemiology in the United States. *Journal of Virology* 84 (24):1236-45, 2010.

Place, N.J., Hansen, B.S., Cheraskin, J., Cudney, S.E., Flanders, J.A., Newmark, A.D., Barry, B. Scarlett, J.M. (2011) Measurement of serum anti-Mullerian hormone concentrations in female dogs and cats before and after ovariohysterectomy. *Journal of Veterinary Diagnostic Investigation* 23:524-527.

Scarlett, J.M., Johnston, N. Effectiveness of a high quality, high volume spay neuter clinic on impoundments and euthanasias in a community shelter and on service and complaint calls to animal control (accepted, *J Appl Anim Wel Sci*, 1/2011).

V. STATE/NATIONAL OUTREACH

- A. Attendance (EB) at the Companion Animal Parasite Council meeting in St. Louis exploring the intersection of primary care and shelter medicine in veterinary colleges nationally.
- B. Completion of chairpersonship of the Residency Standards Task Force, and completion of the Residency Standards description (JS).
- C. Participation in ongoing discussions with the Department of Education in NY State regarding non-licensed shelter staff administering vaccinations and medications (JS)
- D. Participation in the Shelter Medicine Specialty Committee seeking recognition for a ACVS recognized specialty in shelter medicine (JS)
- E. EB visit to the Tufts College of Veterinary Medicine shelter medicine program and to the Animal Rescue League of Boston to build collaborations
- F. Initiation of an international presence of the Program: JS visit and consultation with companion animal welfare organizations in Mumbai, India
- G. EB participation in *Innovations in Education* sponsored by the Oregon Humane Society & Oregon State University College of Veterinary Medicine. This was a conference devoted to a discussion and sharing of information regarding the integration of training in animal shelters into veterinary curricula
- H. (JS) presentations at the New York State Association of Veterinary Technicians annual meeting
 - a. Veterinarians, Veterinary Technicians and Animal Shelters: Part I Homeless animals and animal shelters
 - b. Population Health Management in Animal Shelters
 - c. Infectious Disease Control in Animal Shelters
- I. JS participation in *A Better World for Pets*, an American Humane Association/ Mars Corporation initiative to improve the welfare of homeless animals in the U.S.
- J. Dr. Riley attendance at the *The Purebred Paradox Conference* sponsored by HSUS, the Center for the Interaction of Animals and Society (CIAS) of the University of Pennsylvania School of Veterinary Medicine, and the Royal Society for the Prevention of Cruelty to Animals (RSPCA)
- K. Continue publishing shelter medicine-related book chapters
 - 1. Final Editing of three chapters submitted for inclusion in the upcoming revision to *Shelter Medicine for Veterinarians and Staff* textbook.

Scarlett, J.M. Epidemiology of infectious diseases. In (Miller, L, Zawistowski, S Eds) Shelter Medicine for Veterinarians and Staff. 2nd edition. Ames, Iowa: Blackwell Publishing, submitted 2010.

Scarlett, J.M. Population statistics. In (Miller, L, Zawistowski, S Eds) Shelter Medicine for Veterinarians and Staff. 2nd edition. Ames, Iowa: Blackwell Publishing, submitted 2011.

Appel, L, Scarlett, J.M. Pediatric Neutering In (Miller, L, Zawistowski, S Eds) Shelter Medicine for Veterinarians and Staff. 2nd edition. Ames, Iowa: Blackwell Publishing, submitted 2011.

Appendices

Appendix I	Course Syllabi
Appendix II	Description of the Maddie's® Shelter Medicine Internship
Appendix III	Graphs of data from SPCA of TC Decreasing length of stay Decreasing daily census by month
Appendix IV	Annual Mini-Conference Schedule

