



REACHING OUT TO THE *Community*

6TH NATIONAL G2Z SUMMIT & WORKSHOPS
14-19 SEPTEMBER 2015, MANTRA ON VIEW HOTEL, GOLD COAST



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Abstract

Understanding capacity for care (C4C) and optimizing length of stay (LOS)

Capacity for care (C4C), considered holistically, means meeting the needs of each animal admitted to a shelter, whether feral or friendly, stray or owner surrendered, young or old.

The Five Freedoms of Animal Welfare provide a framework to define what it means to meet the needs of any animal in confinement. Assuring C4C also supports success in meeting a Sixth Freedom, the freedom from euthanasia for animals that are neither terminally ill nor dangerous. Providing high quality housing and minimizing LOS through pro-active management are two key factors in assuring C4C for every animal in the shelter.

The Association of Shelter Veterinarian's Guidelines for Standards of Care in Animal Shelters warns:

Every sheltering organization has a maximum capacity for care, and the population in their care must not exceed that level.

Learn how to optimize your shelter's LOS to always be within your C4C and how this will revolutionize your shelter environment and increase positive outcomes.

Full Presentation

Capacity for Care (C4C) overview

The Association of Shelter Veterinarian's Guidelines for Standards of Care in Animal Shelters (<http://www.sheltervet.org/wp-content/uploads/2011/08/Shelter-Standards-Oct2011-wForward.pdf>) admonish:



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“Active population management is one of the foundations of shelter animal health and wellbeing (Hurley 2004a), and must be based on an appreciation that capacity to provide humane care has limits for every organization, just as it does in private homes.”

“Every sheltering organization has a maximum capacity for care, and the population in their care must not exceed that level.”

On the surface, these seem like a simple and logical statements. Operating within an organization’s ability to provide care is the foundation on which all other guidelines for care must rest. If the facility is insufficient to provide appropriate housing, if staff do not have time to keep animals clean and well fed, if the environment is barren of enrichment due to limited resources, inevitably some elements of animals’ mental or physical well-being will be compromised.

However, what exactly are the required elements of care that define an organization’s maximum capacity? And knowing these, how can an organization ensure that the number of animals in their care does not exceed this capacity, while still serving the community, meeting their mission, and saving as many lives as possible? These are critical questions. Fortunately the answers are not as complex or elusive as they might seem.

Defining Capacity for Care (C4C)

The Five Freedoms of Animal Welfare, although developed by the Farm Animal Welfare Council for livestock in an agricultural context, provide a simple and compelling framework to define the minimum level of care expected for any animal in confinement. Few would argue that we should not provide these for every homeless pet in a shelter’s care:

1. Freedom from Hunger and Thirst
2. Freedom from Discomfort
3. Freedom from Pain, Injury or Disease
4. Freedom from Fear and Distress
5. Freedom to Express Normal Behavior

Sometimes the barrier to meeting the Five Freedoms is obvious: if there is not enough money to purchase wholesome, appropriate food, then the very first freedom cannot be met. However, sometimes obstacles to meeting the freedoms can be more subtle. If cat housing is so small that litter routinely contaminates food and cats refuse to eat, freedom from hunger and thirst is not assured in spite of ample feeding. If a high quality disinfectant is available but staff simply do not have time to keep up with cleaning, reasonable protection from disease cannot be provided. Thus meeting each freedom requires elements of facility/housing and staffing as well as financial resources.

Numbers, Capacity and the “Sixth Freedom”

Clearly, one solution to solving issues with capacity is to reduce the number of animals in the shelter’s care at any one time. Most any organization has the ability to meet the Five Freedoms for one or a few animals. And yet, many shelters are overwhelmed with far more animals than they can comfortably care for. Why is this?

There is one freedom that is not listed in the five above, and this underlies the tendency for many shelters to find their capacity chronically overwhelmed. That is the freedom from euthanasia for animals that are neither suffering irremediably nor dangerous to the community. Because they were developed in the context of animals raised for food, it’s not surprising that this is not addressed in the Five Freedoms.



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However, in a shelter context, it would be unthinkable to ensure the first five freedoms at the expense of the sixth. Providing for the health and well-being of animals cannot come at the expense of their very lives.

Fortunately, we now understand that far from being in conflict, the first five freedoms are synergistic with the sixth. Providing humane care, keeping animals healthy and comfortable, and allowing staff the time to do their jobs well, is not only good for animals, it also provides a more welcoming environment for volunteers, adopters and supporters. Healthy, happy animals move through the shelter to live outcomes more quickly, further reducing the number requiring care at any one time.

Ultimately, by keeping the number of animals within the shelter's limit for daily capacity, *flow-through capacity* can not only be maintained, but increased. More lives can be saved over time while costs for daily care are reduced. Most importantly, animals receive the care they deserve each day as well as receiving the very best chance at life we can possibly provide.

Bringing C4C into balance

A disparity between the available daily C4C and the number of animals actually in the shelter's care, whether related to facility, staffing or finances, can be remedied in three ways: intake can be decreased, capacity can be expanded, or length of stay (LOS) can be reduced.

