

The Association for **Animal Welfare Advancement**



Provision of Veterinary Care in a Shelter Setting Model Practices

ABOUT MODEL PRACTICES

Model practices are a set of guidelines that lay out efficient and effective methods to achieve optimal results. The Association for Animal Welfare Advancement (The Association, formerly known as SAWA) establishes model practices in a variety of areas that will lead to superior care of animals and help our members have more impact on their communities. The methods in this document are generally accepted as those that will produce the best results for animals housed in animal shelters.

We acknowledge that some of the activities described here may be beyond the current operational capabilities of many animal welfare organizations. As model practices these protocols and techniques are not the most accessible, but rather are the most effective. If an organization is not currently capable of implementing all of the recommendations in this document, veterinary care must still be provided to animals in their care.

INTRODUCTION

This Model Practice is intended to identify the most effective standards for the provision of veterinary care in top performing animal shelters. Additionally, it should be used as a complimentary document to each of the previously released Model Practices (Transport and Enrichment) to support the overall health and wellbeing of individual animals in an organization.

The Model Practices document will provide a comprehensive overview of a shelter medicine program so the leadership and administration of animal welfare organizations understand the key components necessary to meet the medical needs of the animals in their care. This document is not intended to be a technical manual for the application of medicine. Technical documents are available within the veterinary field and this document will provide reference to those as appropriate for understanding the requirements of a shelter medicine program. This document is focused on the care of companion animals in animal shelters and is not intended to provide guidance to shelters caring for livestock or wildlife, but similar principles may apply.

Shelter medicine is focused on providing for the physical health and wellbeing of animals while they are in the shelter environment and in managing overall population health. Medical care and attention is a key component of a shelter's responsibility to meet the needs of the individual animals in their care as well as overall health of the entire shelter population. Shelter medicine programs enhance health, mitigate disease, and provide diagnosis and treatment of medical issues. These programs enable animals to be successfully adopted into new homes or safely reunited if stray or lost while also considering the impact on the overall animal population's health within a community.

The five freedoms were developed in the 1960's and are accepted by multiple professional groups (including the Association of Shelter Veterinarian {ASV}) as appropriate measures of welfare for any animal species.

Maintaining physical health and wellbeing for shelter animals, while striving to apply best practices in shelter medicine directly contribute to each of the five freedoms.

1. **Freedom from Hunger and Thirst** by ready access to fresh water and diet to maintain health and vigor.
2. **Freedom from Discomfort** by providing an appropriate environment including shelter and a comfortable resting area.
3. **Freedom from Pain, Injury or Disease** by prevention or rapid diagnosis and treatment.
4. **Freedom to Express Normal Behavior** by providing sufficient space, proper facilities and company of the animal's own kind.
5. **Freedom from Fear and Distress** by ensuring conditions and treatment which avoid mental suffering.

Upon entry to an animal shelter, services and resources must be available to ensure that animals are free from or appropriately treated for pain, injury and disease. By implementing a shelter medicine program an organization can provide this level of care for animals. This can be achieved by following the recommendations, guidelines and key components covered in this document. Compliance with this best practices requires going beyond the basics of individual animal medicine to provide population medicine and preventive care; best practices also encompasses key areas such as capacity for care management, triage, nutrition, behavioral health, neonatal care, and outbreak management, and partnerships with local veterinarians outside the sheltering organization. When all of these practices are cohesively combined, they form a strong shelter medicine program and address quality of life for the animals. Even if the standards of this document cannot be met, all shelters must have the involvement of a veterinarian to provide care for animals, oversee medical practices in the facility, and be involved in the creation of preventive medicine and treatment protocols.

Shelter Medicine vs. Private Practice

There are inherent differences between veterinary medicine in private practice and in the shelter setting.

Shelter settings, specifically those with municipal or stray contracts, often receive animals with no previous history. This creates a challenge for the veterinary team to theorize what they know and learn through each exam, diagnostic or test. In a shelter setting a veterinarian needs to be aware of trends in the community. If a number of stray animals are arriving with the same illness, the shelter veterinarian

may be tasked with tracking intake to determine if intervention is needed for any animal coming from that region.

Shelters often hold many animals with unknown histories and deciding to treat a highly contagious disease may introduce risk to the shelter population. The delicate balance of treating the disease and keeping the rest of the population healthy must always be considered and is dependent upon the capability of the facilities, staff expertise and resources available.

A crucial difference between private practice and veterinary medicine in the shelter setting is the shelter's focus on management of population health in addition to the health of the individual animal. In private practices, especially in emergency settings, isolation space of animals with highly contagious diseases may be readily available without risk of exposure to other animals. Privately owned animals may also go to their owner's home for ongoing treatment where they may not come in contact with new animals. This additional responsibility and risk may result in differing vaccine protocols or other preventative care differences.

When patients enter private practices, the outcome may include follow up care that requires owner's participation and compliance. In kennel settings, even those with vigilant staff, follow up care and treatment protocols may differ from private practice in order to accommodate the overall needs of the population.

Surgery options may vary between what is viable for an owned pet in a private practice and what is feasible a shelter setting. For example, a veterinarian in a shelter setting may have to balance the availability of foster homes or other post-surgical resources with the surgical intervention that might typically be recommended in a private practice.