Appendix I: Course Syllabi

VTMED 6734

Companion Animal Welfare Spring 2010, B Distribution

Lecture Schedule

Date	Day	Time	Topic	Lecturer
2/23	Tues	3-5	Introduction of Course Requirements Animal Sheltering: Past & Present Humane Community & Veterinary Relationships	Scarlett
			Keeping Pets in Their Homes: The Veterinarian's Role	Scarlett
2/25	Thurs	3-5	Strategies for Controlling Pet Populations	Berliner
			The Business of Pets	Berliner
3/2	Tues	3-5	Declawing, Ear Cropping, Tail Docking	Berliner
			Quality of Life	Janeczko
3/4	Thurs	3-5	Animals & NYS Law	Wolfe
3/9	Tues	3-5	Animal Cruelty	Miller
3/11	Thurs	3-5	Recognition & Documentation of Animal Abuse	Miller
3/16	Tues	3-5	Feral Cats	Slater
3/18	Thurs	3-5	Importance of Behavioral Health & Its Implications for Welfare	Bollen
			Discussion/Questions	ALL

**VTMED 6425
Shelter Medicine I
Spring 2010, C Distribution**

Lecture Schedule

Date	Day	Time	Topic	Lecturer
3/30	Tues	2-4pm	Introduction of Course Requirements	Scarlett
			Principles of Preventive Medicine and Disease Surveillance	Scarlett
4/1	Thurs	2-4pm	Wellness Protocols for Shelters	Berliner
4/6	Tues	2-4pm	Pediatric Spay/Neuter	Berliner
			High Quality/High Volume Spay/Neuter	
			TNR Programs	
4/8	Thurs	2-4pm	A Day in the Life of a Shelter Vet	Miller
			Euthanasia	Miller
4/13	Tues	2-4pm	Management of Common Infectious and Zoonotic Diseases in the Shelter	Scarlett
			class meets in S1-123 this lecture only	
4/15	Thurs	2-4pm	Behavioral Evaluation and Care of the Shelter Dog	Bollen
4/20	Tues	2-4pm	Feline Behavioral Medicine in the Shelter	Bollen
4/22	Thurs	2-4pm	Interface of Shelters and Shelter Management	Smith/ Berliner

Discussion/Questions

Scarlett/Berliner/
Bollen

VTMED 6434**Shelter Medicine II****Spring 2010, D Distribution****Lecture Schedule**

Date	Day	Time	Topic	Lecturer
4/27	Tues	2-4pm	Introduction of Course Requirements Vaccination; Time in Shelter; Screening	Scarlett Scarlett
4/29	Thurs	2-4pm	Shelter Metrics	Newbury
5/4	Tues	2-4pm	Shelter Equipment & Chemical Restraint	Brothers
5/6	Thurs	2-4pm	Veterinary Forensics (Video teleconference) *Room S1-011*	Merck
5/11	Tues	2-4pm	Case-Based Discussion of Decision Making And Case Management in a Shelter	Janecko
5/13	Thurs	2-4pm	Issues in Foster Care and Transport Case Management in Foster Care and Transport	Berliner
5/18	Tues	2-4pm	Design and Maintenance of Shelters	Johnson
5/20	Thurs	2-4pm	Case-based Collaboration Extravaganza Discussion/Questions	Scarlett, Berliner, Bollen

Appendix II: Internship Training Description

Internship in Shelter Medicine
Maddie's® Shelter Medicine Program
Cornell University College of Veterinary Medicine
Ithaca, NY
4/20/10; rev 8/11

The internship in shelter medicine in the College of Veterinary Medicine at Cornell University offers training for veterinarians interested in the exciting new discipline of shelter medicine.

Shelter medicine differs from traditional small animal private practice in that it blends individual patient care with population health management, including preventive medicine and behavioral health. Prior to 1999, veterinarians working in shelters did so without formal training or external recognition of the specialized knowledge that comprises shelter medicine. The first course in shelter medicine, conceived by Dr. Lila Miller of the ASPCA and Dr. Jan Scarlett of Cornell University, was taught at Cornell University's College of Veterinary Medicine. Since then, and thanks in large part to Maddie's® Fund, the specialized training in shelter medicine for veterinary students and graduate veterinarians has expanded on a yearly basis, and now incorporates over two dozen schools, offering everything from elective courses for first- and second- year students to externships, internships, and residencies.

