# **5 Requirements for all Underage Kittens**

The focus of this guide is to provide ways to accomplish these five fundamental requirements:

- 1. Keep kittens warm.
- 2. Provide kittens with adequate nutrition.
- 3. Keep kittens clean.
- 4. Provide socialization with people and with other animals.
- 5. Do your best to protect them from infectious disease.



## **CARE OF KITTENS UNDER 8 WEEKS OF AGE**

## **Body Warmth**

Since kittens under four weeks of age do not have the ability to regulate and control their body temperature, we must help them maintain body warmth. One method is to place a warmed *Snuggle Safe* disk at the opening of the cage or crate. *Snuggle Safe* disks should be warmed in a 1000 watt microwave for 5 minutes, an 800 watt microwave for 6 minutes, or a 700 watt microwave for 7 minutes. This disk then provides the needed warmth for 8 hours. Instructions for using *Snuggle Safe* disks are printed on each disk. If you are unsure what wattage the microwave is, heat the disk for 5 minutes, then check the temperature with your hands. Make sure it does not feel too hot before placing it in the cage or crate. Cover the heating disk with a soft folded towel or blanket so the kitten cannot directly contact the disk. If no heating disk is available, place a heating pad on the low setting under the crate or on the bottom of the cage, then place a soft folded towel or blanket between the kitten and the heating pad. Check the heat source frequently to ensure it is not too hot or too cold. Make sure some area of the cage does not contain a disk or have a heating pad under it so kittens can move away from the heat source if too hot. Kittens also like a nice nest in their cage or crate so bundle them in a nice fleece that they can crawl into and out.



You may see kittens 4-5 weeks of age beginning to avoid the heat source when the room is warm but they still need a heat source when the area is cool. Providing a warm spot is not as critical for kittens over 6 weeks of age but they still sometimes like the warmth.

We cannot overemphasize the need for a heat source in orphaned kittens. Their mom would have provided a nice 103°F environment for them. For this reason, as well as for socialization, medical staff should pair up new single kittens of the same age because multiple kittens can share body heat and are less likely to become hypothermic.

Providing a good environment for kittens means providing a warm, non-drafty room. A good practice is to make sure a towel covers the entire bottom of the cage and a bed made from a small litterbox or food carton is available so kittens do not sleep in their litterboxes. A towel covering the crate or front of the cage prevents drafts and keeps kittens under 4 weeks of age nice and toasty. Nursery rooms should

be kept around 80°F. Generally, if rooms are comfortable for the people working in the nursery, they are too cold for baby kittens. A kitten over 8 weeks of age only needs the availability of a warm, cozy spot.



### Properly setting up a crate to keep kitten toasty

- For kittens less than 4 to 5 weeks of age set up a cage or crate with a heating pad or snuggle safe disk on the bottom ensuring that half of their house has a heated floor and half of it does not.
- 2. Place a nicely folded towel over the heat source completely covering the bottom of the cage or crate.
- 3. Give them a nest in a small box (a canned food carton works nicely) with a soft fleece blanket.
- 4. Cover the cage front or entire crate with a towel to keep the house draft-free and cozy.
- 5. In a foster home, kittens should be kept in a warm, quiet room, such as a bathroom. If possible, room temperature should be 80 to 85°F.

If a kitten feels cold, warm it immediately but gently. You can check the temperature by lubricating a thermometer and gently inserting it rectally. The normal temperatures for kittens are:

0 - 1 week 95 - 99°F
2 - 3 weeks 97 - 100°F
4 weeks 99 - 101°F

If the kitten's temperature is less than it should be for its age, wrap a towel around the heating pad, place the kitten on the towel, and "burrito" the towel and heating pad around the kitten. A second method for warming the kitten is to wrap it in a towel, then place the wrapped kitten on a heating disk. After you start warming the kitten, alert the emergency contact so the kitten can be assessed and, hopefully, the cause of the low temperature determined. Do not warm the kitten's body temperature higher than normal for its age as you do not want to overheat it.

### **Kitten Feeding**

Cow's milk is not nutritious enough for kittens and it causes diarrhea, a dangerous condition for kittens. A consistent commercial kitten formula should be used for kittens in nurseries and foster homes. Any prepared formula must be refrigerated and used within 24 hours.