KEY CONSIDERATIONS – GENERAL TIPS FOR SUCCESS

Veterinary relationship

Each organization has its own unique organizational structure that impacts how veterinary care is delivered to the animals. Organizations may have a single veterinarian or a veterinary team and it varies where they reside in the reporting structure, depending on the size of the organization and other factors. Other organizational structures include:

- Community veterinarians who provide services or consult on either a volunteer or fee for service basis.
- Veterinarians on staff who are primarily within an on-site veterinary clinic performing surgery, but also responsible for shelter population health.
- Veterinarians on staff who focus on population health as well as individual animal health.

Roles and Responsibilities

In order to have an effective program, roles and responsibilities must be clearly defined and communicated throughout the organization. These include:

- Formalizing the working and reporting relationship between all participants of the animal care team such as the veterinarians, technicians, management, and animal care staff/volunteers.
- Specifying how decisions regarding treatment, placement, and euthanasia are made.

The organization must clearly define what level of authority the veterinarian has and what their relationship is with other staff. Regardless of the model used, there are some decisions that must always be within the veterinarian's purview.

Veterinary Team Focus

The veterinary team focus is on population health and individual welfare of each animal:

- Best practices is for an organization to have veterinary staffing levels sufficient to enable veterinarians to be part of the team that oversees day to day animal care in order for that veterinarian to have direct contact with the operations as well as the level of authority needed to carry out decisions.
- The veterinary team provides protocols and training to organizational staff and volunteers in the use of proper vaccinations, cleaning and other means of ensuring that population health is maintained and the spread of disease is minimized while at the same time protecting the individual animal's health and welfare.
- In any setting where multiple animals are cared for, it is necessary to place importance on overall population health and infectious disease management. This means that the veterinary team understands population medicine philosophies and best practices, and is able to commit the appropriate amount of time and focus to care for the needs of the organization.

Legal Compliance

Please consult with an attorney or licensing authority before adopting or implementing any policy or practice related to veterinary medical care in the shelter to avoid conflict with statutes, ordinances, or regulations that may apply to your organization. There are generally three levels of oversight for veterinary medical care:

- **State:** Each state has a veterinary practice act (or similarly named legislation) that provides, through statutory language and often through attendant rules, the framework through which veterinarians are licensed and can be disciplined. Additionally, state regulatory agencies (e.g. department of agriculture, department of public health) may have adopted regulations that affect the delivery of veterinary medical care. In some cases regulation for care in a shelter or other non-profit may differ from private practice. Some states have specific laws or rules governing the uses of controlled drugs in shelters under the supervision of non-veterinarians.
- **Local:** Often municipal and/or county ordinances have been adopted that impose additional conditions on the delivery of veterinary medical care. There may be requirements for private organizations that contract with municipalities as well as requirements enacted by municipal or county agencies (e.g. health departments or law enforcement).
- **Federal:** The Drug Enforcement Administration (DEA) has strict requirements for licensing of and reporting by veterinarians who buy and prescribe controlled medications.

It is important that senior leadership within the organization is familiar with state regulations. Some of these can include:

- What requirements in the state practice act relate to shelter clinical practice?
- What requirements veterinarians may be required to follow in the state veterinary practice act?
- Who can have authority over the veterinarian?
- What can non-veterinarians perform?
- What can licensed technicians perform?

Any written policy or protocol must be created in compliance with existing laws and regulations.

GOALS AND IMPACTS

Using this model practices as a benchmark should result in an improvement in the health and well-being of the animals within the organization, improved relationships with community veterinarians, and better documentation. Healthy animals move through the process more quickly, resulting in shorter lengths of stay. Shorter stays directly impact animal health and welfare, resources, staff, donor engagement, and the community as a whole.

For animals

- Improved standard of care and efficiencies in managing animal populations.
- A reduction in contagious diseases.
- Ensure the health of the population and the health of the individual.
- Improved disease recognition and response.
- Improved population management and reduction in disease outbreaks.
- Increase in the number of animals with live outcomes.

Anticipated Impacts

- Provision of care will rise within the shelter
 - As population health improves, and the shelter is able to provide treatment for a wider variety of illnesses and injuries, volunteers, staff and the community will continually raise expectations of what the shelter will do for animals. Expectations may outpace the organizations' ability to deliver so careful planning and communication will be needed.
 - Improved decision making capability through in-house, shelter specific assessment and based on the organization's specific resources and mission. The organization will have the ability to make more informed decisions about humane outcomes including special needs placements, prolonged medical treatments and when euthanasia is medically recommended.
- Financial impact
 - Veterinarians and non-veterinary staff should share in the budgetary and programmatic decision making to make best use of available resources
 - While some resource savings will occur by improving shelter health, an on-staff veterinarian with support staff may also incur additional costs.

