



### Our Mission:

We are committed to saving lives and reducing suffering of homeless dogs and cats through education, advancement of knowledge and shelter outreach.

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# Shelter Watch



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## From the Clinical Director's Desk

So if you are reading this newsletter, you probably don't need me to tell you that kitten season is imminent. Locally, we are collecting milk replacer and starting to recruit and schedule foster volunteers to partake in this always rewarding, often exhausting endeavor. Since February, we have also

ramped up our efforts to spay as many outdoor female cats belonging to low

income owners as possible, running extra clinics on the weekends with volunteer veterinarians, technicians, and veterinary students. Although we try to be proactive in this department all year round, the early Spring, the longer days, and the wail of cats mating in the night tends to turn up the heat -- yes, I said it -- on our efforts right around February; staff that thought they just couldn't schedule one more cat spay suddenly find themselves willing to stay late, come in early, and get the job done. We call it "Spay Your Mama" Saturdays, and we're not just there for the pizza.



Although World Spay Day was February 28<sup>th</sup>, the work goes on with events scheduled through the Spring. If you have hosted or are hosting a special spay/neuter event this season, drop us a line at [sheltermedicine@cornell.edu](mailto:sheltermedicine@cornell.edu). We'd love to hear what our readers are doing, and to pass some good ideas around. Pictures are always welcome, too!

Be seeing you at the shelter,

*Elizabeth Berliner, DVM, MA.*



## Kitten Foster 101: Dr. Kate Gollon



**“Any kittens too young to be spayed or neutered (less than 8 weeks) and nursing mothers should always be in foster care, not the shelter.”**



A well-run foster program is an essential element in the proper care and through-put of little ones during kitten season. Here are some basics to starting a foster network, or improving the one you already have.

### *Who should be fostered?*

Any kittens too young to be spayed or neutered (less than 8 weeks) and nursing mothers should always be in foster care, not the shelter. Creating a system that allows these guys to get into foster care as soon as possible (the same day is ideal!) will go a long way to improving the health of the kittens and nursing queens, as well as the rest of the shelter population.

### *Why foster?*

Kittens are especially susceptible to illness. Getting kittens out of an environment with a plethora of diseases, and into one where their exposure to pathogens is minimal is the best strategy for keeping them healthy. Kittens in a foster home also often get more attention. From a shelter capacity standpoint, keeping young kittens out of the shelter reduces your daily census, makes the shelter less crowded, and keeps the rest of your animal population healthier.

### *Foster rechecks*

Have you ever had a kitten “go missing in foster” only to be heard from once they are nearly an adult? You are not alone! Scheduling appointments every two weeks is essential for a number of reasons. First, you will not find yourself in the situation mentioned above- with an older, less adoptable animal. Second, kittens need health checks and boosters every two weeks. This should include an FVRCP vaccine, a dewormer (usually pyran-

tel) and a weight check to see they are gaining weight and if they are ready for surgery. Third, it serves as a reminder to the shelter and the foster parent that this animal has a structured plan, and its movement through the system needs to take place in an organized and predictable fashion.

### *Caring for Neonates*

Foster families should be provided formal training (especially true for bottle feeders!). A written manual should also be provided. Caring for youngsters is usually more time consuming and intensive than fostering adult animals. Foster families must be made aware of the expected level of commitment, where to house kittens, supplies needed, specific feeding instructions, bottle feeding if applicable, normal behaviors, socialization, when to seek medical attention, and who to call in case of emergency. This gives the foster parent tools to provide the best attention possible for the little ones in the care.

### *Resources*

For an example of a comprehensive kitten foster manual, see the San Francisco SPCA’s website:

[http://www.sfspca.org/sites/default/files/Foster\\_Manual\\_11.pdf](http://www.sfspca.org/sites/default/files/Foster_Manual_11.pdf)

For more information on foster programs in general, please view the following resources:

<http://www.petsmartcharities.org/search.jsp?query=foster>

Sinclair, Leslie (2004) **Foster Care in the Animal Shelter** In Miller, L & Hurley. KF (Eds.), Infectious Disease Management in Animal Shelters (pp. 341-354) Ames, Iowa: Wiley-Blackwell

## Fading Kitten Syndrome: Dr. Nicole Putney

Fading Kitten Syndrome, also referred to as “failure to thrive,” is a condition that affects small kittens ranging from newborns to nine weeks of age. Fading kitten syndrome occurs when kittens who may seem to be doing fine quickly deteriorate without any obvious inciting cause. The exact cause of fading kitten syndrome is nebulous, but potential causes can be grouped into three major categories: 1) genetic 2) environmental, and 3) infectious.