Comprehensive veterinary care of shelter animals requires – in addition to a strong foundation in clinical veterinary practice – a focused expertise combining elements of preventive medicine, epidemiology, infectious disease diagnosis and control, behavioral science, public health, and surgery. Additionally, the shelter medicine specialist must have an expanded understanding of other areas not emphasized under traditional veterinary medical training; these include, but are not limited to, shelter facility design and operation, animal husbandry (nutrition, sanitation, disinfection), companion animal welfare, cruelty investigation, public health, personnel management, psycho-social aspects of sheltering, resource management and risk analysis, and strategies for animal population control.

In 2001 the Association of Shelter Veterinarians formed to further advance the interests of shelter veterinarians both within the profession and in the public eye. Accomplishments to date include advancement towards a specialty board in shelter medicine to be recognized by the AVMA, as well as several groundbreaking documents outlining standards of care and protocols for high-quality medical practices within shelters. It is an exciting time to be a part of shelter medicine.

Internship Requirements

Candidates must have a DVM or equivalent degree. Preference will be given to candidates with at least one year of clinical practice and those demonstrating previous interest and experience in shelter medicine.

Internship Objectives

Our internship in shelter medicine has specific objectives:

1. To provide advanced training in topics of preventive medicine and epidemiology as they apply to animal shelters. This includes visits to local participating shelters, as well as consultations with shelters requesting specific assistance over the course of the year. It is expected that by the year's end the intern will be competent to complete a comprehensive facility evaluation with a consulting shelter, and offer formal recommendations in a final report.
2. To provide opportunities to advance clinical knowledge and skills in general veterinary medicine, but especially in the areas of infectious disease, internal medicine, dermatology, dentistry, ophthalmology, and exotics. This will be accomplished both in completion of clinical rotations in specialty departments of the Companion Animal Hospital, as well as providing on-site care at participating shelters. The intern will also gain insight into providing quality veterinary care with minimal diagnostic capabilities and practical treatment limitations.
3. To provide advanced training in spay/neuter techniques, specifically those supporting high-quality/high volume programs and pediatric spay/neuter. This will include participation in spay/neuter at the SPCA of Tompkins County and Lollypop Farm, as well as opportunities for travel to the Humane Alliance Training Facility and an HSVMA field services clinic.
4. To provide advanced training in companion animal behavioral health as it applies to animal shelters. This will be accomplished through two week-long rotations with the shelter medicine behaviorist and will consist of lectures and hands-on training at the SPCA of Tompkins County.
5. To provide opportunities to develop didactic and clinical teaching skills. The first will involve training in technology and delivery of high-quality, professional lectures. The second will involve developing skills in small group facilitation and collaborative case-based clinical learning. Audiences will include academic colleagues, veterinary students, and shelter staff.
6. To provide exposure to the psycho-social aspects of working in shelters, including but not limited to recognition of animal abuse/neglect, issues in shelter staff management, "marketing" of animals in shelters, and new technologies to aid shelter management.
7. To provide training in the areas of forensic pathology and cruelty investigation. This may include working in cooperation with the anatomic pathology department in necropsy as caseload allows.
8. To provide advanced training in shelter facility evaluation. Medical protocols will always be examined in light of intake protocols, housing, staffing, and facility issues.
9. To provide support for academic research and scientific writing.
 - a. This will include the production and/ or publication of one scholarly case report demonstrating a comprehensive review of the relevant literature and synthesis of the principles of shelter medicine.
 - b. This will also include the construction of an evidence-based Medical Policy and Protocol suitable for implementation at the SPCA of Tompkins County.

10. To provide opportunities to develop skills in data collection and management utilizing shelter-friendly software: in this case, PetPoint.
11. To expose interns to diverse and varied shelter settings. Interns will be required to visit informally a minimum of 15 animal shelters during the course of the internship year.