- Startup costs may include capital expenditures for equipment.
- Costs also exist for medication, supplies, and the proper storage of such.
- Community veterinarians and members of the public may be more supportive of shelter challenges that arise which impact animal health.
 - Community veterinarians will be more likely to call upon the shelter veterinarians with an issue they may see in their practice than they would to call upon a layperson at the shelter.
 - Increased knowledge of shelter medicine in the community, including private veterinarians, provides opportunity to work on solving companion animal homelessness as a community.
 - Use of common animal medical record keeping language is passed on to the community veterinarians that provide post-adoptive care.
 - Promotion of shelter medicine and the understanding that it is a recognized area of veterinary medicine and the expertise that comes with the practice of shelter medicine is vital in our agencies and communities.
 - Informational resources are available for animal welfare and animal health.

GENERAL COMPONENTS AND REQUIREMENTS

See the Addendum A for a veterinary care timeline from intake to outcome (adoption, transfer or euthanasia).

INTAKE

History

A medical and behavioral history is collected for every animal accepted whenever the information is available. The history must include past medical records, travel history, identification information (e.g. microchip, tattoo), and behavioral history when available. A medical record is created at intake and includes the history and all medical information throughout the animal's stay in the shelter, and is sent home with an adopter. All records must comply with any requirements of the state veterinary practice act.

Prophylactic Care

Vaccination

Follow core vaccine guidelines published by the American Animal Hospital Association (AAHA) and American Association of Feline Practitioners (AAFP); both of these guidelines have sections that speak specifically to shelter-housed animals. Additional information is available from the ASV guidelines (see resource section).

Any animal with an unconfirmed vaccine history is vaccinated upon intake for core infectious diseases.

- Primary concerns for vaccination in dogs currently (subject to change) include but do not need to be limited to Parvovirus, Distemper Virus, and Canine Infectious Respiratory Disease (Bordetella bronchiseptica, Parainfluenza, +/- CAV-2).

- Primary concerns for vaccination in cats currently include but do not need to be limited to Panleukopenia and upper respiratory infections (URI) which include vaccines for Herpesvirus, and Calicivirus.

Rabies vaccines are administered as state law, animal age, and access to a veterinarian allows. Any animal leaving a shelter must be vaccinated for rabies before going home for adoption, transfer to another organization, going offsite for an adoption event, going to foster care or other activities that may expose the animal to new people or animals.

Vaccines are boosted based on the recommendation of the attending veterinarian, manufacturer recommendations specific to animal shelters, and shelter-specific vaccine protocols listed in the resource section.

Deworming

For the protection of the public against zoonotic parasites and population health, dogs and cats must be dewormed for at least hookworms and roundworms as soon as possible upon entering a shelter, especially if there is use of group housing or common play areas. Additional options should be available for other common parasites, including whipworms, coccidian, and giardia. Be sure to consider an animal's travel history when deworming an animal as different regions of the country experience different types of, and more or less an abundance of, various parasites.

Flea/tick

Organizations must develop a protocol to address flea and tick treatment that is specific to their region's risk. Shelters in areas where flea and tick infestations can be severe or where flea and tick borne disease create a serious risk must have a protocol in place for prevention and must treat animals with a preventative during their stay.

Initial examination

All animals are examined by either a veterinarian or trained technical staff at intake; if veterinarians are not performing the screening, a process must be in place for animals with medical conditions that are not addressed by protocols to be seen by a veterinarian. The person performing the initial exam must have the ability and authority to place animals into isolation if a contagious disease is suspected.

The initial examination must at minimum:

- Document the animal's age, weight, and sex.
- Include a photo of the animal that is of sufficient quality to identify the animal.
- Note any conditions needing urgent care.
- Note any conditions that may require isolation.
- Allow for the initiation of treatment to address common veterinary medical needs.

Provision of medical treatment identified at intake can be in the form of:

- Direct orders from a veterinarian.

- Protocols that are developed and updated by veterinarians working for or with the shelter that can be administered by trained animal care staff.
 - A non-veterinarian's ability to execute those protocols may be limited by the laws of the state.

Although the exam may be performed by non-veterinarians, provisions should be in place that require

- animals at high risk for disease or illness be examined by a veterinarian (i.e. very young, very old, or have pre-existing conditions).
- all exam findings, treatments, and procedures be documented in that animal's individual record.

Housing

Animals must be housed in a manner to minimize the risk of disease transfer.

- Animals with immature or compromised immune systems (young or sick or both) must be housed separately from other animals.
- Any group housing must take size and behavioral considerations into account to prevent injuries.
 - Additional medical screening and testing may be required before animals can enter group housing.
- Intact male and female animals must not be housed together.
- Individual kennel/cage and ward isolation must be available for:
 - Contagious disease isolation.
 - Quarantine wards for disease exposure.

Housing for legal considerations must include

- Rabies quarantine.
- Animals deemed dangerous.
- Humane investigations.

A behavioral enrichment program must be in place as stress can lead to increased incidence of disease. In some cases, veterinarians may need to be enlisted in behavioral treatment plans, especially if an aspect of treatment may include pharmaceuticals, or if there are welfare concerns. (See The Association best practices for behavior enrichment).

Medical Treatment Decision Making

Decisions as to outcome in particular cases should be based upon the professional assessment and recommendation of the appropriate and qualified veterinary staff. A shelter must decide how much it is able to invest in any individual animal, as that investment may prevent the ability to treat others, or treatment of that animal may negatively affect others in the case of infectious disease.