### **Guidelines for bottle feeding kittens:**

- Combine 1 part powdered formula to 2 parts water.
- Kittens should eat 2 tablespoons or 30 mls of formula per 4 ounces of body weight within a 24 hour period.
- Feed kittens less than 2 weeks of age every 2 hours.
- Feed kittens 2 to 4 weeks of age every 3-4 hours. If they are sleeping for longer periods during the night, do not wake them to feed.
- Feed weak kittens or ones not eating enough more frequently.
- As with all babies, some individual variations in frequency and amounts for each kitten may occur.

Daily weight gain is an indication that the diet is meeting the kittens' nutritional needs. Weigh kittens at the same time daily, not only to ensure adequate weight gain but also to calculate the amount they should be eating with each feeding. Kittens should gain about ½ ounce per day or 4 ounces per week. Keep in mind that the younger the kittens are, the more accustomed they are to staying latched onto their mom's nipple all the time and nursing small amounts periodically. Frequency is essential for digestion and allows the kitten's digestive system to handle small amounts at any one time. Also, the act of nursing stimulates digestion. If you notice a kitten not eating enough in one feeding, increase the frequency of feedings or go back to that kitten after the others finish eating to give it another chance to take more food.

#### **General Feeding Instructions**

Test the temperature of the formula before feeding, it should be warm (around  $100^{\circ}$ F), but not hot. Warm the bottle by placing it in hot water for a few minutes or by putting it in the microwave until it reaches the correct temperature. If you use the microwave be sure to mix the formula well before testing because hot spots may develop in the heating process.

Always properly position a kitten for feeding. **NEVER** recline a kitten on its back while feeding. This can cause it to aspirate, which means the kitten inhales the formula into their respiratory tract rather than swallowing. Aspiration can lead to a reactive pneumonia and be fatal. Kittens must be leaning forward or flat on their belly while feeding. They are most comfortable when positioned as they would be if nursing from their mom. To achieve this position, place the kitten on its stomach on a towel or cloth so the kitten can cling to the material and knead instinctually. If the kitten is acting frantic while nursing, try wrapping the kitten in a towel while feeding it.

When bottle feeding, gently open the kitten's mouth with the tip of your finger and slip in the nipple. Once the kitten learns what is coming, it will search out the nipple enthusiastically. You will feel a vacuum effect when the kitten gets into suckle mode. Watch for bubbles in the bottle during suckling and ears wiggling. These movements mean the kitten is suckling successfully. To keep air from getting into its stomach, hold the bottle at a 45-degree angle, keeping a slight pull on the bottle. Allow kittens to suck at their own pace. If a kitten refuses to take the nipple or will not suckle, try rubbing it vigorously on the forehead or stroking



Proper positioning for bottle feeding a kitten.

its back much as its mom would. Using a toothbrush to stroke the kitten can simulate the feeling of a mom cat's tongue. If you still cannot get it to nurse from the bottle, syringe feed the kitten to make sure it gets adequate nutrition. If a kitten requires syringe feeding, notify the foster coordinator.

If feeding multiple kittens, it will be easier to get them all fed the required amount if you feed each one multiple times during the session. To accomplish this, feed the first kitten until it stops nursing, then feed the second, and so on. After each has had one turn at the bottle, go back to the first and repeat the process. Usually after two or three nursing turns, a kitten has had enough for one feeding. When a kitten has had enough formula, it will usually get some bubbles around its mouth and its tummy will be very rounded, almost pear-shaped.

Kittens that seem too weak to nurse may be cold or have an underlying medical issue. A kitten refusing to nurse beyond the first few "getting the hang of it" times may indicate illness. Please alert the foster coordinator.

If bubbles come out a kitten's nose or it makes gurgling noises, the kitten has accidentally sucked formula into the lungs or aspirated. Immediately hold the kitten upside down until it stops choking and then contact the medical staff member on call so the kitten can be assessed and treated if needed. After each feeding session, give each kitten a full-body once over with a barely damp, warm washcloth. Use short strokes like its mom would use. This activity keeps the kitten's fur clean, teaches it how to groom and gives it needed socialization. Make sure the kitten is completely dry before placing it back in its cage.

