



MADDIE'S
INSTITUTE

Findings from a national survey on

ORPHANED KITTEN CARE

Maddie's InstituteSM
{September 2013}





INTRODUCTION

Orphaned kittens are the most fragile of homeless animals, and many shelters consider it too resource-intensive to care for them. For that reason, they often make up the largest single group of animals euthanized at many shelters.

In the spring of 2013, Maddie's Institute conducted an online survey that asked administrators, staff members and volunteers of United States animal shelters and rescue groups to comment on their organization's approach to the care of orphaned kittens.

Our principle aim in conducting this study was to gather baseline data on several key areas concerning orphaned kitten care, including:

- 1) Parameters of care and housing.
- 2) Prevalence of health issues.
- 3) Training given to individuals who provide care.
- 4) Challenges organizations may face.

Throughout this report, we intend to suggest useful strategies and provide tangible resources to help organizations create or improve an orphaned kitten care program.

Together we can better nurture, support and save the lives of these vulnerable animals.

"Caring for kittens seems very scary but can be handled with some guidance and training.

People enjoy fostering if given the right tools to help."

Anonymous Respondent

*We defined **orphaned kittens** as animals **less than 6 weeks** of age and **without their mother** – to include those categorized as neonatal (0-2 weeks), pre-weaned (2-4 weeks) and early post-weaned (4-6 weeks).*

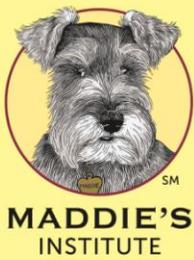


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“The lost hours of sleep, the endless laundry and litter boxes – all of that fades when you tearfully kiss a healthy kitten and hand him or her to their forever mom or dad. So worth the effort.”

Anonymous Respondent



METHODOLOGY

Context and Limitations

In the spring of 2013, Maddie's Institute conducted an online survey that asked administrators, staff and volunteers of United States based animal shelters and rescue groups to comment on their organization's care of orphaned kittens. More than one individual from each organization was allowed to participate.

For the purpose of this survey, we are defining orphaned kittens as animals less than 6 weeks of age (neonatal = 0-2 weeks, pre-weaned = 2-4 weeks and early post-weaned = 4-6 weeks) and without their mother.

Invitations to participate in this survey were distributed via email through the Maddie's Fund[®] mailing list. The data included in this report provide a snapshot of how a range of organizations we surveyed operate. Although, our sample *may* not be statistically representative of the larger population of animal care organizations in the United States, we have collected data from a diverse group of respondents from a highly varied list of organizations, both structurally and geographically.

Assumptions

This report only includes responses from respondents who indicated: 1) their organization either *sometimes* or *always* provided care to orphaned kittens *and* 2) they, as individuals, were *familiar* or *somewhat familiar* with their organization's practices regarding orphaned kittens.

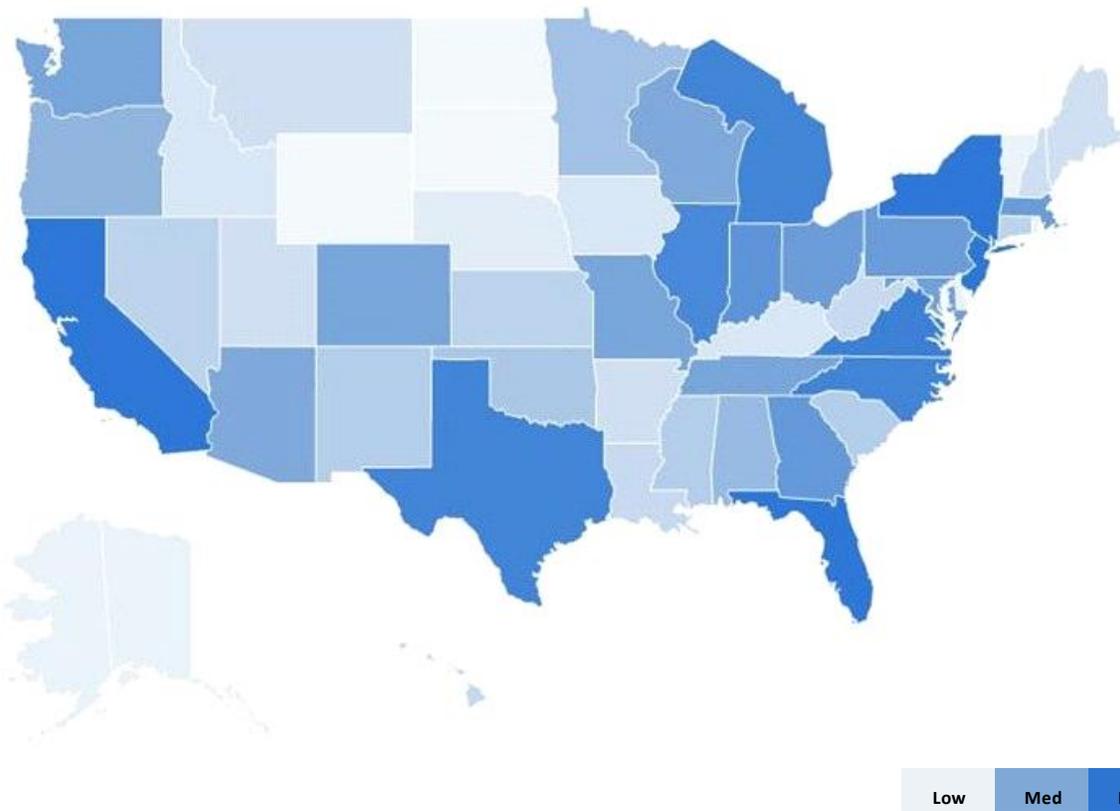
While we realize the importance of providing a wide safety net of care for these vulnerable populations, for the purposes of this report we have excluded the responses of individuals who are not directly affiliated with an animal shelter or rescue organization. Our intention in this report is to maintain clear survey population parameters and present comparable data across organizations. We have the utmost respect for those individuals who selflessly serve their communities and will continue to thoughtfully consider their comments as we create future resources.

RESPONDENT DEMOGRAPHICS

State Distribution of Represented Organizations

- We collected data from 776 respondents – administrators, staff members and volunteers – representing more than 600 different organizations across 47 states (map below).

Orphaned Kitten Survey Participation by State



Color tone range: Low = at least 1 participating organization, High = 20+ participating organizations

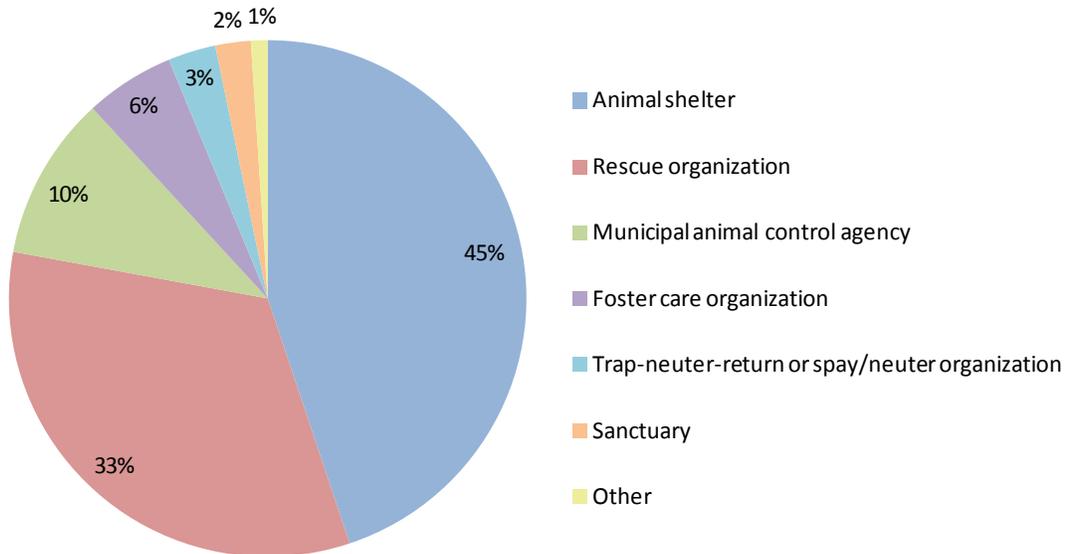
Regional Distribution of Individual Respondents

- Twenty-nine percent of individuals surveyed either worked or served in the Southeast region, as compared to 26% in the West, 20% in the Midwest, 16% in the Northeast and 9% in the Southwest.

Organizational Type

- Although our data represents a diverse array of organizational types, the majority of respondents classified their affiliated organization as either an *animal shelter* (45%) or a *rescue organization* (33%; Graph 1).

Graph 1. "How would you classify your organization?"



n = 770

- Organizational types were fairly evenly geographically dispersed, with the exception of the Southwest, where 19% of respondents described their organizational type as an *animal shelter* compared to an average of 48% in all other regions (i.e., Northeast, Southeast, Midwest and West); data not depicted.

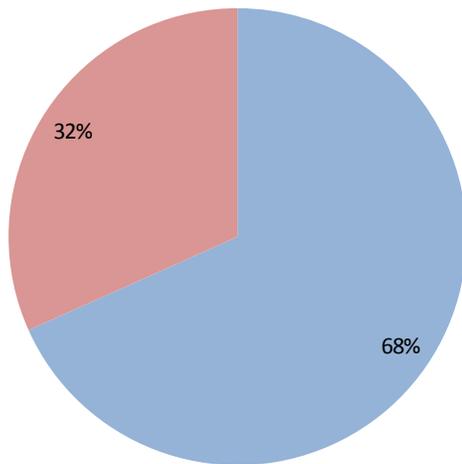
Provision of Care

As stated in the methodology section, this report only includes responses from respondents who indicated that their organization either *always* or *sometimes* provided care to orphaned kittens.

- 68% reported that their organization *always* provided care to orphaned kittens while 32% reported that their organizations *sometimes* provided care to orphaned kittens.
- Fewer respondents (57%) reported that their organization *always* provided care to ill and/or injured orphaned kittens (Graph 2).

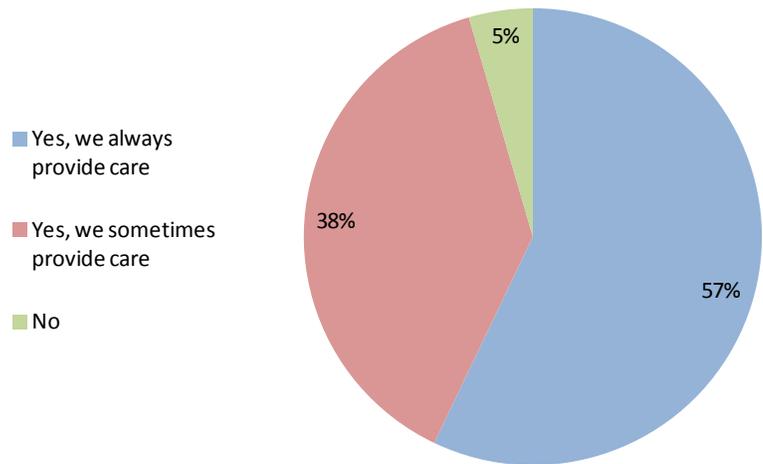
Graph 2. "Does your organization provide care to...

orphaned kittens?"



Total n = 776

ill and/or injured orphaned kittens?"