It can be difficult, or impossible, to compensate for genetic factors, such as low birth weight or physical defects. However, environmental factors, including those that contribute to hypothermia and/or hypoglycemia, can be controlled. Keeping kittens warm is important because they are not as adept as adults at regulating their body temperatures. Keeping them together in litters helps, as do warm blankets and heating pads or discs -- these should always be used with a barrier such as a towel to prevent thermal burns or overheating. Hypoglycemia can be prevented by feeding small meals (if weaned) three to five times daily or simply free-feeding.

The final category of Fading Kitten Syndrome - infectious disease - is of particular importance in a shelter environment. Because of their immature immune system, kittens are particularly at risk for sepsis, which is a complication of bacterial infection. Viral infections are also common, especially feline herpesvirus and calicivirus. Because of the high prevalence of these viruses within the shelter environment, it is highly recommended that all kittens under 8 weeks of age go into foster or at least are kept completely separate from adult cats. Panleukopenia can cause a peracute infection in

kittens, resulting in sudden death without the usual signs of this disease, such as vomiting and diarrhea. In these cases, it is important to run a SNAP test for parvovirus antigen in fecal material, especially when there are other kittens at home that may have been exposed.

Intestinal parasites can also contribute to compromised kitten health. Deworming protocols for kittens should be in place to ensure removal of all roundworms and hookworms, which can be transmitted to kittens from their mother. In addition to routine deworming on intake, kittens and puppies should also be dewormed repeatedly with pyrantel every 2 weeks from 2 weeks to 8 weeks of age. Pyrantel, although inexpensive and effective against common parasites such as roundworms and hookworms, is not effective against protozoal species such as coccidia. In addition to treating all kittens with pyrantel on intake, we recommend administering a dose of ponazuril (Marquis®) paste starting at 2 weeks of age, with one repeat dose 7-10 days later.

Of course, this brief synopsis is not an exhaustive list of all that can go wrong in young kittens. However, with diligent monitoring and preventative care, Fading Kitten Syndrome can be quickly recognized or, preferentially, avoided.

### References:

ME Peterson, MA Kutzler. *Small Animal Pediatrics*. 1<sup>st</sup> ed. St.Louis: Elsevier, 2011.

JL Freshman. Fading puppy and kitten syndrome: Do you know the signs? *Veterinary Medicine*; Nov 2005; 807-808.



**“The exact cause of fading kitten syndrome is nebulous, but potential causes can be grouped into three categories: 1) genetic, 2) environmental and 3) infectious.”**





**“Providing a support system for nursing moms and bottle-feeders and their caretakers will involve not only your foster staff but likely your medical team as well.”**



## The Challenges of the Young: Nursing Moms and Bottle-feeders: Dr. Elizabeth Berliner

Creating a shelter program that includes nursing moms and kittens or un-weaned “bottle-feeders” takes immense effort and a sizable team of volunteers. These populations do much better out of the shelter, so recruiting specially-trained volunteers for each of these roles is a requirement. Providing a support system for these higher-risk populations and their caretakers will involve not only your foster staff, but likely your medical team as well.

### *Nursing moms and kittens*

Fostering nursing moms and kittens can be an incredibly rewarding job full of unabashed “cuteness.” In some ways, this is the easiest form of kitten fostering because mom will often do the work. Critical factors include provision of a quiet, safe, warm environment, away from other animals and human traffic; appropriate nutrition for mom, including high calorie foods like kitten food; cleaning of housing and bedding; and daily monitoring kittens for feeding and growth. At least in the first few weeks, responsive moms are very good at keeping their kittens clean and fed, and teaching them manners. Handling of kittens younger than 3 weeks by kids and shelter staff should be minimized as to avoid stress on mom and the transmission of infectious diseases. However, socializations to humans is important in the critical period of 3-7 weeks and can be done safely with sanitation and a gentle manner

### *Bottle-feeding kittens*

In instances where kittens are or-

phaned, bottle-feeding can bridge the gap until weaning. The time commitment is substantial, as neonates need to be fed every 2 to 4 hours, time between feedings increasing as they age. Most kittens take to formula and bottles with practice, but some can be very stubborn about feeding and require more expert handling. Other critical factors include a warm environment that makes up for the absence of mom’s warmth, as kittens cannot thermoregulate normally; protection of kittens from other animals and overhandling by people; and stimulation of kittens to urinate and defecate after meals. Foster volunteers who take on bottle-feeding usually need to have limited other commitments, including work outside the home; in some cases, offices may take on a litter of kittens as a group project, which can be a great benefit to the shelter and the workplace. Because bottle-feeders do not have a mom to teach them manners or help them wean, bottle-feeders can wean much later than nursed kittens, and they may not learn normal cat behavior as effectively.