- The veterinarian is the final decision maker on development of treatment plans. Capability to carry out that plan may vary depending on shelter capacity.

- A process must be in place to decide when treatment will be pursued. That process includes who will have input into that decision and what factors will be considered.
- Quality of life must be a consideration for all involved. An animal's behavior and available resources are other factors that should be considered.
 - Should treatment be the selected option, the specified course of treatment as created by the veterinarian must be followed in its entirety.
 - If the animal is in pain or suffering, immediate action must be taken to either provide relief or euthanize the animal.

All further medical care should be looked at with the perspective of that shelter's resources. What is ideal for the individual animal may not be what is optimal for the mission of that shelter or in the best interest of the population. What would be ideal for an individual animal in a home may not be ideal for that same animal in a shelter setting.

Diagnostics

Veterinarian must have access to diagnostics based on the most common diseases/pathogens found in a shelter environment. Further testing is often needed to ensure that an animal is healthy enough to place. Test interpretation is often complicated, and needs to be reviewed by veterinarians familiar with the animal's history and risk factors, testing modalities, test accuracy (sensitivity and specificity), and prevalence of disease in the testing populations.

- Heartworm disease: Each organization must assess the risk of heartworm in their region. If heartworm is prevalent then testing must be done on dogs over six months of age taking into account their relative risk, when last tested, and history of preventative. Those that test negative must be placed on preventative treatment; protocol must be directed by veterinarian. Adopters should be provided information about heartworm preventative for dogs too young to be tested. Shelters should follow the American Heartworm Society recommendations for testing and prevention.
- FeLV and FIV testing: A shelter may elect to test all cats, test select cats, or offer testing at time of adoption. A written protocol must be established indicating which cats are tested and when. The protocol must take into account the prevalence of disease occurrence in your community and relative risk. Cats should be tested before going into group housing with cats that have not been exposed before.
- A protocol must be in place to address positive results.

Additional Diagnostics

- Additional basic point of care tests that a shelter must have access to include:
 - Fecal/parasite screening
 - Parvo antigen tests
 - Ringworm cultures
 - Urinalysis
 - PCV/TS
 - Blood glucose
- Parvo (either CDV or Canine distemper) and panleukopenia antibody titer testing in outbreak management

- Tick-borne disease testing (4DX or others)
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- Utilizing a diagnostics lab company or in-house diagnostic tests for:
 - Blood chemistries
 - CBC
 - Specific further testing as needed

Treatment Administration

Medical treatments provided are based on a shelter's capacity for care. Every organization should place importance on achieving the five freedoms and keeping the entire shelter population healthy. A shelter's treatment plans may differ from those in private practice for the same illness, but must still be effective and comply with the five freedoms. The organization must be able to keep animals in treatment stable and comfortable during their time in care.

Examples of comprehensive shelter treatment plans may include medications, but always include some element of environmental management as well:

- Provision of supportive care for felines with URI to include good isolation facilities, behavioral enrichment, minimal stress and crowding, appropriate ventilation and temperature, SQ or IV fluids, and nutritional support.
- Provision of appropriate diet, fluid maintenance and medical and welfare monitoring for cats with chronic kidney disease should a shelter choose to place these cats for rehoming.

Organizations must consider the capacity of the animal care, technical staff and volunteers to administer treatments.

- Skilled foster care providers may be an option for cases where treatment in shelter is not possible or difficult, providing the organization has the capacity to continue the animal's care in the foster home.
- All "scheduled" or prescription drugs must be administered to shelter animals under the direct order of a veterinarian or through a written protocol/algorithm developed by a consulting veterinarian.
- Shelters must consider transfer to an organization that is better equipped to treat a condition when they are not able to treat an animal themselves and are confident they have a partner with the required abilities.

Maintenance

Animal Flow

Veterinary care must be scheduled in a way to minimize an animal's length of stay. Efficient pathway planning and animal flow-through will lead to less disease transmission and lower disease prevalence. Managing to capacity for care will decrease length of stay (LOS) and therefore reduce medical and behavioral issues.

Shelter Rounds should include the review of wellbeing of each individual animal in the shelter. These should include daily population rounds, as well as animal care monitoring and daily inventory procedures.

- “Daily (population) rounds” ensure each animal’s medical and behavioral needs are met as efficiently as possible. These are separate from animal care monitoring procedures or inventory, and are meant to act as a point of problem solving and communication around pathway planning, animal outcomes, and decreasing LOS.
- “Daily Rounds” can include veterinarians and relevant medical personnel, shelter managers or supervisors, behavior personnel, and/or any combination of personnel that are trained and authorized to make decisions about the animal’s wellbeing and medical needs.
- Rounds are documented and any action items should be completed according to established protocols.
- Animal care monitoring: There must be a method to monitor each animal’s daily eating, drinking, urinating, and defecating. There must be a method to easily alert the medical staff of any health concerns in a timely manner.