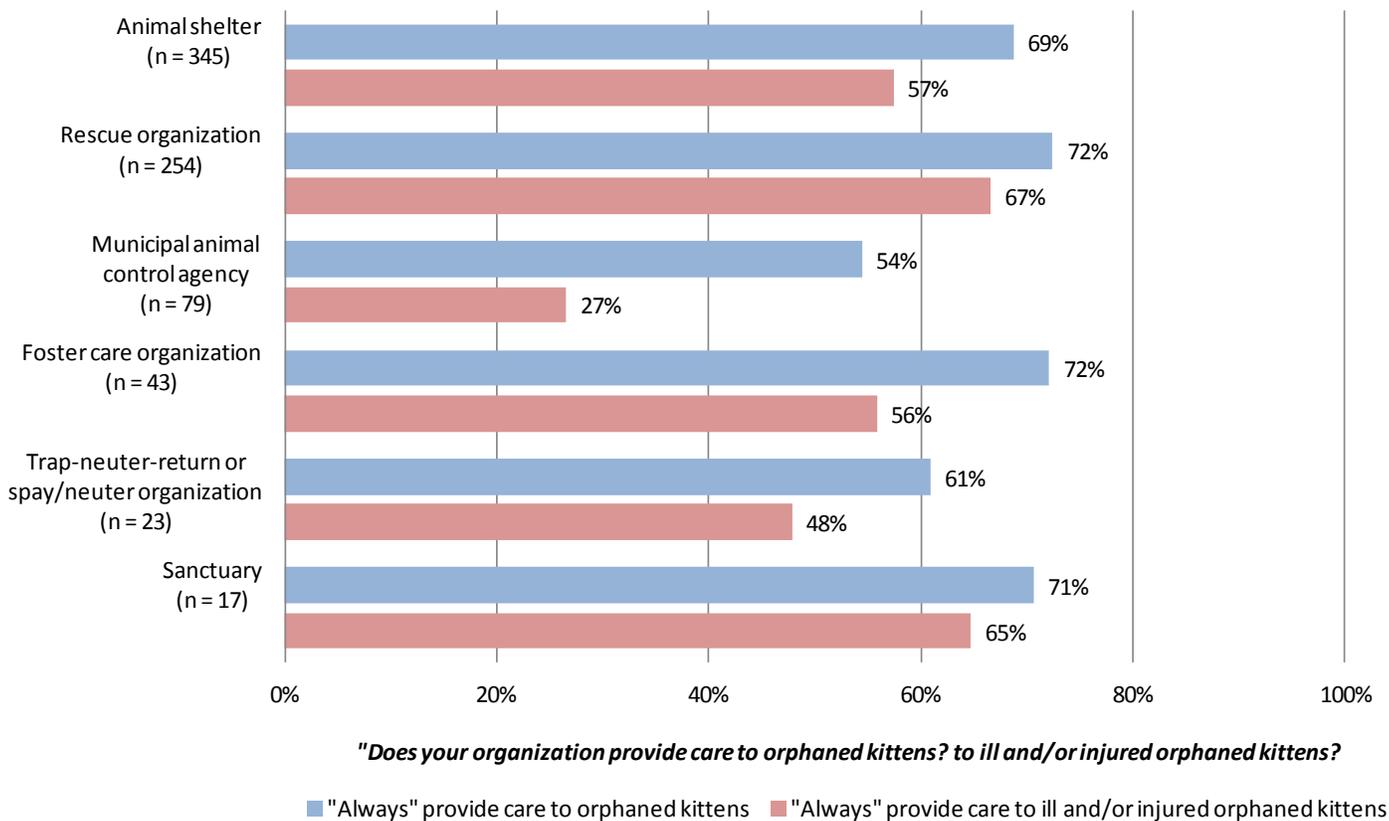


For more information on orphaned kitten care check out the [April 2013 issue of Maddie's Institute's newsletter Advance](#).

Provision of Care (continued)

- Respondents who identified their organization as a *municipal animal control agency* were the least likely to report *always* providing care for orphaned kittens or ill and/or injured orphaned kittens.
 - 54% of *municipal animal control agencies* *always* provided care for orphaned kittens as compared to 70% of all other organizational types.
 - 27% of *municipal animal control agencies* *always* provided care for ill and/or injured orphaned kittens as compared to 60% of all other organizational types (cumulative data from Graph 3).

Graph 3. Responses of "always" provide care by organizational type



Provision of Care (continued)

Not surprisingly, respondents from organizations that *do not always* provide care for ill and/or injured orphaned kittens often cited that care is contingent upon: 1) the severity and type of illness or injury and/or 2) the availability of resources, such as foster care, funding or space.

- Selected comments below briefly illustrate the potential barriers to ill and/or injured orphaned kitten care:
 - *“If there is a foster home available, they are placed with the foster parent; if not, then they are euthanized.”*
 - *“The most accurate reply would be rarely. Funds from the shelter to use towards veterinary care are very limited, as is the training of volunteers with ill/injured kittens.”*
 - *“If it is within our budget to provide vet care, we will do so. If the vet feels the odds of survival are not good or if the cost is beyond our budget, then we will usually opt for euthanasia.”*
 - *“We take in so many young, healthy kittens we don't usually care for the ill any longer than the holding period. During kitten season we don't have the room.”*

While many respondents who reported *always* providing care for ill and/or injured orphaned kittens cited the same barriers and health contingencies, some offered insights as to how care was made possible. Interestingly, a few organizations noted that intake and care of ill and/or injured orphaned kittens is their primary organizational mission, suggesting that there may be local partnering opportunities as these groups emerge.

- Selected comments below illustrate how care of ill and/or injured orphaned kittens is made possible:
 - *“We have many foster homes that are capable of caring for ill or injured kittens.”*
 - *“We have an on-staff veterinarian three days a week and access to a local veterinarian so we are covered seven days a week.”*
 - *“We either provide in-shelter care or transport to partnering veterinarians. Sometimes we partner with other shelters as well.”*
 - *“We are a special-needs rescue so we often take orphaned kittens from other organizations that don't have the time or resources to give them a chance.”*
 - *“They are our number one priority.”*

Challenges which may limit the care of orphaned kittens
are discussed in greater detail on page 32.

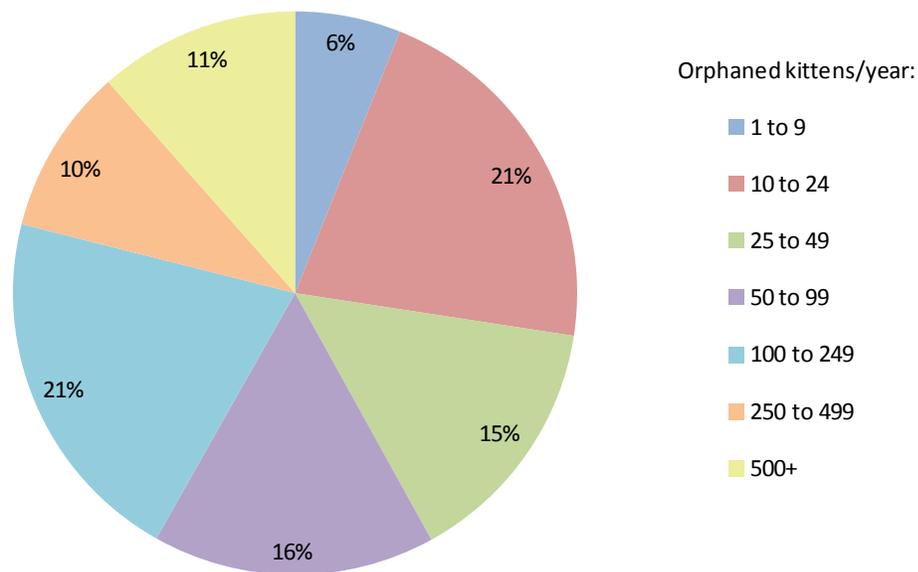
Number of Orphaned Kittens Cared for Annually

Respondents reported the number of orphaned kittens their organization cared for annually. We did not ask respondents to state the number of ill and/or injured orphaned kittens cared for annually.

Our data portray varying capacities for orphaned kitten care:

- The number of kittens cared for annually ranged from 1 to 3,500, with an approximated average of 175 cared for annually per organization. We estimate that this study represented more than 120,000 orphaned kittens taken into care annually (data not depicted).
- 58% of respondents reported that their organization cared for *less than 100* orphaned kittens annually, while 42% cared for *more than 100* annually (cumulative data from Graph 4).

Graph 4. "How many orphaned kittens does your organization care for annually? "



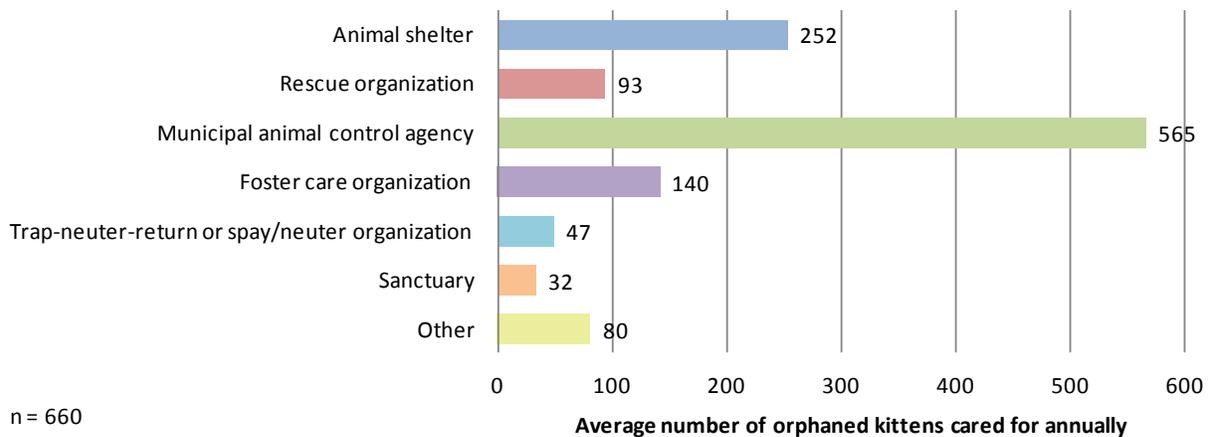
n = 660

- 32% of respondents reported that the number of orphaned kittens cared for annually was tracked, while 68% reported that the number was estimated. The higher the number of orphans reported, the more likely it was to have been reported as tracked (data not depicted).

Number of Orphaned Kittens Cared for Annually (continued)

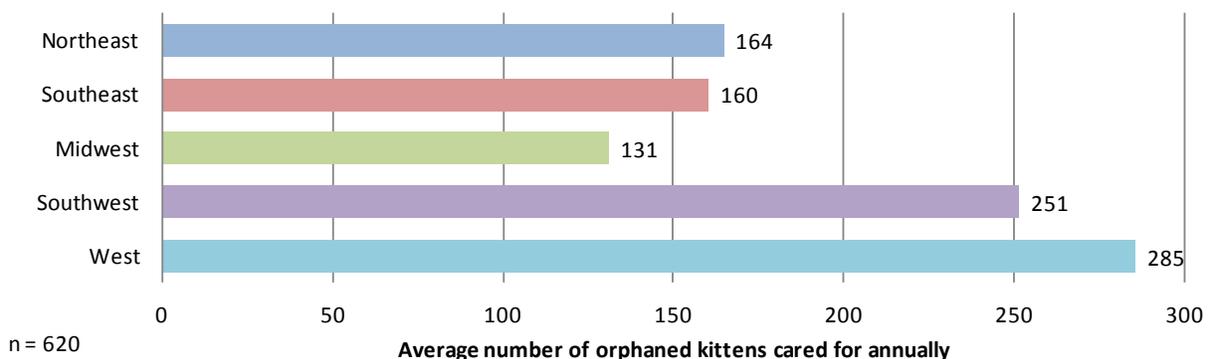
- Respondents from *municipal animal control agencies* reported caring for more than twice as many orphaned kittens annually as respondents from *animal shelters* and more than six times as many as respondents from *rescue organizations* (565, 252 and 93 kittens cared for annually, respectively; Graph 5). This is important to note as respondents from municipal animal control agencies were the least likely to report *always* providing care for orphaned kittens.

Graph 5. Average number of orphaned kittens cared for annually by organizational type



- Additionally, respondents from the West or Southwest regions reported caring for more orphaned kittens annually than those from other geographic regions (Graph 6).

Graph 6. Average number of orphaned kittens cared for annually by region



RESULTS

Housing

Orphaned kittens undoubtedly have special needs. While it is certainly possible for animal shelters and rescue organizations to provide excellent “in-house” care, more often than not, orphaned kittens should be placed in a managed home environment with a dedicated foster caregiver.

So, what are these special needs?

Orphaned kittens require 4 basic environmental assurances:

- 1) An age-appropriate amount of space
- 2) Age-appropriate temperature control
- 3) A clean, dry and comfortable dwelling
- 4) A safety from other animals, injury and disease



Maddie’s Institute suggests that foster caregivers only house one litter per home or space. These little fur-balls require individualized care and time commitment.

When there are too few foster homes available, shelter nursery programs are the next best thing. Nurseries, like the [Bottle Baby Program](#) at Austin Pets Alive! (see more below), are successful *only* through deliberate coordination and consistent implementation.

Veterinarian Dr. Ellen Jefferson and the team at Austin Pets Alive! put together a comprehensive kitten nursery program based on similar programs for orphaned wildlife. In conjunction with home-based foster care, the nursery program utilized existing resources in new ways, allowing them to save hundreds of kittens' lives and contributing to Austin becoming the largest no-kill city in America.

Get more information on the program, standard operating procedures and specific care guidelines by clicking [here](#).