Kittens naturally suckle on each other and on fingers, even after eating. Kittens suckling on each other excessively may be a sign that the frequency of feedings need increased. If littermate suckling becomes problematic, especially around the genital area, separate the kittens. Check each kitten's genitals to ensure sucking activity is not causing problems (redness, irritation, penis hanging out, etc.). Suckling on

genitals can lead to the urethra swelling shut and having to be surgically reopened. If any of this occurs, contact the foster coordinator immediately.

#### Weaning

A kitten is ready for the weaning process when it bites the nipple often and forcefully, and is able to lick formula from fingers. Continue bottle feeding through the weaning process to ensure kittens get adequate nutrition and are not overly stressed.

The first step of the weaning process is to get the kitten to lap up formula from your finger and then a spoon. Once it masters this skill, put formula in a flat dish. Introduce the kitten to solid food by mixing warm canned food and prepared kitten formula into a thin gruel. Gradually reduce the amount of formula mixed with canned food until the kitten is eating just the food.

Place the food in a shallow dish. Some kittens begin lapping right away; others prefer to lick the gruel from your fingers. Allow them to do so and slowly lower your finger to the dish. The kittens may bite the edge of the dish or walk in the food. Sometimes it takes two or more meals before they catch on.



Kitten eating mush from a saucer.

If a kitten does not seem interested in the gruel, try gently opening the kitten's mouth and rubbing a little of the food on its tongue or teeth. Be patient, the weaning process takes time. As the kittens catch on, thicken the gruel. When kittens are eating thicker gruel, they should always have fresh water available in a low spill-resistant bowl.

Kittens usually walk through their food. Make sure the kittens are clean and **DRY** before putting them in their cages. Most weaning kittens are messy eaters so you may not be able to leave gruel or water in their cages at first. Wet kittens can rapidly lose body temperature.

#### **Stimulation for Urination and Defecation**

Mother cats groom their kittens to stimulate urination and defecation on a regular basis. If you are acting as the babies' new mom, you get this important duty. Very young orphan kittens will not be able to urinate and defecate without your help, so this is a crucial job.

Before and after each feeding, gently rub the kitten on its lower abdomen, as well as the genitals and rectum with a cotton ball/pad dipped in warm water or a fragrance free baby wipe. Make sure to rub only enough to get the kitten to eliminate because overstimulation will irritate the area. Keep an eye out for chafing and lingering dirt and do not let the kitten get chilled. Kittens should (and almost always will) urinate during each stimulation. They should defecate at least once daily. General guidelines are:

- Kittens need to be stimulated until about 3 weeks of age.
- Kittens should be stimulated before and after each feeding.
- Kitten should urinate every time and defecate at least once daily.

When kittens get to be 3-4 weeks old, they no longer need help eliminating body wastes. Place a litter box in the crate or cage and fill with the litter provided or shredded newspaper. Clumping litter can create litter clumps in their stomachs and respiratory passages and should not be used with young kittens.

At the same time as introducing a litterbox, start providing some dry kitten food so the kittens can chew on the food and not the litter. When teaching a kitten to use a litterbox, placing their feces in the box so they smell it in there often helps. If you have a kitten that defecates on its towel instead of in the box, move the feces to the box instead of completely cleaning it out of the cage.



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## **Weight Gain and Developmental Milestones**

Kittens should gain about ½ ounce every day or 4 ounces per week. Weigh them at the same time every day with a kitchen or small postal scale. Lack of weight gain in a 24 hour period is cause for concern. Closely monitor the kitten and if it still has not gained weight the next day, alert the foster coordinator. Weight loss is cause for alarm. Begin syringe feeding the kitten. To syringe feed the kitten, mix up the formula as usual and then draw it up in one of the provided syringes. Put a nipple on the end of the syringe and place the kitten in the proper feeding position. Try to get the kitten nursing by slowly pushing formula out of the syringe and through the nipple into its mouth. Make sure it swallows the formula before you push more into its mouth. Let the foster coordinator know how the syringe feeding goes.