Feeding and Nutrition

- Medical staff ensure that all animals are receiving adequate nutrition, including animals at all life-stages.
- Shelters must have access to diets appropriate for conditions they are treating in their shelter.
- Prescription diets may only be utilized under the direction of a veterinarian.
- A method needs to be in place to ensure that all animals are eating and drinking. In colony housing animals must be observed to insure all are eating and drinking.

Disease Outbreak Management

- Animals must to be monitored daily for signs of disease.
- Animals with signs of contagious diseases must be appropriately isolated from other animals.
- A shelter’s capacity for care in isolation is limited by its:
 - Facility.
 - Staffing, medical staff in particular.
 - Protocols for dealing with contagion.
 - Response time for staff to recognizing risk and disease.
 - Continuing education and training to ensure staff has a thorough understanding of isolation and treatment protocols.
- If a shelter is unable to provide appropriate care for a condition, that animal must either be humanely euthanized or transferred to a facility or foster home that can provide appropriate care.
- A shelter must balance the individual and population health management of diseases they experience.

Infectious Disease Protocols

- Even if they do not treat a specific condition, a shelter must have a protocol written in collaboration with the shelter’s veterinarian for how it would manage the most common infectious diseases. These should include all aspects of disease recognition and management, including diagnosis, treatment (if appropriate), housing and husbandry, outcome decisions, decontamination, and communication. Written protocols should be in place for the following diseases:
 - Parvovirus (Canine)
 - Distemper (Canine)

- Panleukopenia (Feline)
- Ringworm (Canine and Feline)
- Mange (Canine)
- Canine Infectious Respiratory Disease (Kennel Cough/Influenza)
- Feline Upper Respiratory Infection including Calicivirus (Feline)
- Rabies
- Data collection or system to track disease prevalence in a shelter.

Sterilization

- To ensure maximum compliance of spay/neuter, all animals must be sterilized before they are released for adoption.
- Animals being transferred to a different adoption organization may be released without being sterilized, but there must be a written agreement that the animal will be sterilized before release.
- Sterilization surgeries can be done on site or in partnership with other veterinarians.
- If surgeries are done in shelter, they must be done to the standards of High-Quality, High-Volume, Spay/Neuter (HQHVS/N) as outlined in the ASV spay/neuter (S/N) guidelines.
- The requirement to S/N animals prior to adoption includes animals of all ages, including those as young as six weeks old (typically start at eight weeks).
- Animals that are not old enough for surgical sterilization are not adopted. They can be held in the shelter, or preferably in foster care until they are old enough for surgery.
- Exemptions to the S/N requirement may be made by a veterinarian due to an individual animal's medical condition that could put the animal at risk. In these cases, a memo should be included in the medical record as to why this decision was made.

Outcomes

Tracking

- A system must be in place to track outcomes and the reason behind those outcomes. This will allow for evaluating if resources were used properly or identifying future areas of improvement.

Adoption

- With deference to animal flow and decreasing length of stay, animals do not have to be in perfect health to be adopted. An animal under treatment can be adopted if
 - It is in a condition where the adopter can easily continue care without compromising the health of the animal.
 - It is better able to heal in a home environment.
 - It has a chronic illness that can be managed in a home environment, but which has no cure.
- Medical Disclosure
 - Shelters must disclose an animal's entire medical history and provide it in a manner that is useful for the adopter and their veterinarian.
 - Any known medical conditions regardless of whether they will require further treatment by the adopter must be disclosed and discussed before the adoption is finalized.

- Disclosures must be thorough enough for the adopter’s veterinarian to understand the diagnosed condition and estimate the amount of future medical care required for that animal.
 - There must be a section of the disclosure written in a manner that allows a lay person to understand the condition and any additional care needs well enough to make an informed decision about adoption.
- Continuum of Care
 - Adoptions must include education and agreement that the animal will see a veterinarian for a post adoption exam to establish client veterinary patient relationship, review history and develop a unique medical plan for each animal and routine preventive care.
 - To facilitate continuity of care a shelter must provide
 - Veterinary referrals for an adopter to visit post adoption.
 - A list of local specialists for the condition being treated if warranted by the condition.
 - A way for veterinary clinics in the community to contact the shelter with questions or concerns.
 - The shelter veterinarian may determine that for some medical conditions it is wise for an adopter to have a veterinary appointment. For those cases, the adopter or outside veterinarian or both will receive follow-up contact from the shelter.
 - Lines of communication need to be well defined between the shelter and community veterinarians to allow for animals’ continued care after adoption.

Transfers

- When transferring an animal to another organization, a shelter must provide all medical information to the receiving organization as they would for an animal being adopted. (See The Association Model Practices on Companion Animal Transport)

Euthanasia

- Euthanasia must be performed by staff or contracted veterinary professionals specifically trained to perform euthanasia and as allowed by local, state and federal law.
- Decisions for medically related euthanasia must be approved by a veterinarian or through protocols established collaboratively by a veterinarian and the shelter administration.

ABOVE AND BEYOND

- In some instances, organizations may have the resources to do more than is recommended in the Shelter Veterinary Care Model Practices. In these cases the recommendations below provide guidance regarding additional services that can benefit the animals in the shelter’s care as well as the community population at large, but are not required to meet the standards outlined in the best practices.
- Organizations and shelters may opt to provide additional veterinary management measures such as testing and disease identification, advanced surgical procedures, and veterinary forensics.