Reduction in intake, while a worthwhile and attainable goal, should be realized through providing positive alternatives to shelter admission, keeping pets in their homes, and reducing the number of unwanted animals in the community. This requires an active investment of shelter resources. Expanding physical and staffing capacity likewise requires additional investment, sometimes on an ongoing basis.

These investments are well worth it, especially where the alternative is operating chronically beyond capacity with all the attendant compromises to animal (and staff and volunteer) welfare. However, finding the resources to make such changes can be challenging when the shelter is already crowded beyond C4C. This quote from a shelter director will resonate with many in the sheltering profession:

"We, and the animals, were caught in a vicious cycle; the housing and crowding in our cat wards led to illness which led to more crowding and so on. The staff was spending so much time giving URI and ringworm treatments that we started to decrease the staffing for spay/neuter. The backup in spay/neuter only worsened the problem."

Fortunately, reducing LOS provides a third route to bring C4C into balance with the number of cats cared for daily. Simple changes can reduce LOS at little or no cost, and bring a host of benefits in addition to achieving daily C4C. Reducing LOS without compromising live release requires a combination of appropriate compartmentalized housing and active management of each animal's pathway through the shelter.

Benefits of reducing length of stay (LOS)

For many, it seems intuitive that giving every animal more time in the shelter would equate to providing the best chance for a live outcome. However, not only is this not necessarily the case, the opposite is often true.

Multiple studies have demonstrated that LOS is the single greatest risk factor for upper respiratory infection in shelter cats.[1, 2] At best, illness means a stint in treatment, a compromise to welfare (nobody likes to be sick), and a yet longer stay in the shelter. Longer stays in turn increase the risk for confinement-related stress and behavioral issues.



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While the risks of prolonged LOS can be overcome with excellent housing and attentive enrichment, such care becomes ever harder to provide as the shelter becomes more crowded. One of the saddest sights in a shelter is that of an animal who has just given up.

Conversely, if a healthy animal can be admitted, examined, receive any needed care, and sent to a good home within a few days, everybody wins. The risk of illness and confinement related stress disorders is dramatically reduced. Time and space that would have been given to that animal can be reallocated to other animals in need of more extensive care. Resources conserved by preventing, rather than treating, illness can be better spent on programs to further the shelter's overall life-saving mission. Here's the rest of the quote from the shelter director referenced above, after implementing C4C:

"Within weeks we saw the results of getting within our Capacity for Care—illness dropped dramatically, the length of stay dropped, cats were healthier, we were able to increase our spay and neuter surgeries and cat adoptions increased by 25%. Just as important, our staff is happier, more engaged and proud of their life saving work. We still use and rely on C4C to help us keep length of stay low and lifesaving high."

To delve into the details of Fast Tracking, a key program to reduce length of stay, by viewing this webinar brought to you by ASPCA Pro: <http://www.aspcapro.org/webinar/2013-10-08/fast-tracking-save-lives> Or, if you are more a reader than a viewer, check out this article on fast tracking from Animal Sheltering magazine: <http://www.animalsheltering.org/resources/magazine/nov-dec-2012/life-in-the-fast-lane.html>.

Housing, LOS, and C4C

Although there are many elements to providing C4C and managing LOS, housing plays a pivotal role. Single compartment housing and cages or condos with less than ~ 9 square feet of floor space have been linked to an increased risk of upper respiratory infection (URI) in shelter cats. Illness, in turn, means an even longer time in the shelter. Single sided kennels for dogs increases stress by not giving the dog the opportunity to urinate and defecate away from where they eat and sleep, a choice that the majority of dogs will make. [3]

Both single and group housing quality has also been closely tied to stress levels in confined cats.[4-9] As with the risk for URI in singly housed cats, size does matter. Specifically, floor space of less than 18 square feet per cat has been linked to higher stress levels in group housed cats. Most adopters prefer friendly, outgoing cats – behavior is the single most important factor when choosing a shelter cat (hyperlink to reference)[10] – so high stress levels can translate into longer stays to adoption as well as greater risk for illness. A vicious cycle can quickly ensue.

On the other hand, better housing can easily reverse this cycle by decreasing illness and stress, and therefore reducing LOS. Reduced LOS, in turn, makes great housing possible: healthy, happy animals staying half the time can each be given twice the space. Cats with more space stay healthier and happier leading to a shorter LOS and the opposite of a vicious cycle takes hold. A simple math equation then is $\frac{1}{2}$ the number of cats + $\frac{1}{2}$ the LOS = the same number of cats helped over time. It's almost like magic.

Start with housing

Because of the tight relationship between housing, stress, illness and length of stay, it makes sense to start with housing when working towards C4C. Although there are many nuances to excellent housing (<http://www.sheltermedicine.com/library/facility-design-and-animal-housing>) for shelter animals, the floor space requirements for single and group housed cats are a great place to begin: at least ~ 9 square feet of space for singly housed cats, and at least 18 square feet of floor space for cats in group housing. Double compartment housing also greatly benefits both cat and dogs by keeping food, bed and litter separate and allowing cleaning and daily care with minimum disruption.