As in other settings, mixing litters is discouraged. A singleton kitten may be introduced to a litter to aid in socialization or feeding, but the risk of infectious disease transmission needs to be considered. Enlisting a shelter veterinarian in writing protocols and policies regarding unweaned kitten care and nursing moms is a valuable investment in this labor intensive but incredibly rewarding endeavor.

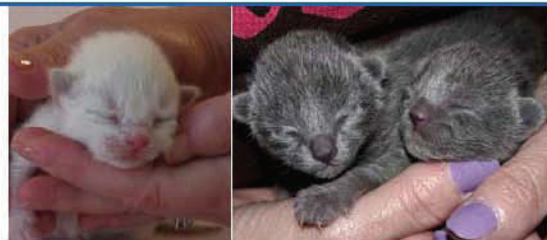


## How Old Is This Kitten? Helpful Tips for Aging Kittens



One Day Old: eyes sealed shut, ears folded, 100% reliant on mother cat. Extremely fragile. Bottle-feed as last possible option if no mother available.

One Week Old: umbilical cord will fall away, will begin to squeak when hungry, purr when content, hiss when stressed. Still completely dependent upon mother cat.



Two Weeks Old: Eyes and ears will begin to function, will start to crawl and may try to stand.

Three Weeks Old: A bit steadier on feet, exploring a little bit. Teeth coming in. Begin to try kitty litter *with supervision* (making sure they don't try to eat it). Can also begin to offer smooth canned kitten food.



Four Weeks Old: Will begin to wean. Digestion problems may occur as they begin to eat solids. Immune system starts to develop. Should weight about one pound. Will also start to play & get into EVERYTHING. May start grooming themselves. Will continue to need help staying clean.

*Thanks to Maggie Thomas at the SPCA of Tompkins County for sharing this project!*



### Kitten Social Learning: Ms. Kelley Bollen, MA, CABC

As we move into kitten season in our shelters there are a few behavioral issues I would like to discuss this month. The first involves the importance of human interactions and the second, the importance of feline interactions in the development of a cat’s emotional wellbeing.

The critical period for socialization for cats is from 3-7 weeks, much shorter than that of dogs, which runs from 3-12 weeks of age. This means that to ensure that cats are socialized well to humans, they need to be handled by people before they are eight weeks old. Kittens who are not handled by humans during this critical time run the risk of being fearful of people in adulthood. Many under-aged kittens will go to a foster home until they are eight weeks old, so it is important to encourage your foster parents to have several people handle the kittens daily. The handling should be gentle and loving of course, so that the kittens learn to trust humans. If your shelter has run out of foster homes for the under-aged kittens and is therefore forced to set up a nursery of sorts, it is important that efforts are made by the staff to handle all of the kittens even if only for a few minutes each day. Now that’s a tough job!

Although it may be easier to find under-aged kittens a foster home without their mom, it is really important to try to keep them with their mother and littermates until they are eight weeks old. Kittens learn through observation and their mothers are their best teachers. By watching mom, kittens learn important social skills, like how to play and how to temper their aggression during social interactions as well as things like how to use the litter box. The other valuable lesson that mom teaches the kittens is to cope with frustration. This important skill occurs naturally through the weaning process as mom starts to control access to her milk, thus teaching to kittens self control and how to deal with the frustration of not getting what they want when they want it. Kittens who don’t learn this important coping skill are often more aggressive as adults. So please make efforts to keep the kittens with their mom as often as possible. For orphaned kittens, it is best to put them with another litter if possible or to at least foster them in a home with other cats so that they can learn these important kitty social skills from their own kind. Humans cannot teach kittens how to be cats – only cats can do that!

### Events Calendar

March 2012						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 Companion Animal Welfare Issues Course	6 Companion Animal Welfare Issues Course	7	8 Companion Animal Welfare Issues Course	9	10
11 <b>SPAY YOUR MAMA</b>	12 Companion Animal Welfare Issues Course	13 Companion Animal Welfare Issues Course	14	15 Companion Animal Welfare Issues Course	16	17
18	19	20	21	22	23	24
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<div style="text-align: center;">  </div>						
25	26 Clinical Rotation in Shelter Medicine (2 Wks)	27 Shelter Medicine I Course	28	29 Shelter Medicine I Course	30	31



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