Internship Clinical Experiences

1. Required clinical rotations at the CUHA: (20%)
 - a. Community Practice Service (2 weeks, and then ongoing as needed)
 - b. Dentistry (2 weeks)
 - c. Small Animal Internal Medicine (2 weeks)
 - d. Exotic animal medicine (2 weeks)
 - e. Dermatology (1 week)
 - f. Gross necropsy (1 week)
 - g. Weekend shifts with the Emergency and Critical Care Service (average assignment 3 per month plus one on-call shift)
 - h. On-call emergency shifts at least one week/month for SPCA TC (ongoing)
 - i. Elective clinical rotations are possible, given time and clinical justification (2 weeks)
2. Shelter Medicine Rotations at Collaborating Shelters: (65%; 34 weeks)
 - a. SPCA of Tompkins County (primary)
 - b. Chemung County SPCA
 - c. Lollypop Farm, Rochester NY
 - d. SPCA serving Erie County, Tonawanda NY
3. Elective External Training Facilities: (5%; 2- 3 weeks)
 - a. Humane Alliance Training Facility (1 week)
 - b. HSVMA Field Services Clinic (1 week)
 - c. Independent arrangements
4. Shelter consultations on a case-by-case basis (10 - 20%)

Internship Behavioral Experiences

1. Required rotations with program behaviorist (2 weeks)
 - a. Reading dog and cat body language

- b. Safe animal handling
 - c. Stress reduction strategies
 - d. Canine and Feline behavior assessment procedures
 - e. Enrichment strategies
 - f. Training and behavior modification techniques
 - g. Treating common behavior problems in cats and dogs
2. Ongoing individual shelter consultations on behavior assessment programs on an as needed basis and in consultation with the program behaviorist.

Intern Clinical Responsibilities

Shelter Medicine Interns have the challenge of at times acting as supervising clinicians overseeing veterinary students, and at other times acting as direct care providers. A successful intern needs to move between the roles of clinician and teacher seamlessly, while keeping an eye to his/her own professional course and development. To aid in this process, the intern will be given clinical assignments to aid in each of these aspects.

1. Provide routine direct medical care to residents of the SPCA of Tompkins County and other collaborating shelters as needed. Routine care includes conditions such as respiratory disease, ringworm, pyoderma, enteric illness, parasitic diseases, ophthalmic conditions, and mild trauma.
2. Supervise ongoing care and case management for patients at the SPCA of Tompkins County and the CUHA as indicated by nature of assignment. At times supervision will include shelter staff (RVTs, managers, animal care attendants), in addition to veterinary students.
3. Act as a consultant to students on the Community Practice Rotation and during regularly scheduled medical visits to the SPCA of Tompkins County with CPS rotations and the shelter medicine club. The intern is also encouraged to participate in once monthly Southside Clinics providing subsidized preventive veterinary care to local residents. In each of these roles, the intern is to aid students as direct care providers, carefully assessing the experience and comfort level of the students involved and helping them to achieve as the primary clinician.
4. Perform spay/neuter surgeries as assigned with a goal of achieving safe, efficient techniques minimizing incision size, anesthetic times, and trauma to patients. It is expected over the year that the intern will gain the ability to practice high-volume techniques with ease and comfort.
5. Assist and supervise students providing direct care to patients, including spay/neuter surgeries. In addition, interns should be comfortable supervising anesthesia, pain management, and post-operative care. Furthermore, they should be comfortable performing and teaching basic clinical procedures as listed in appendix A.

6. Participate in the Shelter Medicine Program's e-mail consultation service available to shelters. Interns should gain skills in constructing comprehensive, practical, research-based answers to common questions asked by shelter management and staff.
7. Provide on-call after hours during rotations, and emergency services for the SPCA of Tompkins County on a rotating basis, averaging 1 week per month.