Housing (continued)

“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.”

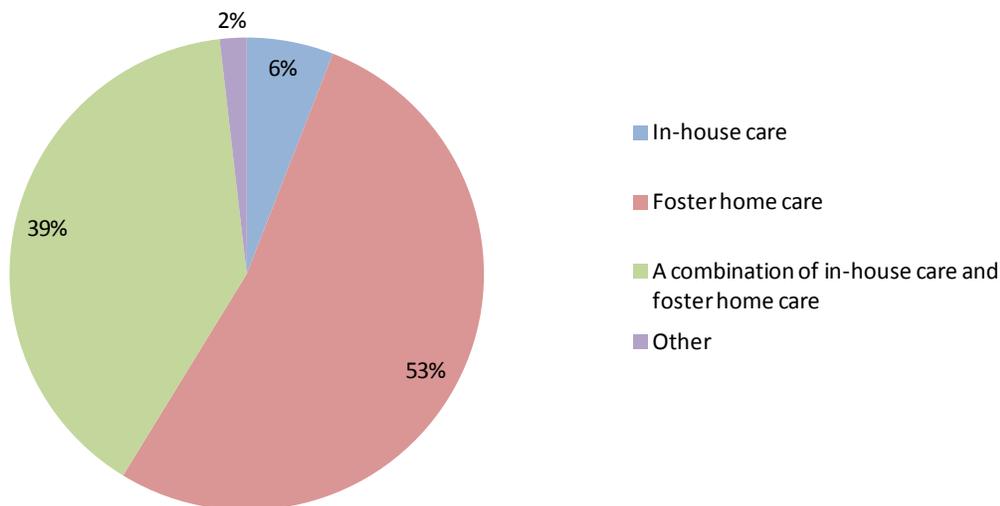
[“The Challenges of the Young: Nursing Moms and Bottle-feeders”](#)

Dr. Elizabeth Berliner

Respondents were asked to report on how their organization primarily provides housing care to orphaned kittens.

- The majority (53%) of respondents reported that their organization primarily utilizes *foster home care* to house orphaned kittens. Approximately 39% reported to use *a combination of in-house and foster home care*, while only 6% reported to primarily provide housing for orphaned kittens *in-house* (Graph 7).

Graph 7. "How does your organization primarily provide housing care to orphaned kittens?"

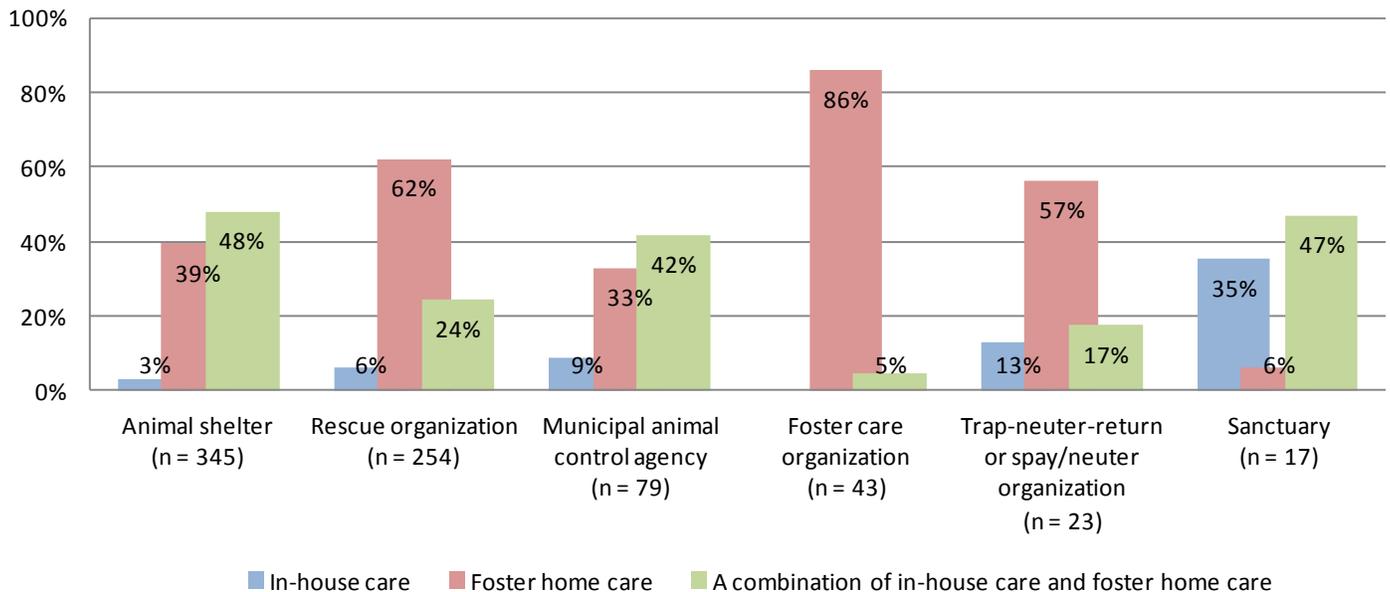


n = 710

Housing (continued)

- Responses coded as *other* included comments such as “*transfer to rescue organizations*” and “*veterinary office housing and care.*”
- Percentage differences did not appreciably differ between those who indicated that their organization *always* or *sometimes* provides care to orphaned kittens (of organizations who *always* provide care, 51% reportedly utilize foster care and 42% reportedly utilize a combination of foster care and in-house care; of organizations who *sometimes* provide care, 57% reportedly utilize foster care and 34% reportedly utilize a combination of foster care and in-house care; data not depicted).
- Not surprisingly, foster care organizations and rescue organizations most commonly utilized *foster home care* alone to house orphaned kittens (86% and 62%, respectively; Graph 8). Rescue organizations and municipal animal control agencies surveyed most commonly utilized a *combination of both in-house care and foster home care* (48% and 42%, respectively).

Graph 8. "How does your organization primarily provide housing care to orphaned kittens?"



See Appendix A on page 44 of this report for our *Statement on Holding Period Requirements.*

Frequency of Health Issues

In the Maddie's Institute YouTube video, *How to Examine an Orphaned Kitten*, Laurie Peek, DVM and Director of Veterinary Programs at Maddie's Fund, provides step by step guidance for a physical examination. She says, "When you are first presented with an orphaned kitten, it is a good idea to do an exam to gather baseline information on that kitten. Record your findings and have a written record for each individual kitten."

Dr. Peek explains in the article, "Caring for Orphaned Kittens: A How-To Guide for Shelters" that orphaned kittens "are likely to have been exposed to several infectious diseases and are at high risk of becoming ill, as well as becoming a source of infection for littermates or other cats. It is quite rare for an individual or group of orphaned kittens to transition and reach adoption uneventfully without complications from milk replacer, solid food, being weaned and spayed or neutered. However, by understanding the challenges, you can be ready with a plan of action to minimize problems when they arise." It is critical to limit caregiver error and increase chances for survival by identifying problems quickly and providing adequate husbandry. "Consequently," Dr. Peek asserts, "two of the very important steps in keeping orphaned kittens healthy are effective preventive medicine measures and caregiver education."



See Appendix B on page 45 of this report for descriptions of health issues seen in orphaned kittens.

Check out these Maddie's Institute YouTube videos:

[*How to Examine an Orphaned Kitten*](#) and

[*Orphaned Kittens: How Saving the Tiniest Lives has the Biggest Impact*](#) for specific steps on how to examine and orphaned kitten and basic care.

For information on preventative health, check out this article published in the Maddie's Institute April 2013 newsletter, *Advance*:
["Caring for Orphaned Kittens: A How-To Guide for Shelters"](#)

For example standard operating procedures and policies regarding various health issues presented in orphaned kittens, check out these [resource documents provided by Austin Pets Alive!](#)

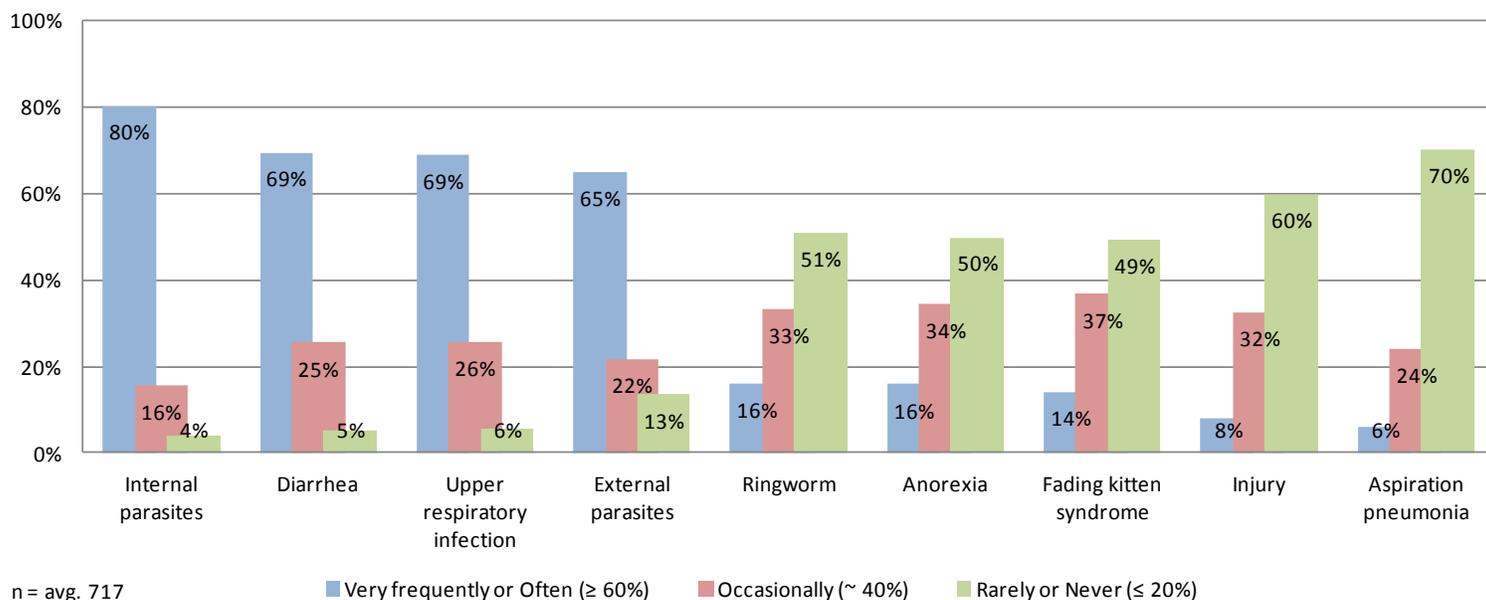
Frequency of Health Issues (continued)

Respondents were asked to rate the frequency of certain health issues seen in orphaned kittens within their organization – including *anorexia, aspiration pneumonia, diarrhea, external parasites, internal parasites, fading kitten syndrome, injury, ringworm* and *upper respiratory infection* (please see Appendix B for condition descriptions).

Frequency was rated on a five point scale from *very frequently* to *never*. Survey participants were also given the ability to categorize any additional health issues not listed.

- *Internal parasites* were reported as the most frequently seen health issue in orphaned kittens (48% reported as *very frequent*, 32% reported as *often*; cumulative data from Graph 9).
- *External parasites* (37% reported as *very frequent*, 28% reported as *often*), *upper respiratory infection* (30% reported as *very frequent*, 39% reported as *often*) and *diarrhea* (28% reported as *very frequent*, 41% reported as *often*) also topped the list as prevalent health issues (cumulative data from Graph 9).

Graph 9. "How often does your organization see the following health issues with orphaned kittens? "



Frequency of Health Issues (continued)

- Of the listed health issues, *aspiration pneumonia* was reported as the least frequently seen in orphaned kittens (54% reported as *rarely*, 16% reported as *never*), followed by *injury* (55% reported as *rarely*, 5% reported as *never*; cumulative data from Graph 9).
- *Fading kitten syndrome* (44% reported as *rarely*, 5% reported as *never*), *anorexia* (42% reported as *rarely*, 8% reported as *never*) and *ringworm* (43% reported as *rarely*, 8% reported as *never*) were most commonly reported as issues *rarely* or *never* seen in orphaned kittens (cumulative data from Graph 9).
- Notably, 13% of respondents *did not know* the frequency of *aspiration pneumonia* or *fading kitten syndrome* among orphaned kittens seen at their organization; approximately 11% *did not know* the frequency of *anorexia* (data not depicted). A number of factors could have attributed to this result, especially given the broad range of experience and levels of care provided by our respondent pool and their affiliated organizations. Nevertheless, this point requires further investigation, as it may indicate a difficulty in recognizing associated symptoms or a lack of familiarity with these health issues. *Fading kitten syndrome*, in particular, is vaguely defined and the true causes are poorly understood even by the veterinary community (please see Appendix A for a condition description and common symptoms). Interestingly, all three of the conditions listed above have relatively low frequency ratings, suggesting a potential for these health issues to have been under-reported.