Kitten Growth Milestones		
Age	Weight	Milestones
Birth	2 – 4 ounces	Eyes and ears are closed.
		Sleeps 90% of the time.
		Minimal handling.
2 – 3 days		Umbilical cord falls off.
4 days		Begins to purr.
10 – 14 days	8 ounces	Eyes and ears should be open.
		Healthy kittens will be round and warm with pink skin and will
		rarely cry.
2 – 3 weeks	12 ounces	Baby incisors erupt, can begin to eliminate without help.
		Will start crawling, standing, and playing with littermates.
		Begin regular handling.
		Ready for deworming.
4 weeks	1 pound	Baby canine teeth erupt, beginning to walk but do not have great
		balance, will begin to groom themselves, able to thermoregulate.
		Continue daily handling.
		Ready for their 1 <sup>st</sup> vaccine.
		Ready for gruel and may be ready for introduction of dry kitten
		food.
6 weeks	1.5 pounds	Baby premolars erupt.
		Running, playing, using the litterbox, grooming themselves.
		Should be eating dry kitten food, supplemented with canned.
		Ready for surgery and adoptions? Find out!
8 weeks	2 pounds	They are now "mini" cats.
		Definitely ready for surgery and adoption!

## **Socialization and Bathing**

Beginning around 3 weeks of age, kittens need exercise to promote muscular and circulatory development and to learn social skills. They will begin to play with their littermates and learning from their mom if they are not orphaned. It is good to begin regular daily handling of kittens to get them used to contact with people. Play is the best method to help them physically and socially develop.

After each feeding session, give kittens a full-body once over with a barely damp washcloth. Use short strokes like a mom cat would use. Kittens often get dirty between cleanings and it is okay to wash a kitten with warm water under a sink faucet but focus only on the areas needing cleaned. A simple "butt bath" will usually do the trick. After bathing, wrap the kitten in towels/blankets and a heating pad set on low. Your body heat is not enough to warm up a cold kitten. Make sure you do not leave a kitten until it is completely dry.

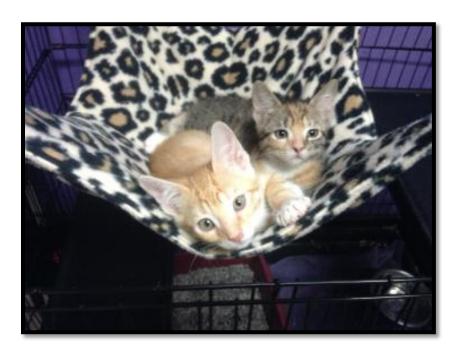


#### Steps to bathe an underage kitten:

- 1. Get a small sink or a basin ready with some warm water. If the kitten is really dirty, a small amount of Dawn or baby shampoo can be used in the water. Make the water a nice warm temperature like you were taking a bath.
- 2. To keep the kitten from getting chilled, have towels ready to immediately dry it off. If possible, warm the towels in the dryer beforehand.
- 3. You may want to wear long sleeves and gloves. Kittens may freak out and start to scratch. Gently hold the kitten by the scruff and support its body with you other hand. This may help calm and control the kitten.
- 4. Give the kitten a quick but thorough bath to get any food and feces off them. If only its butt is dirty, then only immerse the butt, not the whole kitten.
- 5. Rinse the kitten off with warm water and immediately wrap it in a towel.
- 6. Rub vigorously to get the kitten dry. If the first towel becomes wet, switch to a clean, dry towel.
- 7. Keep the kitten with you. Do not put it back in its cage until completely dry. If needed, wrap a heating pad around the outside of the towel while the kitten is drying.

#### Socializing with kittens:

- It's a hard job, but someone has to play with kittens to ensure they are well socialized and people friendly by adoption time.
- Kittens will naturally socialize with their mom and littermates if they have them. Socialization is another reason to pair single, same-age kittens on intake.
- Kittens start to play and explore at about 4 weeks of age. Make sure they have toys and stimulation in their cage. Pipe cleaners, cardboard rolls from toilet paper and paper towels are great play items in addition to traditional kitten toys.
- In a foster home, the foster parent should spend some time each day sitting in the foster room with the kittens and having play time.
- Introducing new fosters to the foster parents' resident pets during the first two weeks is not recommended. Let the kittens get acquainted with their new home before exposing them to other animals. After this time, introducing foster kittens to adult cats and dogs in the home can be great for the socialization of the kittens but should definitely be done with care and only under supervision.
- Try to ensure no kitten is housed alone. Everyone needs a friend.



### **MEDICAL GUIDE**

### **Common Kitten Medical Warning Signs**

Underage, particularly orphaned kittens are fragile and foster parents are a crucial part of keeping them healthy. If a kitten shows any of the signs listed below, follow the recommendations on who to contact and when.