Intern Academic Responsibilities

1. The intern will present at least one didactic lecture to veterinary students. This can be a part of the shelter medicine curriculum, or an extra-curricular lunch or dinner lecture as requested by a student organization. The intern is expected to employ technology as it applies in the given lecture.
2. The intern will attend a one week seminar on Evidence-based Medicine as a means to improving the intern's skills in reading scholarly and academic literature.
3. The intern is required to prepare one scholarly case report incorporating a review of the relevant literature and shelter medicine principles. These should be suitable for publication or submission for seeking board certification with ABVP.
4. The intern is required to complete a minimum of one Medical Policy and Protocol suitable for implementation at the SPCA of Tompkins County.
5. The intern is expected to assist in student laboratories, program didactic lectures, and other elements of veterinary student classroom education as assigned by course leaders.
6. The intern is expected to participate in annual ASPCA/ Cornell Shelter Medicine Mini-Conference. An active role in this program is strongly encouraged.
6. The intern will attend rounds, meetings, webinars, weekly journal club, and seminars as assigned by shelter medicine faculty. Active participation is expected, including the periodic leading of Community Practice Rounds, weekly Intern CE sessions, and weekly Grand Rounds.

Intern Evaluation

Interns will be evaluated every 4 months. Evaluations will be completed by faculty members and residents with whom the intern has most closely worked during the applicable months; evaluation may also include staff and/or management of off-site shelter or other facilities if applicable. The shelter medicine faculty will review the evaluations with the intern and refine objectives as needed. See Appendix B for evaluation form.

Internship Certificate Requirements

A matrix of all requirements is presented in Appendix C to aid the intern in determining progress.

1. The intern must demonstrate proficiency in principles of shelter medicine and surgery. Intern evaluations (see above) will play an important role in deciding if the intern has demonstrated competency and performed with academic rigor.

2. The intern needs to have completed one scholarly case report demonstrating a comprehensive review of the relevant literature and synthesis of the principles of shelter medicine. These should be suitable for publication or submission for seeking board certification with ABVP.
3. The intern needs to have completed a minimum of one Medical Policy and Protocol suitable for implementation at the SPCA of Tompkins County.
4. The intern must complete all required rotations and scheduled clinical experiences.
5. The intern must satisfactorily present one didactic lecture to be attended and evaluated by a shelter medicine faculty member. See Appendix D.
6. The intern must complete a written evaluation of the program and submit it to the Director of the Shelter Medicine Program at the end of the program. See Appendix E.

Commitment to and Fulfillment of the Internship

This is a rigorous externship that is a combination of clinical practice, consultation, and independent study; it is a full-time commitment. During the internship year, interns are not to be employed outside of the internship, or to be involved in independent work or consultation with shelters or other humane organizations without express consent of the Shelter Medicine faculty.

The “Certificate of Shelter Medicine Internship” will be awarded at satisfactory completion of the program.

In conclusion, our intention is to provide rigorous clinical training for the intern interested in pursuing Medical Directorship at an animal shelter following our program. In addition, we encourage our interns to pursue shelter medicine residency.

Appendix A: Internship *Minimum* Clinical Competencies: Dog, cat (+rabbit s/n)

Physical exam, all aspects

Fundic Exam

Phlebotomy

IV and urinary catheterization

Dentistry

- scaling
- surgical extractions

Diagnostic Techniques

- Skin scrapes
- Impression smears
- Fungal cultures
- Urinalysis, including sedimentation
- Fine Needle Aspirate
- Cystocentesis
- Thoracocentesis
- Abdominocentesis
- Fluid analysis

Cytology

- Blood smears
- Discharges
- Effusions
- Masses: Mast cell tumor, histiocytoma, lymphoma

Parasite Identification

- Ecto
- Fecal
- Blood borne

Anesthesia, including nerve blocks and epidurals

Surgery

- Spay/Neuter mature
- Spay/Neuter Pediatric
- Spay/Neuter pathological (pyometra)

- Enucleation
- Amputation
- Wound care
- Cystotomy

Gross Necropsy with full sample collection

Cornell University College of Veterinary Medicine
INTERNSHIP PROGRAM: Quarterly Evaluation

Name: _____ Date: _____

Period of training: I II III IV

	Could not judge	Needs im- rovement	Good	Very good	Excellent
MEDICAL:					
Scientific knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
History and physical examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpretation & utilization of information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical judgment & decision making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMUNICATOR and MANAGEMENT:					
Interprofessional relationship with colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication with clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication with support staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delegates effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organization of work and time management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROFESSIONAL:					
Motivation to read and acquire knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integrity and honesty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sensitivity and respect for diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsibility and self-discipline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognition of own limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work and professional ethics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GLOBAL EVALUATION OF COMPETENCE AND PROGRESS	Incomplete <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: (including strength, weaknesses and need for special attention)