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New cages or condos that meet both floor space and double compartment housing guidelines are available for purchase in a variety of materials. One of our favorite designs is compartments at least 30" inches wide in a 4 by 4 configuration with portals side to side as well as up and down. With this set-up, four compartments can be joined into one large unit for a single cat or bonded pair whose length of stay is expected to be a little longer, or during a mega-adoption event the compartments can be divided into four singles for the day, each housing a few kittens.

Alternately, existing housing can be converted into this or other flexible configurations with the installation of portals (<http://www.sheltermedicine.com/library/manufactured-portals-order-information-and-instruction-for-installation>).

Getting the numbers right: how much capacity is enough?

How do you know how much excellent housing, or what level of staffing, will be enough to serve the incoming population of animals? Put simply, the required C4C is equal to the daily average intake of animals, times the ideal LOS. Minimizing LOS through attentive population management and high quality housing is the most humane and effective way to achieve C4C.

Even when LOS is at its most efficient, however, there will be a minimum number of animals that will need housing and care in order to accommodate daily intake. LOS should never be decreased so drastically that it impedes the ability to provide care or achieve live outcomes. If there is insufficient staffing or housing to safely hold even this minimum number, additional capacity needs to be developed.

There is also a maximum number of animals beyond which additional holding can actually be counterproductive, even if ample space and staffing exists. The number of animals in the shelter can, in itself, be the strongest driver of LOS. This is most evident in adoptions. For a given rate of daily adoptions, more animals awaiting adoption will mean a longer average LOS to adoption.

For example, if 1 animal is adopted per day, and 10 are housed in adoption, the average LOS to adoption will be 10 days. If 20 more animals are added (for a total of 30), and average daily adoptions stay steady at 1 per day, the average LOS will automatically increase to 30 days. The simplest way to decrease LOS in this context is *one time* to adopt out more cats than are admitted. Once a new steady state is reached, it will be self-sustaining. Ideally, each shelter will maintain the number of animals for adoption at a self-sustaining level that maximizes adoptions while minimizing length of stay to adoption. When this number is exceeded, short term adoption specials or intake management can bring it back into balance.

It is not always necessary to delve deeply into capacity calculations to find the sweet spot between minimum and maximum. Some shelters have simply taken the plunge by improving housing and found the resultant decreased LOS made up for any loss of physical holding capacity. However, for shelters where the LOS is already very short, shelters with special considerations (such as routine adoption mega-events or infrequent but substantial transport opportunities), or considering major investments in remodeling or building a new facility, it makes sense to dig deeper.

More detailed instructions on calculating the ideal number of animals awaiting adoption can be found at <http://www.sheltermedicine.com/library/adoption-driven-capacity-calculator-your-shelter-s-key-to-saving-lives-and-providing-great-care> and WAY more detail can be found at <http://www.sheltermedicine.com/library/calculating-shelter-capacity>. For a shorter article see <http://www.animalsheltering.org/resources/magazine/may-jun-2015/whats-your-magic-number.html> OR if you would rather watch than read, or do a bit of both, you can find a webinar on calculating capacity at <http://www.aspcapro.org/webinar/2013-11-20/-calculating-your-humane-capacity>.





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References

1. Edinboro, C.H., et al., *A clinical trial of intranasal and subcutaneous vaccines to prevent upper respiratory infection in cats at an animal shelter*. Feline Practice, 1999. **27**(6): p. 7-13.
2. Dinnage, J.D., J.M. Scarlett, and J.R. Richards, *Descriptive epidemiology of feline upper respiratory tract disease in an animal shelter*. J Feline Med Surg, 2009. **11**(10): p. 816-25.
3. Wagner, D., et al., *Elimination Behavior of Shelter Dogs Housed in Double Compartment Kennels*. PLoS online journal, 2014.
4. Kry, K. and R. Casey, *The effect of hiding enrichment on stress levels and behaviour of domestic cats (Felis sylvestris catus) in a shelter setting and the implications for adoption potential*. Animal Welfare, 2007(16): p. 375-383.
5. Ottway, D.S. and D.M. Hawkins, *Cat housing in rescue shelters: a welfare comparison between communal and discrete-unit housing*. Animal Welfare, 2003(12): p. 173-189.
6. Gourkow, N., *Factors affecting the welfare and adoption rate of cats in an animal shelter*. 2001, University of British Columbia.
7. Kessler, M.R. and D.C. Turner, *Socialization and stress in cats (Felis silvestris catus) housed singly and in groups in animal shelters*. Animal Welfare, 1999. **8**(1): p. 15-26.
8. Kessler, M.R. and D.C. Turner, *Stress and adaptation of cats (Felis silvestris catus) housed singly, in pairs and in groups in boarding catteries*. Animal Welfare, 1997. **6**(3): p. 243-254.
9. McCobb, E.C., et al., *Assessment of stress levels among cats in four animal shelters*. Javma- Journal of the American Veterinary Medical Association, 2005. **226**(4): p. 548-555.
10. Weiss, E., et al., *Why Did You Choose This Pet?: Adopters and Pet Selection Preferences in Five Animal Shelters in the United States*. Animals, 2012. **2**(2): p. 144-159.