- If the time and resources are available, more advanced surgical procedures may be performed on site or sent to a veterinary surgical facility. More advanced surgeries may allow more animals to be placed for adoption.
- In shelters that are responsible for investigating animal cruelty cases or handling animals from those cases, veterinarians must be familiar with forensics and have the ability to perform related exams, create legal documents and testify in court. If resources permit, they may opt for a skilled veterinary forensics team within the veterinary team to be focused specifically on these cases. The staff members may be allowed to complete advanced training in this area to gain more expertise.
- Organizations and shelters with the resources to meet and exceed the standards, may consider releasing animals with chronic but treatable medical conditions (i.e. idiopathic epilepsy, diabetes mellitus, endocrine disorders) that may otherwise not be considered for adoption.
- As outlined in the Animal Transport Model Practices document, organizations with the resources to receive animal transports consisting of multiple animals and/or possibly variable species may have additional opportunities to exceed the standards. This may also apply to shelters or organizations that receive large numbers of animals at any one time from animal cruelty cases. Resources are available through The Association Model Practices
- While basic intake and admissions procedures may not change with multiple animal intakes, specific veterinary practices, isolation measures and disease management protocols as noted above may need to be considered to support the effective and legal processing of a large number of animals at the same time.
- Organizations with the resources to expand beyond the standards may also consider engaging experts outside of the organization. An outside assessment of the shelter's veterinary practices by a qualified consulting organization or an academic shelter medicine program will provide a good baseline and help guide the path for going forward.

REFERENCES

[American Association of Feline Practitioners \(AAFP\)](#)

[American Animal Hospital Association \(AAHA\)](#)

[American Veterinary Medical Association \(AVMA\)](#)

Asilomar Accords

Maddie's® Shelter Medicine Program [Overview of Asilomar Accords](#)

Maddie's® Shelter Medicine Program [Asilomar Accords Definitions](#)

[Association of Shelter Veterinarians \(ASV\)](#)

ASV [2016 Veterinary Medical Care Guidelines for Spay-Neuter Programs](#)

ASV [Guidelines for Standards of Care in Animal Shelters](#)

ASV [Position Statement on Euthanasia of Shelter Animals](#)

ASV [Veterinary Medical Care Guidelines \(2016\)](#)

Disease protocol examples:

[American Heartworm Society Shelter Guidelines](#)

Boulder Humane Society Shelter Medical Journal – See Exhibit B

[Koret Shelter Medicine Program at UC Davis](#)

[ASPCA Pro](#)

[Maddie's Fund/UF Shelter Medicine](#)

Euthanasia humanely performed

Humane Society of the United States [Euthanasia Reference Manual](#)

AVMA [Guidelines of Euthanasia for Animals](#)

ASV [Position Statement on Euthanasia of Shelter Animals](#)

ASPCA [Position Statement on Euthanasia](#)

[Humane Alliance Spay/Neuter Tools & Tips](#)

[Koret Shelter Medicine Program](#)

Koret Shelter Medicine Program [Adoption Driven Capacity](#)

Koret Shelter Medicine Program [Intake and Adoption Decision Making Criteria](#)

Koret Shelter Medicine Program [Veterinarians in private practice and shelters working together](#)

[Maddie's Fund/UF Shelter Medicine](#)

The Association [Companion Animal Transport Best Practices](#)

Surgical protocols and standards

Humane Alliance [Spay/Neuter Tools & Tips](#)

Association of Shelter Veterinarians [2016 Veterinary Medical Care Guidelines for Spay-Neuter Programs](#)

[US Drug Enforcement Administration](#)

Vaccine protocols

[Association of Shelter Veterinarians \(ASV\)](#)

[American Association of Feline Practitioners \(AAFP\)](#)

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[Veterinary Medical Association Executives \(VMAE\)](#)

GLOSSARY

Asilomar codes – See references section in this document.

Association of Shelter Veterinarians (ASV) – The professional organization for shelter veterinarians, consisting of over 1500 members and 28 student chapters from around the globe.

Calicivirus (Part of URI) – Common virus in cats that contributes to the upper respiratory disease complex with symptoms that may cause ulcerations on the tongue. One of the components of the common FVRCP vaccine.

Canine Infectious Respiratory Disease Complex – Common terminology to refer to a collection of symptoms seen in dogs with coughing, ocular and nasal discharge from bacterial or viral origin most

frequently occurring in animal shelters or boarding facilities. Often the specific infecting cause isn't identified and treatment is initiated to address symptoms.

Coccidia – A protozoal parasite that is hardy in the environment and causes diarrhea and vomiting.

Compassion Fatigue – A condition characterized by a gradual lessening of compassion over time. It is common among individuals who work directly with trauma victims such as, therapists, nurses, teachers, psychologists, police officers, paramedics, animal welfare workers, health unit coordinators and anyone who helps out others, especially family members, relatives, and other informal caregivers of patients suffering from a chronic illness.