 Signature of supervisor Date

 Signature of trainee Date

Appendix C: Shelter Medicine Internship Progress Checklist

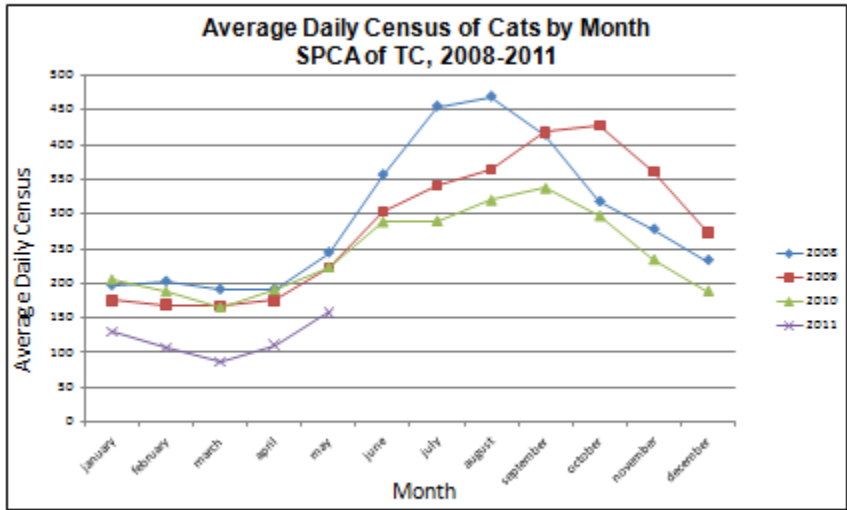
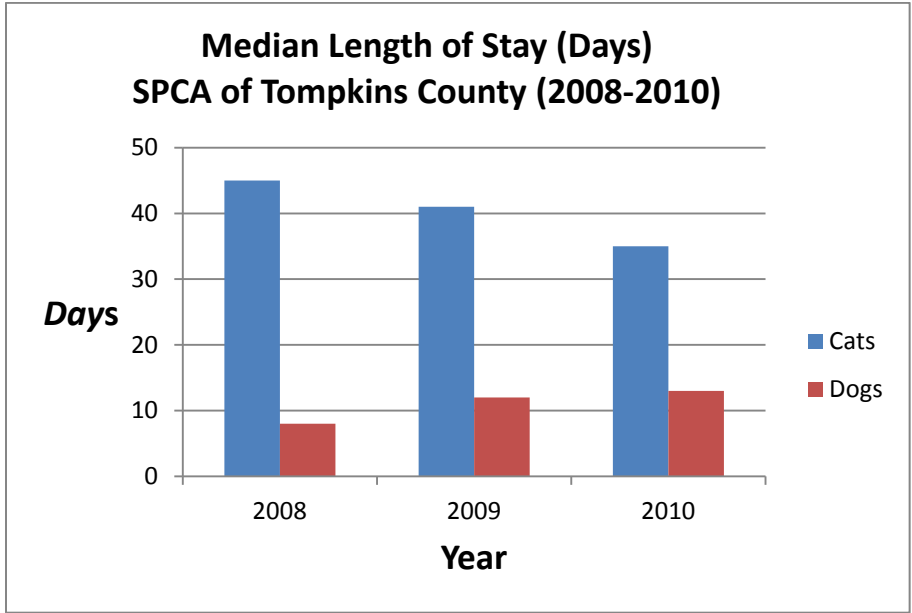
Intern _____
 Initiated _____