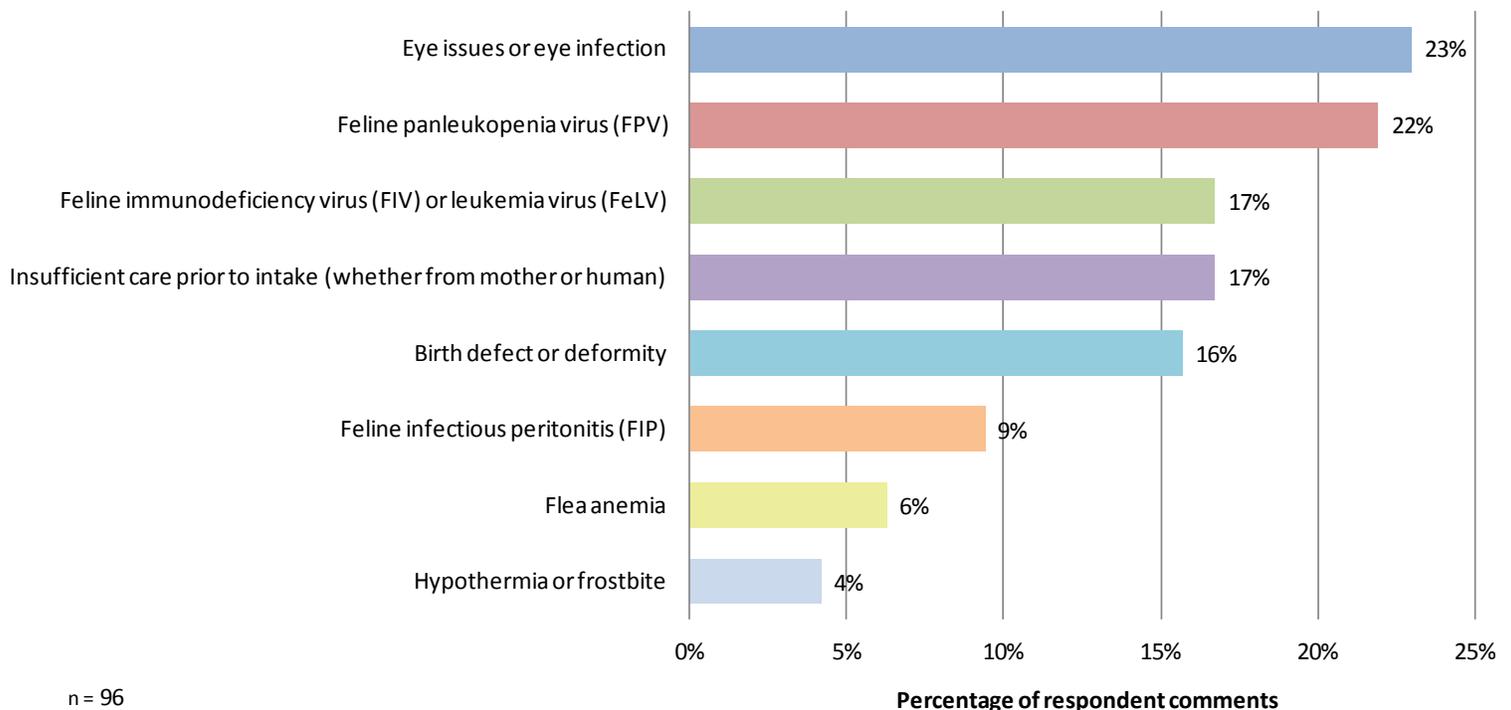
Frequency of Health Issues (continued)

Open-Ended Comments

Survey participants were given the opportunity to openly comment on any additional unlisted health issues. Please note that frequencies (*very frequent* to *never*) are not reported for all categories due to small sample sizes ($n < 20$).

- Of respondents who provided comment ($n = 96$), the most frequently cited additional health issues were *eye issues or eye infection* and *feline panleukopenia virus* (reported in 23% and 22% of comments, respectively; Graph 10).
 - 28% reported the occurrence of *eye issues or eye infection* as *very frequent*, 28% as *often*, and 39% as *occasionally*.
 - It is likely that many *eye issues or eye infections* are related to *upper respiratory infections* (a condition listed in the previous section). These two categories are not mutually exclusive; however, we have elected to report the results of *eye issues or eye infections* due to the volume of comments specific to this problem.
 - 22% reported the occurrence of *feline panleukopenia virus* as *very frequent*, 11% as *often*, 33% as *occasionally*, and 33% as *rarely*.

Graph 10. Most commonly cited additional health issues from respondent comments



Feeding Guidelines

Neonatal feeding

Heidi Beyer, Certified Veterinary Technician and guest presenter for the Maddie's Institute webcast *Orphaned Kittens: How Saving the Tiniest Lives has the Biggest Impact*, urges bottle-fed kitten caregivers to:

“Carefully pre-measure the amount of milk before feeding to avoid feeding them as much as they think they want, which can cause regurgitation, aspiration and diarrhea. Feeding off the [bottle] nipple is very different from feeding off their mom. The flow of milk is different and nipple feeding is easier, so they may consume more in a shorter period of feeding than as compared to nursing from the mom. If you do not pre-measure kittens, they may consume more than needed, which will result in digestive upset. In my opinion it is always better to feed smaller amounts more frequently than to overfeed and risk problems.”



See Appendix C on page 46 of this report for the Maddie's Institute feeding chart, also found here: <http://tinyurl.com/d38ngdb>.

See Appendix D on page 47 of this report for our Statement on Nursing Queen Surrogates.

Check out the following Maddie's Institute YouTube videos:

[How to Bottle Feed an Orphaned Kitten](#)

(for step by step guidance on how to feed an orphaned neonate)

[Orphaned Kittens: How Saving the Tiniest Lives has the Biggest Impact](#)

(for comprehensive information on basic care)

Feeding Guidelines (continued)

Pre-weaned and early post-weaned feeding

In the Maddie's Institute YouTube video, *How to Wean Orphaned Kittens onto Solid Foods*, Laurie Peek, DVM and Director of Veterinary Programs at Maddie's Fund, provides tips on how to transition kittens from formula to solids.

Dr. Peek says: "As exciting as it may sound, adjusting to solid food can be a stressor to the kitten's digestive system. So, try not to rush this process. Slowly transition the kitten from formula to solid food over several weeks. Place a small amount of dry food in the kitten's environment and let the kitten experiment with eating it. You will find that they don't consume a lot of the food, but they will pick and gnaw on it, which will help get them started. Continuing formula during this transition time is important to ensure the kittens are getting the proper calories for growth. When the kitten is eating solid food reliably well and tolerating the food, you can start to reduce the number of bottle feedings and skip those night-time feedings!"



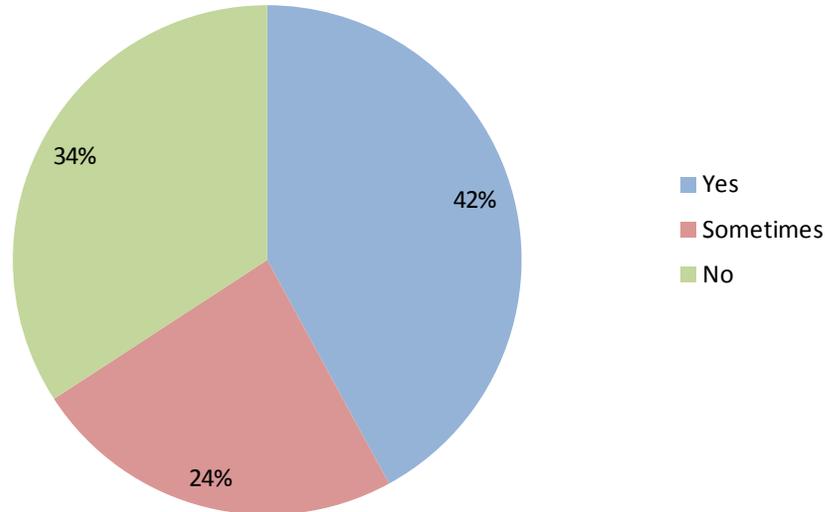
Check out this Maddie's Institute YouTube video, [How to Wean Orphaned Kittens onto Solid Foods](#), for guidance on how to transition orphaned kittens from formula to solid foods.

Feeding Guidelines (continued)

Respondents were asked if their organization used feeding guidelines to determine stomach capacity when feeding orphaned kittens. If feeding guidelines were not used, respondents were prompted to share which methods were used to determine how much to feed orphaned kittens per feeding. If feeding guidelines were used, respondents were encouraged to provide their source.

- 42% of respondents reported that their organization used feeding guidelines to determine stomach capacity when feeding orphaned kittens, and 24% of respondents reported that their organization *sometimes* used feeding guidelines; however, 34% reported to *not* use feeding guidelines (Graph 11).

Graph 11. "Does your organization use feeding guidelines to determine stomach capacity when feeding orphaned kittens?"



n = 763

Feeding Guidelines (continued)

Comments from respondents who reported to *not* use feeding guidelines

If feeding guidelines were *not* used, respondents were then asked to comment on which methods were used to determine how much to feed orphaned kittens per feeding. The question was open-ended, thus responses were manually coded based on the prevalence of specific terms or phrases. Many comments alluded to the simultaneous utilization of several methods.

- Approximately 46% of respondents who stated that their organization did not use feeding guidelines cited that the *kitten's appetite* was at least partially responsible for determining amounts per feeding.
 - Respondent comments included:
 - *"Generally, we can tell because they don't want to eat any more and their bellies are full."*
 - *"No method, really. When the kitten stops suckling the bottle, that feeding is considered over."*
 - *"We just offer them bottles whenever they awake and appear hungry."*
 - *"Kittens are bottle-fed on demand and until they turn away from the bottle. Kittens eating on their own are always left with food."*
 - *"I've been raising orphan kittens for over 20 years now and I always let them feed as much as they want. In nature momma cats do not stop kittens nor calculate how much they should drink."*
- Interestingly, although these respondents claimed that their organization did not use feeding guidelines, 17% stated that the *kitten's weight* at least partially determined feeding amount.
 - Respondent comments included:
 - *"Usually feed until kitten stops wanting to eat, and we track weight to be sure they're gaining, not losing."*
 - *"Kittens are allowed to eat as much as desired. Daily weight monitoring determines if kittens are not eating enough and require additional assistance or dietary changes."*
 - *"Watching a kitten's weight, activity and general well being and how well they are thriving. Are they eating well and are they comfortable."*

Feeding Guidelines (continued)

Comments from respondents who reported to *not* use feeding guidelines (continued)

- Approximately 15% of respondents who stated that their organization does not use feeding guidelines specifically referenced *experience, intuition or common sense* as being partially responsible for determining amounts per feeding.
 - Respondent comments included:
 - *“Usually we feed them 1/2 of the bottle if we can get them to eat it. Each kitten is different, so the amount is intuitive rather than based on guidelines.”*
 - *“I believe that our foster volunteers that are experienced with kittens use their common sense as well as the kittens' behavior to determine how much to feed.”*
 - *“Just our gut level feeling and observing how the kitten is responding.”*
 - *“Rule of thumb and prior experience. The general health of the kittens is used as a guideline as well.”*
 - *“Eye droppers are given at regular intervals until the kittens seem full. We go on experience instead of measurements.”*
- Please note that while hands-on experience may be the best teacher of all and veteran caregivers are an absolutely invaluable asset, Maddie’s Institute strongly urges organizations to follow widely-accepted, written, feeding guidelines for standardized care. Often knowledge gained through experience is based on lessons learned or trial and error over time. One of our responsibilities as caregivers is to minimize error and base our decisions on the best information available at present. Certainly learned nuances and preferred feeding methods will exist; however, it is essential to maintain a consistency of care across a foster care program, from the most experiences of homes to the least. There is no better way to share wisdom than to validate it, document it and share it!
- Other respondent comments included *following kitten milk replacement guidelines (9%), palpation of the kitten’s abdomen/size of stomach (8%) and veterinarian’s recommendation (5%)*.