Sufferers can exhibit several symptoms including hopelessness, a decrease in experiences of pleasure, constant stress and anxiety, sleeplessness or nightmares, and a pervasive negative attitude. This can have detrimental effects on individuals, both professionally and personally, including a decrease in productivity, the inability to focus, and the development of new feelings of incompetency and self-doubt.

Decision Fatigue – Refers to the deteriorating quality of decisions made by an individual after a long session of decision making. It is now understood as one of the causes of irrational trade-offs in decision making. There is a paradox in that "people who lack choices seem to want them and often will fight for them," yet at the same time, "people find that making many choices can be [psychologically] aversive."

Notably, major politicians and businessmen such as Former US President Barack Obama, Steve Jobs, and Mark Zuckerberg have been known to reduce their everyday clothing down to one or two outfits in order to limit the number of decisions they make in a day.

Distemper Virus – Canine distemper is a contagious and serious viral illness with no known cure. The disease affects dogs, and certain species of wildlife, such as raccoons, wolves, foxes, and skunks. The common house pet, the ferret, is also a carrier of this virus. Young, unvaccinated puppies and non-immunized older dogs tend to be more susceptible to the disease. Symptoms include diarrhea, vomiting, ocular and nasal discharge, pneumonia, skin abnormalities and seizures.

FeLV (Feline Leukemia Virus) – A retrovirus that infects cats. FeLV can be transmitted from infected cats when the transfer of saliva or nasal secretions is involved. If not defeated by the animal's immune system, the virus can cause diseases which can be lethal. One disease caused by this virus is a form of cancer of the blood cells called lymphoma.

FIV (Feline Immunodeficiency Virus) – Attacks the immune system, leaving the cat vulnerable to many other infections. Although cats infected with FIV may appear normal for years, they eventually suffer from this immune deficiency, which allows normally harmless bacteria, viruses, protozoa, and fungi found in the everyday environment to potentially cause severe illnesses.

Giardia – A microscopic parasite that causes diarrhea. It is found on surfaces or in soil, food, or water that has been contaminated with feces from infected humans or animals.

Glucometer – Point of care test that checks the level of blood glucose (sugar).

Healthy population – Health defined not simply as a state free from disease but as *"the capacity of people to adapt to, respond to, or control life's challenges and changes."* The World Health Organization (WHO) defined health in its' broader sense in 1946 as *"a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."*

Feline Herpesvirus (Part of URI) – Common virus in cats that contributes to the upper respiratory disease complex with symptoms including pneumonia, ocular and nasal discharge. Also known as Feline viral rhinotracheitis. One of the components of the common FVRCP vaccine

High-Quality, High-Volume, Spay/Neuter (HQHVSN) – Efficient surgical initiatives that meet or exceed veterinary medical standards of care in providing accessible, targeted sterilization of large numbers of cats and dogs to reduce their overpopulation and subsequent euthanasia.

Hookworms (*Ancylostoma caninum*) – Small blood sucking parasites can cause severe anemia in dogs and cats as well as cause diarrhea and vomiting. People can be infected (zoonotic) when these parasites contact bare skin; most often by walking barefoot (cutaneous larval migrans). Hookworm eggs can remain viable in the soil or feces for many months.

Roundworms (*Toxocara species*) – Intestinal parasites which mature from microscopic eggs into long vermicelli-like worms that in the severest cases can cause intestinal blockage. Puppies and kittens are especially vulnerable but adult dogs and cats can have diarrhea and vomiting or no symptoms. Roundworms infect people if accidentally ingested and may cause blindness, with children being most vulnerable (ocular larval migrans).

Isolation – Precautions that are taken to prevent the spread of an infectious agent from an infected or colonized patient to susceptible animals.

Maternal antibodies – Immunity conveyed to a fetus or infant by its mother. Naturally acquired passive immunity can be provided during pregnancy, and through colostrum.

Nutrition – The science that interprets the interaction of nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism and excretion.

Panleukopenia – Also known as feline distemper, is a viral infection affecting cats. It is caused by feline parvovirus, a close relative of canine parvovirus and mink enteritis. Once contracted, it is highly contagious and can be fatal to the affected cat. The name panleukopenia comes from the low white blood cell count (leucocytes) exhibited by affected animals.

Parvovirus – A contagious virus mainly affecting dogs causing vomiting and diarrhea. The virus is similar to feline panleukopenia virus which likely mutated to infect dogs. The current consensus is that feline panleukopenia mutated into canine parvovirus type 2 (CPV2). Parvo is highly contagious and is

spread from dog to dog by direct or indirect contact with their feces. Vaccines can prevent this infection, but mortality can reach 91% in untreated cases.

PCV/TS – Packed cell volume and total solids is a quick test to assess blood volume and protein level in a patient

Point of care tests – Point-of-care testing, or patient-side testing is defined as medical diagnostic testing at or near the point of care—that is, at the time and place of patient care. This contrasts with the historical pattern in which testing was wholly or mostly confined to the medical laboratory, which entailed sending off specimens away from the point of care and then waiting hours or days to learn the results, during which time care must continue without the desired information.

Population immunity – The resistance to the spread of a contagious disease within a population that results if a sufficiently high proportion of individuals are immune to the disease, especially through vaccination.