Date _____

Complete	Item	4 m	8 m	1y	Comments
	Intern orientation				
	Advisor meeting/goal defining				
	Clinical Rotations				
	2 weeks Dentistry				
	2 weeks CPS				
	2 weeks Int. Med				
	2 weeks Exotics				
	2 weeks Behavior				
	1 week Dermatology				
	2 weeks elective clinic				
	1 week necropsy				
	2-4 ER shifts monthly				
	1 week data analysis				
	Consulting Shelters				
	On-call services SPCA of TC				
	Full shelter evaluation (min 1)				
	Shelter P and P (min 1)				
	One case report				
	Email shelter consults (min 5)				
	Classroom				
	Audit/Assist in CAW				
	Audit/Assist in Shelter Med I				
	Audit/Assist in Shelter Med II				
	Veterinary Students				
	Shelter Med Club shelter visits				
	CPS consults (ongoing)				
	Lead CPS rounds				
	Shelter Medicine Clinical Rnds				
	One didactic lecture				
	Other training				
	Visit 15 animal shelters				
	CU shelter med conference				

	FEMA Disaster training online				
	Webinars – see required list				
	IACUC training online				
	One regional/national mtg				
	External Training Sites				
	Humane Alliance (1 week)				
	HSVMA field clinic (1 week)				
	Other:				
	Other:				
	HQHVS				
	Pediatric Techniques				
	Adult Techniques				
	Surgical Emergency Mgt.				
	Other Surgical Training				
	Amputation				
	Enucleation				
	Nerve blocks, epidurals				

Appendix III: Graphs of progress at SPCA of TC



Appendix IV: Mini-Conference



8th Annual



ASPCA/Maddie's® Shelter Medicine Program Conference

Sunday, August 7, 2011

College of Veterinary Medicine, Cornell University

**Registration
due July 30**



SCHEDULE

- 8:00 am: **Registration and Breakfast**
- 8:25 am: **Welcome**
Leslie Appel, DVM, Executive Director, Shelter Outreach Services
- 8:30 am: **Update: Maddie's Shelter Medicine Program at Cornell**
Jan Scarlett, DVM, PhD, Professor and Director of the Maddie's Shelter Medicine Program, Cornell University College of Veterinary Medicine
- 8:45 am: **ASV Guidelines for Standards of Care in Animal Shelters**
Kathy Makolinski, DVM, Senior Director, Spay/Neuter Programs, Veterinary Outreach, ASPCA
- 9:05 am: **Using Shelter Metrics to Improve Shelter Programs**
Jan Scarlett, DVM, PhD, Cornell University College of Veterinary Medicine
- 9:50 am: **A Review of FeLV Testing in Shelters**
Kate Gollon, DVM, Intern in Shelter Medicine, Cornell University College of Veterinary Medicine
- 10:10 am: **A Review of FIV Testing in Shelters**
Nicole Putney, DVM, Intern in Shelter Medicine, Cornell University College of Veterinary Medicine
- 10:40am: **Physical Exam of Shelter Animals**
Brian Collins, DVM, Lecturer, Community Practice Service, Cornell University College of Veterinary Medicine
- 11:15 am: **Enrichment for Dogs and Cats in the Shelter**
Kelley Bollen, MS, CABC, Behaviorist, Cornell University College of Veterinary Medicine
- 12:30 pm: **Lunch and Networking**
- 1:15 pm: **Updates from the Animal Welfare World**
Kathy Makolinski, DVM, ASPCA
- 2:00 pm: **NYS Spay/Neuter Funding: Exciting Grant Opportunity and Other ASPCA Grant Opportunities**
Michael Barrett, Senior Director, Grants Management, ASPCA
- 2:40 pm: **Break**
- 2:55 pm: **Success and Happiness for Shelter Staffs**
Jill Van Tuyl, Director, Community Initiatives, ASPCA
- 3:45 pm: **Chemical Solutions/Restraint for Aggressive Animals**
Andi Looney, DVM, CVA, CCRP, DACVA, Senior Lecturer, Cornell University College of Veterinary Medicine
- 4:45 pm: **Conference Wrap-Up/Questions/Networking**
- 5:00 pm: **Safe Trip Home**

REGISTRATION is FREE! Breakfast and Lunch Provided

RSVP Dr. Appel at LDA3@cornell.edu OR 607-592-8892

Lecture Hall I in the Atrium at the Cornell University College of Veterinary Medicine, Tower Road, Ithaca, NY