*“Overfeeding is as dangerous as underfeeding kittens!
Keep an eye on your kittens at feeding time and
monitor how much each is eating.”*

[Feline: Guide to Raising Orphan Kittens](#)
UC Davis Koret Shelter Medicine Program

Feeding Guidelines (continued)

Comments from respondents who reported to use feeding guidelines

If feeding guidelines were used, respondents were encouraged to provide their source.

Again the question was open-ended; thus, responses were manually coded based on the prevalence of specific terms or phrases. Many comments alluded to the simultaneous utilization of several sources.

*“We have developed a **foster handbook** which includes information on feeding orphan kittens. Several resources were consulted in compiling the information for that document.”*

Anonymous Respondent

- Of respondents who claimed that their organization either *sometimes* or *always* uses feeding guidelines to determine stomach capacity when feeding orphaned kittens, approximately 41% reported that those guidelines were at least partially based on *veterinarian or medical director recommendation*.
 - Respondent comments included:
 - *“Our volunteer veterinarians have established a protocol for feeding underage kittens and help us monitor their growth.”*
 - *“We take them to our veterinarian and s/he gives us her guidelines per each kitten.”*
 - *“Vet recommendations that are in standard operation procedures and oral instructions.”*
 - *“In-house kitten/puppy care and feeding protocol documents written for animal care staff, medical and volunteers. Protocols written and updated as needed by veterinary staff.”*
- Approximately 29% of respondents specifically referenced *internet sources* or *published guides*, including shelter medicine program websites from various universities, national humane associations, societies and foundation websites, as well as independently published books specific to kitten care.
- Approximately 21% of respondents reported that the source of feeding information was ascertained from the *kitten milk replacement guidelines (manufacturer’s label)*.

Information and Training

Written policies and procedures – along with in-person training – provide orphaned kitten caregivers with the clarity and confidence to do their best. These fragile creatures require a lot of work and attention and there isn't always room for faulty assumptions and best guesses.

Informative, supportive and well-coordinated in-house care and/or foster training programs set kittens and caregivers up for success. The ultimate goal is to not only enable more kittens to become healthy, adoptable cats but to also develop and retain experienced caregivers who will be inspired to continue to serve their community and organization for years to come.



Check out this [example foster care handbook and PowerPoint deck](#) from Sonoma Humane Society for a great foster care training template.

Itty Bitty Orphan Kitty Rescue has created their [Pre-wean Kitten Project Packet](#) which provides guidance to individuals who may have found an orphaned kitten and are willing to provide care.

If you are interested in developing an in-house kitten nursery, check out the documents provided by Austin Pets Alive!, which include their [bottle baby training worksheet, a training questionnaire and standard operating procedures.](#)

Information and Training (continued)

Training ideas we love:

"We have a Google Groups site available to our foster parents following training where we post a library of information and links to other reputable sources of information that we've vetted."

"All resources are combined into in-house compiled documents provided to foster homes. Medical information is gleaned both from our staff veterinarian as well as the UC Davis shelter medicine program. Other information comes from resources developed by other foster care programs in the area."

"All training manuals and important numbers are on our main website. We also have an emergency cell phone that is carried by a technician 24 hours a day. Foster parents can call at any time if there are questions or emergencies with their foster kittens."

"All of our fosters are given an in-person training (about 90 minutes) along with the foster handbook that we have created. Next kitten season we are going to create age-specific one-page reminder sheets for fosters to be given when they pick up their kittens."

"Our foster web page allows sharing of information. We have a Foster Buddy system, as well. Our formal document, developed in-house, links to just about every source of information. The initial foster training session is mandatory and [we hold] quarterly shelter workshops on specific subjects, especially medical care."

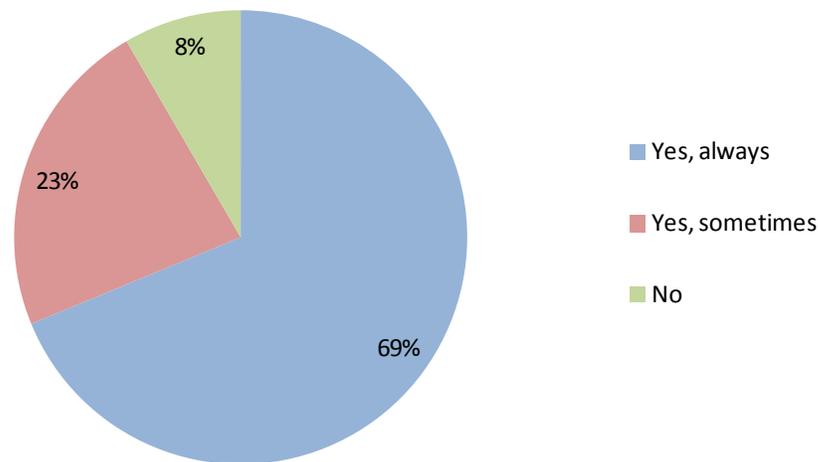
Anonymous Respondents

Information and Training (continued)

Respondents were asked if their affiliated organization offered specific information or training – whether formal or informal – for individuals who provide orphaned kitten care. Those who reported that guidance is *always* or *sometimes* given were then asked to then identify the type of information or training received.

- 69% of respondents reported that their organization *always* offered information or training to the individuals who provide care to orphaned kittens, while 23% reported *sometimes* and 8% reported *no*, meaning that no information or training is provided (Graph 12).

Graph 12. "Does your organization offer specific information or training (formal or informal) for individuals who provide orphaned kitten care?"



n = 704

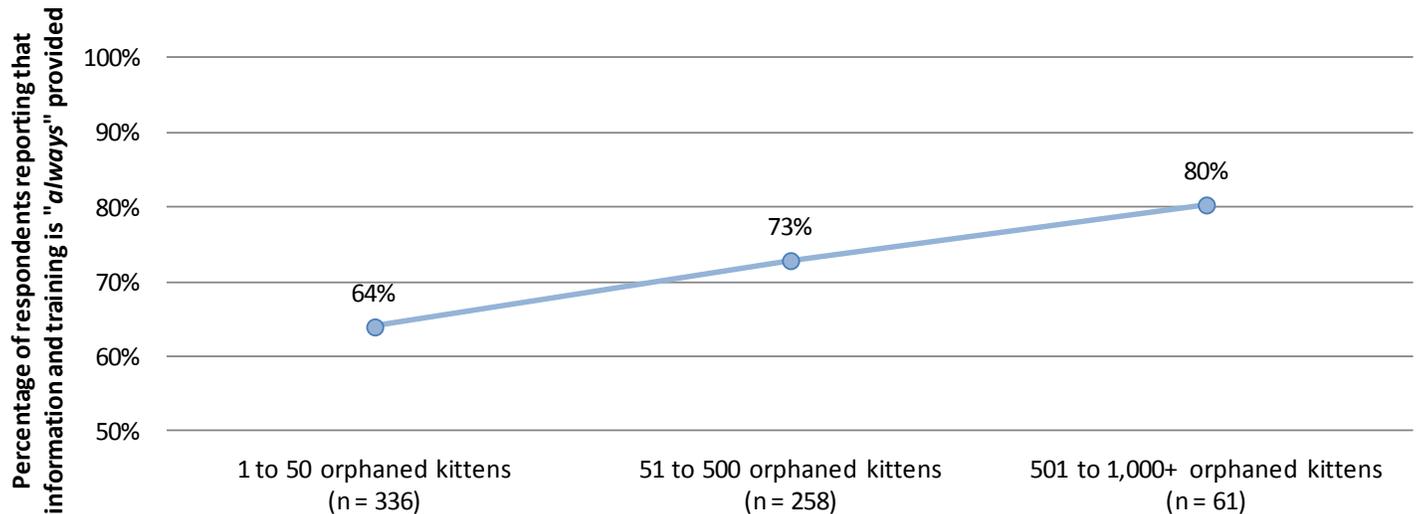
"There is a need for both written materials and videos that will streamline the training process. We would value materials that cover both basic care and unusual circumstances or health concerns that arise."

Anonymous Volunteer

Information and Training (continued)

- Data indicated that the more orphaned kittens cared for annually the more likely respondents were to report that their organization *always* offered specific information or training to caregivers (Graph 13).

Graph 13. Respondents who reported that their organization "always" provides specific information or training to caregivers by the number of orphaned kittens cared for annually



"The medical team at our shelter is always available for support and medical attention when the kittens are not doing well, but I would really love a more formal training program and more specific guidelines for feeding frequency, amounts and so on."

Anonymous Volunteer

Information and Training (continued)

Those who reported that guidance is *always* or *sometimes* given were then asked to then identify the type of information or training received. Five potential strategies were listed, including: *formal in-person training class*, *informal in-person training*, *written information developed in-house*, *written information developed by another organization* and *information available on the Internet*. Respondents were also given the opportunity to comment on any other ways their organization provided information or training to orphaned kitten caregivers.

Below are our results:

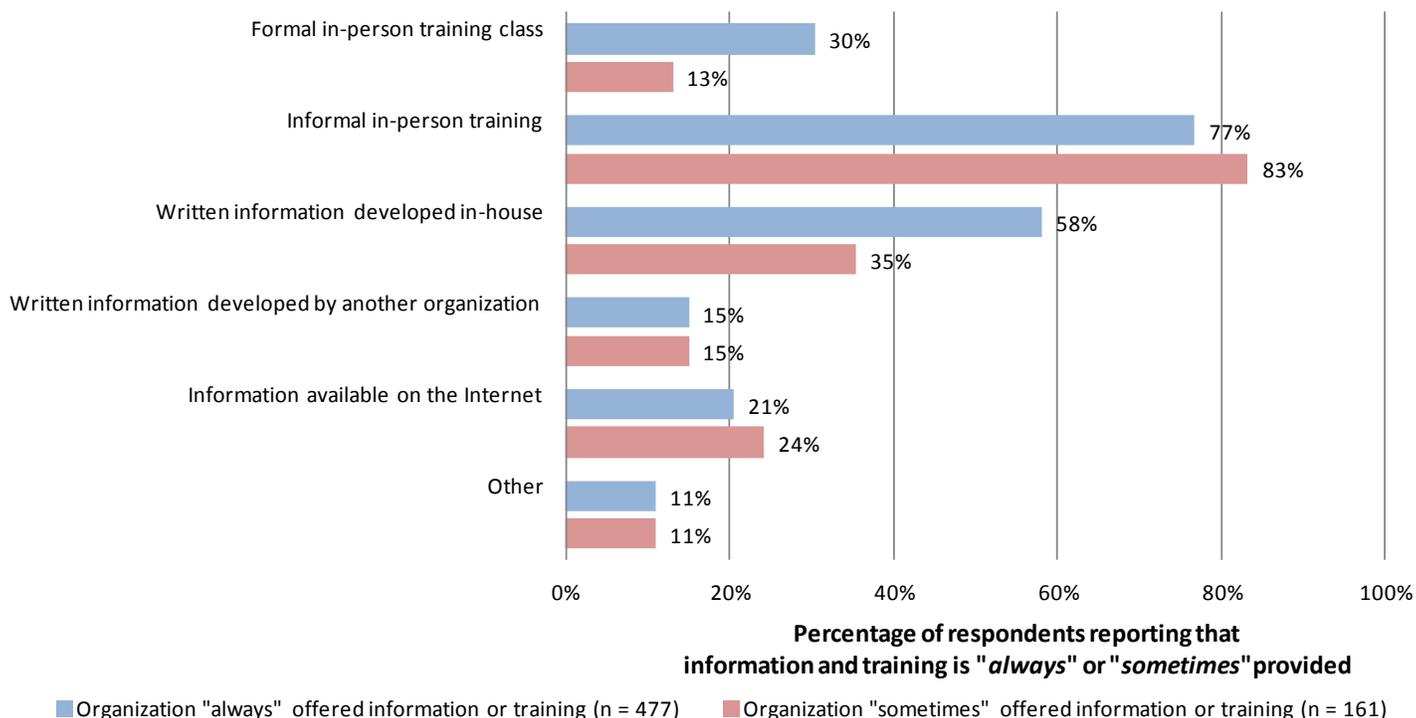
- Approximately 54% of applicable respondents (those representing organizations who either *always* or *sometimes* provide guidance) reported that their organization offers *both* an *in-person training* – whether formal or in-formal – and *written information* – whether developed in-house or by another organization – to orphaned kittens caregivers (data not depicted).
- 51% of respondents who reported that their organization *always* provides guidance to orphaned kitten caregivers also reported that their organization consistently *uses feeding guidelines* to determine stomach capacity when feeding orphaned kittens (data not depicted).