Preventative – Practices within a shelter such as vaccination and cleaning practices to prevent the occurrence of disease.

Private practice – A veterinary clinic with no associated animal shelter that offers veterinary services to the general public

Quality of life – Generally regarded as the balance between pleasant and unpleasant factors and experiences as they apply to an animal's physical and mental state. A term used in discussions of euthanasia or intensive treatment.

Quarantine – An area or kennel with restricted access in which animals exposed to infectious or contagious disease are placed for a set period time to be observed for clinical signs of the disease.

Schedule or prescription drugs – Drugs that are approved by the U.S. Food and Drug Administration (FDA) and that are required by federal or state law to be dispensed to the public only on prescription of a licensed physician or other licensed provider.

In the U.S., a schedule or prescription drug can be a controlled substance (narcotic), or a non-narcotic drug authorized by veterinarians, dentists, optometrists, and medical practitioners. Basic-level registered nurses, medical assistants, clinical nurse specialists, nurse anesthetists, nurse midwives, emergency medical technicians, psychologists, and social workers do not have the authority to prescribe schedule or prescription drugs.

Shelter medicine – Veterinary practice with a focus on the care and management of shelter animals that encompasses all aspects of healthcare ranging from the physical and behavioral health of shelter animals to the environmental health of the shelter facility.

Subcutaneous (SQ or SC) or Intravenous (IV) fluids – SQ or SC fluid administration is the term used to describe giving sterile fluids into the space under the skin (subcutaneous tissue) from where it can be slowly absorbed into the blood and body. This is a very useful way of providing additional fluids to manage and prevent dehydration.

IV fluid administration is the term used to describe giving sterile fluids into the veins. Similar to SQ (or SC) fluids, it is used to manage and prevent dehydration.

Tapeworms – (*Dipylidium caninum*, *Echinococcus spp.* and *Taenia spp.*) - Flat worm segments about the size of rice are usually seen on the surface of feces. Most dogs have no symptoms but a severe infection can cause intestinal obstruction in puppies this parasite requires an intermediate host, flea or rodent, that a dog must ingest for the worm to complete its life-cycle. Also can infect cats.

Triaging – A process in which things or patients are ranked in terms of importance based on available resources to resolve a current emergency.

Upper respiratory infections (URI) Feline URI – Common terminology to refer to a collection of symptoms seen in cats with sneezing, ocular and nasal discharge from bacterial or viral origin most frequently occurring in animal shelters or boarding facilities. Often the specific infecting cause isn't identified and treatment is initiated to address symptoms.

Whipworms (*Trichuris vulpis*) - Intestinal parasite which causes vomiting and diarrhea in dogs. The eggs are very hardy and long lived in the environment.

RESOURCE LIST

Resources for understanding these regulatory considerations include state veterinary medical associations, the Veterinary Medical Association Executives (VMAE), state federations of animal welfare organizations, state agencies or departments, state associations of municipalities, state associations of counties, the American Veterinary Medical Association (AVMA), and the US Drug Enforcement Administration.

Infectious Diseases

[Infectious Disease Management in Animal Shelters](#), Lila Miller, DVM, Kate Hurley, DVM, MPVM, Wiley-Blackwell, July 2009

[Infectious Diseases](#), Craig E. Green, DVM, Saunders, December 2011

[Shelter Medicine for Veterinarians and Staff, 2nd Edition](#), Lila Miller, DVM, Stephen Zawistowski, Ph.D., CAAB, Wiley-Blackwell, January 2013

Record Keeping

See Catalyst Council examples for standardization of data collection in Model Practices Exhibits.

Veterinary Forensics

[ASPCA Veterinary Forensics](#), 9/4/2012, Dr. Rhonda Windham, Medical Director Field Investigations and Response

[ASPCAPro Veterinary Forensics](#), Dr. Randall Lockwood and Dr. Jason Byrd

[Veterinary Forensics: Animal Cruelty Investigations, 2nd Edition](#), Melinda D. Merck, DVM

Additional Resources

See "References" in this document.

Prophylactic

- Vaccine
 - DHPP/Bordetella for Dogs
 - FVRCP for Cats
- Deworming
- Flea/Tick

Triage (to be done immediately upon intake)

- Urgent medical issues addressed
- Housed based on disease risk
 - Age
 - Species
 - Exposure

Evaluation

- Medical evaluation
- Behavioral evaluation
- Routine diagnostic testing as appropriate for shelter (HWT, FeLV/FIV, fecal)
- Determine disposition

Continued Care

- Spay/Neuter
- Rabies vaccination
- Follow up medical care as needed
- Daily animal monitoring – Rounds
- Foster care if needed
- Regularly scheduled revaccination and deworming
- Plan for expected longer term residents
- Communication board or a system to report medical concerns
- Regularly scheduled weights for group housed cats
 - Plan for weight loss

Outcomes

Adoption

- Post-adoption veterinary exam list
 - Coalition of community veterinary clinics
- Medical disclosures reviewed
- Any current medications to go with pet
- Plan for follow-up care if needed (whether provided by shelter or not)

Transfer

- All pertinent information sent along with animal to rescue partner

Euthanasia

- Performed through established protocol by trained staff