**Red Flags** – if any of the following occur, the kitten needs immediate medical attention and the foster parent should alert the emergency contact immediately.

- Kitten did not eat during last meal.
- Kitten lost weight.
- Kitten has liquid diarrhea.
- Kitten is dehydrated.
- Kitten is listless.
- Kitten vomited repeatedly.
- Kitten is bleeding.
- Kitten has neurologic signs.
- Kitten found deceased in cage.

**Yellow Flags** – if any of these things occur, monitor the kitten and contact the foster coordinator to schedule a veterinary exam.

- Kitten has sneezing, wheezing, nasal discharge and/or coughing.
- Kitten has ocular discharge.
- Kitten has mild lethargy or depression.
- Kitten did not gain weight.
- Kitten has loose stool.
- Kitten has occasional vomiting.
- Kitten has decreased appetite.
- · Kitten has difficulty urinating or defecating.
- Kitten is limping.
- Kitten has behavior not normal for the kitten.
- Kitten has an area of hair loss.

#### **Fecal Guide**

Below is a guide to the color and consistency of kittens' feces. Pay attention to this whenever the kitten goes to the bathroom. Color and consistency can be a warning sign of a medical problem needing addressed. For any feces that is not normal, please collect a fecal sample and fill out an exam request form.

Fecal Color	
Brown	Normal color
Bloody	Red blood seen in stool. May indicate intestinal parasites o panleukopenia virus.
Mucous	Can be seen when straining is occurring or with excessive diarrhea.
Black	True dark black color in stool. Can indicate bleeding in the upper GI tract.
Yellow to White	May indicate a bacterial imbalance. With diarrhea, may indicate coccidia.



#### **Overview of Hydration**

Checking to see if a kitten is dehydrated is a fairly simple thing to do. Pull up on an animal's skin right behind the neck, between the shoulder blades, and let go. It should fall immediately back. If it does not, this can be a sign of dehydration.

Below is a guide to checking for dehydration in kittens.

- Grasp the skin between the shoulder blades on the kitten and gently pull the skin up between your thumb and fingers.
- If the skin you "tented" snaps right back in place, the kitten is well hydrated.
- If the skin slowly falls back down, the kitten is dehydrated and in need of SQ fluids.
- If the skin stays in place, the kitten has severe dehydration and needs immediate medical attention.



Checking for dehydration.

### **Common Illnesses in Kittens**

The following information is intended to help you better understand and recognize some of the more common illnesses in cats.

### **Upper Respiratory Infection (URI)**

The term "upper respiratory infection" (URI) is used to refer to any illness that affects a cat's upper respiratory system. URIs are commonly seen in shelter cats. The following information applies to all upper respiratory infections.

- Signs & Symptoms: Sneezing, runny nose and eyes, fever, anorexia.
- Treatment: Veterinary care, including antibiotics and supportive care.
- Transmission: Contagious to other cats through direct contact of bowls, bottles, hands, etc. Stress is a major contributing factor in the development of a feline URI.

#### Conjunctivitis

If the eye is crusted shut or mucus filled, use a warm moist cotton ball or soft towel to soak the area. Never pick at crust or force an eye open because of the potential to further injure tissues this way.

- Signs & Symptoms: Watery eyes, white, yellow or green discharge. Black crust can be dried blood. Eyelids and third eyelid may be red, swollen and raised.
- Treatment: Veterinary care, including antibiotics and supportive care.
- Transmission: Contagious to other cats through direct contact of bowls, bottles, hands, etc.



Image of kitten with URI and conjunctivitis.

#### Ringworm

Ringworm is a fungus similar to athlete's foot. The fungal spores can live in the environment for a long time. Accel disinfectant is effective against ringworm but must have a contact time of 10 minutes.

- Signs & Symptoms: Irregularly shaped areas of fur loss and the skin in these areas will usually have a crusty appearance.
- Treatment: Veterinary care, including dips and oral medication.
- Transmission: Contagious to other cats, dogs, and people, but usually requires close contact with the infected animal or its bedding.

#### **Fleas**

Fleas are tiny insects that feed on the blood of cats, dogs, humans, and other animals. Although each flea only consumes a small drop of blood, they usually attack in large numbers and can cause life threatening anemia in puppies and kittens.