Formal or informal in-person training

- Of respondents who reported that their organization *always* provides specific information or training to caregivers of orphaned kittens, 77% reported that *informal in-person training* was a guidance component (Graph 14).
- *Informal in-person training* was the *only* source of guidance provided to orphaned kitten caregivers by 35% of respondents who categorized assistance as *sometimes* being provided compared to 21% of respondents who categorized help as *always* being provided (data not depicted). This suggests that guidance is more likely to be informal when inconsistently available.
- Not surprisingly, respondents from organizations that *always* provide training are more likely than respondents from organizations that *sometimes* provide training to report having a *formal in-person training class* (30% and 13% respectively; Graph 14).

Information and Training (continued)

Graph 14. "What type of guidance is given to individuals providing care for orphaned kittens? Please select all that apply."



Written information

- The second most common form of orphaned kitten care guidance was *written information developed in-house* (52% of all applicable respondents; cumulative data from Graph 14).
- Interestingly, only 4% of applicable respondents indicated that *written information – either developed in-house or by another organization – was the only source of guidance provided* (data not depicted).
- Not surprisingly, organizations that *always* provide guidance to orphaned kitten caregivers are more likely than organizations who less consistently provide guidance to have *written information developed in-house* (58% and 35%, respectively; Graph 14).

Information and Training (continued)

Information available on the internet

- 21% (Graph 14) of applicable respondents reported that guidance is given via *information available on the Internet*. Internet searches provide an easy, quick and inexpensive way to locate information. We do however, strongly encourage organizations to be critical of information out there. Only utilize or share information gleaned from a reputable source (like the ones we have listed on page 42).

“Most people Google, but there is a lot of misinformation mixed in with the good.”

Anonymous Volunteer

Other forms of guidance

- 11% (Graph 14) of applicable respondents reported that other forms of guidance are provided by their organization to inform those giving care to orphaned kittens.
- Respondent descriptions for “other” forms of guidance (specific information or training) included:
 - Mentoring opportunities:
 - *“We have mentors available for each new foster family.”*
 - *“Foster buddy system”*
 - *“Apprenticeship/mentorship with an experienced foster”*
 - Shared web pages:
 - *“Peer support from orphaned kitten group on Yahoo.com”*
 - *“We have a Google Group site available to our foster parents following training where we post a library of information and links to other reputable sources of information that we've vetted.”*
 - Phone assistance:
 - *“24 hour access to employees for assistance via phone”*
 - *“Guidance to individuals over the phone”*
 - In-home consultation:
 - *“Home-checks are also performed to check on the kittens and on the care being provided.”*

Challenges

Although there are a number of challenges to provide care for orphaned kittens, especially at the peak of kitten season, we at Maddie's Institute know that every life saved is a success deserving celebration. The old adage rings true: "Where there is a will there is a way."

Take for example, The Bottle Baby Nursery Program at Austin Pets Alive!. It targets "orphaned, unweaned kittens fated for euthanasia... Each year, especially during the breeding season, which spans from March to October, the local shelter is overwhelmed with orphaned kittens. Prior to APA!'s introduction of the Bottle Baby Program, nearly all of these kittens were euthanized because neither the shelter nor other groups in the community could provide the intensive care they need to survive. They thought this was unacceptable and decided to make a change. In 2011, APA! was able to save every young orphaned kitten that arrived at Austin's Animal Shelter (approximately 1,000 orphaned kittens); in 2012, they saved 2,000 orphaned kittens."



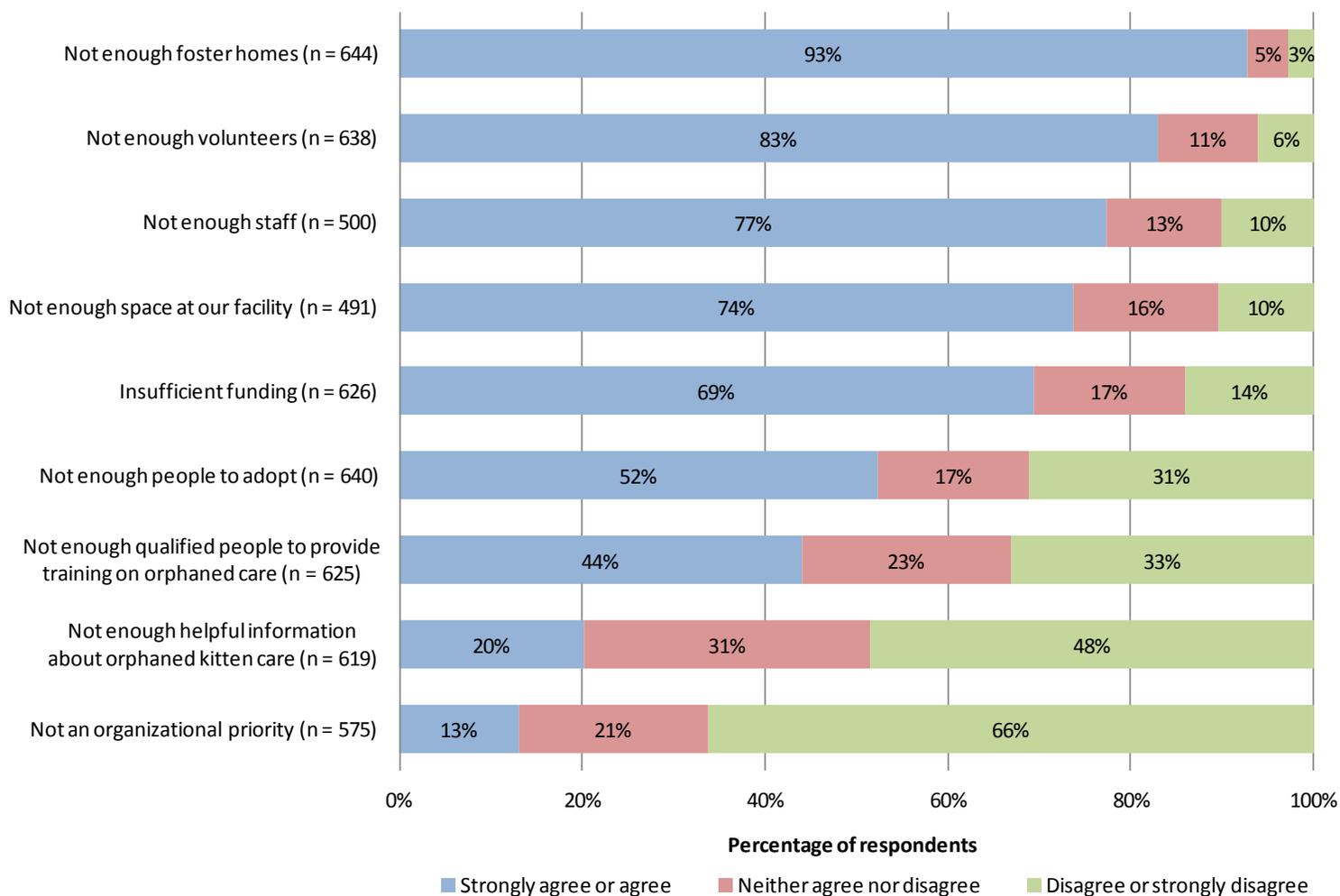
Dane County Humane Society is the picture of a successful orphaned kitten foster care program. Their volunteer program is equipped with three essential components – a role specific application, a thorough orientation before admittance to the program and in-depth training with a designated Foster Care Team member. They realize that "homes that are able to take fosters on a consistent basis help out the most, but even homes that can take only a couple fosters a year can be a big help for the shelter's special needs animals." Every foster home can make a significant contribution! Their coordination efforts and mindset led to the placement of over 230 orphaned kittens in foster care in 2012, an 18% increase from 2011 alone. And, the numbers are growing.

Challenges (continued)

We asked respondents to rate nine specified factors that may challenge the provision of orphaned kitten care on a five-point scale from *strongly agree* to *strongly disagree*. Respondents were also given the option to comment on any other challenges their organization may face in an open-ended format.

Only responses from respondents who indicated that their organization either *always* or *sometimes* provided care to orphaned kittens were included in Graph 15. Furthermore, respondents were given the option of reporting that a specific challenge was *not applicable* to their organization; responses of *not applicable* were not included in the percentages below, thus sample sizes (n) vary.

Graph 15. "The factors listed below are challenges my organization faced in providing care to orphaned kittens."



Challenges (continued)

Top five most commonly agreed upon challenges

Of our nine listed factors, the top five most commonly agreed upon challenges included (in order of highest percentage of *strongly agree* and *agree*; Graph 15): 1) *not enough foster homes*, 2) *not enough volunteers*, 3) *not enough staff*, 4) *not enough space at our facility* and 5) *insufficient funding*.

- 93% of respondents either *strongly agreed* or *agreed* that there are *not enough foster homes* – signifying that this is the most commonly shared challenge to providing orphaned kitten care across organizations represented (Graph 15).
- Approximately 83% of respondents either *strongly agreed* or *agreed* that there are *not enough volunteers* and 77% of respondents either *strongly agreed* or *agreed* that there are *not enough staff* (Graph 15).
- Notably, the top three most commonly agreed upon challenges involve an insufficient “worker” capacity; of course, many factors could contribute to insufficient capacity, including unsuccessful recruitment and/or retention efforts, limited funding or excessively demanding program requirements.
 - Likely central to the challenge of a “worker” capacity shortage is a fundamental problem not listed: *the volume of kittens* (a comment discussed in greater detail on page 38).

“We have volunteers, just not volunteers that have the kind of time available for orphaned kittens.”

“We are always needing more fosters, especially for bottle babies. Many people cannot care for bottle babies because they work and are not able to care for them round the clock, as needed. Kittens that are old enough to eat food (either kibble or wet food) are usually able to get into foster.”

“As with many shelters, we are overwhelmed with animals (particularly cats and kittens) and never have enough foster homes or funding or in-house staff to care for all of them.”

Anonymous Respondents

Challenges (continued)

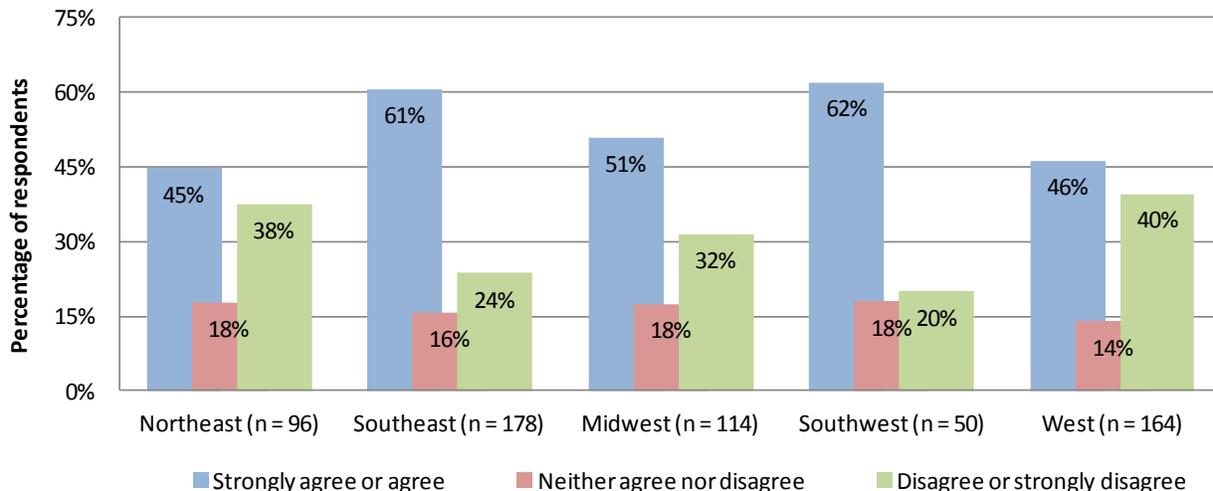
Top five most commonly agreed upon challenges (continued)

- 74% of respondents either *strongly agreed* or *agreed* that *limited space at their facility* is a challenge to providing care to orphaned kittens (Graph 15). Recall that 53% of respondents reported that their organization relies primarily on *foster home care* for orphaned kitten housing; thirty-nine percent rely on a *combination of both foster care and in-house care*, while only 6% reported to primarily utilize *in-house care* to house orphaned kittens. The challenge of *limited facility space* may pertain to insufficient room at the time of intake, time of return from foster care or both.
- 69% of respondents either *strongly agreed* or *agreed* that *insufficient funding* poses a challenge to care; however, 31% reported a rating of *neutral to strongly disagree* for this category (Graph 15).