- Signs & Symptoms: Intense itching and scratching; fur loss, particularly along the back and at base of tail.
- Treatment: Veterinary care including a prescription flea preventative medication.
- Transmission: Contagious to other cats, dogs, and people.

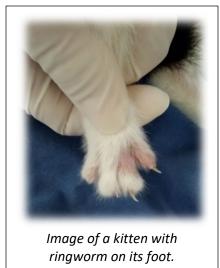


Image of fleas

#### **Earmites**

Earmites are tiny parasites that live in the ear canal.

• Signs & Symptoms: Itching, scratching, head-shaking, dark brown discharge in the ears - often looks like dirt or "coffee grounds."



- Treatment: Veterinary care including a topical medication.
- Transmission: Contagious to other cats and dogs, but usually requires direct contact with the infected animal.



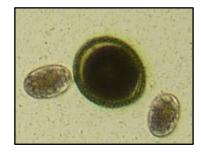
Discharge from earmites.

## **Roundworms, Tapeworms and Hookworms**

Intestinal parasites affect a cat's digestive system. They are most commonly seen in kittens and young cats.

- Signs & Symptoms: Large hard belly, diarrhea and an inability to gain weight. Hookworms can cause a life threatening anemia, particularly in kittens.
- Treatment: Veterinary care, including deworming medication.

Transmission: Contagious to other cats and dogs, but only through contact with (and subsequent ingestion of) feces.

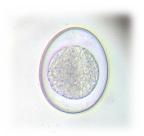


Microscopic view of one roundworm egg and two hookworm eggs.

#### Coccidia

Commonly seen in kittens. Can easily be spread without good sanitation techniques.

- Signs & Symptoms: Pale yellow diarrhea. Can lead to dehydration and decreased appetite.
- Treatment: Veterinary care, including a deworming medication for 3 days and subcutaneous fluids if needed.



Coccidia egg.

#### Panleukopenia

Panleukopenia (sometimes called feline distemper, although it is actually related to canine parvovirus) is a viral infection that most commonly affects kittens and young cats. Left untreated, panleukopenia is almost always fatal. Even with intensive treatment, many kittens who contract panleukopenia will die. Unfortunately, this illness can be frustrating to deal with because the virus can survive in the environment for years. This means that other unvaccinated cats/kittens can become infected with panleukopenia simply by coming into contact with places where an infected cat has been. Accel disinfectant is effective against panleukopenia virus. The vaccine for panleukopenia is extremely effective but kittens will not be completely protected until they complete their vaccination series.

- Signs & Symptoms: Fever, diarrhea, lethargy, vomiting, loss of appetite and even sudden death.
- Treatment: Veterinary care, including fluid therapy and antibiotics.
- Transmission: Highly contagious to other cats, especially through contact with infected feces or vomit but also bowls, hands, clothes, etc.

## **CCAS Foster Animal Concerns**

- If you need to make an appointment for a recheck examination, please email Morgan Grove at <a href="mailto:clayfosters@claycountygov.com">clayfosters@claycountygov.com</a> or you can call and leave a message at 904-529-4733. Please allow up to 24 hours for a response on business days, Tuesday through Saturday.
- If you have a medical concern during normal business hours, Tuesday through Friday from 10 am 4 pm or Saturday from 10 am 3 pm, please contact Morgan Grove at 904-529-4733. If you cannot reach her, then you can call Christina Sutherin at 904-529-4779.
- Please have your animal ID#, which is on the kennel card you took home with you available. It makes it easier to look up the history of your foster pet.
- If you have a medical emergency during normal business hours, Tuesday through Friday from 10 am 4 pm or Saturday from 10 am 3 pm, please start heading to CCAS but call the main shelter at 904-269-6342 to let the dispatcher know that you are on the way.
- If you have a medical concern after hours but feel that it can wait until the next business day, then please contact as recommended above.
- If you have a medical emergency (such as a hit by car, animal attack, seizure, non-responsive animal) after hours, please take the pet to Clay-Duval Pet Emergency Clinic on Wells Road. Their phone number is 904-264-8281. CDPEC can contact our on call officer for approval to place the care of the foster animal on the CCAS account. They will need to have the Animal ID# to authorize care, so please remember to provide it. This must be a true emergency for care to be approved at CDPEC. We cannot reimburse for any medical care that is payed for by the foster parent or done at any other veterinary emergency clinic.