Less commonly agreed upon challenges

- Across the entire country, an average of 52% of respondents either *strongly agreed* or *agreed* that there are *not enough people to adopt* and this poses a challenge to the care of orphaned kittens (Graph 15 and summary data from Graph 16).
 - The realities – or perceptions – of a *limited number of available adopters* will likely differ between communities and thus requires regionally-sensitive exploration. Interestingly though, respondents in the Southeast and Southwest regions expressed the highest percentage of agreement that *insufficient number of adopters* is a challenge (61% and 62%, respectively; Graph 16).

Graph 16. Ratings of "not enough people to adopt" as a challenge organizations face in providing care to orphaned kittens by region

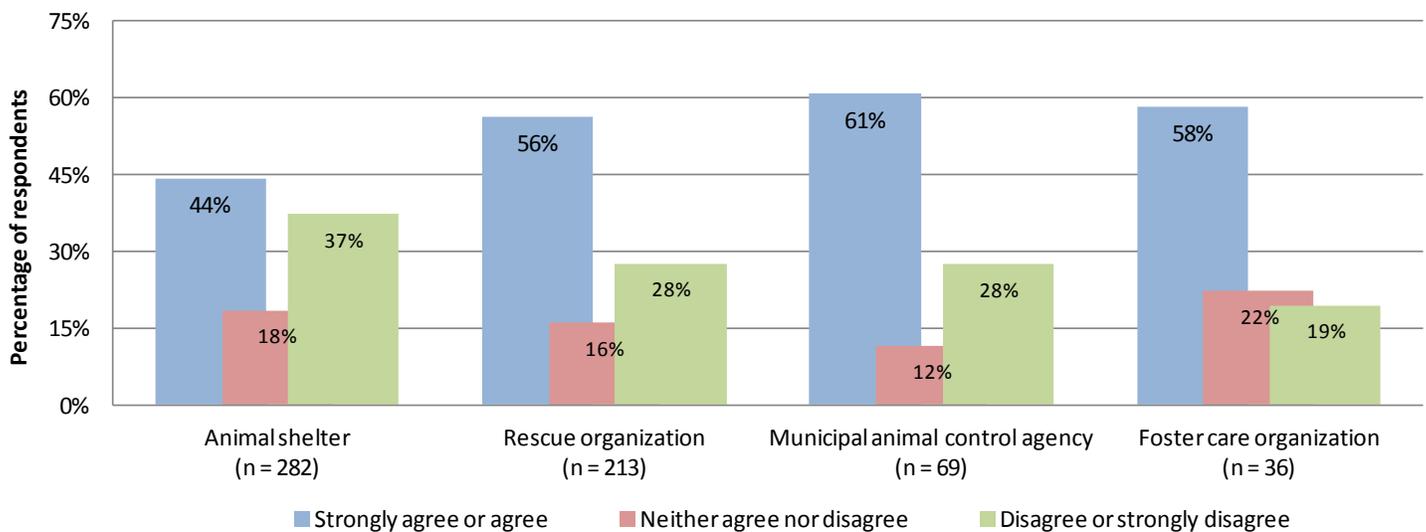


Challenges (continued)

Less commonly agreed upon challenges (continued)

- Notably, respondents who identified their affiliated organization as an *animal shelter* were least likely to *strongly agree* or *agree* (44%) and most likely to *disagree* or *strongly disagree* (37%) that a *limited number of available adopters* pose a challenge to their provision of orphaned kitten care (Graph 17).

Graph 17. Ratings of "not enough people to adopt" as a challenge organizations face in providing care to orphaned kittens by organizational type



- Fewer respondents, 44%, either *strongly agreed* or *agreed* that a *limited number of qualified people to provide training on orphaned care* is a challenge to providing care (Graph 17).
 - Interestingly, respondents who identified their organization as a *municipal animal control agency* were more likely to *strongly agree* or *agree* (54%) that there are *not enough qualified people to provide training on orphaned care* than other organizational categories (18% reported a *neutral* rating, while 28% either *disagreed* or *strongly disagreed*; data not depicted).

Challenges (continued)

Least commonly agreed upon challenges

- Respondents were least likely to *strongly agree* or *agree* (13%) that the care of orphaned kittens is challenging because it is *not an organizational priority* (66% either *disagreed* or *strongly disagreed* that this listed factor was a challenge; Graph 15).
 - Please keep in mind that these figures only represent those who indicated that their organization already *always* or *sometimes* provides care to orphaned kittens. Findings could potentially be different if we had actively solicited responses from organizations that currently do *not* provide care to orphaned kittens.
 - Notably, respondents who identified their organization as a *municipal animal control agency* were far more likely to *strongly agree* or *agree* (30%) that orphaned kitten care is *not an organizational priority* when compared to other organizational categories (36% either *disagreed* or *strongly disagreed*, while 34% reported a *neutral* rating; data not depicted).

“The shelter is so overwhelmed with adoptable kittens that they don't bother much with any that aren't ‘perfect’ and ready to adopt when they walk in the door.”

Anonymous Respondent

- Only 20% of respondents either *strongly agreed* or *agreed* that *insufficient information about orphan kitten care* was a challenge to providing care (Graph 15).
 - 48% of all respondents either *disagreed* or *strongly disagreed* that *insufficient information about orphan kitten care* was a problem, approximately 31% reported a *neutral* response.
 - Although this potential factor ranked toward the bottom of the list, this data indicates that there is still a need for greater access to information, more helpful information or both.

Challenges (continued)

Other challenges limiting the ability to care for orphaned kittens

Respondents were given the opportunity to provide commentary on any additional obstacles which may thwart orphan kitten care. Many of these thoughts cut to the core of why care efforts can be challenging. Successful orphaned kitten care programs clearly not only require multiple, tangible and infrastructural facets, such as funding, space, time and staff or volunteers, they also require continued public outreach, organizational networks, veterinary education and support and, perhaps most importantly, a shift in ideology.

- Selected comments included:
 - The volume of kittens:
 - *“The quantity and time is a major factor; I used to work alone at night and would get at least 30 kittens a night just in my 8 hour shift in the summer time.”*
 - *“Needless to say, we have way too many cats and kittens to handle and are always challenged by that fact alone.”*
 - Difficulty finding foster care for ill and/or injured kittens:
 - *“It is difficult to find fosters for kittens or cats with [health issues] because those who are typically interested in fostering a sick cat, have cats.”*
 - Lack of cooperation with larger groups:
 - *“We have individuals rescuing feral kittens from bad areas; [They are] overwhelmed by also having to foster them and adopt them out instead of funneling them into larger groups who have more money and resources.”*
 - Limited veterinary expertise on neonatal kitten care:
 - *“We were surprised to find many veterinarians do not have training or experience in diagnosis and treatment of neonates.”*
 - *“Veterinarians in our area do not know how to treat very young kittens – what medications are okay to use or the dosage for tiny ones. We rely on other private rescue groups who share information informally.”*
 - Limited support from the veterinary community:
 - *“Some seem to feel we are wasting our time on orphaned high-risk neonates.”*
 - Lack of emotional support:
 - *“There are not many who understand the emotions behind rescue.”*

*“Caring for orphaned kittens is a **labor of love**.
It is extremely rewarding but can also be extremely heartbreaking.”*

Anonymous Respondent

CONCLUSIONS

Key Takeaways

Provision of Care to Ill and/or Injured Orphaned Kittens

- 1) This report only contains the responses of those who have indicated that their organization either *always* (68%) or *sometimes* (32%) provides care to orphaned kittens. Not surprisingly, a lower percentage of respondents (57%) reported that their organization *always* provides care to ill and/or injured orphaned kittens.

Number of Orphaned Kittens Cared for Annually

- 2) Respondents from *municipal animal control agencies* reported caring for more than twice as many orphaned kittens annually as respondents from *animal shelters* and more than six times as many as respondents from *rescue organizations* (565, 252 and 93 kittens cared for annually, respectively). This is important to note as respondents from municipal animal control agencies were the least likely organizational type to report *always* providing care for orphaned kittens.

Housing

- 3) A slight majority (53%) of respondents reported that their organization primarily utilizes *foster home care* to house orphaned kittens, while 39% reported to use *a combination of in-house and foster home care* and only 6% reported to primarily provide shelter for orphaned kittens *in-house*.
- 4) Foster care and rescue organizations most commonly utilized *foster home care* alone to house orphaned kittens (86% and 62%, respectively). Rescue organizations and municipal animal control agencies surveyed most commonly utilized *a combination of both in-house care and foster home care* (48% and 42%, respectively).

Prevalence of Health Issues

- 5) Of the nine listed health issues, the most frequently seen in orphaned kittens were: *internal parasites* (80% *very frequently* or *often*), *diarrhea* (69% *very frequently* or *often*), *upper respiratory infection* (69% *very frequently* or *often*) and *external parasites* (65% *very frequently* or *often*).
- 6) Of the nine listed health issues, the least frequently seen in orphaned kittens were: *aspiration pneumonia* (70% *rarely* or *never*), *injury* (60% *rarely* or *never*), *fading kitten syndrome* (49% *rarely* or *never*), *ringworm* (51% *rarely* or *never*) and *anorexia* (50% *rarely* or *never*).

Key Takeaways (continued)

Prevalence of Health Issues (continued)

- 7) Optional commentary provided by respondents indicated *at least some* prevalence of the following health issues that were not part of our original survey: *feline panleukopenia virus (FPV)*, *feline immunodeficiency virus (FIV)*, *feline leukemia virus (FeLV)*, *insufficient care prior to intake* (either by the mother cat or human, to include starvation and dehydration), *birth defects or deformity*, *feline infectious peritonitis (FIP)*, *flea anemia*, and *hypothermia or frostbite*.

Feeding Guidelines

- 8) Respondents most commonly reported that their organization uses feeding guidelines to determine stomach capacity when feeding orphaned kittens (42%); however, 24% reported to *sometimes* use feeding guidelines, while 34% reported to *not* use feeding guidelines at all.
- 9) Of respondents who reported that their organization does *not* use feeding guidelines to determine stomach capacity when feeding orphaned kittens, 46% cited that the *kitten's appetite* was at least partially responsible for determining amounts per feeding; approximately 17% gauged feeding amount by *kitten's weight* and 15% cited *experience, intuition or common sense* as being partially responsible for determining amounts per feeding.
- 10) Of respondents who claimed that their organization either *sometimes* or *always* use feeding guidelines to determine stomach capacity when feeding orphaned kittens, 41% reported that those guidelines were at least partially based on *veterinarian or medical director recommendation*; approximately 29% referenced *Internet sources and published guides*, including shelter medicine program websites from various universities, national humane associations, societies and foundation websites, as well as independently published books specific to kitten care and 21% ascertained feeding recommendations from the *kitten milk replacement guidelines (manufacturer's label)*.

Information and Training

- 11) The majority (69%) of respondents reported that their organization *always* offered information or training to individuals who provide care to orphaned kittens, while 23% reported to *sometimes* provide guidance and only 8% reported to *not* provide guidance. Data indicated that the more orphaned kittens cared for annually the more likely respondents were to report that their organization *always* offered specific information or training to caregivers.
- 12) Approximately 78% of applicable respondents reported that *informal in-person training* is at least one component of their organization's guidance for orphaned kitten caregivers; a slight majority (52%) reported that *written information developed in-house* is at least one form of guidance given.

Key Takeaways (continued)

Information and Training (continued)

13) Commentary provided by respondents elucidated other forms of guidance for orphaned kitten caregivers, such as mentoring opportunities, shared web pages, phone assistance and in-home consultations.

Challenges

14) Out of nine listed factors, the top five most commonly *agreed* upon challenges included (in order of highest percentage of *strongly agree* and *agree*): *not enough foster homes* (93%), *not enough volunteers* (83%), *not enough staff* (77%), *not enough space at our facility* (74%) and *insufficient funding* (69%).

15) Approximately 52% of respondents either *strongly agreed* or *agreed* that there are *not enough people to adopt* and that this poses a challenge to the care of orphaned kittens; fewer respondents (44%) either *strongly agreed* or *agreed* that a limited number of *qualified people to provide training on orphaned care* is a challenge to providing care.

16) Out of nine listed factors, the three least commonly *agreed* upon challenges included (in order of lowest percentage of *strongly agree* and *agree*): *not an organizational priority* (13%), *not enough helpful information about orphaned kitten care* (20%), *not enough qualified people to provide training on orphaned kitten care* (44%).

17) Commentary provided by respondents elucidated other challenges which may limit orphaned kitten care, including: the high volume of kittens, difficulty finding foster care for ill and/or injured kittens, lack of cooperation with larger groups, limited veterinary expertise, limited support from the veterinary community and lack of emotional support.

MUST-SEE RESOURCES

Maddie's Institute Newsletter:

- **Advance, April 2013 issue**
http://www.maddiesfund.org/Maddies_Institute/Institute_Newsletter/April_2013.html

Maddie's Institute YouTube Video Collection:

- **How to Examine an Orphaned Kitten**
<http://www.youtube.com/watch?v=4R13Ei0YyXQ&feature=youtu.be>
- **How to Bottle Feed an Orphaned Kitten**
<http://www.youtube.com/watch?v=QXlaolFEXjY&feature=youtu.be>
- **How to Stimulate an Orphaned Kitten to Urinate and Defecate**
<http://www.youtube.com/watch?v=KExOXnZHt50&feature=youtu.be>
- **How to Bathe an Orphaned Kitten**
<http://www.youtube.com/watch?v=gqxzUan3AP8&feature=youtu.be>
- **Giving Orphaned Kittens Probiotics**
http://www.youtube.com/watch?v=Ma_jqc-HzvA&feature=youtu.be
- **How to Wean Orphaned Kittens onto Solid Foods**
http://www.youtube.com/watch?v=22_kn_8gNWI&feature=youtu.be

Maddie's Institute Webinars:

- **Orphaned Kittens: How Saving the Tiniest Lives has the Biggest Impact**
http://www.maddiesfund.org/Maddies_Institute/Webcasts/Orphaned_Kittens.html
 - Including:
 - Part One: Ellen Jefferson, DVM, on Austin Pets Alive! Bottle Baby Program
 - Part Two: Heidi Beyer, CVT, on orphaned kitten care



MUST-SEE RESOURCES (continued)

Resource Documents:

- **Maddie's Institute's Practical Tips for Orphaned Kitten Care:**
<http://www.maddiesfund.org/Documents/Institute/Practical%20Tips%20for%20Orphaned%20Kitten%20Care%20Resources.pdf>
 - Including:
 - Physical exam chart
 - Temperature chart
 - Feeding chart and stomach capacity table
 - Emergency milk replacer recipe
 - Common feeding issues and solutions
 - Daily weight and feeding record

- **Austin Pets Alive! Bottle Baby Nursery Program information:**
<http://www.maddiesfund.org/Documents/Institute/Austin%20Pets%20Alive!%20Resource%20Documents.pdf>
 - Including:
 - Example job and service descriptions
 - Neonatal program volunteer agreement, training worksheets and questionnaire
 - Example medical chart and daily care sheet
 - Disease protocols and standard operating procedures

- **Sonoma Humane Society's example foster care handout and PowerPoint deck:**
http://www.maddiesfund.org/Documents/Institute/Kitten Foster Manual_Sonoma Humane Society.pdf

- **Itty Bitty Orphan Kitty Rescue's Pre-wean Kitten Project Packet:**
<http://www.maddiesfund.org/Documents/Institute/Kitten Information - IBOK Rescue.pdf>

APPENDIX A

Statement on Holding Period Requirements

Organizations that take in stray cats or kittens may have “hold periods,” which are typically established by local governments and generally range from 3 to 5 days. The primary aim of a stray hold is to give owners the chance to find and reclaim their lost pets. However, what is the purpose of holding orphaned kittens who are very unlikely to have an owner?



Stray hold periods for orphaned kittens can be both financially draining and detrimental to their health. For these reasons, [local ordinances like this one from the City of Jacksonville](#) have decidedly redefined the terms of hold periods.

“Litters of puppies and kittens estimated to be less than six (6) months of age, as determined by the emergence of adult canine teeth, without an actively nursing mother shall have no required holding period for placement. For this section a ‘litter’ shall be considered two (2) or more animals of apparently the same age and breed/mix.”

In the Maddie’s Institute webinar, [Shelter Crowd Control: Keeping Community Cats Out of Shelters](#), Dr. Julie Levy expresses that this is a move in the right direction, saying “This is very important because a lot of youngsters come into our shelters as strays and if we have a rigid stray hold period, it forces us to keep these puppies in a very hazardous environment. [If] they say it is a litter, they can go ahead and disposition them immediately, which usually means getting them out to a rescue group immediately.”

Before spending time, effort and resources to change your local laws, of course, be sure to know what the current laws are! Then, you can take action to limit or waive stray holds for these kittens which need immediate and continuous attention.

“I am trying to encourage shelter management to waive ‘stray hold’ periods for orphans. Currently, they spend 3-5 days in-house before they can be sent to a foster home, which is not in the best interest of the animal.”

Anonymous Respondent

APPENDIX B

Appendix B. Descriptions of health issues	
Anorexia:	The loss of appetite or lack of eating. ¹
Aspiration pneumonia:	Inflammation of the lungs with exudation and consolidation due to inhaling of foreign material. ²
Diarrhea:	Abnormally frequent evacuation of watery stools. ²
External parasites:	Organisms that live on an animal (e.g., hair, skin, nasal and ear passages) at whose expense they obtain their nutrition and protection. ²
Fading kitten syndrome:	Although poorly understood and vaguely defined, it is a term used to describe a life threatening condition in which a kitten fails to thrive, usually within the first two weeks of life. It has been linked to birth defects, environmental stress and infectious disease. Symptoms can include low body temperature, extreme lethargy, difficulty breathing and excessive meowing. ³
Injury:	Harm or hurt; a wound or maim; usually applied to damage inflicted on the body by an external force. ²
Internal parasites:	Organisms that live within an animal (e.g., heart, intestinal tract) at whose expense they obtain their nutrition and protection. ²
Ringworm:	Fungal infection of the skin (the name is a misnomer since the disease is not caused by a worm). Caused by a microscopic group of parasitic, fungal organisms also known as dermatophytes. ⁴
Upper respiratory infection:	Invasion and multiplication of microorganisms in the tissues of the respiratory system including the mouth, nose, pharynx, larynx, trachea, and epiglottis. ²

¹ PetMD.com; <http://www.petmd.com/veterinaryterms#.Ua4FttKfjbM>

² Medical Dictionary from Free Dictionary.com; <http://medical-dictionary.thefreedictionary.com/pneumonia>

³ Adapted from Austin Pets Alive! *Neonatal program Standard Operating Procedures (2013)*;
<http://www.maddiesfund.org/Documents/Institute/Austin%20Pets%20Alive!%20Resource%20Documents.pdf>

⁴ Adapted from CatWorld.com; <http://www.cat-world.com.au/ringworm-in-cats>

APPENDIX C

Practical Tips for Orphaned Kitten Care

Orphaned Kitten Feeding and Stomach Capacity Table

Estimated Age	Weight (grams)	Weight (ounces)	20 Kcal/100 g body weight ¹	Daily volume Commercial milk replacer (ml) Concentration 0.74 kcal/ml*	Stomach capacity (ml) (4 ml/100 g body weight) ¹	Approx. number of feedings per day**
Newborn	50	1.8	10	13.5	2	7
	75	2.6	15	20	3	7
	100	3.5	20	27	4	7
	125	4.4	25	34	5	7
~ 1 week	150	5.3	30	40	6	7
	175	6.2	35	47	7	7
	200	7.0	40	54	8	7
	225	8	45	61	9	7
~ 2 weeks	250	8.8	50	68	10	7
	275	9.7	55	74	11	7
	300	10.6	60	81	12	6-7
	325	11.5	65	88	13	6-7
~ 3 weeks	350	12.3	70	95	14	6-7
	375	13.2	75	101	15	~6
	400	14.1	80	108	16	~5
	425	15	85	115	17	~5
~ 4 weeks***	450	15.9	90	122	18	~5
	475	16.8	95	128	19	~4
	500	17.6	100	135	20	~4
	525	18.5	105	142	21	~4
~ 5 weeks***	550	19.4	110	148	22	~4

¹Energy requirement and stomach capacity reference: Lawler DF. Neonatal and pediatric care of the puppy and kitten. *Theriogenology*, 70 (2008) 384-392.

Energy Requirement: 20-26 kcal/100g body weight/day

Comfortable Stomach Capacity: Approximately 4 mL/100g body weight

* Most commercial milk replacers in the US provide less than 1 kcal/ml (0.74 kcal/ml), acting to increase the volume of milk required to meet calorific needs. This can be problematic in terms of the number and size of feedings given relative to stomach capacity and more likely to result in gastrointestinal disturbances. This may also account for why bottle fed kittens grow slower than kittens that nurse off their mother.

** As the kitten is adjusting well to the milk and the feeding volume, you may be able to increase the volume fed to help reduce the number of feedings per day. This will exceed recommended comfortable stomach capacity and may put the kitten at risk of regurgitation, aspiration and diarrhea.

*** Kittens at this age are frequently eating some solid food, decreasing the amount of milk replacer required to meet daily calorific requirements. This may result in less frequent milk feedings.

Additional references:

- 1) Cline J, *Cattery Management and Nutrition of the Queen and Her Offspring*, in *Management of Pregnant and Neonatal Dogs, Cats, and Exotic Pets*, 1st ed, ed, Cheryl Lopate, Wiley-BlackwellAmes, Iowa, 2012, 15-24.
- 2) Zambelli D, *Feline Neonatal Physiology, Behavior, and Socialization*, in *Management of Pregnant and Neonatal Dogs, Cats, and Exotic Pets*, 1st ed, ed, Cheryl Lopate, Wiley-BlackwellAmes, Iowa, 2012, 145-158.

APPENDIX D

Statement on Nursing Queen Surrogacy

In nature, kittens are dependent on their mother for the first few weeks of life - physically, nutritionally and behaviorally. In the absence of the kitten's biological mother, same-species surrogacy may be a viable option. While there are definite benefits to same-species surrogacy, as mentioned above, there are also serious health risks which need to be calculated and minimized before matching.



Because health risk increases incrementally with increased exposure, Maddie's Institute does not generally advocate for the mixing of litters. However, in emergency situations, when options are highly limited, litter-mixing may provide a life-saving alternative. Again, those attempting to match an orphan with a surrogate mother – or match an orphan to another litter – need to thoughtfully assess the unique pros and cons of *each* case to determine the best method of care for *each* involved. How? Orphans, surrogate mothers *and* surrogate siblings should be examined for external or internal parasites, such as fleas and roundworms, fungal infections, such as ringworm, and clinical signs of upper respiratory infection. Additionally, all should be tested for infectious diseases and conditions, such as feline leukemia virus (FeLV), feline immunodeficiency virus (FIV) and parvovirus prior to introduction.

Take, for instance, the following measures in place at Animal Care Services in San Antonio. The author of "Kittens Get Second Chance with Surrogate Mommas," sat down with Dr. Marilyn Gotbeter, their staff veterinarian. She reported, "When adult female cats arrive at the shelter, staff make note of which ones are producing milk. The moms are tested for feline leukemia and feline immune viruses. Staff place the kittens under a black light to check for ringworm. Then they check to see if the mother's behavior would be a good match with kittens. Staff will first introduce one kitten to a mother cat to gauge her reaction. If the mother licks and rubs the kitten, they slowly continue the process, kitten by kitten."

In a recent article, "From Helpless Newborn to Skilled Acrobat: Feline Development and the Orphaned Kitten," Dr. Susan Krebsbach adds that same-species fostering also plays a critical function for behavioral development. She says, "Good maternal behavior is essential for healthy kitten development - not only for the basics of food, water, shelter and cleaning, but as a role model for survival, rescuing them from danger, and a source of security and emotional development." She goes on to state that, "...it can be done if a [healthy], receptive, preferably nursing, feline mom is available. This provides orphans the next best chance for normal development, as long as exposure to people during the critical socialization period is achieved."

REPORT REFERENCES

Austin Pets Alive! (2013). [Bottle Baby Program](#).

Berliner, E. (2012). "[The Challenges of the Young: Nursing Moms and Bottle-feeders](#)." *Shelter Watch*, Cornell University, College of Veterinary Medicine. Vol 2 (Issue 4).

Davis, V. (2013). "[Kittens Get Second Chance with Surrogate Mommas](#)." MySanAntonio.com.

UC Davis Koret Shelter Medicine Program. (2010). [Feline: Guide to Raising Orphan Kittens](#).

"In the absence of same-species fostering, these tiny and vulnerable creatures must look to the compassionate heart of human foster parents. These thoughtful and self-sacrificing people take on a demanding job, providing the needed loving care, warmth and socialization to raise orphaned kittens to adoption into their forever home."

["From Helpless Newborn to Skilled Acrobat: Feline Development and the Orphaned Kitten"](#)

Dr. Susan Krebsbach